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The Impact of Project-Based Learning Assignments on the Writing, Communication and Interpersonal Skills of Students in a College Skills Course

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DEDICATION

To my husband, Roland, who pushed me when I wanted to give up! I thank you for encouraging me to *Believe in the Impossible*! To my daughter, Briana, who motivates me to always give my best! Go further and higher than me! To my mother, Lynda, who sacrificed so I might soar to great heights! To my grandparents, the late Cecil and Mary Watts, who spoke greatness in me from my birth. To David Stand AME Zion Church, you made me believe that I was capable of doing great things!

To my entire family--my village, I dedicate this work!

ABSTRACT

The purpose of this action research study was to determine the impact of project-based learning on the writing, communication and interpersonal skills of students in a college skills course. This course was required for students who were enrolled in at least one or more developmental courses. The purpose of this course was to equip the students with skills necessary for success during college and beyond. However, the syllabus for the course did not include any activities or assignments to improve the students' writing, communication or interpersonal skills. As a result, the students were not successful in completing the final class assignment that required strong writing and communication skills. Research suggests that project-based learning enhances students' knowledge and critical thinking skills.

Through a convergent mixed methods action research design, the study addressed three research questions that explored the impact on writing, communication, and interpersonal skills. Quantitative and qualitative data was collected from pre-and post-test writing assessments, observation checklist, interviews, final project and end of the course survey. The results indicated an improvement in the writing, communication and interpersonal skills of the students. An action plan was developed to provide training for additional faculty to increase the sections of the course to help more students be successful in college.

Keywords: project-based learning; assessment; critical thinking; writing skills; communication skills, interpersonal skills; student learning; student success

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CHAPTER 1

INTRODUCTION

The mission of Success Community College (SCC), a pseudonym, is to prepare all students for success. As an open admissions institution, SCC accepts and enrolls students who are underprepared for college. Therefore, the administration, along with the Associate Vice President of Instruction and Deans, has been intentional about implementing courses and programs to equip these students with the skills necessary for success in college and in the workplace. One course that was implemented to help underprepared students was College 103 (COL 103). The purpose of this course is to equip the students with writing, communication and interpersonal skills that are necessary for success during college and beyond. "Higher-order cognitive skills, such as the ability to think critically, are invaluable to students' futures; they prepare individuals to tackle a multitude of challenges that they are likely to face in their personal lives, careers, and duties as responsible citizens" (Tsui, 2002, p. 740).

As a result, information literate students have improved communication and interpersonal skills, enhanced leadership skills, increased creativity and improved writing skills (Duke, 2016). If students who are information literate are equipped with tools for success during and after college, what happens to students who lack these tools? Sadly, students who lack these skills struggle to be successful in college. Therefore, the college skills course was created to address this concern. Students who are placed in

developmental courses (reading, math, English) are required to take COL 103 to gain the necessary skills for success. Therefore, this is one of the most critical courses for our entering students.

As the Director of Student Outcomes Assessment and an adjunct instructor at SCC, the teacher-researcher received the success rates for all courses taught during the 2016-2017 academic year. After reviewing the data for the college skills course, the teacher-researcher posed the following question to the Associate Vice President and Deans: how can our institution better equip students for success in college and beyond? The teacher-researcher shared with the group the need for SCC to move beyond the traditional view of teachers as sources of information and students are the passive absorbers of that information (Dewey, 1938). The teacher-researcher stated that simply giving information to students was not preparing the students with the writing, communication, interpersonal skills that they needed to be successful in the classroom. The college skills course followed a lecture-based instruction style that did not create an opportunity for students to gain writing, communication, interpersonal skills. The teacher-researcher proposed a more student-centered approach such as project-based learning to hone these skills. The teacher-researcher was confident that project-based learning could provide students with the tools for success in college and beyond based on research.

According to research by Finkelstein, Hanson, Hirschman, and Huang (2010), students demonstrated better problem-solving, critical thinking and writing skills in project-based learning than in more traditional classes and were able to apply what they learned to real-life situations. The research also indicated that sustainable learning occurs

when students were intrinsically motivated to engage in the learning process (Pink, 2005; Wagner, 2012). The goal of the teacher-researcher was to find ways to engage the students in the learning process. Some of the comments from the Student Evaluation of Instruction indicated that the course was boring, a waste of time and did not help students transition to college life. The course was lacking opportunities for meaningful and sustainable learning. Wagner (2012) stated that meaningful learning occurs when students receive challenges that encourage setting short to long-term goals, making decisions, taking actions, receiving feedback, and demonstrating knowledge and skills while engaged in the learning process.

After sharing the research, the Associate Vice President and the Deans agreed that the benefits of project-based learning aligned well with the purpose of the college skills course. The purpose was to prepare the students with skills to be successful in college. As a result, the Associate Vice President and Deans agreed to allow the teacher researcher permission to change the structure of her course. Beginning in fall 2018, the teacher-researcher incorporated project-based learning into her COL 103 course.

Problem of Practice

COL 103 is a course required for students who are taking developmental courses (reading, math and English) at the college. The purpose of this course is to equip the students with writing, communication and interpersonal skills that are necessary for success during college and beyond. However, the Assessment Committee that the teacher-researcher serves as chairperson made two significant findings based on end of the year assessment for COL 103: 1) over half of the students (52%) failed to successfully complete the final project that required strong writing and communication

skills and 2) the syllabus for the class did not include any activities or assignments to improve these skills prior to the final project. As a result, the students had not been successful in completing COL 103 or subsequent courses due to expressed deficiencies in these skills.

Therefore, the teacher-researcher met with the Associate Vice President of Instruction and the Deans to share results, concerns and a new instructional method for the college skills courses. Hoping for better student learning outcomes, the Associate Vice President of Instruction and Deans gave the teacher-researcher permission to restructure her college skills course. After receiving permission, the teacher-researcher met with the Dean of Arts and Sciences (AS), Department Chair and the lead instructors to discuss ways to incorporate assignments and activities that involved writing, communication and interpersonal skills in the curriculum. After many meetings, discussions and research to address the issues concerning the COL 103 curriculum, the Dean of AS, Department Chair and lead instructors agreed that the curriculum should be more student-centered. A more student-centered approach would reduce time spent on lectures and increase time spent in class on activities that engage students in analysis, evaluations, problem-solving, and processing information (McKeachie, 1954; Ach, 1951; Albrecht & Gross, 1948). To make the course more student-centered, the teacher-researcher decided to use the video, case studies, discussion prompts and the supplemental resources provided by the textbook publisher.

Beginning fall 2018, the teacher-researcher included one day of inquiry to allow students an opportunity to investigate and to research topics and one day of project-based learning assignments each week. The project-based learning assignments included a

writing component and group activities focused on communication and interpersonal skills. These revisions were necessary to create a more student-centered and experiential approach to education that improves student learning and success (Pellegrino and Hilton, 2012).

Purpose of Study

The purpose of this action research study was to improve the students' skillset required to successfully complete the COL 103 and subsequent courses at SCC by incorporating project-based learning assignments and activities. The inability to complete these courses negatively impacts the students' future goals and aspirations. Therefore, the success of the students was important to the teacher-researcher and to the college.

The action research study sought to determine if the addition of project-based learning assignments to the curriculum had an impact on the writing, communication and the interpersonal skills of the students enrolled in the COL 103 course. The research methodology is addressed more specifically in Chapter 3.

Study Rationale

SCC is located in the Upstate of South Carolina where business and industry has grown over the last 5 years. With the exponential growth of business and industry, employers were aggressively seeking persons to fill vacant positions. This presented a wonderful opportunity for our students to have a job offer before graduation. In fact, more than fifty percent of the students enrolled at SCC planned to enter the workforce immediately upon graduation (SCC Exit Survey, 2018).

However, the employers desired employees who possess specific skills. During a 2017 Advisory Committee Meeting at SCC, employers expressed concern about our recent graduates' ability to think critically, communicate clearly (oral and written), as well as their ability to solve complex problems while working as a part of a team. Therefore, employers were putting more demands on the college to produce graduates who were equipped with written, communication and interpersonal skills.

The concerns of the employers aligned with recent research as well. Several surveys of employers and recruiters indicated their desire for increased information literacy skills. In a survey of employers by Hart Research Associates (2010) for the American Association of Colleges and Universities (AAC&U), 60% of employers thought two-year colleges needed to make improvements in preparing their students for the challenges faced by today's workforce (20% said significant improvement). On the same survey, 81% of employers reported that "ensuring that students develop the skills to research questions in their field and develop evidence-based analyses in writing" would help students succeed after graduation (57% said it would help a lot).

Therefore, it was critical for colleges and universities to find ways to better prepare students for the workforce. SCC was urged to find ways to address the concerns of employers about current and future students. In response to the employers' feedback, SCC began a curriculum review process to determine what courses must be revised to provide students with necessary skills for success. COL 103 was one of the courses selected to improve the writing, communication and interpersonal skills of the students.

During the summer of 2018, SCC offered training sessions led by the Director of Instructional Support for faculty on ways to incorporate more student-centered

assignments and activities in their classes. The administration understood the urgent need to equip students with skills necessary for success, such as writing, communication and interpersonal skills. Therefore, the faculty was provided with additional training and support throughout the fall and spring semesters of 2018-2019. Feedback from the faculty that received training and support during the year will be gathered to determine the strengths, weaknesses and areas of improvement. This feedback will guide the training for faculty during the summer of 2019.

In support of academic freedom, the faculty had the option to choose the best instructional model for their course. The teacher-researcher chose project-based learning for her class. According to Finkelstein, Hanson, Hirschman, and Huang (2010), students demonstrate better problem-solving, critical thinking and writing skills in project-based learning than in more traditional classes and are able to apply what they learn to real-life situations. The goal was that by employing these techniques, SCC will produce graduates who meet or exceed the expectation of employers who hire them. At the completion of the summer training during the months of June and July 2018, the teacher-researcher revised the syllabus for COL 103 class to add project-based learning assignments in hopes of improving the writing, communication and interpersonal skills of the students.

SCC cannot continue to produce graduates who fail to meet the standards of employers who are seeking graduates with the necessary information literacy skills (writing, communication and interpersonal) to be successful in the workplace. Therefore, the onus was on SCC to find ways to adequately address this concern in course development. Again, information literate students not only reap the benefits in the

workplace but also in their personal, social and civic lives. Therefore, it was the hope of the teacher-researcher that revising the course to include a day of inquiry and a day of project-based activities and assignments would have a positive impact on the writing, communication and interpersonal skills of the students.

Research Questions

The research questions that guided this action research study were:

- What is the impact of adding project-based learning assignments on the writing skills of students enrolled in the COL 103 course?
- How does project-based learning assignments impact the communication skills of students in the COL 103 course?
- How does project-based learning assignment improve the interpersonal skills of students in the COL 103 course?

Theoretical Frameworks

The purpose of this action research study was to improve the writing, communication, and interpersonal skills of students enrolled in COL 103. Therefore, the teacher-researcher chose frameworks and models that support the teacher as a facilitator, students as active participants in the learning process, activities that use real-world issues, multiple opportunities to use critical thinking skills, collaboration with classmates and a final project (artifact) that combined the totality of the classroom experience. This was a significant shift from the traditional classroom. The theoretical frameworks that provided support for the action research study are discussed below.

Progressivism. Progressive theorists emphasize that students should test ideas by active experimentation (Cohen, 1999). The learner is a problem solver and thinker who makes meaning through individual experience in the physical and cultural context. Effective teachers provide experiences so that students can learn by doing (Cohen, 1999). One of the major ideas that was critical for the COL 103 course was that teachers serve as guides for problem solving and inquiry. The teacher-researcher restructured the class so the students will have one day of inquiry and one day of working on a project-based learning assignment or activity, which will engage the students in the education experience.

As educators at SCC, the challenge was to help students move from merely learning facts to gaining the skills necessary to use the facts. John Dewey (1938) argued for "children to learn through the senses with objects, to discover for themselves, and he called for varying activities for children" (p. 10). This theory supported this action research study because the students were assigned activities that required writing, communication and interpersonal skills. In this class, learning was active and not passive.

Social Reconstructionism. One of the goals of SCC was to produce graduates who will make a difference in the community and world. Social Reconstructionist theorists stress student experience and taking social action on real problems within the curriculum. Community-based learning and bringing the world into the classroom are also strategies for educators (Cohen, 1999). This theory aligned well with COL 103 as the assignments focused on issues that the students will encounter as they work in the various capacities in the community. Some of the topics covered immigration, sexual

identity, racism, and healthcare. These weekly activities allowed the students to critically examine issues, discuss with others and propose ways to create a better society. Participating in group discussions allows students to generalize and transfer their knowledge of classroom learning and builds a strong foundation for testing ideas, communicating ideas orally, and developing a deeper understanding of what they learning (Reznitskaya & Kuo, 2007). When the students participated in the project-based learning assignments, they gained skills that were critical to success in COL 103, subsequent courses, the workplace and in life.

Critical Thinking. "Critical thinking is both a process and an outcome. As a process, it is the steps taken in order to achieve a particular end. As an outcome, it is the acquisition of deep and meaningful understanding as well as content-specific abilities, skills, and dispositions" (Garrison, Anderson & Archer, 2000, pp. 2-3). John Dewey (1933) stressed the distinction between process and product in thinking. He defined "reflective thinking" as "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends [that] includes a conscious and voluntary effort to establish belief upon a firm basis of evidence and rationality" (p. 9). Dewey believed that education could either help or hinder development of problem solving and judgment. He advocated education based on the scientific method, capitalizing on students' interests and integrating experience and reflection with learning content (Dewey, 1938).

The teacher-researcher revised the COL 103 course in order to address both the process of how the information was shared with students to produce an outcome of better writing, communication and interpersonal skills. Educators are responsible for creating

classrooms that are student-centered, engaging, active, interesting and relevant. That was the purpose for making the changes to the course. According to Huba and Freed (2000), the curriculum must provide a coherent set of experiences leading to the development of desired knowledge and skills as they progress through the program. The project-based learning activities were instrumental in providing experiences to develop writing, communication and interpersonal skills. Wiggins and McTighe (1998) stated "educators should focus on the instructional strategies and learning experiences that bring students to the 6 facets of understanding's competency levels (i.e., explain, interpret, apply, have perspective, empathize, have self-knowledge)" (p. 14).

Project-Based Learning. Project-based learning is rooted in the progressive education movement, a movement that promoted more student-centered and experiential approaches to education. Thomas Markham (2011) described project-based learning in this way:

> Project-based learning integrates knowing and doing. Students learn knowledge and elements of the core curriculum, but also apply what they know to solve authentic problems and produce results that matter. These cannot be taught out of a textbook, but must be activated through experience. (p. 38)

The feedback from the employers and the data for course success provided sufficient evidence for the teacher-researcher that the skills students needed could not be taught out of a textbook. With project-based learning, students pursue solutions to nontrivial problems by asking and refining questions, debating ideas, making predictions, designing plans and/or experiments, collecting and analyzing data, drawing conclusions,

communicating their ideas and findings to others, asking new questions, and creating artifacts (Blumenfeld, Soloway, Marx, Krajcik, Guzdial, and Palincsar, 1991).

The research by Blumenfeld et al (1991) helped to guide the teacher-researcher in revising the COL 103 course. The assignments and activities for the course allowed the students to ask questions, debate ideas, analyze data, communicate findings and create artifacts. The goal was that a more student-centered and experiential approach to education would improve student learning and success (Pellegrino and Hilton, 2012). Studies have provided evidence that students who used project-based learning had improved critical thinking (Beckett & Miller, 2006; Horan, Lavaroni, & Beldon, 1996; Mergendoller, Maxwell, & Bellisimo, 2006), improved ability to work collaboratively and resolve conflicts (Beckett & Miller; ChanLin, 2008), and improved attitudes toward learning than in more traditional settings (Thomas, 2000; Walker & Leary, 2009).

The aforementioned theories and instructional model provided support to the teacher-researcher to revise the syllabus for COL 103. The revised course incorporated project-based learning assignments and activities to help students improve their writing, communication and interpersonal skills in an engaging, interactive and dynamic classroom setting where the teacher guides and facilitates learning.

Research Design

Action research offered a "process by which current practice can be changed toward better practice. The overarching goal of action research is to improve practice immediately within or a few classrooms or schools" (Mertler, 2014, p. 13). Action research allows teachers to study their own classroom, their own instructional methods, their own students and their own assessments to better understand and to improve their

quality and effectiveness (Parsons & Brown, 2002). Because the research for this study was conducted within the classroom of the teacher-researcher, action research is the most appropriate methodology to answer the research questions. Action research helps teachers to "pick up threads suggested in academic circles, and weave them in their own classroom" (Ferrance, 2000, p.13). Therefore, the literature review will help establish a connection between the action research study and what others have said, done, and discovered before me (Johnson, 2005).

The teacher-researcher used the action research process as outlined by Mertler (2014) to guide the process of classroom improvement. The four phases in the action research process--planning, acting, developing and reflecting, aided the teacher-researcher in answering the research questions. The planning phase that included: identifying the topic, gathering information, reviewing the related literature and developing a research plan was critical in the development of the research questions and direction of the action research study. Therefore, planning was discussed here in Chapter 1. Phases 2-4 that included: implementing the plan, collecting data, analyzing the data, developing an action plan, sharing and communicating the results and reflecting on the process were discussed throughout the study as appropriate.

Planning. This is where the teacher-researcher, along with the other COL 103 faculty, began to look for ways to improve the content and structure of this course to improve critical skills needed for success in COL 103 and subsequent courses. They were all concerned that students were not successfully completing the course. From the meetings, the teacher-researcher identified two areas of great need: revising the content and instruction in COL 103 to better equip our students for course success. Therefore,

the problem of practice for this study addressed students' inability to successfully complete COL 103 or the subsequent courses required for degree completion. Once the teacher-researcher identified the problem of practice, research questions were developed to guide the study. Once the research questions were developed, the teacher-researcher found previous research from other community colleges to support this action research study. The research helped the teacher-researcher identify additional skills that may result from adding the project-based learning assignments—improved communication and interpersonal skills. Therefore, these two components were added to the action research study.

Throughout this action research study, the teacher-researcher used quantitative and qualitative data to determine the impact of project-based learning assignments on the writing, communication and interpersonal skills of students enrolled in the COL 103 course. The research methodology included pre and post-writing assignments, observation checklist, final presentation (artifact), interviews and an End of the Course survey were discussed in more detail in Chapter 3.

Limitations. Although this research was carefully prepared, I am keenly aware of its limitations and shortcomings. "Limitations are matters and occurrences that arise in a study that are beyond a researcher's control…Every study, no matter how well it is conducted and constructed, has limitations" (Simon and Goes, n.p., 2013). First, the research was conducted in one COL 103 course that is only seven and a half weeks in length. In 2017, the administration decided that the content of the COL 103 courses could be taught in a shorter time frame. Therefore, the change was made from a full semester to half a semester. Seven and a half weeks was a short amount of time to see

significant impact on writing skills. It would be better if the class met for the entire semester. Second, the population of the class was small (fifteen students) and might not represent the majority of the students enrolled in the COL 103 courses. In addition, since the assessments of the pre and post-assignments will be conducted by the teacher-researcher, it was unavoidable that in this study, certain degree of subjectivity could be found. To address the issue of subjectivity, the teacher-researcher remained aware of her own biases, incorporated quantitative data in the study and met regularly with COL 103 colleagues to discuss findings.

Glossary of Key Terms

Assessment. In education, the term assessment refers to the wide variety of methods or tools that educators use to evaluate, measure, and document the academic readiness, learning progress, skill acquisition, or educational needs of students. Just as academic lessons have different functions, assessments are typically designed to measure specific elements of learning—e.g., the level of knowledge a student already has about the concept or skill the teacher is planning to teach or the ability to comprehend and analyze different types of texts and readings. Assessments also are used to identify individual student weaknesses and strengths so that educators can provide specialized academic support, educational programming, or social services. **(**Glossary of Education Reform, 2014**)**

Career Readiness/Workforce. The term career-ready is generally applied to (1) students who are considered to be equipped with the knowledge and skills deemed to be essential for success in the modern workforce, or (2) the kinds of educational programs

and learning opportunities that lead to improved workforce preparation. The career-ready concept is also related to 21st century skills and college-ready. (Glossary of Education Reform, 2014)

Critical Thinking. Critical thinking is a term used by educators to describe forms of learning, thought, and analysis that go beyond the memorization and recall of information and facts. In common usage, critical thinking is an umbrella term that may be applied to many different forms of learning acquisition or to a wide variety of thought processes. In its most basic expression, critical thinking occurs when students are analyzing, evaluating, interpreting, or synthesizing information and applying creative thought to form an argument, solve a problem, or reach a conclusion. (Glossary of Education Reform, 2014)

Information Literacy. Information literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning. An information literate individual is able to:

- Determine the extent of information needed
- Access the needed information effectively and efficiently
- Evaluate information and its sources critically
- Incorporate selected information into one's knowledge base
- Use information effectively to accomplish a specific purpose

- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally (Association of Colleges and Research Libraries, 2015)

Project-Based Learning. Project-based learning refers to any instructional approach that utilizes multifaceted projects as a central organizing strategy for educating students. When engaged in project-based learning, students will typically be assigned a project that requires them to use diverse skills—such as researching, writing, interviewing, collaborating, or public speaking—to produce various work products, such as research papers, scientific studies, multimedia presentations, video documentaries, for example. Unlike many tests, homework assignments, and other more traditional forms of academic coursework, the execution and completion of a project may take several weeks or months, or it may even unfold over the course of a semester or year. (Glossary of Education Reform, 2014)

Conclusion

This action research study was designed to answer the following research questions:

- What is the impact of adding project-based learning assignments on the writing skills of students enrolled in the COL 103 course?
- How does project-based learning assignments impact the communication skills of students in the COL 103 course?
- How does project-based learning assignment improve the interpersonal skills of students in the COL 103 course?

COL 103 is a class designed to help students gain the skills necessary to be successful college students. However, the students in COL 103 had not been successful in completing final written assignments in the course. Therefore, the teacher-researcher revised the course to add project-based learning assignments on Thursdays to improve writing, communication and interpersonal skills of the students. The goal was to improve these skills so they could successfully complete COL 103. By successfully completing COL 103, the students can register and enroll in college credit courses required for completion of their program of study. Completion of the program of study will lead to job opportunities, which is the goal of the majority of students at SCC.

The following chapters provided further support of adding project-based learning assignments to the COL 103 course. Chapter 2 includes a literature review that provides support of infusing project-based learning in the curriculum to improve writing, communication and interpersonal skills among college students. Chapter 3 describes the research design of the action research study. This chapter details the process of how and when the data is collected, analyzed, and reported. Chapter 4 reports the findings of the action research study and how these findings relate to the Problem of Practice. The action research study concludes with Chapter 5 that includes an overview and summary of the action research study; an action plan based on the findings; and suggestions for future research related to project-based assignments and student learning and success.

CHAPTER 2

LITERATURE REVIEW

The mission of Success Community College (SCC), a pseudonym, is to prepare all students for success. As an open admissions institution, SCC accepts and enrolls students who are underprepared for college. Therefore, the administration, along with the Associate Vice President of Instruction and Deans, have been intentional about implementing courses and programs to equip these students with the skills necessary for success in college and in the workplace. "Higher-order cognitive skills, such as the ability to think critically, are invaluable to students' futures; they prepare individuals to tackle a multitude of challenges that they are likely to face in their personal lives, careers, and duties as responsible citizens" (Tsui, 2002, p. 740). As a result, information literate students have improved communication and interpersonal skills, enhanced leadership skills, increased creativity and improved writing skills (Duke, 2016). If students who are information literate are equipped with tools for success during and after college, what happens to students who lack these tools? Sadly, students who lack these skills struggle to be successful in college. Therefore, the college skills course was created to address this concern. Students, in developmental courses (reading, math, English), are required to take the college skills course to gain the necessary skills for success. Therefore, this is one of the most critical courses for our entering students.

However, the Assessment Committee that the teacher-researcher serves as chairperson made two significant findings based on end of the year assessment for COL

103: 1) over half of the students (52%) failed to successfully complete the final project that required strong writing and communication skills and 2) the syllabus for the class did not include any activities or assignments to improve these skills prior to the final project. As a result, the students have not been successful in completing COL 103 or subsequent courses due to a lack of these skills.

Therefore, the purpose of this action research study was to improve the students' skillset required to successfully complete the COL 103 and subsequent courses at SCC by incorporating project-based learning assignments and activities. The inability to complete these courses negatively impacted the students' future goals and aspirations. Consequently, the success of the students was important to the teacher-researcher and to the college. The research questions that guided this action research study were:

- What is the impact of adding project-based learning assignments on the writing skills of students enrolled in the COL 103 course?
- How does project-based learning assignments impact the communication skills of students in the COL 103 course?
- How does project-based learning assignment improve the interpersonal skills of students in the COL 103 course?

Purpose of the Literature Review

The purpose of this literature review is to highlight sources for data and measurement tools others have effectively developed to address the problem of practice (Leedy & Ormond, 2005). Although the teacher-researcher discovered that there is a limited amount of research related to the problem of practice, the goal is to provide credible evidence pertaining to the research question (Machi & McEvoy, 2016).

Ultimately, this literature review will create a connection between the action research study and the work of other scholarly researchers regarding the benefit of project based learning in improving the writing, communication and interpersonal skills of students.

Organization of the Chapter

The literature review for this chapter included an examination of Education Resources Information Center (ERIC), JSTOR, doctoral dissertations, books, academic journals, and Google Scholar using key words related to the problem of practice. The books, articles, and other resources included in this literature review were seminal and historic works related to project-based learning that included writing, communication and interpersonal skills. The first section discussed the theoretical frameworks that guided this action research study. The second section provided the history of project-based learning. The third section discussed project-based learning and the college student. The fourth section will discuss social justice issues related to the action research study.

Theoretical Frameworks

The goal of the revised curriculum for COL 103 was to help students gain the skills (writing, communication and interpersonal) that are necessary in college, in the workplace and throughout life by using project-based learning assignments focused on their experiences and current issues in society. Therefore, the frameworks guiding this action research study were progressivism and social reconstructionism.

Progressivism. Dewey (1948) believed that children make meaning and construct knowledge through the continuous reconstruction of their existing meanings as a result of new experiences they encounter (Dewey, 1948). In other words, children learn by doing (Dewey, 1938). For that reason, he believed that children, not content, should

be the focus of teaching. While Dewey (1938) recognized the need for curriculum, he argued that it is the responsibility of the educator to establish aims and activities, but not to be restrained by them. In essence, the educator should be guided by the needs of the students who enter our classrooms. Dewey (1959) believed that an educational experience must fuse the interests of the individual and society, that individual development was dependent upon community. He also believed that the process of inquiry went to the heart of the educative experience. For many educators today, this belief still holds true.

For the COL 103 course, the process of inquiry was woven throughout the curriculum. For Dewey (1959), inquiry involved the generalization of the scientific method to practical problem solving and worthwhile learning. It defined the relationship between thought and action. For Dewey, inquiry was also an essentially social activity. Dewey believed that through collaboration that respected the individual, students would assume responsibility to actively construct and confirm meaning. This approach to teaching and learning holds that the learner, through interaction and experience with an object or process, creates knowledge (Allen, 2008). Progressive theorists emphasize that students should test ideas by active experimentation (Cohen, 1999). The learner is a problem solver and thinker who makes meaning through individual experience in the physical and cultural context. Effective teachers provide experiences so that students can learn by doing (Cohen, 1999). Progressive theorists have embraced the concept that teachers serve as guides for problem solving and scientific inquiry (Dewey, 1938).

This theory supported this action research study because the students were given project-based learning assignments and activities that required problem solving and

critical thinking skills. In this class, learning was active and not passive. The previous structure of the COL 103 course was designed with two days a week of lecture from the instructor. The course was restructured so the students had one day of inquiry and one day of working in a group to address the weekly topics. Lectures were replaced with discussion questions, debates, and case studies. Dewey (1959) stated "that the educational process has two sides – one psychological and one sociological; and that neither can be subordinated to the other or neglected without evil results following" (p. 20). The structure provided by project-based learning addressed both the psychological and the sociological throughout the COL 103 course.

Social Reconstructionism. Influenced by Dewey, George Counts challenged educators at the Progressive Education Association. It was his three speeches that shaped his book, *Dare the School Build a New Social Order*, published in 1932. In his address, Counts (1932) suggested that teachers dare build a new social order through a complex, but definitely possible, process. He believed that process was possible only through educating students for life in a world transformed by major changes in science, industry, and technology (Counts, 1932). Counts (1932) contends that the student enters the classroom full of potential that can be shaped in manifold directions. Therefore, the role of education was to shape the student in such a way that she contributes to a better society. He argued that the teacher must go beyond the interests of the moment or any special class to focus on the common good (Counts, 1932).

In doing so, social reconstructionists have faith in the ability of education, through the medium of curriculum, to teach people to understand their society in such a way that they can develop a vision of a better society and act to bring that vision into existence

(Shiro, 2013). It is the belief that schools should function to provide students with the knowledge, character, and moral vision that leads to the reconstruction of society that benefits all (Giroux, 1992). For social reconstructionists, curriculum focuses on student experience and taking social action on real problems (Cohen, 1999).

The academy is not paradise. But learning is a place where paradise can be created. The classroom with all its limitations remains a location of possibility. In that field of possibility we have the opportunity to labour for freedom, to demand of ourselves and our comrades, an openness of mind and heart that allows us to face reality even as we collectively imagine ways to move beyond boundaries, to transgress. This is education as the practice of freedom. (hooks 1994: 207)

The project-based learning assignments for this course focused on issues, such as sexual identity, immigration, racism, inequality, and education. Because these assignments were designed to take in consideration students' experiences as well as help the students construct new meaning it aligned well with social reconstructionism. The goal of the course is to help students envision a society not plagued by racism, sexism, classism, etc.

History of Project-Based Learning

According to the Buck Institute of Education (BIE), project-based learning is "a systematic teaching method that engages students in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed products and tasks" (Markham, Larmer, & Ravitz, 2003, p. 4). Although project-based learning is viewed as a new trend, it has origins that date back to early progressive educators (Pecore, 2015). Project-based learning is rooted in the

progressive education movement, a movement that promoted more student-centered and experiential approaches to education that support deeper learning through active exploration of real-world problems and challenges (Pellegrino & Hilton, 2012; Peterson, 2012). These early progressive educators believed that students should construct knowledge in a way that was meaningful for them. Therefore, the project-based learning model is much more than just students completing projects in the classroom. Project-based learning is defined by students working together to create solutions to authentic and real world problems posed in the classroom (Holmes & Hwang, 2016).

The early advocates of students learning by doing began can be traced to Confucius, Aristotle and Socrates, where their techniques of questioning, inquiry and critical thinking are evident in the project-based classroom of today (Boss, 2011). Since the early 1900s, educators such as John Dewey have stressed the benefits of student-centered, hands-on learning. Dewey (1938) argued against the traditional view of students being passive receivers of information in schools and rallied for more experiential learning experiences. Dewey challenged the traditional view of the student as a passive recipient of knowledge (and the teacher as the transmitter of a static body of facts). He argued instead for active experiences that prepare students for ongoing learning about a dynamic world. As Dewey pointed out, "Education is not preparation for life; education is life itself" (as cited in Boss, 2011).

Dewey (1948) believed that children make meaning and construct knowledge through the continuous reconstruction of their existing meanings as a result of new experiences they encounter. In other words, children learn by doing (Dewey, 1938). For that reason, he believed that children not content should be the focus of teaching. While

Dewey (1938) recognized the need for curriculum, he argued that it is the responsibility of the educator to establish aims and activities, but not to be restrained by them. In essence, the educator should be guided by the needs of the students who enter are classrooms. Dewey (1959) believed that an educational experience must fuse the interests of the individual and society, that individual development was dependent upon community. He also believed that the process of inquiry went to the heart of the educative experience.

Like Dewey, Montessori and Piaget also challenged the traditional view of education. Montessori showed through example that education happens "not by listening to words but by experiences upon the environment." The Italian physician and child-development expert pioneered learning environments that foster capable, adaptive citizens and problem solvers (Boss, 2011). Piaget helped us understand how we make meaning from our experiences at different ages. His insights laid the foundation for the constructivist approach to education in which students build on what they know by asking questions, investigating, interacting with others, and reflecting on these experiences (Boss, 2011). Piaget believed that children construct an understanding of the world around them, experience discrepancies between what they already know and what they discover in their environment, then adjust their ideas accordingly.

Inspired by the philosophies of John Dewey, William Heard Kilpatrick developed the project method that is cited as the first formalization of a project-based learning model (Peterson, 2012). His device is child-centered and based in constructivism. Educators who use the project method allow the student to solve problems with as little

teacher direction as possible. With this method, the teacher is seen more as a facilitator than a deliverer of knowledge and information (Peterson, 2012).

In the COL 103 class, the teacher was more of a facilitator who guided the students in the learning process. Effective teachers provide experiences so that students can learn by doing (Cohen, 1999). Progressive theorists have embraced the concept that teachers serve as guides for problem solving and scientific inquiry (Dewey, 1938). This theory supported this action research study because the students were given project-based learning assignments and activities that required problem solving, critical thinking and writing skills. In this class, learning was active and not passive. The goal was to improve their writing, communication and writing skills so they would be able to successfully complete COL 103. By successfully completing COL 103, the students will be able to enroll in college credit courses required for completion of their program of study.

Current Research on Project-Based Learning

Thomas Markham (2011) described project-based learning in this way: "Project-based learning integrates knowing and doing. Students learn knowledge and elements of the curriculum, but apply what they know to solve authentic problems and produce results that matter. These cannot be taught out of a textbook, but must be activated through experience" (p. 38). By incorporating project-based learning in the curriculum, students pursue solutions to nontrivial problems by asking and refining questions, debating ideas, making predictions, designing plans and/or experiments, collecting and analyzing data, drawing conclusions, communicating their ideas and findings to others, asking new questions, and creating artifacts (Blumenfeld, Soloway, Marx, Krajcik,

Guzdial, and Palincsar, 1991). Duke (2016) suggested several reasons schools should employ project-based learning. First, the skills students use during project-based learning are considered to be those "21st century skills" that schools are responsible for teaching. Second, research shows that project-based learning enhances students' knowledge and critical thinking skills. Additionally, project-based learning approaches are more engaging to students than traditional teaching approaches.

Project-based Learning and College Students. Krishnan, Gabb and Vale (2011) conducted research with college students that had implications for both project-based learning and problem-based learning. Similar to COL 103, the course was revised from lecture based to more interactive, group projects and assignments. Krishnan et al (2011) found that collaboration skills learned through project-based learning were essential to positive learning outcomes in their study of first-year students. Groups who adopted a collaborative learning culture emphasized gaining as much knowledge as possible in the team setting. Krishnan et al (2011) observed that this group exhibited excellent communication (oral and written), high levels of participation and mutual respect, and that most students in these teams "used deep learning approaches…[and] focused on finding more than one solution to each program" (Krishnan et al., 2011, 74). Therefore, the researchers considered these groups the most successful in encouraging education for all members, compared to other types of group cultures that were focused on finishing the project or maximizing their grade.

Project-Based Learning Instruction in Developmental Courses. COL 103 was a course designed for students who were taking developmental courses at SCC. Therefore, the teacher-researcher was interested in finding developmental courses that

implemented project-based learning. Butler and Christofili (2014) conducted a study that tracked the application of project-based learning during four separate college terms at Portland Community College in Portland, Oregon. Each term followed a different learning community of first-term college students enrolled in a program of developmental education (DE), reading, writing, math, and college survival and success (CSS) courses. The study documented the journey from a pilot project-based learning model to the improved model used today, focuses on each term's project-based learning goal of increasing student success, and outlines how the project-based succeeded or failed based on student demonstration of their learning community's intended core outcomes. The case study examined three main collaborative learning model components:

1. A developmental education population
2. A learning community integrating up to four classes
3. Project-based learning (as a term-long question or challenge)

The application of this learning model took place in the context of Project DEgree (PDE). This program took diploma or General Education Diploma (GED)-holding students, generally between the ages of 18 to 26 (with some exceptions), and placed them in a cohort integrating several courses through a cohesive, term-long project. The CSS teacher was also the student's Resource Specialist, who served as a mentor and an advisor and who provided wraparound support. Participating students tended to be more at-risk than a comparative demographic in the college, according to demographic data collected between our population and a comparison group. The first two terms of project-based learning were unsuccessful, but revisions to the course made the next two terms very successful.

Butler and Christofili (2014) discovered after 4 terms of implementing project-based learning in the course that project assignments shaped around an open-ended project question led to true student discovery of an answer or solution to a project-based learning question or challenge. Ultimately, the lessons learned show that project-based learning worked best, no matter whether in a single or multiclass community, when teachers respect students' need for autonomy and ownership over discovery within a setting of guided rather than steered rigor.

The findings from this study that were critical for the teacher-researcher were (a) to generate early student buy-in by making students feel that the project is relevant to their lives and by engaging them in multiple levels of learning; and (b) clearly connect the project question to course material so that students have a sense of integrated learning (Butler & Christofili, 2014). The researchers stressed the importance of engaging the students throughout the course. The demographics of the study was similar to the students in the COL 103 course used for this action research study. Therefore, the teacher-researcher worked with the lead instructors to ensure students were engaged throughout the course to ensure student success in the course.

Project-Based Learning Assignment to Increase First-Year College Student's Comfort with Interdisciplinarity. Hutchison (2016) conducted a large, interdisciplinary, project-based assignment, the Empathy Project, which allows students to delve into and increase comfort and skill with interdisciplinary thinking and collaborative learning, while improving the core college skills of written and oral communication, ethical and quantitative reasoning, and critical thinking. The context of Focused Inquiry is a required year-long seminar-style class that develops and hones the

core skills deemed necessary for success in college and beyond: critical thinking, written and oral communication, ethical reasoning, civic responsibility, quantitative reasoning, information fluency, and collaborative learning. The Empathy Project was a collaborative, project-based learning assignment incorporated in the Focused Inquiry course.

Project-based learning increased content mastery because it was organized around collaboration, authenticity, and student driven inquiry. In addition, teachings utilizing project-based learning have designed and implemented challenging, authentic, and student-centered projects to increase student engagement (Blumenfeld, et al., 1991). Multiple studies have reported that students in project-based learning taught classrooms demonstrated improved critical-thinking and problem-solving skills (Blumenfeld et al., 1991, Tretten & Zachariou, 1995).

Hutchinson (2016) found that to make this project more successful in the future, students required more time to complete assignments. However, the students showed evidence of gaining many academic skills during the Empathy Project. The sales pitch materials and test improved writing skills, the presentation of the sales pitch improved oral communication, researching the topic helped to improve research and analytical skills and group discussions and assignments improved collaboration skills. Harris and Alexander (1998) described learning as "enhanced" when the subject matter is "functional, relevant, and stimulating" (p. 116). Therefore, project-based learning provides the most optimal experience for student learning.

Social Justice Issues

This two-year community college offers certificates and associate degree programs with campuses in Spartanburg, Cherokee and Union counties in South Carolina. Companies like BMW, Michelin, Spartanburg Regional, ESAB, Mary Black, and Denny's Corporation regularly hire graduates from Industrial & Engineering, Health & Human Services, and Business & Computer Technology programs (SCC Website, 2016). Because the school offers over 100 programs of study that students can complete in 4 months to 2 years, the campuses attract students of all ethnicities, gender, sexual orientation, abilities, and age.

Over the last few years, the administration has worked to ensure that the campus is welcoming to all students. The All-College meetings provided presentations and training to help faculty and staff understand terms like Diversity and Inclusion. The President stressed that we should be committed to the mission of preparing students for success regardless of what they look like or where they come from. Yet, COL 103, a course designed to help underprepared students transition to college has been ineffective. More than half of these students will be placed into developmental education as a result of their scores on reading, writing, and mathematics entry assessments, yet there is little evidence that this improves student outcomes (Hughes & Scott-Clayton, 2011). Research from Hughes and Scott-Clayton and others support the fact that colleges need to do more than place these students who are often first-generation, minority and lower income into a COL 103. Hughes and Scott-Clayton (2011) suggest one method to improve academic success for these students "is to consider what is included in developmental education courses" (p. 27).

Therefore, this action research will focus on adding the project-based learning assignments to COL 103 to enhance students' writing, communication and interpersonal skills to make them better prepared to complete the COL 103 course as well as subsequent courses in their program of study. Dana and Yendol-Hoppey (2014) state that social justice is a person's desire to effect social change by exploring questions of race, class, gender, or ability. Therefore, teachers must find ways to improve academic success for all of our students. How can we continue to lose first-generation, minority, and lower income students each year and not find ways to address this issue? The teacher-researcher felt a responsibility to help SCC address issues of retention and completion that plague our students. In line with social reconstructionists, the teacher-researcher used her classroom to equip the students with skills to be successful in college, in the workplace and in life. As an educator, the teacher-researcher had a responsibility to give students tools to reconstruct their world. The assignments for the course focused on racism, sexual identity, immigration, and healthcare.

Moving towards social justice requires us to not only focus on oppression that occurs at the various levels, but also address the privileges that we exercise at the expense of others. "Privilege exists when one group has something of value that is denied to others simply because of the groups they belong to, rather than because of anything they've done or failed to do" (Johnson, 1997, p. 17). Understanding the complexity of these terms, their relationship to one another, and our responsibility is critical to those who are educators. Our ability to understand these terms will shape how we prepare lessons, activities, and assessments as we teach a diverse group of learners. "When we are involved in the pursuit of social justice, we gain a sense of purpose that makes our

lives more fulfilling, more satisfying. Our work, in turn, makes society more humane and further enhances our sense of purpose" (Weber, 2010, p. 19).

I believe that education is the civil rights issue of our generation. Moreover, if you care about promoting opportunity and reducing inequality, the classroom is the place to start. Great teaching is about so much more than education; it is a daily fight for social justice. (Duncan, 2009, n.p.)

Conclusion

This chapter explored the history of project-based learning, theoretical frameworks, project-based learning and the college student and social justice issues related to the action research study. The goal of the revised curriculum for COL 103 was to help students gain the skills (writing, communication and interpersonal) that are necessary in college, in the workplace and throughout life by using project-based learning assignments focused on their experiences and current issues in society.

The literature provided evidence of the use of project-based learning assignments and student learning. Thomas Markham (2011) describes project-based learning in this way: "Project-based learning integrates knowing and doing. Students learn knowledge and elements of the curriculum, but apply what they know to solve authentic problems and produce results that matter. These cannot be taught out of a textbook, but must be activated through experience" (p. 38). Duke (2016) suggests several reasons schools should employ project-based learning. First, the skills students use during project-based learning are considered to be those "21st century skills" that schools are responsible for teaching. Second, research shows that project-based learning enhances students' knowledge and critical thinking skills. Harris and Alexander (1998) describe learning as

"enhanced" when the subject matter is "functional, relevant, and stimulating" (p. 116). Therefore, project-based learning provides the most optimal experience for student learning.

In Chapter 3, the site, participants, and methodology to be employed by this teacher-researcher will be explained.

CHAPTER 3

METHODOLOGY

The mission statement at Success Community College (pseudonym, SCC) is to prepare all students for success. The students completed a placement test administer by the Admissions Office to determine the most appropriate classes for the students' ability. COL 103 was a course required for students who received low scores in reading, English and/or math. The purpose of this course was to equip the students with writing, communication and interpersonal skills that were necessary for success to complete COL 103 and the subsequent courses in their program of study. However, the curriculum for the course did not include any activities or assignments to improve the students' skills in these areas. As a result, the students had not been successful in completing COL 103 or subsequent courses due to poor writing, communication and interpersonal skills.

To address these issues, project-based learning assignments that included a writing component and group activities focused on communication and interpersonal skills were added to the curriculum for the COL 103 course. The course was restructured to include one day of inquiry and one day of project-based learning assignments and activities. To accomplish this goal, the key components of project-based learning according to Grant (2002) were:

- An introduction to "set the stage" or anchor the activity.
- A task, guiding question or driving question.
- A process or investigation that results in the creation of one or more sharable artifact.

- Resources, such as subject-matter experts, textbooks and hypertext links.
- Scaffolding, such as teacher conferences to help learners assess their progress, computer-based questioning and project templates.
- Collaborations, including teams, peer reviews and external content specialists.
- Opportunities for reflection and transfer, such as classroom debriefing sessions, journal entries and extension activities.

This chapter will discuss the convergent mixed methods action research, the research design, research site, role of the researcher, participants and data collection methods employed to answer the research questions for this study. The research questions for this study were:

- What is the impact of adding project-based learning assignments on students writing skills in the COL 103 course?
- How does project-based learning assignments impact the communication skills of students in the COL 103 course?
- How does project-based learning assignment improve the interpersonal skills of students in the COL 103 course?

Research Design

Action research is especially important for classroom teachers as it allows them to analyze the best methods possibly to improve the effectiveness or quality of work demonstrated by either the teacher or the students involved in the study (Sagor, 2000). Therefore, action research allowed the teacher-researcher an opportunity to make changes to the COL 103 course in hopes of improving student learning. More importantly, action research is characterized as research that is done by teachers for themselves (Johnson,

2008). Action research is not done "to" or "by" other people; it is research done by particular educators, on their own work, with students and colleagues (Mertler, 2014). Action research gave the teacher-researcher the opportunity to use project-based learning to conduct research and reflect on its application to improve student learning in COL 103.

After the research questions were identified for the action research study, the teacher-researcher created a research plan that supported a convergent mixed methods action research design. In this design, both quantitative and qualitative data was collected from the students. "The true benefit lies in the fact that the consideration of both types of data may provide a better understanding of the research problem than either type of data alone" (Mertler, 2014, p. 103). It was the belief of the teacher-researcher that the feedback from the students who completed the project-based learning assignments would strengthen the quantitative data. To have qualitative data that supported the quantitative data would add rigor and trustworthiness to the study. Using the different processes could also lead to unexpected or emergent themes and information that would not have otherwise have come to light (Driscoll, Appiah-Yeboah, Salib, P., & Rupert, 2007).

Research Site

Since 1963, the institution that is now Success Community College (SCC) has served students in South Carolina, providing them "affordable access to high-quality technical, transfer and lifelong professional and personal development programs in a teaching and learning environment that prepares students for success" (*SCC Academic Catalog*, 2018, p. 17). Today, the college maintains five locations in three counties,

offering diplomas, certificates, associate degrees, and non-credit programs designed to improve the lives of its students.

The fall 2018 student body consisted of 2,074 males and 2,854 females with 2,232 of those students enrolled full-time and 2,696 enrolled part-time. The ethnic background of our students was Caucasian (3,080); Black/African American (1,101); Hispanic (351); Asian (181) and Other (215). The 3,802 of our students were residents of Spartanburg County. SCC has a growing number of non-traditional students, but 2,960 students were 18-25 years old (SCC Office of Evaluation, Accreditation and Planning, 2018).

Sample

Since 2013, the majority of students who were enrolled in COL 103 were first-generation; students of color; males; lower socioeconomic status; residents of the Upstate (primarily Spartanburg and Cherokee counties) and scored low on both their reading/English and math placement tests (SCC Office of Evaluation, Accreditation and Planning, 2018). Because this course was designed to help students gain critical skills (writing, communication and interpersonal) for success, the teacher-researcher requested that the enrollment for her section be limited to 15 students. A small number of students allowed more engagement and interaction between the students as well as with the teacher-researcher.

The demographics of this course were 15 students between 17-25 years of age, 4 African-American males (27%), 3 African-American females (20%), 4 Caucasian males (27%), and 3 Caucasian females (20%) and 1 Asian female (6%). All students in the course were classified as first-generation, low income (based on financial aid records) and enrolled in at least one developmental course in reading, English or math.

Ethical Considerations

"Making sure that action research adheres to ethical standards is a primary responsibility of the teacher-researcher" (Mertler, 2014, p.105). Because the action research project incorporated project-based learning assignments within the assigned class day and time, the teacher-researcher received permission from the Associate Vice President of Instruction. Although the student-participants were adults, the teacher-researcher distributed a letter explaining the purpose the course, the extent of participation, the type of data that would be collected, how this data would be used and the teacher-researcher's commitment to confidentiality and anonymity of the student-participants. After the letter of consent was signed by the student-participants, a copy was filed in the offices of both the teacher-researcher and the Associate Vice President of Instruction.

Because the findings of this action research study are important to student learning and will be shared with the administration, faculty and campus community, the teacher-researcher used codes to protect the identity of the student-participants. The teacher-researcher ensured that the confidentiality of all student-participants by creating reports with aggregate data so no individual students or their scores will be reported anywhere. So, the students were assured of confidentiality and anonymity during the course. All records related this this study were stored on the personal computer of the teacher-researcher that was secured by password or locked in a file cabinet only accessed by the teacher-researcher.

"Teacher-researchers are teachers first. They respect those with whom they work, openly sharing information about their research" (Hubbard & Power, 1999, p. 64). Once

the data was analyzed, the outcomes were shared with the student-participants. The teacher-researcher created an Infographic and sent it to their email addresses. This method of sharing was necessary because the student-participants would have completed the course before the analysis was completed. However, the teacher-researcher wanted the students to be aware of the results and how their participation will help SCC improve student success in COL 103.

Intervention

COL 103 was the first course that students take as a student to navigate the college experience at SCC. For the 2018-19 academic year, the theme for the COL 103 course is "What Tools Do I Need To Be Successful?" All instructors were encouraged to plan activities and assignments around this theme to help students learn more about themselves, tools for college success, their chosen field and society. The goal at SCC is to produce graduates who model good citizenship on campus, on the job, in the community and in their families. With that in mind, the teacher-researcher created project-based learning activities and assignments for COL 103.

On Tuesdays, the teacher-researcher introduced the topic for the week and "guests" from Support Areas visited to provide information and resources then the student-participants spent the rest of the class using the computer to research the topic. On Thursdays, the class began with a Class Check-in. This allowed the teacher-researcher to address any issues or concerns of the student-participants. This was followed group discussions and activities centered around the topic of the week. For the final assignment, the student-participants created a PowerPoint presentation and outline for the class that

addressed the theme of the course. The weekly topics were incorporated in the final project.

Below, the topics to answer our driving question, what tools do I need to be successful?", for the 7.5 week course were:

- Week 1: When I grow up….my career choice
- Week 2: What I Need…Time Management/Study Skills
- Week 3: Who Am I….Personality Type/Career Assessment
- Week 4-How To Manage Feelings (Mine and Others)….Emotional Intelligence
- Week 5-How to Live My Best Life……Relationships
- Week 6-How to Deal with Differences….Diversity (Race, Gender, Sexuality, Politics)
- Week 7-Final Presentations

Following the project-based model, each week, the student-participants were reminded of the guiding question for the course, they were given time to research the topic of the week through research journals, articles, and websites, the teacher-researcher made time to check-in with each student as well as groups, the students worked together on assignments and activities. The week ended with the students reflecting and sharing on the topic.

Positionality

In this action research study, I sought ways to improve student learning in the COL 103 course. Through action research, "teachers are encouraged to become continuous, life-long learners in their classrooms with respect to their practice" (Mertler, 2014, p. 13). Because I was interested in finding ways to improve student learning, I

served as the teacher-researcher. This role was most appropriate based on the definition of MacLean and Mohr (1999). They stated that “teacher-researchers raise questions about what they think and observe about their teaching and their students' learning. They collect student work in order to evaluate performance and to examine the teaching and learning that produced it" (Maclean & Mohr, 1999, p. x).

The teacher-researcher used action research to better understand the impact of project-based learning on the writing, communication and interpersonal skills of students enrolled in the COL 103 course. This teacher-researcher has taught the COL 103 course at SCC since 2015. Because I work on the campus, serve as an advisor and mentor, I am an insider. In addition to teaching COL 103, I serve as the Director of Student Outcomes Assessment, chairperson for the Learning Outcomes Assessment Committee and a member of the Curriculum Review Committee. In those roles, I work with faculty and staff to improve student learning in courses, programs and activities. Therefore, I was granted permission by the Dean and Department Chair to revise the course and the syllabus. They understand my role as a teacher-researcher who is seeking to improve student learning and success in the COL 103. Success in the COL 103 aligns with the mission of SCC to prepare all students for success.

Data Collection Instruments

This was a convergent mixed methods action research study that collected quantitative and qualitative data to answer the research questions.

In this study, quantitative data were collected from the following sources:

- Pre and Post-writing assignment
- Observation Checklist

- Final Assignment-Artifact
- End of the Course survey

The qualitative data for this action research study was collected from the following sources:

- Observation checklist notes
- Interview with each student
- The open ended questions on the End of the Course survey

Writing Skills rubric. The writing skills rubric was a researcher-created instrument to determine the improvement of the writing skills before and after the intervention of the project-based learning assignments. The students were given a writing assignment (Appendix B) that focused on their goals and dreams as a young child, a college student and as a working professional. The teacher-researcher administered the writing assignment to the entire class of 15 students during the first week and the last week of class.

The teacher-researcher chose the rubric from the English Department (Appendix C) that is currently used for students in developmental English and reading courses. In developing the instrument, the teacher-researcher worked with the Department Chair and two faculty members in the English Department. The English faculty ensured that the assessment aligned with the program learning outcomes of the department. The goal was to provide the same level of academic integrity for the instruments used by the English faculty. Again, the goal of COL 103 is to prepare students for subsequent courses, such as English 101. The scale for the rubric was 0-inadequate; 1-needs improvement; 2-

meets expectations and 3-exceeds expectations. The criteria was broken out into four areas: structure; grammar; language and content.

Final Assignment (Artifact) rubric. The final assignment (artifact) rubric was a researcher-created instrument to measure the written and oral communication skills of the students at the end of course. The categories on the rubric included:

- Appearance and Delivery of the Presenter
    - Vocal Tone/Volume
    - Appearance-Business Casual (Dressing for success)
    - Eye Contact
    - Professional Language
- Organization and Required Components
    - Title Slide
    - Education/Training
    - Salary/Job Outlook
    - Tools for Success
- Preparation and Planning
    - Appropriate Time Length
    - Transitions between slides
    - Outline of Presentation for class

In developing the rubric, the teacher-researcher worked with the Senior Instructor for Speech 205 to ensure that the key components of the final assignment could be adequately measured for this action research study. The teacher-researcher selected the rubric from the English and Speech departments (Appendix E) that is commonly used to

grade presentations. Again, the goal was to provide the same level of academic integrity for the instruments used by the faculty in the college credit courses, which prepares the students for the rigors of college courses.

End of the Course survey. On the last day of the course, the teacher-researcher allowed the students time to complete the End of the Course survey. This instrument was revised by the Director of Instructional Support in 2010 and is used for all courses offered at SCC. Because the structure of the COL 103 course changed for fall 2018, the teacher-researcher requested to have additional questions that addressed the project-based learning component of the course. The survey (Appendix F) had 19 Likert scale questions with a range of 1 to 4: 1-Strongly Disagree; 2-Disagree; 3-Agree and 4-Strongly Agree. The questions focused on the following areas:

- Course
- Instructor
- Classroom Environment
- Academic Advisor

Questions 20-25 were questions added to the survey specifically for the course taught by the teacher-researcher. The questions were as follows:

- The weekly assignments and activities were helpful.
- I enjoyed being an active participant in the learning process.
- I feel more comfortable in my ability to write, to work with others and to clearly communicate information.
- I will definitely use the skills gained in this course in my future courses.

- The structure of this course (1-day inquiry and 1-day application) contributed to my success.
- I would rate this course: Poor____ Fair____ Good_____ Excellent_____

Observation Checklist. The teacher-researcher selected the rubric used by the Speech faculty (Appendix D) during assigned group projects. This rubric was selected as the Speech faculty considered experts in the areas of communication and interpersonal skills with over 25 years in the field. To determine if there was any change from the beginning of the course to the end of the course, the teacher-researcher assigned a numerical score to indicate level of group participation as follows: 1-few members participating; 2-some members participating; 3-most members participating and 4-all members participating. The teacher-researcher observed the behavior of the groups that were outlined on the rubric that included:

- agreeing on a plan
- beginning work promptly
- working without teacher assistance
- sharing responsibilities
- having relevant conversations
- evaluating new information
- giving each other a chance to speak and staying on task

The teacher-researcher requested that the class of fifteen students meet in a smart room equipped with computers and technology to aid in the project-based learning assignments. During the group activity, the teacher-researcher recorded the behaviors of the students. The goal of the weekly group work was to improve the interpersonal skills

of the students. Because employers stated that this was an area of improvement for our graduates, the teacher-researcher worked with the Director of Career Services and the Internship Coordinator to develop an instrument to help hone these skills. The teacher-researcher will use the notes from the checklist to look for common themes or issues noted during the group activities.

Interviews. Interviews were conducted with each student in the course to ascertain their thoughts as to the effectiveness of project-based learning assignments and activities. At the beginning of the course, the teacher-researcher informed the students that they would be asked to participate in an interview. Being sensitive to other responsibilities, the teacher-researcher set a time of 15-20 minutes for each interview. This allowed students to meet with the teacher-researcher before and after class as well as another day that worked best for the student. The teacher-researcher allowed the students to schedule during the week of November 19th. The teacher-researcher shared with each student before beginning the interview:

As you know, this course, COL 103, was offered in a different format this year to improve the writing, communication and interpersonal skills. Therefore, this course was structured with one day of inquiry and one day of group activity and discussion.

Our goal was to equip students with the tools and skills necessary for success. As an active participant in this course, I want to hear your thoughts, comments and suggestions about this course.

The teacher-researcher limited the interview to six questions (Appendix G) that were deemed to be the most important as determined by the Associate Vice President of

Instruction, the Dean of Arts and Sciences, and department chair. Rather than refer to Appendix G, it would be great to list those questions here.

End of the Course Survey-Open Ended Question. Because the structure of the COL 103 course changed for fall 2018, the teacher-researcher requested to have an additional question that addressed the project-based learning component of the course. The survey (Appendix F) had 19 Likert scale questions with a range of 1 to 4: 1-Strongly Disagree; 2-Disagree; 3-Agree and 4-Strongly Agree. The teacher-researcher received approval from the Director of Instructional Support to add an open-ended question related to the project-based learning assignments at the end of the survey. The students-participants were asked to give feedback to the question. The responses to the question, what suggestions do you have to improve the course? Below, the research questions, the instruments and the type of data collected are displayed in Table 3.1.

Table 3.1

Research Questions and the Data Collected

Research Question	Instrument	Data Collected
What is the impact of adding project based learning assignments on students writing skills in the COL 103 course?	Writing Skills rubric	Quantitative
	Final Assignment (Artifact) rubric	Quantitative
	Interviews	Qualitative
How does project-based learning assignments impact the communication skills of students in the COL 103 course?	Final Assignment rubric	Quantitative
	Observational Checklist	Qualitative

(continued)

Research Question	Instrument	Data Collected
How does project-based learning assignment improve the interpersonal skills of students in the COL 103 course?	Observational Checklist	Qualitative
	End of the Course Survey with open ended question	Quantitative & Qualitative

Data Collection Methods

The length of the COL 103 course was only 7.5 weeks so the teacher-researcher created a data collection schedule. The schedule was necessary to ensure that there was sufficient for meaningful student learning and for assessment activities. The schedule for data collection is displayed in Table 3.2

Table 3.2

COL 103 Data Collection Schedule

Activity	Instrument	Week
Pre-Writing Assignment	Writing Assignment Rubric	Week 1
Observation Checklist	Observation Checklist Rubric	Weeks 1, 3, and 6
Final Presentation	Final Presentation Rubric	Week 7
Post-Writing Assignment	Writing Assignment Rubric	Week 7
End of the Course Survey	End of the Course Survey	Week 7
Interviews	Structured Interview Questions	Week after classes ended

Data Analysis

For this convergent mixed method action research study, the quantitative and qualitative data was analyzed to determine the impact of project-based learning assignments on the writing, communication and interpersonal skills of students enrolled in the COL 103 course. The scores collected from the Writing Assignment rubric, the Final Assignment rubric and the End of the Course Evaluation was analyzed by mean, median and mode for the students and the class. The qualitative data collected from the Observational Checklist, Interviews and the End of the Course evaluation will be used to find patterns and themes from the weekly observations and notes from the teacher-researcher. To strengthen the action research study, the teacher-researcher plans to triangulate the data collected from the multiple instruments during the course. Triangulation is the "process of relating multiple sources of data in order to establish their trustworthiness or verification of the consistency of the facts while trying to account for their inherent biases" (Mertler, 2014, p. 11).

Rigor and Trustworthiness. The rigor and trustworthiness is critical to any study. Krefting (1991) stated that researchers recognize the worth and value of the work by assessing the reliability and validity of the work. Therefore, the teacher-researcher followed Guba's model that "identifies four aspects of trustworthiness that are relevant to both quantitative and qualitative studies: truth value, applicability, consistency, and neutrality" (as cited in Krefting, 1991, p. 215). The teacher-researcher has addressed the truth-value aspect by working with a team at SCC to ensure the best research design and instruments to address the research questions. It is the hope of the teacher-researcher that the findings can be applied to other COL 103 sections to improve writing,

communication and interpersonal by managing any threats to external validity. The teacher-researcher has worked with a team of faculty and staff familiar with the Problem of Practice to design a study with instruments (quantitative) that could be administered by different people and produce the same results. However, the teacher-researcher understands that the qualitative component is more challenging due to the nature of qualitative research. Finally, the teacher-researcher will include instrumentation tested and/or currently used at SCC and randomization to minimize bias in this action research study. Krefting (1991) argued that the best way to ensure that all four aspects of trustworthiness are achieved is by triangulation of the data. The teacher-researcher will use triangulation as a part of this mixed methods action research study.

Conclusion

COL 103 was a course required for students who received low scores in reading, English and math. The purpose of this course was to equip the students with writing, communication and interpersonal skills that were necessary for success to complete COL 103 and the subsequent courses required as part of their program of study. However, the syllabus for the class did not include any activities or assignments to improve the students' these skills. As a result, the students have not been successful in completing COL 103 or subsequent courses due to poor writing, communication and interpersonal skills. To address this issue, project-based learning assignments that included a writing component and group activities focused on communication and interpersonal skills were added to the curriculum for the COL 103 course.

The teacher-researcher sought to answer the following research questions by using convergent mixed methods action research:

- What is the impact of adding project based learning assignments on students writing skills in the COL 103 course?
- How does project-based learning assignments impact the communication skills of students in the COL 103 course?
- How does project-based learning assignment improve the interpersonal skills of students in the COL 103 course?

In this chapter, the teacher-researcher provided detailed descriptions of the research site and the sample she chose for the study. The teacher-researcher described the instruments, the data collection and the process to analyze the data. The results and interpretation of the data for this this action research study will be discussed in Chapter 4.

CHAPTER 4

FINDINGS

COL 103 is a course required for students who are taking two developmental courses at the college. The purpose of this course is to equip the students with writing, communication and interpersonal skills that are necessary for success during college and beyond. However, the Assessment Committee that the teacher-researcher serves as chairperson made two significant findings based on end of the year assessment for COL 103: 1) over half of the students (52%) failed to successfully complete the final project that required strong writing and communication skills and 2) the syllabus for the class did not include any activities or assignments to improve these skills prior to the final project. As a result, the students have not been successful in completing COL 103 or subsequent courses due to a lack of these skills.

Therefore, the teacher-researcher met with the Dean, Department Chair and the lead instructors to discuss ways to incorporate assignments and activities that involve writing and communication skills in the curriculum. After many meetings, discussions and research to address the issues concerning the COL 103 curriculum, the Dean, Department Chair and lead instructors agreed that the curriculum should be more student-centered. A more student-centered approach would reduce time spent on lectures and increase time spent in class on activities that engage students in analysis, evaluations, problem-solving, and processing information (McKeachie, 1954; Ach, 1951; Albrecht & Gross, 1948).

Project-based learning was selected by the teacher-researcher because it supports a more student-centered and experiential approach to education that improves student learning and success (Pellegrino and Hilton, 2012). Beginning fall 2018, COL 103 will include one day of inquiry and one day of project-based learning assignments each week. The project-based learning assignments will include a writing component and group activities focused on communication and interpersonal skills. The goal of the revised curriculum for COL 103 is to help students gain the skills (writing, communication, interpersonal) that will be necessary in college, in the workplace and throughout life.

Project-Based Learning Benefits to Students

Project-based learning is rooted in the progressive education movement, a movement that promoted more student-centered and experiential approaches to education that support deeper learning through active exploration of real-world problems and challenges (Pellegrino and Hilton, 2012; Peterson, 2012). Dewey (1938) challenged the traditional view of the student as a passive recipient of knowledge (and the teacher as the transmitter of a static body of facts). He argued instead for active experiences that prepare students for ongoing learning about a dynamic world. Therefore, project-based learning prepares students for academic, personal, career success, and readies young people to rise to the challenges of their lives and the world they will inherit (Buck Institute for Education, 2018).

According to research by Finkelstein, Hanson, Hirschman, and Huang (2010), students demonstrate better problem-solving, critical thinking and writing skills in project-based learning than in more traditional classes and are able to apply what they learn to real-life situations. Teaching for meaning and understanding is the goal of

education. Research indicates that sustainable learning occurs when students are intrinsically motivated to engage in the learning process (Pink, 2005; Wagner, 2012). Meaningful learning occurs when students receive challenges that encourage setting short to long-term goals, making decisions, taking actions, receiving feedback, and demonstrating knowledge and skills while engaged in the learning process (Wagner, 2012). The same attributes for meaningful learning are present in project-based learning.

Duke (2016) suggested that schools should employ project-based learning for two reasons: 1) the skills students use during project-based learning are considered to be those 21st century skills that schools are being called to teach 2) project-based learning enhances students' knowledge and critical thinking skills. The research questions guiding this action research study are:

- What is the impact of adding project-based learning assignments on the writing skills of students enrolled in the COL 103 course?
- How does project-based learning assignments impact the communication skills of students in the COL 103 course?
- How does project-based learning assignment improve the interpersonal skills of students in the COL 103 course?

Significance of Study

Effective teachers provide experiences so that students can learn by doing (Cohen, 1999). One of the major ideas that is critical for the COL 103 course is that teachers serve as guides for problem solving and inquiry. The teacher-researcher restructured the class so the students will have one day of inquiry and one day of working on a project-based learning assignment or activity, which will engage the students in the education

experience. As educators, the challenge is to help students move from merely learning facts to gaining the skills necessary to use the facts. John Dewey (1938) argued for "children to learn through the senses with objects, to discover for themselves, and he called for varying activities for children" (p. 10). This learning theory supports the action research study because the students were assigned activities that required writing, communication and interpersonal skills. In this class, learning was active and not passive.

After the research questions were identified for the action research study, the teacher-researcher created a research plan that would support a convergent mixed methods action research design. In this design, both quantitative and qualitative data was collected from the students. "The true benefit lies in the fact that the consideration of both types of data may provide a better understanding of the research problem than either type of data alone" (Mertler, 2014, p. 103). In this study, quantitative data was collected from the following sources:

- Pre and Post-writing assignment
- Observation Checklist
- Final Assignment-Artifact
- End of the Course survey

The qualitative data for this action research study was collected from the following sources:

- Observation checklist notes
- Interview with each student
- The open ended question on the End of the Course survey

It is the belief of the teacher-researcher that the feedback from the students who completed the project-based learning assignments will only strengthen the quantitative data. Using the different processes can also lead to unexpected or emergent themes and information that would not have otherwise have come to light (Driscoll, Appiah-Yeboah, Salib, P., & Rupert, 2007).

This chapter will describe the results and interpretation of my action research study to implement project-based learning in my COL 103 course. The results of each instrument will be described.

Description of Data Collection

The data collection consisted of a pre- and post-writing assignment focused on goals and dreams; an observation checklist used during group activities and assignments; a final project using the weekly topics; interviews and an End of the Course survey. The teacher-researcher began the data collection process during the first week of class in October with 15 students. Data was collected for 7.5 weeks, the length of the course. The results from each instrument are listed below:

Writing Assignment Results

The students were given a writing assignment (Appendix B) that focused on their goals and dreams as a young child, a college student and as a working professional. The teacher-researcher administered the writing assignment to the entire class of 15 students during the first week and the last week of class. The teacher-researcher chose the rubric from the English Department (Appendix C) that is currently used for students in developmental English and reading courses. Therefore, this rubric was most appropriate to their level and ability because all of the students are taking developmental English

and/or reading. The scale for the rubric was 0-inadequate; 1-needs improvement; 2-meets expectations and 3-exceeds expectations. The criteria was broken out into four areas: structure; grammar; language and content.

Intervention for the writing assignment was conducted by the teacher-researcher during weeks two through six. During this timeframe, students were required to write a response to the topic of the week. Then, the weekly writing assignments were reviewed by both the group members and the teacher-researcher. The purpose was to give each student feedback on content, structure and grammar as they prepared for the next assignment.

After compiling the scores using Excel, the teacher-researcher analyzed the data for the class by gender and race. The teacher-researcher noted that there was a slight increase in the pre-test (M=1.12, SD=0.63) and post-test scores (M=1.76, SD=0.54) of the students. Interestingly, the groups (males and white students) that requested more assistance and feedback from the teacher-researcher experienced improvements in their post-writing assignment scores. Overall, the students improved in the areas of structure (organization, flow of thought, transitions, and format) and content (clarity of purpose, critical and original thought, and use of examples). The students consistently gave feedback to each other related to the structure and content of the weekly writing assignments. However, the students were more reluctant to address issues related to grammar (sentence structure, punctuation) and language (mechanics and use of vocabulary) on the weekly writing assignments. Some students commented that those two areas were difficult for them to critique. Because the students did not feel competent to address issues related to grammar and language, the teacher-researcher provided the

feedback to help all students improve in these two areas. However, the post-writing scores indicated that the students continued to struggle with grammar and language related to sentence structure, punctuation, mechanics and use of vocabulary. The mean scores for the pre-writing assignment and the post-writing assignment are displayed below in Table 4.1. The highest score that the students could receive based on the rubric used for the pre-writing assignment and the post-writing assignment was a 3. A score of a 3 indicated that the student exceeded the expectations of the writing assignment.

Table 4.1

Mean Scores for the Writing Assignment Before and After Intervention By Gender and Race

Students	Pre-Writing Mean	Post-Writing Mean	Difference
Gender			
Male (8)	0.63	1.38	0.75
Female (7)	0.93	1.57	0.64
Race			
White*(7)	0.71	1.57	0.86
Black (7)	0.64	1.21	0.57
Asian (1)	2.00	2.50	0.50
All students (15)	1.12	1.76	0.64

*Students are classified as white according to school records. However, 3 of the 7 are Russian or Greek students.

After the teacher-researcher discovered that the scores of all students indicated an increase from 1.12 to 1.76 in the writing assignment scores after the implementation of

the project-based learning, the teacher-researcher examined the findings by gender and race. The male students ended the course with an increase of 0.75 on the writing assignment. Within the groups, the male students received more feedback from the group and the teacher-researcher. The same pattern was true of the white students who had an increase of 0.86 on the writing assignment.

To explain the increase in the writing assignment scores, the teacher-researcher included questions about the implementation of the project-based learning assignments to improve writing during interviews with each student at the end of the course. This will be discussed further in the triangulation of findings at the end of this chapter.

Observation Checklist Results

One of the major revisions to the COL 103 course by the teacher-researcher was group activities each week. The goal was to improve communication and interpersonal skills of students. According to our employers, these were critical skills that were lacking in our graduates that prevented them from being successful in the workplace. Again, the purpose of the revisions to the COL 103 course was to prepare students for success at SCC and beyond, including the workplace. The teacher-researcher selected the rubric used by the Speech faculty (Appendix D) during assigned group projects. This rubric was selected as the Speech faculty considered experts in the areas of communication and interpersonal skills with over 25 years in the field.

To determine if there was any change from the beginning of the course to the end of the course, the teacher-researcher assigned a numerical score to indicate level of group participation as follows: 1-few members participating; 2-some members participating; 3-

most members participating and 4-all members participating. The teacher-researcher observed the behavior of the groups that were outlined on the rubric that included:

- agreeing on a plan
- beginning work promptly
- working without teacher assistance
- sharing responsibilities
- having relevant conversations
- evaluating new information
- giving each other a chance to speak and staying on task

The teacher-researcher requested that the class of fifteen students meet in a smart room equipped with computers and technology to aid in the project-based learning assignments. The size and arrangement of the classroom were beneficial for three groups of five students working together each week. Initially, the teacher-researcher planned to assign the students to groups. Due to their random seating in the classroom, the teacher-researcher did not need to assign groups. Their seating arrangement naturally created three groups with diversity of age, gender and ethnicity. The groups were as follows:

- **Group 1**-3 males (2 black and 1 white) and 2 females (1 white and 1 black)
- **Group 2**-2 males (1 black and 1 white/Russian) and 3 females (1 white/Asian, 1 white and 1 black)
- **Group 3**-3 males (1 black/white, 1 white and 1 white/Greek) and 2 females (1 black and 1 white/Russian)

The teacher-researcher conducted the group observations each week. The scores for weeks 1, 3 and 6 by question are displayed below in Table 4.2.

Table 4.2

Scores for the Observation Checklist for Weeks 1, 3 and 6

Observed Behaviors	**Week 1**	**Week 3**	**Week 6**
Agree on agenda			
Group 1	***2***	***3***	***3***
Group 2	***3***	***3***	***4***
Group 3	***2***	***2***	***3***
Get out project materials			
Group 1	***3***	***3***	***3***
Group 2	***3***	***3***	***4***
Group 3	***2***	***2***	***3***
Share responsibilities			
Group 1	1	2	3
Group 2	2	2	4
Group 3	2	2	3
Consult primary resources			
Group 1	2	2	3
Group 2	3	3	3
Group 3	2	2	3
Relevant conversations			
Group 1	1	2	3
Group 2	3	2	4
Group 3	2	2	3
Evaluate new information			
Group 1	2	2	3
Group 2	2	3	4
Group 3	2	2	3
Stay on task			
Group 1	2	2	2
Group 2	2	3	4
Group 3	2	2	2

(continued)

Observed Behaviors	**Week 1**	**Week 3**	**Week 6**
Make decisions efficiently			
Group 1	1	2	3
Group 2	3	3	4
Group 3	1	2	2
Share essential information			
Group 1	2	2	2
Group 2	3	3	4
Group 3	2	2	2
Stay on task			
Group 1	2	2	2
Group 2	3	3	4
Group 3	2	2	2
Overall Score for all categories			
Group 1	1.94	2.19	2.75
Group 2	2.44	2.88	3.75
Group 3	1.75	2.00	2.44

Krishnan, Gabb and Vale (2011) found that collaboration skills learned through project-based learning were essential to positive learning outcomes in their study of first-year students. Groups who adopted a collaborative learning culture emphasized gaining as much knowledge as possible in the team setting. Krishnan et al. (2011) observed that this group "exhibited excellent communication (oral and written), high levels of participation and mutual respect, and that most students in these teams 'used deep learning approaches…[and] focused on finding more than one solution' to each program" (p. 74). Therefore, Krishnan et al. (2011) considered these groups the most successful in encouraging education for all members, compared to other types of group cultures that were focused on finishing the project or maximizing their grade. Therefore, the research from Krishnan et al supported the findings of the teacher-researcher.

The teacher-researcher included questions about the group activities during interviews with each student at the end of the course. This will be discussed further in the triangulation of findings at the end of this chapter.

Presentation (Artifact) Results

According to the Buck Institute of Education (2018), "students work on a project over an extended period of time that engages them in solving a real-world problem or answering a complex question. They demonstrate their knowledge and skills by developing a presentation for a real audience" (p.1). The students in the COL 103 course worked for 7.5 weeks answering the question: what tools do you need to be successful? This question allowed students to envision what success looked like for them at SCC, in their chosen career and in life. Each week, the students time of inquiry, research, discussion and group activities centered around a "tool" such as time management, resilience, emotional intelligence, personality, working with others, etc. The students created a presentation at the end of the course that they shared with the class encompassing these elements. Each student had the freedom to create the presentation using videos, interviews, personal stories, etc. "Students develop deep content knowledge as well as critical thinking, creativity, and communication skills in the context of doing an authentic, meaningful project" (BIE, 2018).

The teacher-researcher selected the rubric from the English and Speech departments (Appendix E) that is commonly used to grade presentations. The rubric assesses three main areas focused on oral and written communication skills:

- Appearance and Delivery of the Presenter
    - Vocal Tone/Volume

    - Appearance-Business Casual (Dressing for success)
    - Eye Contact
    - Professional Language
- Organization and Required Components
    - Title Slide
    - Education/Training
    - Salary/Job Outlook
    - Tools for Success
- Preparation and Planning
    - Appropriate Time Length
    - Transitions between slides
    - Outline of Presentation for class

Prior to the week scheduled for presentations, students visited the Career Closet for business attire that had been donated by local businesses, faculty and staff for students who a need for items. The Director of Career Services allowed the students to keep all the items for future presentations and/or job interviews. The business attire was important as the driving question for the course was, "what tools do you need to be successful?" and appearance was one of the categories on the rubric. The presentation showed evidence of the students' researching careers, citing sources, and incorporating the tools needed for success. Overall, the students did an excellent job during the presentations. Although each student had to answer the driving question for the course, the students demonstrated great diversity, creativity and innovation in the presentations. Each student had 5-7 minutes to answer the question. The scores for the presentation

ranged from 95 to 55 out of 100 possible points. The mean score was 85.53 for the presentations. Thanks to the assistance of the Career Center, 13 students (87%) wore appropriate business attire on the day of your presentation. The average scores for the three category were as follows:

- Appearance and Delivery of the Presenter-18 out of 25 points
- Organization and Required Components-58 out of 60 points
- Preparation and Planning-8 out of 15 points

The teacher-researcher noticed that the points deducted from the Appearance and Delivery of the Presenter category was due in large part to the failure of students to use professional language and/or issues with vocabulary and grammar. Many of the students struggled with issues dealing with vocabulary and grammar the entire course. The students did an excellent job incorporating their weekly assignments into the presentations. Only one student, who missed several classes and did not fully participate in weekly activities, had points deducted in the Organization and Required Components category. Points were deducted in the last category, Preparation and Planning, due to failure to meet the minimum time requirement and/or turn in presentation packet.

Despite a few issues, the teacher-researcher felt the students made great progress during the course of 7.5 weeks. The screenshots highlighted in Figure 4.1 are the final products of the students' work in the course. Each presentation sought to answer the question, "what tools do I need to be successful?" by using the research on the topics, weekly assignments and activities, feedback and discussion from peers and the teacher-researcher. Overall, the students did a great job of incorporating the weekly topics and assignments into the presentation.

Screenshots of a few of the student presentations are displayed in Figure 4.1.

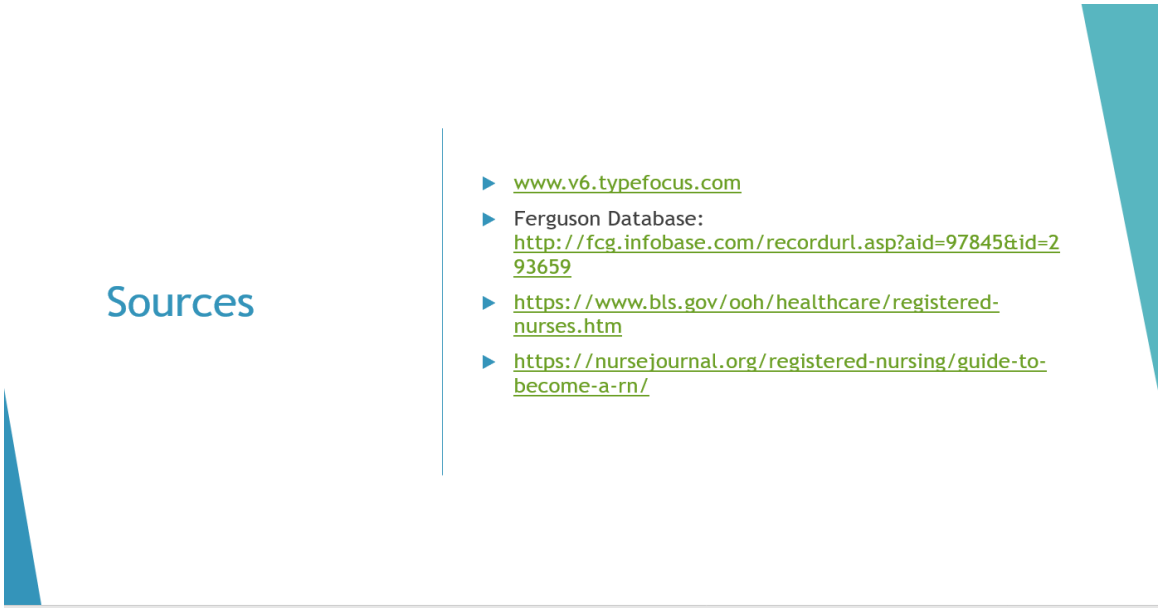

Figure 4.1 *Screenshots of Presentations*

The teacher-researcher gave feedback on each presentation immediately following the presentation as well as during the interview. To the surprise of the teacher-researcher, the students offered feedback through words of encouragement, support and recommendations. In previous courses, the teacher-researcher has been the lone voice of encouragement, support and recommendations. However, the format of this class gave the students' ownership in the learning experience from the weekly tasks to the final project. A more student-centered approach would reduce time spent on lectures and increase time spent in class on activities that engage students in analysis, evaluations, problem-solving, and processing information (McKeachie, 1954; Ach, 1951; Albrecht & Gross, 1948). To delve further into the usefulness of the presentation, the teacher-

researcher included questions about the presentation during interviews with each student at the end of the course. This will be discussed further in the triangulation of findings at the end of this chapter.

End of the Course Survey Results

SCC is required to evaluate each course to ensure that instructors are maintaining the highest standards of learning. The goal of each course is to equip all students for success during and after SCC. Equipping students with the necessary skills for success takes place primarily in the classroom. Therefore, the End of the Course survey was administered online by the Learning Resource Center to capture feedback from the students to determine if the course objectives have been met.

Because the structure of the COL 103 course changed for fall 2018, the teacher-researcher requested to have additional questions that addressed the project-based learning component of the course. The survey (Appendix F) had 19 Likert scale questions with a range of 1 to 4: 1-Strongly Disagree; 2-Disagree; 3-Agree and 4-Strongly Agree. The questions focused on the following areas:

- Course
- Instructor
- Classroom Environment
- Academic Advisor

Questions 20-25 were questions added to the survey specifically for the course taught by the teacher-researcher. The questions were as follows:

- The weekly assignments and activities were helpful.
- I enjoyed being an active participant in the learning process.

- I feel more comfortable in my ability to write, to work with others and to clearly communicate information.
- I will definitely use the skills gained in this course in my future courses.
- The structure of this course (1-day inquiry and 1-day application) contributed to my success.
- I would rate this course: Poor____ Fair____ Good_____ Excellent_____

Because the last question on the survey did not have numerical values assigned, the teacher-researcher assigned the following numerical values: 1-Poor; 2-Fair; 3-Good and 4-Excellent

To answer the research questions for this study, the teacher-researcher focused on questions 20-25 that specifically focused on the revisions made to the course. The teacher-researcher discovered that all of the students in the course responded to questions 20-24, the students with either a 4-Strongly Agree or a 3-Agree. For question 25, the student responded to that question with either 4-Excellent or a 3-Good. The Learning Resources Center gives each instructor an overall score for the course on a scale of 1 to 4, with 4 being the highest. For teacher-researcher received an overall score of 3.80 for this course.

The teacher-researcher reviewed the scores for each question to determine the strengths and weaknesses of the course. The feedback from the students indicated that 80% of the students found the weekly assignments and activities were helpful as well as being an active participant in the learning process. Research indicates that sustainable learning occurs when students are intrinsically motivated to engage in the learning process (Pink, 2005; Wagner, 2012). Meaningful learning occurs when students receive challenges that encourage setting short to long-term goals, making decisions, taking

actions, receiving feedback, and demonstrating knowledge and skills while engaged in the learning process (Wagner, 2012).

One of the biggest changes to the COL 103 course was moving from a traditional classroom setting of lectures led by the teacher-researcher. For fall 2018, the teacher-researcher implemented a day of inquiry and a day of application through project-based learning activities. The students were asked to respond to a question about the new structure of the course. Based on the responses, 93% of the students strongly agree that the structure contributed to their success. Overall, 73% of the students rated the course as excellent. The responses for each question is displayed below in Table 4.3.

Table 4.3

End of the Course Questions for Project Based Learning

Questions	**Agree**	**Strongly Agree**	**Total Participants**
The weekly assignments and activities were helpful.	3 (20%)	12 (80%)	15 (100%)
I enjoyed being an active participant in the learning process.	3 (20%)	12 (80%)	15 (100%)
I feel more comfortable in my ability to write, to work with others and to clearly communicate information.	5 (33%)	10 (67%)	15 (100%)
I would rate this course: Poor (1) Fair (2) Good (3) Excellent (4)	4 (27%)	11 (73%)	15 (100%)

It is the belief of the teacher-researcher that the feedback from the students who completed the project-based learning assignments will only strengthen the quantitative

data. Using the different processes can also lead to unexpected or emergent themes and information that would not have otherwise have come to light (Driscoll, Appiah-Yeboah, Salib, P., & Rupert, 2007). Therefore, the teacher-researcher included questions related to these responses during to dig deeper into the strengths and weaknesses of the course. Feedback from the sole open-ended question on the survey as well as from the interviews will be included later in this chapter.

For this action research study, the teacher-researcher employed a mixed methods approach to gain more understanding that can improve COL 103 for future students. Creswell and Plano Clark (2011) agree that this approach enables a greater degree of understanding to be formulated than if a single approach were adopted to specific studies. For that reason, the teacher-research collected qualitative data from the Observation Checklist (shared earlier in this chapter); the End of the Course survey and the student interviews. Below, the feedback from the survey and interviews are shared.

End of the Course Survey-Open Ended Question Results

The End of the Course Survey (Appendix F) is handled by the Learning Resource Center at SCC. SCC uses a new online system, SmartEvals, to collect data from all the courses. The role of the teacher-researcher was to send out reminders to students to complete the survey. A new feature that was helpful for the teacher-researcher was the number of students who had completed the survey. This allowed the teacher-researcher to remind students in class and by email to complete the survey. This helped the teacher-researcher achieve a response rate of 100% for the course. Because the surveys were completed online the data was available immediately following submission of grades. The teacher-researcher shared with the students that their responses could not be accessed

by me until after grades were submitted. The teacher-researcher wanted to assure the students of anonymity so the responses would be open, honest and constructive. However, students were not required to answer the question.

The responses to the question, what suggestions do you have to improve the course, were coded using Microsoft Excel software. The coded data were then categorized to identify patterns. These patterns of coded data were then organized into overarching themes (Saldana, 2009). There were three overarching themes that emerged from the student responses: class structure, working in groups and social support.

Course structure. The teacher-researcher revised the structure of this course from two days of lecture to a day of inquiry and a day of project-based learning activities. Therefore, feedback about the change to the class structure was important to the teacher-researcher. Overall, there was positive feedback from the students related to the class structure. The students indicated that the structure of the class helped them to be more engaged in the learning process than other courses at the college. One student commented "every course at the college should be just like COL 103". Another student stated, "I like the way we got to work together". The students also noted that the class structure made them feel like they were actual college students. No longer were the students simply told what they should know about the topics, but they discovered their own truths. The goal of incorporating a day of inquiry was to allow students an opportunity to research topics and make meaning out the information. A student stated that "it feels good to learn new things about myself, my career and my future. This is what college should help us do!" Project-based learning supports a more student-

centered and experiential approach to education that improves student learning and success (Pellegrino and Hilton, 2012).

Working in Groups. Each week, the students worked together in groups discussing the topic of the week through various activities, such as scenarios, case studies and think-pair-share. The teacher-researcher shard with the students during the first meeting that a major component of the class would involve working in groups. The announcement from the teacher-researcher was met with mixed reactions. Some students were excited to spend their time working with other students, while some students were hesitant about working with complete strangers. The teacher-researcher encouraged the students to approach this new class component with an open mind. The teacher-researcher believed the benefits for the students would outweigh their concerns. Project-based learning is defined by students working together to create solutions to authentic and real world problems posed in the classroom (Holmes & Hwang, 2016). One student stated, "Working in groups is hard for shy students but you said it would help me because I want to be a nurse. It did help me…thank you." Another student commented, "I thought it was pretty cool to work with a group. It is way better than sitting and listening to the teacher just talk". Overall, the feedback from the students related to working in groups was a positive experience. A student responded to the question about the course with the following response, "This was my favorite class. I like the way we got to work together. My group rocked!" One of the students requested that the teacher-researcher allow more time for the group activities, "Can we have more time to work in groups….my group always seem to run out of time because we have so much to share". Working in groups definitely enhanced the learning opportunities for the students.

Social Support. The teacher-researcher noticed that working in groups created an environment of support and encouragement for the students. This was critical for a group of first-year students who need support to be successful. Krishnan, Gabb and Vale (2011) found that collaboration skills learned through project-based learning were essential to positive learning outcomes in their study of first-year students. The comments from the students aligned well with the findings from the researchers. A student commented, "my group has really supported me in this class", while another student commented, "I am happy that I was in this class. I feel better about being a college student and I made new friends from the group". Therefore, the researchers considered these groups the most successful in encouraging education for all members, compared to other types of group cultures that were focused on finishing the project or maximizing their grade (Krishan et al, 2011). I like the class because I got help from Mrs. Gee and my group". The students received support from the group as well as the teacher-researcher to complete their assignments. There was a commitment from both the students and the teacher-researcher to help every student be successful in the course.

The teacher-researcher reviewed the comments looking for suggestions and feedback that supported the decision to restructure the course. Overall, the comments were positive and offered support for a day of inquiry and a day of project-based learning activities. There were several comments that mentioned the positive experience and benefits of working in groups. The responses of students who suggested that the structure remain the same also lend support to the benefit of the structure.

Interview Results

Because the structure of the course was changed for fall 2018, it was critical to gather feedback from the students who were enrolled in the course. At the beginning of the course, the teacher-researcher informed the students that they would be asked to participate in an interview. Being sensitive to other responsibilities, the teacher-researcher set a time of 15-20 minutes for each interview. This allowed students to meet with the teacher-researcher before and after class as well as another day that worked best for the student. The teacher-researcher allowed the students to schedule during the week of November 19th The teacher-researcher shared with each student before beginning the interview:

As you know, this course, COL 103, was offered in a different format this year to improve the writing, communication and interpersonal skills. Therefore, this course was structured with one day of inquiry and one day of group activity and discussion. Our goal was to equip students with the tools and skills necessary for success. As an active participant in this course, I want to hear your thoughts, comments and suggestions about this course.

The teacher-researcher limited the interview to six questions (Appendix G) that were deemed to be the most important as determined by the Associate Vice President of Instruction, the Dean of Arts and Sciences, and department chair. The responses to the six questions were coded using Microsoft Excel software. The coded data were then categorized to identify patterns. These patterns of coded data were then organized into overarching themes (Saldana, 2009). There were three overarching themes that emerged

from the student responses: class structure, interpersonal skills and success as a college student.

Class Structure. The students' responses mirrored the comments from the End of the Course survey. The students appreciated the structure of COL 103 and felt that it created a great learning environment for them. This was important for the teacher-researcher as these students needed additional assistance to help them be successful at SCC. Several students commented that the structure of the course helped improve their learning experience. One of the students commented, "In my other classes, I just sat and took notes. This class, I got to do things. It helped me learn better. Other students shared similar experiences, "most classes here tell you what you need to know and you have to learn it that way even if you don't agree. This class let me decide what I needed", "I got to do research on the topics and learn information for my presentation instead of someone giving me what I needed to know", "this was the first time I had a voice in what I learned. The groups helped with that".

Mergendoller and Michaelson (1999) stated that project-based learning worked best, no matter whether in a single or multiclass community, when teachers respect students' need for autonomy and ownership over discovery within a setting of guided rather than steered rigor" (p.1). The students' responses were positive related to having control over the learning experience. One of the reasons for restructuring was to give the students ownership in the classroom. Throughout their K-12 experience has been teachers who have merely shared information rather than allowing students the opportunity to create knowledge.

Students' Skillset. The goal of the course was to improve writing, communication and interpersonal skills of students. The feedback provided evidence that students perceived a positive change in these areas. Duke (2016) suggests several reasons schools should employ project-based learning. First, the skills students use during project-based learning are considered to be those "21st century skills" that schools are responsible for teaching. Second, research shows that project-based learning enhances students' knowledge and critical thinking skills.

Additionally, project-based learning approaches are more engaging to students than traditional teaching approaches. Some of the comments that support this research are "my writing has improved thanks to you (teacher-researcher) and my group", **"**I feel more confident speaking in front the class. I know it will help next semester for my speech class", "I learned how to work with a group of people. I think our whole group did a great job", "each week, I felt better about sharing my thoughts and opinions. Everyone in the class was nice to each other so that really helped." The teacher-researcher worked hard during the course to ensure that the students had activities and projects to hone these skills. The comments confirmed that these activities and projects were beneficial to the students.

Success as a student. The purpose of this action research study is to improve the students' skillset required to successfully complete the COL 103 and subsequent courses at SCC by incorporating project-based learning assignments and activities. The inability to complete these courses negatively impacts the students' future goals and aspirations. Therefore, the success of the students is important to the teacher-researcher and to the college. So, the last question of the interview focused on the preparation of students to

succeed in college. For the teacher-researcher, this portion of the interview was critical. Because these students were placed in developmental courses, they have additional courses added to their program of study. They must believe that despite the obstacles that they can be successful in college. One of the most positive comments came from one of the female students who was a full-time working mother of three young children. "I was able to understand what I needed to do to be successful. This was the first time I really took time to look at outlook, work conditions and how much I could make". Other students also had similar responses, "yes, I learned how to listen and to respect other people's opinions. It has already helped me at work so I know it will continue to help me in the future", "this class helped me believe that I can make it in college", "you (teacher-researcher) pushed me to think a little deeper and to work harder to make it in college". The comment from the "mother" of the course summed up the interviews well. "I think that all of us have gained not just skills, but words of encouragement and support. For many of us, this was the first time that we believed that we were capable of doing great things. I think that is why we will be successful because we have new skills, new knowledge and a new attitude!"

The comments all support the goal of the course. The course focused on tools that would help prepare the students for subsequent courses and the workforce. The students were engaged in the discussions and activity because they were real-life situations. Each week, there was a student who was dealing with a situation that we as a class discussed applying tools from the previous or current lesson. The teacher-researcher is hopeful that these skills will translate to student success. Every student in this course received a passing grade for COL 103.

Triangulation of Findings

The research questions guiding this action research study are:

- What is the impact of adding project-based learning assignments on the writing skills of students enrolled in the COL 103 course?
- How does project-based learning assignments impact the communication skills of students in the COL 103 course?
- How does project-based learning assignment improve the interpersonal skills of students in the COL 103 course?

To answer the research questions, the teacher-researcher collected quantitative and qualitative data. A mixed method design was used for this study to triangulate the data to provide an element of reliability of the results (Johnson & Onwuegbuzie, 2004). After reviewing the quantitative and qualitative data, the teacher-researcher determined that there was a high level of congruence between the quantitative and qualitative data.

To answer the first research question, What is the impact of adding project-based learning assignments on the writing skills of students enrolled in the COL 103 course?, the teacher-researcher collected data from the pre-test and post-test writing assignments. After analyzing the data, the teacher-researcher learned that the scores for all students increased from 1.12 to 1.76 for the writing assignment scores after the implementation of the project-based learning activities. The teacher-researcher examined the findings by gender and race. The male students ended the course with an increase of 0.75 on the writing assignment. Within the groups, the male students received more feedback from the group and the teacher-researcher. The same pattern was true of the white students who had an increase of 0.86 on the writing assignment. The teacher-researcher observed

that the both the male and white students actively sought feedback on their week each week from the group and the teacher-researcher. They were instances where these students stayed after class to receive feedback. The female and students of color were more willing to assume a role of giving feedback rather than asking for feedback. The role that the students assumed within their groups could possibly explain the difference in scores when examined by gender and race.

During the interviews, the students indicated that they feel more confident in their writing skills as a result of the weekly assignments, feedback from their group members and feedback received from the teacher-researcher.

To answer the second research question, How does project-based learning assignments impact the communication skills of students in the COL 103 course?, the teacher-researcher collected data from the Observation Checklist, artifact and the interviews. Each of these instruments highlighted improved communication skills. The teacher-researcher required the students in the group to share a portion of their writing assignment to their group members each week. The goal was to prepare students for their presentation (artifact). For the presentation (artifact), communication skills was a major category for the students. Overall, the students did well with the average score of 85.53 for the presentation. One student attributed her success (earned a 90 on presentation) to her communication skills. She shared, "I would have never been able to stand and make the presentation if it had not been for speaking up every Thursday. I took the lessons I learned each week from the group and you (teacher-researcher) and it helped me get my A on the presentation". Other students had similar comments related to improved communication skills as a result of the weekly project-based learning assignments. The

End of the Course supported the improvement in communication skills as the entire class indicated either strongly agree or agree to the question related to their communication skills in the course.

To answer the third research question, How does project-based learning assignment improve the interpersonal skills of students in the COL 103 course?, the teacher-researcher used the Observation Checklist, the notes during their group work, interviews and the End of the Course Survey. All groups had an increase in their scores from Week 1 to Week 6. The teacher-researcher contributes the increases from Week 1 to Week 6 to changes made based on the following observations. During Week 1, the teacher-researcher observed that:

- Groups 1 and 3 needed more of a guide to help them get started, to help them include everyone in the group and to stay on the task for the day.
- Group 2 worked well together by staying on task, involving all group members, deciding on an agenda and maintaining relevant conversation.
- All the groups needed guidance from the teacher-researcher.

As a result of these observations, the teacher-researcher provided more specific directions to the groups in the proceeding weeks. During Week 3, the teacher-researcher observed the following:

- all groups worked better together in agreeing on an agenda
- all groups started promptly on the task
- all groups engaged in more relevant conversations and required less guidance from the teacher-researcher.

- Interestingly, the students began to rely more on each other to solve issues and concerns.

Week 6 was the last week that the groups worked together on a task. The teacher-researcher observed the following:

- how well the groups worked well together in completing the task.
- each group had a "leader" who helped move the group
- the students all had an active role in the process.
- the conversations in all groups were filled with ideas and suggestions focused on the task at hand.

The entire class agreed with the statement that their interpersonal skills had improved as a result of taking this course. Their comments during the interviews supported the results from the survey and the observations made by the teacher-researcher. A student said, "this was the first-time, I have enjoyed working with a group. I learned so much about myself and other people. It has already helped me at my job with Mr. Herb." This student was experiencing difficulty on his job working with his team, especially Mr. Herb. He took lessons from the course that helped him improve his interpersonal skills. His comment showed the immediate impact of success in the course and in the workplace.

The results are consistent with research that indicates that project-based learning has great benefits for students. Meaningful learning occurs when students receive challenges that encourage setting short to long-term goals, making decisions, taking actions, receiving feedback, and demonstrating knowledge and skills while engaged in

the learning process (Wagner, 2012). The same attributes for meaningful learning are present in project-based learning.

Conclusion

The aim of this action research study was to determine the impact of adding project-based learning assignments on the writing skills, communication skills and the interpersonal skills of the students enrolled in the COL 103 course. Therefore, the teacher-researcher created a research plan that would support a mixed methods action research design. In this design, both quantitative and qualitative data was collected from the students. "The true benefit lies in the fact that the consideration of both types of data may provide a better understanding of the research problem than either type of data alone" (Mertler, 2014, p. 103). In this study, quantitative data was collected from the following sources:

- Pre and Post-writing assignment
- Observation Checklist
- Final Assignment-Artifact
- End of the Course survey

The qualitative data for this action research study was collected from the following sources:

- Observation checklist notes
- Interview with each student
- The open ended question on the End of the Course survey

The data collected from both the quantitative and qualitative sources indicate that there was improvement in the writing, communication and interpersonal skills of the

students during the 7.5 week course. Because the data supports the research questions for this action research study, there will be more discussion about the continued use of project-based learning in COL 103, the implications and future research in Chapter 5.

CHAPTER 5

IMPLICATIONS AND RECOMMENDATIONS

The mission of Success Community College (SCC), a pseudonym, is to prepare all students for success. As an open admissions institution, SCC accepts and enrolls students who are underprepared for college. Therefore, the administration, along with the Associate Vice President of Instruction and Deans, have been intentional about implementing courses and programs to equip these students with the skills necessary for success in college and in the workplace. "Higher-order cognitive skills, such as the ability to think critically, are invaluable to students' futures; they prepare individuals to tackle a multitude of challenges that they are likely to face in their personal lives, careers, and duties as responsible citizens" (Tsui, 2002, p. 740). As a result, information literate students have improved communication and interpersonal skills, enhanced leadership skills, increased creativity and improved writing skills (Duke, 2016). If students who are information literate are equipped with tools for success during and after college, what happens to students who lack these tools? Sadly, students who lack these skills struggle to be successful in college. Therefore, the college skills course was created to address this concern. Students in developmental courses (reading, math, English) are required to take the college skills course to gain the necessary skills for success. Therefore, this is one of the most critical courses for our entering students.

Problem of Practice

COL 103 is a course required for students who are taking developmental courses (reading, math and English) at the college. The purpose of this course is to equip the students with writing, communication and interpersonal skills that are necessary for success during college and beyond. However, the Assessment Committee that the teacher-researcher serves as chairperson made two significant findings based on end of the year assessment for COL 103: 1) over half of the students (52%) failed to successfully complete the final project that required strong writing and communication skills and 2) the syllabus for the class did not include any activities or assignments to improve these skills prior to the final project. As a result, the students were not successful in completing COL 103 or subsequent courses due to a lack of these skills. Therefore, the teacher-researcher met with the Associate Vice President of Instruction and the Deans to share results, concerns and a new instructional method for the college skills courses. Hoping for better student learning outcomes, the Associate Vice President of Instruction and Deans gave the teacher-researcher permission to restructure her college skills course. After receiving permission, the teacher-researcher met with the Dean of Arts and Sciences (AS), Department Chair and the lead instructors to discuss ways to incorporate assignments and activities that involve writing and communication skills in the curriculum. After many meetings, discussions and research to address the issues concerning the COL 103 curriculum, the Dean of AS, Department Chair and lead instructors agreed that the curriculum should be more student-centered. A more student-centered approach would reduce time spent on lectures and increase time spent in class

on activities that engage students in analysis, evaluations, problem-solving, and processing information (McKeachie, 1954; Ach, 1951; Albrecht & Gross, 1948).

Project-based learning was selected by the teacher-researcher because it supports a more student-centered and experiential approach to education that improves student learning and success (Pellegrino and Hilton, 2012). Beginning fall 2018, the teacher-researcher included one day of inquiry to allow students an opportunity to investigate and to research and one day of project-based learning assignments each week. The project-based learning assignments will include a writing component and group activities focused on communication and interpersonal skills. The goal of the revised curriculum for COL 103 was to help students gain the skills (writing, communication, interpersonal) that will be necessary in college, in the workplace and throughout life.

Research Questions

The action research study focused on adding project-based learning assignments to the COL 103 to improve student learning and success. The research questions that will guide this action research study are:

- What is the impact of adding project-based learning assignments on the writing skills of students enrolled in the COL 103 course?
- How does project-based learning assignments impact the communication skills of students in the COL 103 course?
- How does project-based learning assignment improve the interpersonal skills of students in the COL 103 course?

Review of Methodology

The action research study took place in a classroom at Success Community College (SCC), a pseudonym, located in the upstate of South Carolina. The demographics of this course were 15 students between 17-25 years of age, 4 African-American males (27%), 3 African-American females (20%), 4 Caucasian males (27%), 3 Caucasian females (20%) and 1 Asian female (6%). All students in the course are classified as first-generation, low income (based on financial aid records) and enrolled in at least one developmental course in Reading, English or Math.

The researcher's role in this action research study was teacher-researcher. Through action research, "teachers are encouraged to become continuous, life-long learners in their classrooms with respect to their practice" (Mertler, 2014, p. 13). This role was most appropriate based on the definition of MacLean and Mohr (1999). They state, "teacher-researchers raise questions about what they think and observe about their teaching and their students' learning. They collect student work in order to evaluate performance and to examine the teaching and learning that produced it" (Maclean & Mohr, 1999, p. 10). The teacher-researcher used action research within her classroom to determine the impact of project-based learning assignments on the writing, communication and interpersonal skills of students enrolled in the COL 103 course.

After the research questions were identified for the action research study, the teacher-researcher created a research plan that would support a mixed methods action research design. In this design, both quantitative and qualitative data was collected from the students. "The true benefit lies in the fact that the consideration of both types of data may provide a better understanding of the research problem than either type of data

alone" (Mertler, 2014, p. 103). In this study, quantitative data was collected from the following sources:

- Pre and Post-writing assignment
- Observation Checklist
- Final Assignment-Artifact
- End of the Course survey

The qualitative data for this action research study was collected from the following sources:

- Observation checklist notes
- Interview with each student
- The open ended question on the End of the Course survey

It is the belief of the teacher-researcher that the feedback from the students who completed the project-based learning assignments will only strengthen the quantitative data. Using the different processes can also lead to unexpected or emergent themes and information that would not have otherwise have come to light (Driscoll, Appiah-Yeboah, Salib, P., & Rupert, 2007).

Review of Findings

To answer the research questions, the teacher-researcher collected quantitative and qualitative data. A mixed method design was used for this study to triangulate the data to provide an element of reliability of the results (Johnson & Onwuegbuzie, 2004). After reviewing the quantitative and qualitative data, the teacher-researcher determined that there was a high level of congruence between the quantitative and qualitative data.

The results of both the quantitative and qualitative data were consistent with research that indicates that project-based learning has great benefits for students. Meaningful learning occurs when students receive challenges that encourage setting short to long-term goals, making decisions, taking actions, receiving feedback, and demonstrating knowledge and skills while engaged in the learning process (Wagner, 2012). The same attributes for meaningful learning are present in project-based learning.

Action Plan

The first step in the action plan was to share the results with the Associate Vice President of Instruction, the Dean of Arts and Sciences, the Department Chair and lead instructors during a meeting on a Friday morning. Because the results have implications for future courses and students, the teacher-researcher chose a day of the week that that is designated for professional development opportunities. Johnson (2008) explained that "the most appreciative audience for presentations of action research results is often your own colleagues. Results can be shared in an informal manner, perhaps taking the form of a brief presentation at a regularly scheduled faculty meeting" (p. 37).

The teacher-researcher began the meeting by sharing the purpose of the action research study, the research questions, the methodology and the findings. Although this information is important, the teacher-researcher felt that her reflection was critical to the action research study. "Reflection is a crucial step in the process, since this is where the teacher-researcher reviews what has been done, determines its effectiveness, and makes decisions about possible revisions for future implementations of the project" (Mertler, 2014, p. 135) After sharing with the group, the teacher-researcher allowed time for questions from the group. Then, the teacher-researcher led the group in a discussion with

the driving question, "What does this mean for our students in COL 103?" The goal of the discussion was to encourage the group to think about our curricula, instruction, student learning and student success. Although the group used different teaching methods in the COL 103 sections, there was agreement that the revisions to COL 103 were instrumental to the success of the students. The group was excited about the future of the course to improve the communication, writing and interpersonal skills of our underprepared students. Therefore, the group decided to continue with this section and to recruit additional COL 103 faculty willing to make revisions to their section.

The second step is additional training for the teacher-researcher and faculty. In June, the teacher-researcher will attend a conference with sessions on course design, teaching strategies, including the use project-based learning and assessment. This conference will not only provide the teacher-researcher with tools to improve COL 103 but also will equip the teacher-researcher to share more tips, strategies and best practices with the COL 103 faculty during the summer training sessions in late June and July.

As the Director of Student Outcomes Assessment, the teacher-researcher has the responsibility of assisting faculty in continuous improvement in their classrooms. "We must inquire continuously into whether our courses are meeting student and other stakeholder needs, and we must assess educational innovations to ensure that they are resulting in the learning students require" (Banta, Black, Kahn, & Jackson, 2004, p. 14). This can only happen when faculty are engaged in an ongoing professional development opportunities. Therefore, the teacher-researcher requested additional funding for the professional development of the faculty teaching the COL 103 section.

The third step will be working with the Admissions and Advising Offices. The revised COL 103 courses will be open to students who are taking at least one developmental course. The goal is to equip our students who are underprepared for college with the tools needed for success. According to research by Finkelstein, Hanson, Hirschman, and Huang (2010), students demonstrate better problem-solving, critical thinking and writing skills in project-based learning than in more traditional classes and are able to apply what they learn to real-life situations. It is the goal of the Associate Vice President of Instruction to revise every section of COL 103 so every student will be better equipped for success in school, in the workplace and in the community.

The fourth step will involve the Department Chair visiting the revised COL 103 to observe the role of the teacher as a facilitator and the appropriate use of project-based learning activities in the classroom. At the end of the semester, the faculty will meet to discuss findings from the data, strengths, weaknesses and concerns related to the course.

The fifth step will include revisions to the COL 103 based on the data from collected and analyzed from the course as well as the feedback and recommendations from the faculty during the end of the semester meeting. "If assessment is to result in genuine improvement, those who will be implementing assessment approaches and making use of assessment findings must be engaged in developing objectives, plans, and processes related to educational goals to which they are truly committed" (Banta et al., 2004, p. 8). Therefore, this step is critical in continuous improvement that is necessary to provide the best learning environment for all of our students at SCC. Below, Figure 5.1 depicts the action plan for this study.

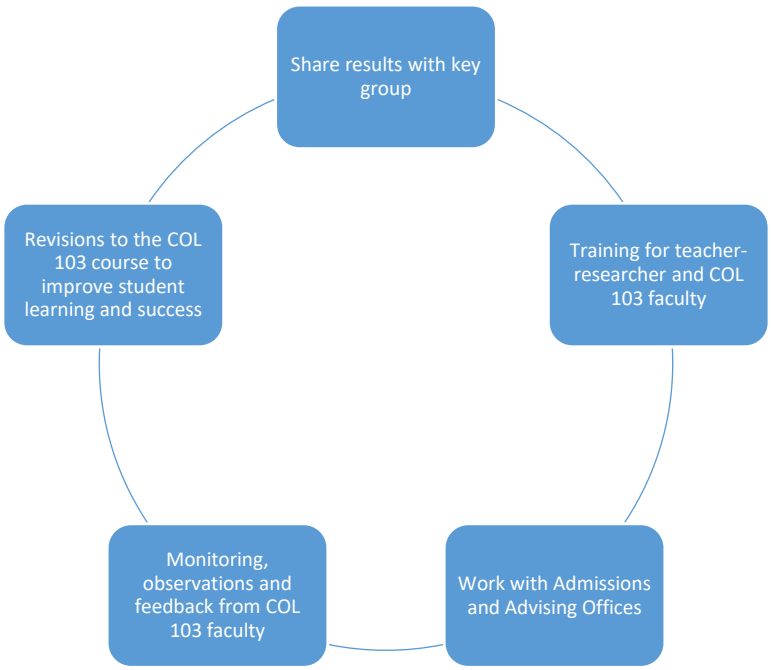

Figure 5.1

Action Plan for COL 103

Implications for Practice

The mission of Success Community College (SCC), a pseudonym, is to prepare all students for success. As an open admissions institution, SCC accepts and enrolls students who are underprepared for college. Therefore, the administration, along with the Associate Vice President of Instruction and Deans, have been intentional about implementing courses and programs to equip these students with the skills necessary for success in college and in the workplace. Therefore, the goal of this action research study was to revise the structure of the COL 103 course to include a day of inquiry and a day of project-based learning assignments, in hopes of improving student learning and success.

Both the quantitative and qualitative data provided evidence that there was improvement in the writing, communication and interpersonal skills of the students

enrolled in the course. Because the action research study indicated there was improvement in student learning and success by implementing project-based learning activities, the teacher-researcher will use the same structure in her fall 2019 course. Despite the improvements, there are several implications of practice must be noted.

The first implication involves providing students with tools necessary for success. The course included videos and other supplemental materials to assist the students during their day of inquiry as well as during group activities. The teacher-researcher noted that some of the students had not accessed the material prior to class. Therefore, class time was used to view and/or read material. It was discovered that the students did not have access to a computer at home and work responsibilities or transportation issues limited their ability to use library computers. To maximize the learning experience, it is suggested that the students enrolled in the COL 103 course be assigned a laptop from the IT department. That way, all students have access and opportunity to adequately prepare for the weekly topics and discussions.

The second implication involves the length of the course. Although the goal of SCC is to move students through their program of study as expeditiously, there needs to be discussion about the length of college skills course. During the interviews, several students stated that this course was beneficial and should last their entire first semester. Because the course focuses is on the writing, communication and interpersonal skills of students, the teacher-researcher believes greater improvement may be experienced by allowing more time for practice and reflection. There were topics, like emotional intelligence and respect for diversity that could have been discussed more in-depth among the groups. COL 103 is the only course that is designed to help students

successfully transition to college. At the end of the course, the teacher-researcher continued to receive emails and visits from COL 103 students who had questions and/or concerns related to advising, faculty, support services, work, family and relationships.

Implications for Further Research

The data from this action research study indicated that there were improvements in the writing, communication and interpersonal skills of the students in COL 103. However, there is not a great deal of research related to implementing project-based learning in college courses. Many faculty stated during a faculty meeting that it is too time consuming and they were not interested in revising their section of COL 103. That may also explain the lack of research from colleges and universities. However, the research using project-based learning for K-12 is plentiful. Community colleges classes are comprised of adult learners who enjoy learning activities that they can work as a group to achieve a goal as well as engage in discussions where they draw on life experiences. A more student-centered approach would reduce time spent on lectures and increase time spent in class on activities that engage students in analysis, evaluations, problem-solving, and processing information (McKeachie, 1954; Ach, 1951; Albrecht & Gross, 1948). Consequently, there many benefits of implementing project-based learning in college classrooms. It is the hope of the teacher-researcher that more colleges will begin to use and to report the benefits of project-based learning on student learning and success.

Conclusion

The President stressed that we should be committed to the mission of preparing students for success regardless of what they look like or where they come from. Yet,

COL 103, a course designed to help underprepared students transition to college has been ineffective. Research from Hughes and Scott-Clayton (2011) support the fact that colleges need to do more than place students who are often first-generation, minority and lower income into a developmental class. Hughes and Scott-Clayton (2011) suggest one method to improve academic success for these students is to consider what is included in developmental education courses. That is the purpose of this action research study. We must find ways to improve academic success for all of our students. How can we continue to lose first-generation, minority, and lower income students each year and not find ways to address this issue? The goal of every classroom teacher should be to improve her or his professional practice as well as student outcomes. Action research is an effective means by which this can be accomplished (Mertler, 2014).

Therefore, the COL 103 course was restructured to include a day of inquiry and a day of project-based learning assignments during the fall 2018 semester. The quantitative and the qualitative data from the action research study showed improvement in the written, communication and interpersonal skills. As a result, an action plan has been developed to provide training for more faculty in order to revise more sections of the COL 103 for fall 2019 to help more students be successful at SCC and beyond. It is the hope of the teacher-researcher that restructuring the class will lead to more students, like the ones enrolled in COL 103 who were uncertain if they could succeed in college , who will discover their potential to be successful in college. As one student shared, "I never thought I would go to college. Now, I am in college and doing well. I know it won't be easy, but I believe I can make it!

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APPENDIX A

LETTER OF CONSENT

Project Title: The Impact of Adding Project-Based Learning to College 103 on Students' Writing, Communication and Interpersonal Skills

Investigator: Gee Lockhart Sigman

I am conducting a research study to determine the impact on your writing, communication and interpersonal skills by of implementing project-based learning assignments and activities in the College 103 course. My goal is to equip students with the tools needed to successfully complete this course as well as other courses required for your program of study. If you decide that you want to be part of this study, you will be asked to complete a pre and post writing assignment, watch videos prior to class, participate in group activities, create a final project and meet with me for an exit interview related to your experiences in COL 103.

There are some things about this study you should know. This section of COL 103 is not structured in a traditional classroom format. There will be one day of inquiry and one day of group activities and discussions with the teacher serving as your guide and facilitator. You will be an active participant in the learning process.

Everyone who takes part in this study will benefit. A benefit means that something good happens to you. We think these benefits are stronger writing, communication and interpersonal skills**.** These skills are necessary for success in college, in the workplace and in life. However, the benefits will be different for each participant.

At the conclusion of this study, I will write a report about what was learned this semester. This report will not include your name or that you participated in the study.

You do not have to be in this study if you do not want to be. If you decide to stop after we begin, that is okay as well. Just let me know.

If you decide you want to be in this study, please sign your name.

I, _____, want to be in this research study.

_____ _____

(Student Participant Signature) (Date)

APPENDIX B

WRITING ASSIGNMENT (PRE AND POST)

When I Grow Up: Reflecting on Personal Growth

Description: Asks students to remember their goals and dreams were when they were younger and challenge them to write in that voice and from that position.

Procedure: Ask the students to remember what they wanted to be "when they grew up" when they were younger (from 5 years old to 12 or 13 perhaps). Encourage students to use the voice they would use when they were that age; to write as if they were five years old, for example. Let them write for about 5 minutes on this topic, then have a few of the students share their writing with the class or in small groups.

Next, ask the students to write about what their present plans are for their career and why they picked their particular career. If they do not know, ask them to speculate and to write about potential careers that might interest them. Again, have students share their writing.

Then, ask students to look into the future 5, 10, 15 years; however long they think they need in order to be able to picture themselves now in the world of work. Encourage them to use the voice they think they will have at this time. What are they now doing? Do they like their job? What is "a day in their life" like at this time? Have they attained their goals (a certain salary, promotion, job satisfaction, etc.,)? What goals do they have now? Once again, ask the students to share their writing.

**Courtesy of the SCC English Department

APPENDIX C

PRE AND POST WRITING ASSIGNMENT RUBRIC

Criteria/Scale	-3- Exceeds Expectations	-2- Meets Expectations	-1- Needs Improvement	-0- Inadequate
Structure *Organization *Flow of Thought *Transitions *Format	*Paper is logically organized *Easily followed *Effective, smooth, and logical transitions *Professional format	*Paper has a clear organizational structure with some digressions, ambiguities or irrelevances *Easily followed *Basic transitions *Structured format	*There is some level of organization through digressions, ambiguities, irrelevances are too many *Difficult to follow *Ineffective transitions *Rambling format	*There is no apparent organization to the paper *Difficult to follow *No or poor transitions *No format
Grammar/Mechanics *Sentence structure *Punctuation *Mechanics	*Manipulates complex sentences for effect/impact *No punctuation or mechanical errors	*Uses complex sentences *Few punctuation or mechanical errors	*Uses compound sentences *Too many punctuation and/or mechanical errors	*Use simple sentences
Language *Vocabulary; use of vocabulary *Tone	*Vocabulary is sophisticated and correct as are sentences which vary in structure and length *Uses and manipulates subject specific vocabulary for effect *Writer's tone is clear, consistent, and appropriate for intended audience	*Vocabulary is varied, specific and appropriate *Frequently uses subject vocabulary correctly *Writer's tone emerges and is generally appropriate to audience	*Vocabulary is used properly though sentences may be simple *Infrequently uses subject specific vocabulary correctly *Writer's tone exhibits some level of audience sensitivity	*Vocabulary is unsophisticated, not used properly in very simple sentences *Uses subject specific vocabulary too sparingly
Content/Information *Clarity of purpose *Critical and original thought *Use of examples	*Central idea is well developed and clarity of purpose is exhibited throughout the paper *Abundance of evidence of critical, careful thought and analysis and/or insight *Evidence and examples are vivid and specific, while focus remains tight	*Central idea and clarity of purpose are generally evident throughout the essay *Evidence of critical, careful thought and analysis and/or insight *There are good, relevant supporting examples and evidence	*The central idea is expressed though it may be vague or too broad; Some sense of purpose is maintained throughout the essay *Some evidence of critical, careful thought and analysis and/or insight *There are some examples and evidence, though general	*Central idea and clarity of purpose are absent or incompletely expressed and maintained *Little or no evidence of critical, careful thought or analysis and/or insight

APPENDIX D

OBSERVATION CHECKLIST

Group Observation Checklist

Project: Group Members: Date:

Observe a group for five to ten minutes. Check the boxes that best describe group member participation.	**All Members**	**Most Members**	**Some Members**	**Few Members**	**Not Applicable**
When starting a new task, group members:					
Agree on an agenda or plan	□	□	□	□	□
Begin work promptly	□	□	□	□	□
Get out project materials	□	□	□	□	□
Figure things out without teacher assistance	□	□	□	□	□
Share responsibilities	□	□	□	□	□
When conducting research, group members:					
Consult primary sources	□	□	□	□	□
Take notes	□	□	□	□	□
Have relevant conversations	□	□	□	□	□
Evaluate the significance of new information	□	□	□	□	□
Stay on task	□	□	□	□	□
When discussing project work, group members					
Ask clarifying questions	□	□	□	□	□
Give each other a chance to speak	□	□	□	□	□
Make decisions efficiently	□	□	□	□	□
Record decisions and plans	□	□	□	□	□
Share essential information	□	□	□	□	□
Stay on task	□	□	□	□	□

APPENDIX E

FINAL PRESENTATION (ARTIFACT) RUBRIC

	Below Standard (10)	Approaching Standard (25)	At Standard (40)	Score/ Comments
Explanation of Ideas & Information	• does not present information, arguments, ideas, or findings clearly, concisely, and logically; argument lacks supporting evidence; audience cannot follow the line of reasoning • selects information, develops ideas and uses a style inappropriate to the purpose, task, and audience (may be too much or too little information, or the wrong approach) • does not address alternative or opposing perspectives	• presents information, findings, arguments and supporting evidence in a way that is not always clear, concise, and logical; line of reasoning is sometimes hard to follow • attempts to select information, develop ideas and use a style appropriate to the purpose, task, and audience but does not fully succeed • attempts to address alternative or opposing perspectives, but not clearly or completely	• presents information, findings, arguments and supporting evidence clearly, concisely, and logically; audience can easily follow the line of reasoning • selects information, develops ideas and uses a style appropriate to the purpose, task, and audience • clearly and completely addresses alternative or opposing perspectives	
Organization	• does not meet requirements for what should be included in the presentation • does not have an introduction and/or conclusion • uses time poorly; the whole presentation, or a part of it, is too short or too long	• meets most requirements for what should be included in the presentation • has an introduction and conclusion, but they are not clear or interesting • generally times presentation well, but may spend too much or too little time on a topic, a/v aid, or idea	• meets all requirements for what should be included in the presentation • has a clear and interesting introduction and conclusion • organizes time well; no part of the presentation is too short or too long	
Eyes & Body	• does not look at audience; reads notes or slides • does not use gestures or movements • lacks poise and confidence (fidgets, slouches, appears nervous) • wears clothing inappropriate for the occasion	• makes infrequent eye contact; reads notes or slides most of the time • uses a few gestures or movements but they do not look natural • shows some poise and confidence, (only a little fidgeting or nervous movement) • makes some attempt to wear clothing appropriate for the occasion	• keeps eye contact with audience most of the time; only glances at notes or slides • uses natural gestures and movements • looks poised and confident • wears clothing appropriate for the occasion	

	Below Standard	Approaching Standard	At Standard	Score/ Comments
Voice	• mumbles or speaks too quickly or slowly • speaks too softly to be understood • frequently uses "filler" words ("uh, um, so, and, like, etc.") • does not adapt speech for the context and task	• speaks clearly most of the time • speaks loudly enough for the audience to hear most of the time, but may speak in a monotone • occasionally uses filler words • attempts to adapt speech for the context and task but is unsuccessful or inconsistent	• speaks clearly; not too quickly or slowly • speaks loudly enough for everyone to hear; changes tone and pace to maintain interest • rarely uses filler words • adapts speech for the context and task, demonstrating command of formal English when appropriate	
Presentation Aids	• does not use audio/visual aids or media • attempts to use one or a few audio/visual aids or media, but they do not add to or may distract from the presentation	• uses audio/visual aids or media, but they may sometimes distract from or not add to the presentation • sometimes has trouble bringing audio/visual aids or media smoothly into the presentation	• uses well-produced audio/visual aids or media to enhance understanding of findings, reasoning, and evidence, and to add interest • smoothly brings audio/visual aids or media into the presentation	
Total Score				

APPENDIX F

END OF COURSE SURVEY

STUDENT EVALUATION OF INSTRUCTION

Read each statement carefully. Then use the scale to make your response.
The scale for all questions is
Strongly Disagree; Disagree; Agree; Strongly Agree

Instructor Name:
Course and Section Number:
Course Term:

COURSE

1. The instructor distributed and explained the syllabus (including the course competencies) at the beginning of the semester.

2. The textbook and course materials are helpful in understanding the subject.

3. Assignments and tests measure concepts, objectives, and skills taught in the course.

4. Assignments and tests are sufficient in number to provide a fair evaluation of my knowledge of the subject.

5. I would recommend this course as it is delivered (by lecture, video, online, etc.) to another student.

INSTRUCTOR

6. The instructor is organized and well prepared for classes.

7. The instructor has command of the class.

8. The instructor makes effective use of class time.

9. The instructor's teaching methods help me learn the subject.

10. The instructor is knowledgeable about the subject.

11. The instructor is willing to help students.

12. The instructor gives me the opportunity to ask questions and express appropriate ideas.

13. The instructor provides assistance outside the established classroom through: established office hours, by appointments, by telephone, email, online discussion, etc.

14. The instructor returns graded assignments and tests within a reasonable period of time.

15. I would recommend this instructor to another student.

(continued)

CLASSROOM ENVIRONMENT

16. The facilities (i.e., room, temperature, etc.) are adequate and support learning.

17. The equipment and supplies used in this course are adequate and support learning.

ACADEMIC ADVISOR

18. I know the name of my Academic Advisor.

19. My academic advisor is available when needed through established office hours, by appointment, by telephone, email, etc.

PROJECT BASED LEARNING

20. The weekly assignments and activities were helpful.

21. I enjoyed being an active participant in the learning process.

22. I feel more confident in my ability to write, to work with others and to clearly communicate information.

23. I will definitely use the skills gained in this course in my future courses.

24. The structure of this course (1 day-inquiry/discovery and 1 day-application) contributed to my success.

OVERALL

25. I would rate this course: ___Poor ____Fair ____Good ____Excellent

COMMENTS

What suggestions do you have to improve this course?

APPENDIX G

INTERVIEWS QUESTIONS FOR STUDENT-PARTICIPANTS

COL 103 Interview Questions

Teacher-researcher to student:

As you know, this course, COL 103, was offered in a different format this year to improve the writing, communication and interpersonal skills. Therefore, this course was structured with one day of inquiry and one day of group activity and discussion.

Our goal was to equip students with the tools and skills necessary for success. As an active participant in this course, I want to hear your thoughts, comments and suggestions about this course.

1. **What are your thoughts on the structure of the course?**
2. **Do you believe that you had more control over your learning experience than in traditional courses? Please explain.**
3. **Did you enjoy applying real-life situations to your project work? How will this benefit you here at SCC and beyond?**
4. **How did working with other students contribute to your acquisition of new knowledge?**
5. **What skills do you feel that you gained as a result of taking this course?**
6. **Do you think more SCC courses should be structured this way?**

Teacher-researcher to student:

Thank you for taking time to speak with me about this course. Your feedback will be helpful as we make improvements to this course. I wish you the best in future endeavors!