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Effects of a Developmental English Program Redesign on Underprepared Students' Academic Success

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
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Project Study Submitted in Partial Fulfillment

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Abstract

The study explored first-year composition (FYC) success by students who were initially enrolled in developmental English at a public university in the western United States. The study site redesigned its developmental English program to increase time to completion and completion rates of FYC and minimize time to completion of that course by developmental students, yet no evaluation had been conducted to determine the effects of the redesigned program. The framework that supported this study was Adelman's theory of academic momentum. Using a quantitative nonexperimental, causal-comparative design and census sample, the research question explored two dimensions of FYC completion, including (a) whether the curriculum redesign had decreased time to enrollment in FYC and (b) whether the redesign had decreased the time required to successfully complete FYC ($N = 132$). An independent samples t test revealed that on average, the post-redesign group ($n = 92$) enrolled in FYC .89 semesters faster than the pre-redesign group ($n = 40$), $t(160) = 4.91$, $p < 0.01$. For those who completed the FYC, the post-redesign group ($n = 92$) averaged completing 1.05 semesters faster than the pre-redesign group ($n = 38$), $t(128) = 5.0$, $p < 0.01$. A project position paper supporting the redesign is included with recommendations for continuation of the program, additional research, and other methods of delivering and evaluating developmental education. The study results in positive social change by confirming the efficacy of the redesigned developmental English program and by serving as a model for the evaluation of similar programs in other institutions of higher learning.

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Section 1: The Problem

The study site is a public higher education institution in a western state. It is the baccalaureate education provider for 14 counties. According to the study site's website, this region comprises around 30,000 square miles and represents 28% of the state's population. The university awards baccalaureate and graduate degrees. The university also has a state legislative mandate to award 2-year degrees and vocational certificates. This mandate allows the university to provide a developmental education program similar to programs in the state community college system. Developmental education provides courses to prepare underprepared students for college-level course work. Thus, this university is a full-service institution for a substantial portion of the state.

The Local Problem

The university's developmental English program has shifted structure since its inception. Prior to 2006, the university housed its developmental English courses in the English department. According to the study site's 2005 catalog, it offered one class, ENGL 090. In 2006, the university created a stand-alone developmental education program comprised of courses from three disciplines: math, reading, and writing. As shown in the study site's 2006 catalog, this move expanded the offerings to a three-course sequence for reading and a three-course sequence of writing. The university used the ACT college readiness test (College Board, 2017) and the Accuplacer placement test (College Board, 2018) to identify students for each level.

History of Local Problem

In 2010, the university started to consider the effects of the developmental education programs on student success. The university's vice-president for academic affairs appointed faculty and staff to the new Working Group to Improve Student Academic Success (WGISAS). The school's administration gave the group a number of charges. One charge was to examine all aspects of admission, course placement, and course enrollment for students. A second charge was to examine student movement toward success and that success and then propose approaches if improvement was needed. Subsequently, the group proposed 15 recommendations, one of which has pertained to this project study. In that recommendation, the group advocated students complete all their developmental education requirements during their first 30 hours of coursework. This recommendation aligned with the Institution's 2010 Strategic Planning Goal 1, Section 2, Subsection c, which mandated a reduction in the time students were enrolled in developmental education.

To implement the recommendation of shortening students' time in developmental education, the university accelerated coursework and provided supplementary courses for students who were underprepared for college level composition. In fall 2012, the university eliminated the two lowest developmental reading courses and retained the highest developmental reading course, the 3-credit hour READ 090. Students scoring below Accuplacer reading comprehension 79 enrolled in READ 090. Students scoring equal to or above Accuplacer reading comprehension 79 enrolled in FYC and a 1-credit hour supplemental reading course (READ 092). At the same time, the university

eliminated the two lowest developmental writing courses, retaining the highest developmental writing course, the 3-credit hour course, ENGC 090. Students scoring below Accuplacer sentence skills 70 enrolled in ENGC 090. Students who scoring equal to or above Accuplacer sentence skills 70 enrolled in FYC and a 1-credit hour supplemental writing course (READ 092). As shown in the study site's 2013 academic catalog, the university combined READ 090 and ENGC 090 into one 3-credit hour course, ENGC 090. Depending on the Accuplacer scores for the above students, they were also required to enroll in a 1-credit hour reading or writing studio. Those students needing both reading and writing studios enrolled in a 2-credit hour learning community, ENGC 094 that was attached to specific ENGC 090 courses. Students scoring equal to or above 70 on the Accuplacer sentence skills subtest and equal to or above 79 on the Accuplacer reading comprehension subtest could enroll in FYC. They did not have to take the developmental English course, ENGC 090. However, according to the school's *2020 Strategic Plan*, they had to enroll concurrently in a 1-credit hour supplemental course in either reading studio (READ 092) or writing studio (ENGC 092) depending on their Accuplacer subtest scores. By the end of spring 2014, the developmental English program reverted to its prior configuration in general; the difference between the redesigned and the pre-2006 design was the provision of supplemental courses. By fall 2014, implementation of the redesign had been in place for one year.

Gap in Practice

The program is more than its coursework and students; this program also included the reading and writing instructors. These instructors were all adjunct during the

transition time school years 2012 and 2013. As adjuncts, they did not have any input in the redesign; they found out about the redesign approximately one month before the roll out of the redesign in fall 2012. The adjuncts had not been informed of the student data after the redesign. They have only known what successes and failures have occurred in their own classes and in classes of those developmental English instructors with whom they spoke. The university has provided neither descriptive nor inferential statistics about the effects of the accelerated redesign in ENGC 090. Furthermore, the university has provided neither descriptive nor inferential statistics of the effect of the accelerated part of the redesign in which students were fast-tracked into FYC with a 1-credit hour supplemental course. The problem is that stakeholders do not know the effects of developmental English program redesign for the academic success of underprepared students at the study site, an open-access university.

Problem in Larger Population

Outside of the university, a large number of organizations have been interested in the effects of developmental education. These organizations included U.S. Department of Education, state legislatures and state educational systems. Other organizations were private foundations, educational advocacy organizations, and independent research centers.

U.S. Department of Education. The U.S. Department of Education (DOE) has shown an interest in both improving the effectiveness of developmental education and limiting the use of developmental education. To improve developmental education, a division of the DOE, *What Works Clearing House*, published an educator's practice guide

that includes six strategies for developmental education instruction (Schak, Metzger, Bass, McCann, & English, 2017; What Works Clearinghouse, 2016). This guide was meant for administrators, advisors, and faculty in higher education. To limit the use of developmental education courses, the federal government has denied the use of federal financial aid for those courses.

According to the U.S. Department of Education (2016),

> A remedial course cannot be below the educational level needed for a student to successfully pursue her program after one year in that course. Also, remedial courses must be at least at the high school level, as determined by the state legal authority, your school's accrediting agency, or the state agency recognized for approving public postsecondary vocational education. If that agency determines that a remedial class is at the elementary level, the school must abide by that determination, and the class cannot be included for FSA purposes. Nor can FSA funds be used for a remedial course that uses direct assessment of student learning instead of credit or clock hours (p. 4).

Furthermore, students could not use federal financial aid for more than 30 credit-hours of coursework (U.S. Department of Education, 2016). Therefore, the federal government regulated developmental education through students' use of federal financial government.

State legislatures. State legislatures across the United States have joined the discussion on the topic of developmental education. Legislatures in Colorado (Colorado Department of Higher Education, 2016b), Connecticut (Connecticut State Senate, 2012),

Florida (Park, Tandberg, Hu, & Hankerson, 2016; Park, Woods, et al., 2016), and Missouri (Davenport, 2016) passed bills concerning developmental education. Most legislation took the form of prohibitions and requirements (Davenport, 2016).

Colorado. The Colorado legislature has prohibited baccalaureate-granting institutions from offering developmental education courses. Instead, those institutions might offer supplemental academic instruction for students with moderate academic shortcomings (Colorado State Legislature, 2012,), using a method called corequisite remediation (Colorado Department of Higher Education, 2014; Colorado Commission on Higher Education, 2017). In addition, the legislature required those institutions to allow students to bypass remediation and enroll in gateway courses with additional support (Colorado State Legislature, 2012; Colorado Commission on Higher Education, 2017). Previously, remediation for students matriculating in baccalaureate-granting institutions took place outside of those institutions in community colleges (Fain, 2012). All public institutions of higher education, 2- and 4-year, had to submit reports regarding preparation for college and the effects of developmental education (Colorado Department of Higher Education, 2016a). This report was available to the public on the department's website.

Connecticut. The Connecticut legislature has prohibited baccalaureate-granting institutions from teaching developmental courses (Connecticut State Senate, 2012). The legislature also required associate-granting institutions to embed remedial support in gateway courses for those students with moderate academic shortcomings (Connecticut State Senate, 2012). Further, those institutions had to provide an intensive college

readiness program for those students deemed unprepared for college prior to taking courses with embedded support (Connecticut State Senate, 2012).

Florida. The Florida legislature has prohibited associate's and baccalaureate-granting institutions from requiring placement exams for students who graduated from a Florida high school since 2007 (Florida State Legislature, 2013; Park, Tandberg et al., 2016; Park, Woods et al., 2016). Active duty military personnel were also exempt from placement exams (Florida State Legislature, 2013; Park, Tandberg et al., 2016; Park, Woods et al., 2016). In addition, associate's-granting institutions had to allow these previously mentioned students to opt out of developmental courses (Florida State Legislature, 2013; Park, Tandberg et al., 2016; Park, Woods et al., 2016). Students could enroll in credit-bearing, college-level courses no matter their prior educational achievement (Park, Tandberg et al., 2016; Park, Woods et al., 2016).

Missouri. The Missouri legislature has required all associate's and baccalaureate-granting institutions to identify and implement best practices in developmental education course delivery (Missouri House of Representatives, 2012). To achieve this, the Missouri Department of Higher Education (2014) commissioned numerous studies and surveys to determine best practices in developmental education. From the results of these actions, Missouri Department of Higher Education (2017) developed *Principles for Best Practice in Remedial Education*, a policy document. Then, Missouri Department of Higher Education (2014) worked with the Missouri Task Force on College and Career Readiness and the Missouri Developmental Education Consortium to implement these best practices

by fall 2015. The legislature required institutions to file annual reports regarding campus level student persistence data (Missouri House of Representatives, 2012).

Private foundations. Foundations such as the Bill & Melinda Gates Foundation (2010) and Lumina Foundation (2017) have provided financial support to those initiatives that seek to increase college completion.

Bill & Melinda Gates Foundation. According to the Bill & Melinda Gates Foundation (2014b), the foundation has supported "the creation, integration, and expansion of new and more effective approaches to delivering these programs, with the goal of getting underprepared students off to a strong start and on track toward a degree" (para. 2) The foundation listed four supports for student success: provide a bridge from secondary to postsecondary education; correct assessment/placement; curriculum, teaching, and learning; and student support services and advising (Bill & Melinda Gates Foundation, 2014b). To achieve these supports, the foundation advocated redesigning remedial courses and programs (Bill & Melinda Gates Foundation, 2014b). Among their grantees were Achieving the Dream (Bill & Melinda Gates Foundation, 2012), Colorado Community College System (Michael & McKay, 2015), Community College Research Center, also known as CCRC (2009, 2016), and Complete College America (Bill & Melinda Gates Foundation, 2014a).

Lumina Foundation. The Lumina Foundation (2017), founded in 2000, has been the largest private foundation devoted solely to higher education in the United States. Its goal was for 60% of people between ages 21 to 64 to attain postsecondary credentials by 2025 (Lumina Foundation, 2017). As of 2019, 47 per cent attained those credentials with

a 10% increase since 2008 (Lumina Foundation, 2019). One of its reports was titled, *Reforming Developmental Education to Better Support Students' Postsecondary Success in the Common Core Era* (Bracco, Austin, Bugler, & Finkelstein, 2015).

Educational advocacy groups. National advocacy groups have created initiatives to study and reform developmental education. Many of the nonprofits received funds from philanthropic groups such as the Bill & Melinda Gates Foundation (2012, 2014a) and the Lumina Foundation (Achieving the Dream, 2017). Others, such as Complete College America (2019), Education Commission of the States (2017; Royals, 2016), and Jobs for the Future, worked in conjunction (Complete College America, 2012). Regardless, multiple educational advocacy organizations brought the issue of developmental education and student success to the public (Huffington Post, 2012; Morello, Craighill, & Clement, 2013).

Complete College America. Complete College America (2014b, para. 11) has worked with "states to significantly increase the number of Americans with quality career certificates or college degrees and to close attainment gaps for traditionally underrepresented populations." Its main publication on developmental education was *Remediation: Higher Education's Bridge to Nowhere* (Complete College America, 2012). More recently, Complete College America (2014a) endorsed three "Game Changers" for student success: performance funding, corequisite remediation, full-time as enrollment in 15 credit hours, structured schedules, and guided pathways to success (Complete College America, 2014a)

Achieving the Dream. Achieving the Dream (2017) has been a nongovernmental organization aimed at improving student success. Over 200 colleges in 36 states were part of the Achieving the Dream network serving more than 4 million 2-year college students (Achieving the Dream, 2017). Fifteen states formed state policy teams consisting of higher education organizations, individuals with the power to affect change, and investors, such as the Lumina Foundation (Achieving the Dream, 2017).

Jobs for the Future. Jobs for the Future (2018) has focused its resources on underprepared students and workers who needed credentials and skills to be successful in the modern workforce. This organization partnered with other nongovernmental organizations such as Achieving the Dream (2017), to create pioneering, scalable solutions to educational problems. Scalable solutions were those innovations that could start small but grew to system or statewide dispersal (Sternberg et al., 2006). Jobs for the Future campaigned for adoption of these solutions by national and state entities. For example, one of their briefs, "From Innovation to Transformation: Texas Moves to Reform Developmental Education" (Jobs for the Future, 2013), figured prominently in Texas developmental education reform (Clancy & Collins, 2013).

Independent research centers. Independent research centers such as Community College Research Center (2017), MDRC (2019), and the National Center for Developmental Education (2017) have played a role in broadcasting developmental education issues. They analyzed data and investigated educational programs to determine the most effective ways to achieve higher completion rates in developmental education recommending a variety of reforms.

Community College Research Center (CCRC). According to its website, the Community College Research Center (2017) has been the leading independent authority on the nation's nearly 1,200 2-year colleges. CCRC strategically assessed the problems and performance of community colleges to contribute to the development of practice and policy that expanded access to higher education and promotes success for all students. Its most recent publications on developmental education were "College Placement Strategies: Evolving Considerations and Practices" (Barnett & Reddy, 2017) and *When College Students Start Behind* (Bailey & Jaggars, 2016).

The Community College Research Center has produced the bulk of research in developmental education, and that research appeared in the vast majority of reference pages in published articles and dissertations. Practitioners in the profession of developmental education (Goudas & Boylan, 2012, 2013) identified many errors in statistical analyses in CCRC reports. However, the director of CCRC rebutted those claims (Bailey, Jaggars, & Scott-Clayton, 2013). In fact, this dispute between researchers and practitioners appeared regularly in *InsideHigherEd* (Smith, 2015) and *The Chronicle of Higher Education* (Mangan, 2017).

MDRC. Since 1974, MDRC (2019) has been a nonpartisan, nonprofit education and social policy research organization. Its focus was to improve the lives of low-income people of all ages (MDRC, 2019). Its work included lobbying for legislation in program design and operational practices in education across the United States (MDRC, 2019). The administrators at this organization sought scalable solutions similar to Jobs for the Future. Concerning developmental education, MDRC "has moved aggressively to fill the

knowledge gap" (Malbin, 2016). Its most recent publication about developmental education was a comparison of the Accelerated Study Associate Program (ASAP) model and guided pathways in reforming developmental education in community colleges (Kolenovic, Linderman, & Karp, 2013; Kruglaya, 2016; Linderman & Kolenovic, 2013)

The National Center for Developmental Education. The National Center for Developmental Education (2017) at Appalachian State University has provided a variety of services to faculty and staff in developmental education nationally and internationally. These services included, but were not limited to, instruction through the annual Kellogg Institute, research, and training programs. Its most recent publication was "College Completion: Focus on the Finish Line" (Boylan, Calderwood, & Bonham, 2017).

Higher education organizations. Finally, higher education organizations, such as those in Colorado, New York, Texas, and Washington, have analyzed data and investigated educational programs to determine the most effective ways to redesign developmental education programs to achieve higher completion rates.

Colorado Community College System. In 2013, the Colorado Community College System's (2013) Developmental Education Task Force has recommended accelerating students "by reducing the amount of time, number of developmental credits, and number of courses in the developmental sequence so students can be successful in a college level course. Accelerated learning will require a curriculum redesign." To accomplish an accelerated learning design, the group recommended a set of principles. These principles included employing a reverse curriculum design based on knowledge needed for academic success supported by active learning in the classrooms embedded

affective skill building (Colorado Community College System, 2013). The group also recommended a continuous process for curriculum design and student learning assessment. Finally, the group advocated increasing student support services (Colorado Community College System, 2013).

City University of New York (CUNY). The City University of New York (CUNY) has implemented the Accelerated Study in Associate Programs (ASAP) to increase underprepared students' academic success (Kolenovic et al., 2013)). This program had both academic and financial components. Academically, students required to enroll full-time in a block schedule that includes a noncredit first-year seminar Kolenovic et al., 2013; Linderman & Kolenovic, 2013; Scrivener & Weiss, 2013). Then, they were required to meet with counselors two times a month and use tutoring. Financially, students were given financial support in the form of free tuition above their financial aid offers, free transportation tokens, and free textbooks (Kolenovic et al., 2013; Linderman & Kolenovic, 2013; Scrivener & Weiss, 2013). This program cost CUNY around $4,000 a year per student. (Levin & Garcia, 2013). After conducting a randomized, controlled study, CUNY found that ASAP significantly raised its graduation rate for remedial students from 18% to 33%. ASAP provided taxpayers a return on investment of 300 to 400 % (Levin & Garcia, 2013).

Texas Association of Community Colleges. In conjunction with the Texas Legislature, the Texas Higher Education Coordinating Board, Dana Center at the University of Texas at Austin, and Educate Texas, the Texas Association of Community Colleges have implemented a reform of the mathematics program, both developmental

and nondevelopmental (Clancy & Collins, 2013). The New Mathways Project used differentiated math course sequences that were closely aligned with the requirements of different academic and eventual career paths. These paths included Statistical Reasoning pathway for students in the social sciences; Quantitative Reasoning pathway for students in general liberal arts fields; Science, Technology, Engineering, and Mathematics (STEM-Prep) pathway (Rutschow, Diamond, & Wallender, 2015, p. iii, para. 2).

Rationale

Analysis of the reports from the Colorado Department of Higher Education has shown the importance of understanding of the effect of the redesigned programs on student academic success. The state's yearly *Legislative Reports on Remedial Education* (Colorado Department of Higher Education, 2016a) provided data from the public postsecondary schools in the state. These public reports gave educators a snapshot of remedial, or developmental, education year by year. However, the data tables also presented many questions. For example, because the report showed that the study site had an 81% pass rate in English and an 89% pass rate in reading for school year 2014 (Colorado Department of Higher Education, 2016a), the university's acceleration program appears to have been successful. However, because the data had been compiled into summaries, the data had not been disaggregated into the pass rate for just the 3-credit courses, which had the lowest level students. Neither did the aggregate data show the pass rate for students who were directly enrolled into FYC with a 1-credit hour studio (help) course, another aspect of the redesign. Disaggregation of the data could expose hidden inconsistencies and enlighten course instruction (Abbott, 2015). Although the

governmental reports were valuable, they provided an incomplete picture of the effect of the university's accelerated developmental English sequence thus supporting the issue as a significant local problem.

Others Who Think This Is a Problem

Many stakeholders have not known the effects of developmental English program redesign for the academic success of underprepared students at the study site. These stakeholders included: the university's developmental English instructors, the university's first-year composition instructors, and the director of the developmental education program.

The developmental English instructors. The developmental English instructors had expressed a need for information about the effect of the redesigned program. This need was significant because "faculty are central to enhancing quality and student attainment" (Rhoades, 2012).They perceived the redesign's impact on students in their own courses, which included the 3-credit ENGC 090 and the two supplemental courses, the 2-credit hour learning community, ENGC 094, and the 1-credit hour studios, ENGC 092 and READ 092.

However, they knew little about how the redesign had affected the students' academic success outside of the courses that they taught. They knew little about how the redesign affected the students in general. Their understanding about the effect of the redesign generally stopped at their classroom doors. In addition, they knew little about how to increase their students' successful completion of the subsequent first-year college course, FYC.

Other stakeholders. Moreover, the experiences of the developmental English instructors are important, for unlike instructors in the state's community college system (Michael et al., 2016), the university's developmental English instructors had no chance to pilot the accelerated courses nor participate professional development opportunities. Other interested parties include instructors who teach FYC and have expressed interest in the effect of the accelerated sequence. The director of the developmental education program wants to know the effect of the program in moving students through developmental English and into and through FYC to better provide for students' academic success and to increase instructors' abilities to teach. These various stakeholders all want to know the effects of the developmental English program redesign for the academic success of underprepared students at the study site, an open-access university.

Purpose of the Study

The purpose of this study was to determine the effects of developmental English program redesign for the academic success of underprepared students at an open-access university. The study has time frames. The first time frame was 2009–2012 because this was when the original program design took place. However, this first group, Group A, included only students matriculating fall 2009. The second time frame was school year 2014 to spring 2017 because this was one year after the completion of the redesign up to current data. This group, Group B, included only students matriculating fall 2014.

Definition of Terms

Academic readiness: State of being fully prepared for learning in higher education (Parker, Barrett, & Bustillos, 2014).

Academic underpreparedness: State of being unqualified to take college-level coursework because of an absence of one or more of the following: basic reading, writing, or mathematics (Miller & Murray, 2005).

Developmental English: College preparatory courses in reading and composition. Also known as Developmental Reading/Writing at the study site.

ENGC 090, College Preparatory Reading and Composition: The same as developmental English at the university.

*ENGC 092, Writing Studio***:** A 1-credit supplemental support course for students in FYC and ENGC 090.

ENGL 030, 060, 090: Developmental writing sequence precurricula redesign.

First-year composition (FYC): The first college-level English course at the university.

READ 030, 060, 090: Developmental reading sequence precurricula redesign.

READ 092, College Reading Studio: A 1-credit supplemental support course for students in reading intensive courses across the disciplines.

Redesign program effectiveness: Shortening the time in developmental education so that an increase in developmental English students enroll into and complete FYC.

Success in FYC is a course grade of C or better.

Significance of the Study

This study has been groundbreaking because, as of spring 2017, few studies had been conducted on the effect of developmental English redesign at a nonsystem, open-access, public institution. Most articles addressed mathematics redesign (Atkins, 2016; Benken, Ramirez, Li, & Wetendorf, 2015; Hogan, 2016; Kosiewicz, Ngo, & Fong, 2016; Puri, Cornick, & Guy, 2014) rather than English programs. Within the developmental English field, researchers mostly studied a specific kind of acceleration, the Accelerated Learning Program (ALP; Doheney, 2016; Sides, 2016; Weissman, Cullinan, Cerna, Safran, & Richman, 2012). Other researchers studied the effects of redesign on the community college systems in California (Hern & Snell, 2014; Illowsky, 2013; Kafka, 2016; Parks, 2014), Colorado (Michael & McKay, 2015), Texas (Booth et al., 2014; Woodson, 2016), and Florida (Florida State University, 2016). Researchers also conducted studies at selective schools without open-access (Hauptman, 2015; Super, 2016) and private schools (Doherty, 2016). The study that I completed has been outside of the above categories, and because of that, was significant to the literature and the field of developmental English.

The university's administrators needed evidence of the program's efficacy to inform their future decision-making. Many researchers found data-driven decision making important (Daniel, 2015, 2017; Dietz-Uhler & Hurn, 2013; Hora, Bouwma-Gearhart, & Park, 2017; Kuh et al., 2014; Spillane, 2012). Because this evidence needed to be specific to an institution's students (Hlinka, 2017), the study provided both evidence of the program redesign's effect but also that effect on the students at the

university. This knowledge allowed university administrators to consider policies and practices in developmental education to the institution's students.

Research Question and Hypotheses

The problem addressed in this study is that stakeholders did not know the effects of the developmental English program redesign for the academic success of underprepared students at the study site, an open-access university. Thus, the purpose of this study was to determine the effects of the developmental English program redesign on the academic success of underprepared students at an open-access university. Therefore, the research question was as follows.

Research Question 1 (RQ1): What were the effects of developmental English program redesign for underprepared students' academic success at an open-access university?

Hypotheses

The independent variable was the developmental English program redesign. The two dependent variables were (a) time to FYC enrollment and (b) time to FYC successful completion with a grade of C or better.

Null Hypothesis 1 ($H_0$1): Changes did not occur in underprepared students' time to ENGL 111 enrollment after the developmental English program redesign.

Alternative Hypothesis 1 (H_a1): Changes did occur in underprepared students' time to ENGL 111 enrollment after developmental English program redesign.

Null Hypothesis 2 ($H_0$2): Changes did not occur in underprepared students' time to ENGL 111 completion with a grade of C or better after developmental English program redesign.

Alternative Hypothesis 2 (H_a2): Changes did occur in underprepared students' time to ENGL 111 completion with a grade of C or better after developmental English program redesign.

Review of the Literature

The purpose of this review was to discuss literature on the effects of developmental English redesign for underprepared students' academic success. I reviewed primary and secondary sources published in the last 5 years. The primary sources were original qualitative and quantitative research. The secondary sources were journal articles and governmental/nongovernmental organization reports that described application of research and theory, expressed perspectives, and explained theories and concepts. I also reviewed seminal studies on the issues of teaching reading and writing to underprepared college students.

In this review of literature, I have provided details concerning the study's theoretical framework of academic momentum. I also provided a history of developmental education in the United States and the current developmental reading and writing reform initiatives. The literature provided two themes: corequisite courses and integrated reading/writing courses (IRW). Two trends emerged from the literature. First, the reforms were not new ideas, but old ideas combined in new ways. Second, empirical, peer reviewed studies did not necessarily support the reforms.

Theoretical Framework

Academic momentum (Adelman, 1999, 2006) has provided the theoretical framework for this study. The School's Working Group to Improve Student Academic Success (WGISAS) used the theory of academic momentum to support its recommendations about course acceleration to increase success of underprepared students. Adelman (1999, 2006) concluded that the shortage of student academic success in higher education was a lack of momentum. He drew this conclusion after analyzing the transcripts of high school students and then following those students through their postsecondary education.

Academic momentum and its source. Academic momentum has been an educational theory concerned with the speed in which students earn college-level credits. In academic momentum, the more college-level credits that students earned in their first year of study and their continuous progress towards a degree increased their probability of graduation (Adelman, 1999, 2006; Tinto, 2013). Students' success in their first college courses has predicted their ultimate college success as measured by a degree. According to Adelman (1999, 2006), students impeded their momentum when they enrolled part-time. Attewell, Heil, and Reisel (2012) agreed with this perspective. They also indicated that taking a break between leaving high school and starting college could impede momentum and subsequent success (Attewell, Lavin, Domina, & Levey, 2006; Attewell et al., 2012). Slow academic momentum led to lower degree completion.

Academic momentum's major theoretical propositions. Academic momentum has included three main propositions. The first proposition stated that undergraduates'

early academic credit load and their progress set a course that clearly affected degree completion (Adelman, 1999, 2006; Attewell & Monaghan, 2016; Attewell, et al., 2012; Belfield, Jenkins, & Lahr, 2016; Davidson & Blankenship, 2016). Losing momentum could seriously hinder a student's probability of graduation. According to Adelman (1999, 2006), students needed to earn at least 20 college-level credit hours, degree applicable by the end of the first year of enrollment to create and maintain momentum. In other words, credits earned in developmental education (DE) courses would contribute nothing to students' momentum because those credits were not college-level. Students' early academic course load mattered to achieve academic momentum.

The second and third propositions extended the idea of momentum. The second proposition stated that this early momentum had its own effect on students' timely graduation (Adelman, 1999, 2006). As a factor in students' success, then, academic momentum overshadowed all other causes of academic success. The third proposition stated that certain actions would increase academic momentum. These actions included earning summer term credits and maintaining continuous college enrollment; the summer term credits needed to come from new classes rather than those a student had to retake (Adelman, 1999, 2006; Attewell et al., 2006; Attewell et al., 2012). In other words, stopping out for summer work or other issues hampered momentum and eventual graduation.

Relationship between theory and study. As the theory of academic momentum was the framework for the developmental program redesign at the study site, it was the most logical framework to use to determine the effects of course acceleration on

underprepared students' academic success. Therefore, in this study, I tested the theoretical framework of academic momentum by analyzing college transcripts of those students who enrolled in ENGC 090 Fall 2014, one year after completion of the program redesign accelerating coursework. In addition, I compared college transcript information for students who enrolled in ENGC 090 in fall 2010 prior to the redesign. By comparing pre- and post-redesign cohorts, I was able to determine the effects of academic momentum through acceleration.

Review of the Broader Problem

Higher education institutions have provided a variety of types of learning assistance for their students. Developmental education was one type. Other types of learning assistance included Supplemental Instruction, which had been a specific method of peer tutoring (University of Missouri-Kansas City, 2017, 2019); (lower case) supplemental instruction, which had been corequisite help; tutoring centers; and writing labs (Norton & Agee, 2014). In the following history section, I initially used the term *learning assistance* instead of *developmental education* because the term developmental education was not used until the 1960s in the United States.

Historical overview. The need for learning assistance in higher education has had a long history in the United States. To understand its place, Arendale (2014) divided the history of learning assistance into six phases ranging from 1636 to today. In the early years of the United States, the phases lasted many years, sometimes bridging centuries, but the later phases (those after World War II) had been shorter. Although many people and organizations believed that the large number of students needing developmental

education today had been an anomaly (Achieving the Dream, 2017; Bill & Melinda Gates Foundation, 2017; Complete College America, 2019), a review of learning assistance proved otherwise. When the first college in the American colonies opened, the percentage of students needing assistance was 10 % (Boylan & White, 2014). In school year 2011–2012, about 29% of first- and second-year students at 4-year schools and 41% of those at 2-year schools enrolled in developmental education courses (Skomsvold, 2014). The percentage of students needing assistance fluctuated since the opening of the first college.

Phase 1, 1636–1800. The first instance of learning assistance for underprepared students occurred early in U.S. history. In 1636, the young men from Massachusetts Bay Colony were unprepared for the rigors of university coursework in the newly established Harvard College (Boylan & White, 2014). As the language of instruction was Latin (Statutes of Harvard, 1961), they needed assistance (White, Martirosyan, & Wanjohi, 2014). Tutoring by men educated in England provided that assistance. Throughout this phase, tutoring served as the primary method of delivering help for 100% of the student body (Arendale, 2014; White et al., 2014). The need for these tutorials continued until English replaced Latin in textbooks and lectures after the American Revolution ended in 1781 (Brubacher & Rudy, 1976).

Phase 2, 1800–1862. Admitting underprepared students continued into the 19th century. As the new nation had few high schools (Boyer, 1983), many students moved from elementary school directly into college, matriculating underprepared (Arendale, 2014). Shortly before the start of Civil War in 1860 at the University of Wisconsin, 290 out of 331 admitted students needed remedial help; 88%of the incoming students needed

extra help (Arendale, 2014). The many underprepared students placed an academic burden on institutions, but without those students, the schools would have faced financial hardship. Therefore, to meet the students' educational needs, colleges and universities added preparatory academies (Arendale, 2014; Boylan & White, 2014). Learning assistance moved from outside the institution to part of the institution; learning assistance was a more organized method of helping underprepared students than individual tutoring from previous years.

Phase 3, 1862–1945. Learning assistance continued as a part of higher education institutions after the Civil War. To meet the educational and vocational needs of the expanding nation, Congress passed the first Morrill Act of 1862 (Brier, 2014) and the second Morrill Act of 1890 (Bracey, 2017). These Congressional acts allowed for the development of more colleges and universities in areas of the nation that did not have any. The action broadened the student base to include overlooked students such as farmers in the Midwest, immigrants from European countries (Brier, 2014), and enslaved people freed after the Civil War (Bracey, 2017).

A large number of students seeking admittance to colleges and universities were still underprepared for college coursework. In 1865, 8 % of the admitted students needed preparatory courses (Arendale, 2014). In 1868, 10 % of the incoming students needed preparatory courses at the new Illinois Industrial University, which later became the University of Illinois (White et al., 2014). In 1880, 87%of students at American institutions needed preparatory courses (White et al., 2014). In the early 1900s, 50% of all students entering universities had to take preparatory courses (Boylan & Bonham,

2014). Even at the Ivy League universities, 50% of the students had to enroll in preparatory courses (Boylan & Bonham, 2014) even though most attended secondary schools (Arendale, 2014; Brier, 2014).

Remedial courses added. To accommodate these many underprepared students, colleges and universities changed the way they provided learning assistance. Instead of preparatory academics, higher education administrators added remedial classes to their curriculums. For example, in 1874, Harvard University, a men's institution, started the first remedial English course because most newly enrolled students were underprepared regardless of their family backgrounds (Arendale, 2014). By1876, Vassar College, the first women's institution equivalent to Harvard, also included remedial classes with 45% of its students taking such classes (Arendale, 2014). Echoing the enrollment issues from before the Civil War, many colleges needed those underprepared students to avoid financial hardships and possible closings (Arendale, 2014). By the end of the 19th century, 80% of all higher education institutions had some form of remedial education (Boylan & Bonham, 2014), and 40% of all first-year students enrolled in remedial courses (Arendale, 2014). Tensions began to show between institutions that wanted to provide access and those who feared a lowering of standards (Casazza, 1999). Institutions needed the underprepared students for financial reasons but were also concerned about the effects of enrolling them.

Community colleges. At the start of the 20th century, a new form of higher education entered the picture: the junior or community college. These 2-year colleges originally were viewed as prebaccalaureate institutions that provided the first two years

of a 4-year degree (Rudolph, 1968). They were also viewed as schools for those students who wanted to stay in their community while getting an education (Rudolph, 1968). Gradually the 2-year colleges took on the role as the main remedial education providers. Thus, by World War II, higher education in the United States served a wide variety of students, many of them underprepared for that level of coursework.

Phase 4, 1945–1964. In this phase, a new group of students desired a college education. Veterans returning from World War II took advantage of the Servicemen's Readjustment Act of 1944, popularly called the G.I. Bill, to attend colleges and universities (Bannier, 2006). Most of these veterans were underprepared for college coursework because they had not taken a college prep program in high school or completed high school. College administrators found that they needed to provide these new students with learning assistance (Bannier, 2006). As a result, remedial education classes became a part of most higher education institutions (Arendale, 2014), and those institutions became more aware of the significance of learning assistance programs (Bannier, 2006). Higher education institutions continued to enroll underprepared students; during the 1960s, 50% of entering students at community colleges were underprepared for college level work (Arendale, 2014). Many of the underprepared students were from populations previously marginalized in higher education, such as students from non-Anglo/European backgrounds or students from lower socioeconomic status backgrounds (White et al., 2014). Purposefully, institutions enrolled these groups of underprepared students to try to create equity in higher education. This new purpose

for enrolling underprepared students differed from past phases when institutions needed to enroll those students to maintain solvency.

Phase 5, 1964–1980. The Civil Rights Movement promoted the inclusion of compensatory education, or education that combined remedial work and support services targeted to federal legislative priority groups, namely first-generation students, economically disadvantaged students, and students of color (Arendale, 2005). As in the 1960s, 50% of students admitted to community colleges needed preparatory work, now called developmental education (Arendale, 2014). Educators formed professional organizations to advocate for remedial programs and provide professional development (Arendale, 2014). Practitioners established the College Reading and Learning Association in 1968 and the National Association for Developmental Education in 1976 (Boylan, 2016). Universities also added professional graduate programs to educate instructors and administrators to work with underprepared students. Appalachian State University started the first graduate program in developmental education in the 1960s. Researchers at Appalachian State also founded the National Center for Developmental Education and received a grant to initiate the Kellogg Institute for the Certification of Adult and Developmental Educators (Arendale et al., 2009; Bannier, 2008). The field of developmental education was becoming professionalized.

Phase 6, 1980–2017. As in the other phases, underprepared students still desired college educations, but new stakeholders had appeared. Some of those stakeholders gathered at Harvard Symposium 2000: Developmental Education (Arendale, 2000) where Casazza (1999) stated, “[underprepared students] have always been and always will be

students who are very capable of succeeding but simply in need of additional assistance" (p. 4). The percentage of entering students needing developmental education decreased since the early 1990s when 50% of the students needed preparatory courses. In 1983, 29% of students entering 4-year needed at least one developmental education course. Twenty years later, in 2003, that number decreased one percent to 28% for students entering 4-year schools. At community colleges that year, 43% of entering students needed developmental courses. Even though the numbers were lower than in past decades, the raw number seemed so large that various groups announced the need of developmental education as a crisis. To overcome this crisis, Achieving the Dream (Quint, Jaggars, Byndloss, & Magazinnik, 2013), Complete College America (2019), the Bill & Melinda Gates Foundation (2017), and other philanthropic organizations (Barnhardt, 2017; National Center for Developmental Education, n.d.) dedicated research, advocacy, technical assistance, and money to study developmental education. At the same time, organizations tied to universities, such as the National Center for Developmental Education (n.d.) and the Community College Research Center (2017) studied the effectiveness of developmental education. In addition, grants from foundations spurred direct intervention by state governments to redesign DE and mandate methods of delivery and pedagogies (Colorado Community College System, 2013; Davenport, 2016).

Developmental education had come a long way from the tutoring of colonists' sons. This history has shown that developmental education was not new, and the percentage of students needing help has changed for the better although still needed by

many students. Regardless, of other changes in precollege education, the need for developmental education has continued into the next decade.

Redesign approaches. To redesign developmental English programs, institutions have used various methods of acceleration. In education circles, acceleration had multiple definitions. It could refer to approaches and programs intended for K–12 students identified as gifted and talented (Great Schools Partnership, 2013). Acceleration had also referred to approaches that provided groups of students (class, school, and district) with more demanding assignments early in their educational sequence (Great Schools Partnership, 2013). In addition, acceleration referred refer to early placement of high school students into college courses (Steenbergen-Hu, Makel, & Olszewski-Kubilius, 2016). For the purpose of this study, acceleration was an educational approach that strove to move underprepared college students as quickly and successfully as possible through developmental education (Hern & Snell, 2014; Hodara & Jaggars, 2014; Jaggars, Hodara, Cho, & Xu, 2015; Scrivener et al., 2015). The two methods of acceleration that I have discussed were corequisite coursework and IRW.

Corequisite remediation. In corequisite remediation, students enrolled in college-level coursework along with a concurrent academic support class (Schak et al., 2017). Three types of corequisite remediation currently used are the Accelerated Learning Programs (ALP), learning communities, and writing studios.

Accelerated Learning Program (ALP). The developmental reading/writing corequisites model with the most traction has been the Accelerated Learning Program (ALP). Researchers developed and implemented this program at The Community College

of Baltimore County (CCBC) in 2008 (Adams, Gearhart, Miller, & Roberts, 2014). Currently over 200 schools nationwide implemented some form of ALP, and six state systems implemented ALP in their institutions. Under this program, the school placed eight developmental reading/writing students in a specific section of a 3-credit hour, first year composition (FYC) course along with 12 students who placed directly into FYC. The eight developmental reading/writing students also took a 3-credit hour developmental English course taught by the same instructor who taught their FYC (Adams, et al., 2014; Adams & McKusick, 2014). The developmental reading/writing students shared the same instructor for six hours of course work a week with three of those hours in a low student-teacher ratio.

Developmental reading/writing student success in this initial CCBC ALP has had mixed results. In analyzing the same data set from the first two years of the program, Adams et al. (2014) and Jenkins, Speroni, Belfield, Jaggars, and Edgecombe, (2010) found a positive correlation between participation in ALP by developmental reading/writing students and their successful completion of the FYC course. A higher percentage of developmental reading/writing students passed their first FYC course than those students who took the FYC course after completing typical developmental reading/writing courses. Using a data set from the first four years of the program, Cho, Kopko, Jenkins, and Jaggars (2012) also found a positive correlation between participation in ALP by students and their successful completion of the FYC course. The positive results continued over time leading the way for more schools to implement the program.

Queensborough Community College (NY) and Northwest-Shoals Community College (AL) have adopted the ALP model and adapted it to meet their students' needs. Queensborough included English language learners who were at the same level as developmental reading/writing native English speakers in the ALP courses (Anderst, Maloy, & Shahar, 2016). Northwest-Shoals chose a 1-hour companion course to provide the supplemental help (Sides, 2016) rather than a 3-hour developmental reading/writing companion course as in the original model (Adams & McKusick, 2014). At both institutions, developmental reading/writing students who participated in ALP had higher retention rates than similar developmental reading/writing students who took the traditional developmental reading writing courses. Adams et al. (2014), Anderst et al. (2016), Cho et al. (2012), and Jenkins et al. (2010) agreed that accelerating students who are at the higher end of the developmental education continuum yielded positive results regardless of the length of time of the companion course.

Learning communities and writing studios. Learning communities and writing studios have been two types of courses designed to provide supplemental, corequisite instruction for underprepared students. Institutions paired these small group instruction opportunities with content courses to provide students with extra academic help. Learning communities were small group, supplemental instruction courses attached to a particular course and section of that course. In this situation, the same group of students took two or more courses together (Hatch & Bohlig, 2015; Tinto, 2013). Although writing studios were also small group, supplemental instruction courses, they were not attached to a particular course (Hatch & Bohlig, 2015). Students in writing studios attended to get help

for their assignments in a variety of courses (Hatch & Bohlig, 2015). Even though the two course types had differences, their common denominator was the linkage to other courses in which the students have enrolled.

Supplemental instruction was supposed to help students succeed in the linked courses. However, the extent to which supplemental instruction in the form of learning communities and writing studios have helped students succeed is unclear. Researchers have found both positive and null correlations.

Learning communities. Universities and colleges delivered one form of corequisite instruction through learning communities. In learning communities, a group of students took multiple courses together. Generally, these courses shared themes or assignments (MDRC, 2017). At Kingsborough Community College, students took three courses together: English composition, a general education course, and study skills course (Smith & Jimenez, 2014). Since their appearance in the 1970s, learning communities have fostered personal connections with peers and faculty as well as course work mastery (MDRC, 2017). The theory supporting this approach was Tinto's theory that emphasized the importance of students' academic and social engagement to students' academic success (Tinto, 1998; Tinto, Russo, & Kadel, 1994). As the emphasis was on community building, a number of schools have used learning communities to help underprepared students succeed in the first year of college (Raftery, 2005; Richburg-Hayes, Visher, & Bloom, 2008).

Researchers found that learning communities have had either a positive or a null effect on students' increased academic success in concurrent and subsequent coursework.

Schools that have participated in MDRC's Learning Communities Demonstration had positive, though modest, effects on students' success in the linked course (Weiss, Visher, Weissman, & Wathington, 2015). In another study, researchers found that learning communities produced positive effects on student's success in the linked courses. However, that increased success rate occurred only for students in the higher level developmental English courses not for students at the lower level (Barnes & Piland, 2013). Other researchers found that the effects of 1-semester learning communities contributed to student success for that semester but increased neither enrollment nor credit accumulation in subsequent semesters (Weissman et al., 2012). Although the use of supplemental instruction for college preparatory reading and writing in the form of learning communities seemed intuitively correct, not enough research has been conducted to substantiate that perspective. Regardless, administrators, instructors, and researchers saw learning communities as important to increase student success (MDRC, 2017).

Writing studios. Another example of supplemental instruction has been the writing studio. A writing studio was a course to help students with their English composition needs. In theory, the student writers discussed their writing and conducted peer reviews in these courses (Grego & Thompson, 2008). The concept of third-space (Grego & Thompson, 2008) has framed most of the research studies on writing studios (Davila & Elder, 2017; Hensley, Winter, & Richardson, 2017; Malcolm, 2017; Miley, 2013; O'Neill, 2014; Parisi & Rodriguez, 2013; Phillips & Giordano, 2016; Virgintino, 2017). According to Grego and Thompson (2008), third-space was a venue within the university but not linked to a specific course section where students worked

collaboratively on their writing. The students would experience the collaborative give and take similar to authors' writing groups (Grego & Thompson, 2008). However, instructors have found that studios function more similarly to writing labs in which a facilitator worked with students individually on immediate writing needs (Warnick, Cooney, & Lackey, 2010).

Published research on writing studios has been scarce. Even scarcer has been research on writing studios linked to developmental English, community colleges, or the theory of academic momentum. Most research on writing studios has focused on programs in 4-year colleges and in service to their Writing across the Curriculum programs (Davis & Cozza, 2014; Ernest, Johnson, & Kelly-Riley, 2011; Warnick et al., 2010). Other articles referencing writing studios and citing Grego and Thompson (2008) focused on their notion of *third-space*, which valorized the location where students' write (Charlton, 2014; Hensley et al., 2017; Pigg, 2014).

Although many institutions have used the term 'writing studio,' they have differed in implementation. Some institutions housed the writing studio in learning assistance centers. At Macomb Community College (2016), the writing studio has been part of the tutoring center, requiring students to make appointments. At Pittsburg State University (2017), the Writing Center also housed a writing studio, the Graduate Writing Studio where the Writing Center director and assistant director worked with students one-to-one on a walk-in basis. Some institutions housed the writing studios in the English department. At the University of the Pacific (2017), students enrolled in weekly 2-hour writing studios where they received supplemental writing help (Gerhard, Tevis, Peterson,

Beck, & Matz, 2013). To justify its use of studios, the University of the Pacific (Gerhard et al., 2013) cited a joint statement by the Charles Dana Center, The Education Commission of the States, Complete College America, and Jobs for the Future (2012) about the importance of extending instruction through studios. However, the referenced studios were 3-credit graded courses (Jenkins et al., 2010) that were not the same as those courses at the University of the Pacific. The point I am making was that to use research on writing studios, one needed to be careful to make sure that the writing studio situations were similar before using research to justify a program.

Although few researchers and practitioners have conducted studies on writing studios, educational organizations, philanthropic organizations, and higher education institutions have lauded studios as an effective developmental education reform. The evidence of their effectiveness has come from a Community College Research Center report (Jenkins et al., 2010) by way of a report produced by national policy organizations (Charles Dana Center et al., 2012). Using research about one type of studio to justify another type of studio has been poor decision making. Another problem with the evidence about studios in developmental education reform has been that the evidence relates only to those at the higher end of the developmental education continuum or those students just over the cutoff for first year composition. Even though most of the research has been conducted at baccalaureate and graduate degree-granting institutions, community colleges have still used that research to implement studios. One of the few exceptions to this research pattern has been research conducted by the Community College Research Center concerning the Accelerated Learning Program approach at the

Community College of Baltimore County (Jenkins et al., 2010). Their approach, though, resembles learning communities more than writing studios. Although written about with great regard, writing studios have not had empirical evidence supporting their efficacy.

The common definition of writing studios differed from learning communities in that writing studios were not linked to specific courses and course sections. In other words, students in a writing studio might all be in FYC but enrolled in different sections with different teachers. Coming together in studios might be the only time these students are in a class together (Grego & Thompson, 2008). Other times, students came from a variety of courses not just FYC. Ernest et al. (2011) found that gains from writing studios in ability to peer review did not differ in the two above situations.

Integrated reading and writing (IRW). IRW has been another reform that institutions used to increase students' academic success. In IRW courses, an institution joined the existing reading and writing courses into one course (Hayes & Williams, 2016; Saxon, Martirosyan, & Vick, 2016a). Instead of learning about reading and writing as discrete topics, students wrote about what they had read (Edgecombe, Jaggars, Xu, & Barragan, 2014; Grabe & Zhang, 2013). In addition, at least one course from each level of the traditional developmental English sequence was eliminated (Jaggars, Edgecombe, & Stacey, 2014**)**. Educators have seen IRW as a way to reduce students' time in developmental English courses (Edgecombe et al., 2014; Hern, 2011; Holschuh & Paulson, 2013).

The theory underpinning IRW was social-constructivism. Social-constructivist models of learning supported the integration of reading and writing because both subjects

shared cognitive, language, and social foundations (Fitzgerald & Shanahan, 2000; Holschuh & Paulson, 2013; Kucer, 2009; Parodi, 2007; Perin, Lauterbach, Raufman, & Kalamkarian, 2016; Quinn, 1995; Shanahan & Lomax, 1986; Tierney & Pearson, 1983).

The view of the effectiveness of IRW for underprepared students has been mixed. Many instructors have believed that IRW would not provide enough time for students to learn the multitude of skills taught in developmental reading and writing (Saxon et al., 2016a). Jaggars et al. (2014) have acknowledged that the accelerated coursework might increase students' frustrations leading to increased attrition. Other instructors believed that IRW would increase students' academic success (Saxon et al., 2016a; Saxon, D. P., Martirosyan, N. M., & Vick, 2016b). Advocates have believed that integration of reading and writing would better prepare students to become creative, critical, and transformative thinkers (Quinn, 1995). However, research that provided evidence for either stance has been limited (Grabe & Zhang, 2013; Saxon & et al., 2016a). At Community College of Baltimore County, Hayes and Williams (2016) found an increase in underprepared students' success as measured by developmental English course pass rates. At Chabot College, Edgecombe et al. (2014) also found an increase in student success. No other recent empirical studies on the effectiveness of IRW for students appeared during my searches.

Instead, primary and secondary sources have focused on the IRW course instructors. One source explained the positive impact of North Carolina's online professional development materials, which helped instructors as they transitioned from writing subject specialist to academic literacy specialist (Dees & Moore, 2016). Two

other sources presented the results of a survey given to IRW instructors (Saxon et al., 2016a, 2016b). Those surveyed provided strategies for integrating reading and writing. Hayes and Williams (2016) outlined their process for creating a new reading/writing course. Hassel et al. (2015) expressed the need for faculty to be involved in the design and implementation of IRW.

In the above review, I have explained the study's theoretical framework of academic momentum, provided a history of American developmental education, and described current developmental reading and writing reform initiatives. These initiatives have dealt with corequisite remediation and IRW courses. Two trends have appeared: the reforms were old ideas combined in new ways, and they were rarely backed by quantitative or qualitative peer reviewed studies.

Implications

Implications for a developmental English project direction have been based on findings from the study's data collection and analysis. One implication would be to cycle the findings back into the design and delivery of the university's developmental English program. Another consequence of this study would be the chance to open a channel of conversation between the developmental English faculty and first-year composition instructors.

If the statistical analysis showed a low success rate for those students who were fast-tracked into ENGC 090 and completed the supplemental ENGC 092, then an analysis needed to be done to find out how faculty in each of those courses could support the other in fostering student academic success. On the other hand, if the statistical

analysis showed a high success rate for the fast-tracked students, then a handbook of best practices could be produced by the ENGC 092 faculty. In either case, the results of the study could lead to a conversation among all the ENGC 090 and FYC faculty about what each expects from the other.

If the statistical analysis showed a lower pass rate in ENGC 090 after the redesign than before the redesign, and if through disaggregation those not passing ENGC 090 after the redesign were those at the lower end of the placement continuum, then changes needed to be made to accommodate those students. One such strategy would be to bring back the Quick Start program. If this occurs, then advising faculty need orientation as to its importance to convince students that they must take that program rather than opting out of it. Another consequence for this scenario would be campuswide public relations campaign explaining the developmental English courses.

If the evaluation reveals a need for changes, then another possible project would be to devise methods to raise the program to a higher degree. Two deliverables concerning this project would be, first, a presentation to stakeholders such as university administration and, second, an adjustment to the developmental English program.

Summary

In this study, I determined the effects of the developmental English program redesign for the academic success of underprepared students at the study site, an open-access university. In this section, I explained the importance of evaluating a program such as developmental English. Moreover, I showed the trajectory of learning assistance in higher education that has culminated in the current state of developmental education. In

the remaining sections, I explain how I plan to proceed in determining the effects of the university's developmental English program redesign on underprepared students.

Section 2: The Methodology

The purpose of this project study was to determine the effects of a developmental English (DE) program redesign on underprepared students' academic success at an open-access university. In this section, I have described the method and procedures used to conduct this project study. This section includes the study's research design and approach; the setting and sample; the materials; the data collection and analysis; assumptions, limitations, scope, and delimitations; and protection of participants' rights.

Research Design and Approach

In this study, I measured the effects of the DE program redesign at an open-access university. The study compared outcome data of two groups of students. Group A were students who had scored below 70 on the Accuplacer Sentence Skills subtest and who enrolled in fall 2009 in ENGL 030 and ENGL 060 prior to program redesign. Group B were students who had scored below 70 on the Accuplacer Sentence Skills subtest and who enrolled in ENGC 090 in fall 2014 post-redesign. The population for this study was students enrolled in DE at the study site.

In this study, I used data extracted from student transcripts and test results. The student transcripts included semester of matriculation, semester of enrollment in each DE course and in FYC, semester of successful completion of each DE course and FYC, and cumulative GPAs,). The test records include student's ACT composite and subtest score in English and Accuplacer subtest scores for reading comprehension and sentence skills. Academic success was measured by time to completion of FYC with a grade of C or better and the number of credit hours completed. Research Design and Justification

I used a quantitative nonexperimental, causal-comparative (ex post facto) research design to determine the effects of the DE program redesign on underprepared students' academic success. Researchers use quantitative research when they seek to describe, evaluate, or explain phenomena (Engel & Schutt, 2013). As I proposed to describe and evaluate the effects of the DE program redesign, a quantitative design was appropriate. Researchers use the nonexperimental approach when they cannot manipulate experimentally the independent variable (Lodico, Spaulding, & Voegtle, 2010). They also use the nonexperimental approach when random assignment of participants is not possible. As I was not able to manipulate the independent variable nor conduct random assignment, a nonexperimental approach was appropriate. One nonexperimental approach is a correlational design. In this design, a researcher uses one group. Another nonexperimental approach is the causal-comparative design. In this design, researchers seek to explain the effects of the independent variable by comparing two or more groups (Lodico et al., 2010). As I compared success rates and persistence of two groups, Group A pre-redesign and Group B post-redesign. In both groups, students would have scored below 70 on the Accuplacer Sentence Skills subtest, this design was appropriate.

I did not choose qualitative research methods, for they focus on the perceptions of the participants and researchers in the study. In one qualitative method, the phenomenological approach, the researcher seeks to describe and analyze the lived experience of the study's subjects (Lodico et al., 2010). This method would be inappropriate because the focus of the research question was to analyze data to compare two groups empirically not to gather participants' perceptions. In an ethnographic

approach, a second qualitative method, the researcher observes a culture from the point of view of the study's subject or subjects (Lodico et al., 2010). This method was inappropriate because the research involves a group of students from almost ten years previous. Observing a group that has already disbanded would be impossible to achieve. In a case study, a third qualitative method, the researcher conducts a detailed examination of the subject in a definite place and time (Lodico et al., 2010). This method was inappropriate because I wanted to compare two groups from different time spans rather than focus on only one group. Therefore, a quantitative research nonexperimental approach with a causal-comparative design was he most appropriate approach and design for this program study.

I included all students from Group A and Group B. The background information I used to determine the equality of the groups was an Accuplacer Sentence Skills score below 70. I then compared the two groups on the dependent variable: time to completion of FYC. These variables were (a) time to FYC enrollment and (b) time to FYC successful completion with a grade of C or better.

This design derives logically from the problem. This problem was the lack of information on the effects of the DE program redesign for underprepared students' academic success at the study site. The members of the redesign initiative used similar empirical evidence to justify the change in the DE program. The local evidence that they used included the number of students enrolled in DE courses, the number of students who completed ENGC 090 with a grade of C or better, the number of these latter students who enrolled in and successfully completed FYC. By using causal-comparative design, I

tested the committee members' hypothesis that a shorter sequence to FYC increased student persistence to and success in FYC.

Setting and Sample

The study site was a public university. As it has an open-access mandate, the school enrolls underprepared students from which the sample was taken. The degree of underpreparedness determined the sample inclusion, exclusion, and characteristics.

Setting of Study

The setting of this study was a public university. Although serving all citizens in the state, the school has an educational mission for the 14-county region in the western part of the state. It is a comprehensive public higher education institution. From 13 departments, the school offers technical, professional, and liberal arts programs at the certificate, associate, bachelor's, master's, and doctoral levels. According to the study site's website, it employs 295 full-time academic and technical faculty members and 188 part-time faculty.

The student body was varied. According to the school's website, out of its 10,000 full-time and part-time students, 77% were traditional full-time students. Twenty-four percent were from groups traditionally underrepresented in U.S. higher education. Twenty-one percent of the student body were first-year students.

Population

The population for this study was students at the study site who enrolled in DE in fall 2009 and 2014 and had an Accuplacer Sentence Skills score of < 70. The population for fall 2009 was 112 whereas the population for fall 2014 was 159.

Sampling strategy and size. For the study sample, researchers usually use a subgroup of the population. This subgroup, or sample, of the population must be representative of the population (Lodico et al., 2010). To determine that subgroup, researchers may use an online sample size calculator (Australian Bureau of Statistics, 2013). To calculate the sample size for my study, I used the Australian Bureau of Statistics (2013) sample size calculator with a, a confidence interval of 95%, and a relative standard error of 2. For Group A pre-redesign with a population of 112 students, the sample size was $n = 107$. For Group B post-redesign with a population of 159, the sample size was $n = 140$. However, researchers may also use the complete population instead of the calculated sample (Daniel, 2015). Because the calculated sample sizes were close to the numbers of students in the population, I chose to use the census numbers for my samples: Group A, $n = 112$; Group B, $n = 159$.

Sample inclusion and exclusion criteria. Therefore, there was no sampling for this study, but rather I used the entire population of students who enrolled in DE fall 2009 ($N = 112$) and students who enrolled in DE fall 2014 ($N = 159$) and who scored below 70 on the Accuplacer Sentence Skills subtest. These conditions satisfied the parameters of this study. Of this initial population, 40 students (36%) in Group A enrolled in FYC after completing ENGL 090 and 92 students (58%) in Group B enrolled in FYC.

I then compared the two groups of ENGC 090 completers on the following interval dependent variables. These variables were (a) time from start of first developmental English course to FYC enrollment, (b) time from start of first developmental English course to successful completion with a grade of C or better, (c)

number of credits attempted, and (d) number of credits successfully completed. I also compared the two groups on the categorical dependent variable of successful completion.

Sample characteristics. The selected samples had the following characteristics. All were students at the study site. All had Accuplacer Sentence Skills subtest scores below 70. All were enrolled for the first time in a DE course. For the Group 1 sample, all students were enrolled in either ENGL 030 or ENGL 060. For the Group 2 sample, all students were enrolled in ENGC 090. The ages, ethnicities, gender, and socioeconomic statuses varied.

Instrumentation and Materials

Calculation of Scores and Their Meaning

The data to measure the dependent variable of coursework success were the letter grades earned in the ENGC and ENGL courses. The data to measure the dependent variable of persistence were enrollment in the subsequent English composition courses.

Reliability and Validity of the Instruments

A research instrument must be valid and reliable. Validity concerns how well an instrument measures what it is supposed to measure (Mertler, 2012). Reliability concerns how well an instrument measures what it is supposed to measure over time (Mertler, 2012). The instrument I used were students' academic transcripts. The measures were enrollment and success in FYC. Researchers and practitioners in the field of education have considered these measures valid and reliable (Adelman, 2006; Attewell & Monaghan, 2016; Wang, 2017) and have used them in their research (Bahr, 2013a,

2013b; Crosta, 2014; Hagedorn, 2005; Hagedorn & DuBray, 2010; Hagedorn & Kress, 2008).

Availability of Raw Data

The raw data were student records archived in the university's database. The study site's Institutional Research Office oversees the dispersal of these records.

Data Collection and Analysis

The data I collected had been archived in the institutional database, Banner management system. The records included placement test scores and transcript data.

Data Collection Process

The data source was archived student records. Each student record included Accuplacer placement test scores and the student's transcript. The Accuplacer scores were the composite for the student, and the sentence skills and reading comprehension subtests. I used the Accuplacer Sentence Skills subtest to create the sample for this study. That subtest measures knowledge of sentence structure and identification of construction shift questions with the subtest scores ranging from 20–120 on a 120-point scale (College Board, 2018). The student transcript information included grades for one or more of the following DE courses -- ENGL 030, ENGL 090, ENGC 090 -- and FYC, the number of first year credits completed, and the student's overall grade point average (GPA) at the study site.

The procedure for gaining access to the data set at the study site involved Institutional Review Board (IRB) applications to Walden University and the study site. To apply to Walden's IRB, I had to have an approved proposal, completed the proposal

oral conference, and received formal proposal approval notification from Walden's Office of Student Research Administration (Walden University, 2016). Next, my supervising faculty member approved my IRB materials for student research (Walden University, 2016). Then, I submitted those materials to Walden IRB and received approval (04-06-18-048890). To apply to the study site's IRB, I applied to the university's Office of Sponsored Programs. After obtaining that approval (Protocol Number 18-61), the university's Office of Institutional Research and Assessment reviewed my study's protocol and pulled the data that I wanted. The director of this office informed me of a $100 per hour charge for pulling the data.

Nature of Scale for Each Variable

In a quantitative study, the researcher needs to determine the measurement scale for each variable. The measurement scale for the variables in my study were categorical and interval.

Categorical variable. A categorical variable has two or more categories such as groups or levels. (Lodico et al., 2010). In my study, the independent variable, enrollment in a post-redesign course, was categorical. Students either enrolled in a redesigned course or did not enroll in a redesigned course. In my study, one of the dependent variables, student success in FYC with a grade of C or better, was categorical. Students either passed FYC with a C or better or did not pass FYC with a C or better.

Interval variable. Another type of variable is the interval variable. An interval variable has a numerical value and can be placed along a continuum (Lodico et al., 2010). In my study, four of the dependent variables were interval and could b**e** placed along a

continuum. The first two dependent variables were (a) time from enrollment in DE to enrollment in FYC and (b) time from enrollment in FYC to successful completion of that course with a C or better. These were interval variables because time was measured by 16-week semesters, which has numerical values. The expected range for Group B was one semester to enrollment in FYC and then, for both groups, one semester to complete FYC.

Proposed Descriptive and Inferential Analyses

I analyzed the data using descriptive and inferential statistical analyses. Using descriptive statistics helped to ensure that the data were organized in a meaningful context (Lodico et al., 2010). Using inferential analyses allowed for the researcher to determine relationships among variables (Creswell, 2014). All statistical analyses were, performed on the Statistical Package for the Social Sciences (SPSS) 17.0 (IBM, 2019) and the level of significance established was $p = 0.05$.

Descriptive analyses. For descriptive analyses, I calculated the mean (*M*) and standard deviation (*SD*) for each group for each dependent variable. The mean indicated an average of all members of a group (Salkind, 2010). I found the average amount of time students in Group A and Group B took from initial enrollment in DE courses to enrollment in FYC and the average amount of time students took from enrollment in FYC to completion of that course with a grade of C or better. I also calculated the standard deviation to determine range of the numbers around the average number (Salkind, 2010). Thus, the standard deviation allows the researcher to determine how spread out or close to the mean the data are.

Inferential analyses. Inferential analyses determine whether a statistically significant difference has occurred between groups (Creswell, 2014). For inferential analyses, I used an independent samples *t* test. An independent samples *t* test determined whether the means of two groups had statistical difference from each other (Creswell, 2014). An independent samples *t* test was computed on scores. I conducted an independent samples *t* test for each of the interval dependent variables

Design and Procedures

The procedure for the statistical analysis of the data included multiple steps. To prepare for the analysis, I deleted any information from the Excel spreadsheets for students who had scored above 70 on the Accuplacer Sentence Skills subtest or had not taken the subtest, and then I uploaded the remaining data to SPSS. The first test that I ran was an independent samples *t* tests to compare Group A and Group B on the two dependent variables by first, clicking *Analyze* on the SPSS ribbon; second, selecting the *Compare Means* procedure; and third, selecting the *Independent Samples T Test.* Each test resulted in two tables. The first table provided Group Statistics of Number of mean of time in semesters, standard deviation (*SD*) and Standard Error of the Mean. The Independent Samples table provided Lavene's Test to Equality of Variances, the independent samples *t* test for Equality of Means, and the Confidence Interval of the Difference.

Assumptions, Limitations, Scope, and Delimitations

Assumptions

I identified two assumptions. The first assumption was that the redesign had been, and is, successful. The head of the English department and the director of the developmental education program have held that assumption. The second assumption was that the redesign had not been, nor is, successful. DE faculty hold this assumption.

Limitations

In general, a major limitation of causal-comparative design occurs in the inability to randomize to condition (Salkind, 2010). The limitations of this evaluation were as follows. One limitation includes the lack of a stated need by the administrative stake holders, as they did not initially request this evaluation. This lack limits the study's ability to affect change in the program at the study site. A second factor was the lack of prior quantitative research studies on DE program evaluation, especially after course redesign. I can perhaps overcome this limitation by corresponding with DE programs who have completed evaluations by the National Association for Developmental Education (NADE) but have not published their results. The National Association for Student Support (NOSS; formerly NADE) website has a list of these institutions (NOSS, 2019). A third factor includes the lack of control for all extraneous variables and counter threats to internal validity such as students' maturity levels, socioeconomic status, and instructor (Salkind, 2010).

Scope of Study

The scope of this project study included specific populations at a regional, public university in a western state, namely students at the study site who matriculated in fall 2009 (Group A) and fall 2014 (Group B) and who were required to take the Accuplacer Sentence Skills test. The independent variable was enrollment in ENGC 090 fall 2014. This was Group B. The control was students matriculating fall 2009 (Group A) because that date was a full three years before the redesign, so those students had not been affected by the redesign. For Group B, I chose students matriculating fall 2014 because that date was two full years beyond the start of the redesign. This date has allowed for the instructors to get a handle on teaching in the redesign. The dependent variables included enrollment in and completion of FYC with a grade of C or better. These variables were the ones that concerned the committee charged with redesigning the DE program.

Delimitations

The delimitations of this project study included the following points. I did not choose students matriculating from the start of the DE program in 2006 until the redesign in 2012. Nor did I choose students matriculating during the years of the redesign, school years 2012 and 2013 as the program was in a bit of a disarray as instructors got their feet on the ground with new curriculum. Moreover, I did not choose to include all students in the specified times, for that choice would have included some students who had not taken the Accuplacer Sentence Skills test. Furthermore, I did not choose to include students who had taken only the Accuplacer Reading Comprehension test, as before the redesign

they would have enrolled in a course different from DE. Thus, I would not have been comparing like with like in my study.

I had not chosen qualitative research methods, for they focus on the perceptions of the participants and researchers in the study. Those methods would have been inappropriate for this study because the focus of the study does not focus on the subjects' lived experience as in a phenomenological approach; nor an observation of a culture as in an ethnographic approach; nor a detailed examination of subject in a specific place and time, as in a case study. Therefore, a quantitative research nonexperimental approach with a causal-comparative design was the most appropriate approach and design for this program study.

Protection of Participants' Rights

I followed certain routines to assure confidentiality of participants' identifications and data storage. First, I received the data from the Institutional Research Office de-identified with numbers, no names, indicating each student. Second, I protected data storage both before and after analysis. To achieve this protection of electronic data, I encrypted the files containing the data, using that data on password protected computers. The storage service was also password protected. Furthermore, I closed the files containing the electronic data whenever I left them unattended. To achieve protection of data on paper, I stored such data in securely locked cabinets.

Data Analysis Results

This section includes an analysis of the data retrieved from the study site's Institutional Research Archive. This data, gained after IRB approval from Walden

University 04-06-18-048890) and the study site (Protocol Number 18-61), answer the following research question: What were the effects of the developmental English program redesign for underprepared students' academic success at an open-access university? The two hypotheses derived from the research question were the null and alternative hypotheses are as follows.

H_{O1}: Changes did not occur in underprepared students' time to FYC enrollment after the developmental English program redesign.

H_{A1}: Changes did occur in underprepared students' time to FYC enrollment after developmental English program redesign.

H_{O2}: Changes did not occur in underprepared students' time to FYC completion with a grade of C or better after developmental English program redesign.

H_{A2} Changes did occur in underprepared students' time to FYC completion with a grade of C or better after developmental English program redesign.

The sample for this study was students who enrolled in DE fall 2009 (n = 112) and students who enrolled in DE fall 2014 (n = 159) and who scored below 70 on the Accuplacer Sentence Skills subtest. Of this sample, 40 students (36%) in Group A enrolled in FYC after completing ENGL 090 and 92 students (58%) in Group B enrolled in FYC.

I then compared the two groups of ENGC 090 completers on the following interval dependent variables. These variables were (a) time from start of first developmental English course to FYC enrollment, (b) time from start of first developmental English course to successful completion with a grade of C or better, (c)

number of credits attempted, and (d) number of credits successfully completed. I also compared the two groups on the categorical dependent variable of successful completion.

Inferential Analysis

Inferential analyses determine whether a statistically significant difference has occurred between groups (Creswell, 2014). For inferential analyses, I used an independent samples *t* test. An independent samples *t* test would determine whether the means of two groups have statistical difference from each other. I conducted an independent samples *t* test for each of the interval dependent variables and their concomitant hypotheses.

Time to enrollment in FYC. Hypothesis 1 stated that changes did not occur in underprepared students' time from matriculation to enrollment in FYC after the developmental English program redesign. Next, I conducted an independent samples *t* test in SPSS to study the time, in semesters, from first enrollment in developmental English to enrollment in FYC. The results of the independent samples *t* test, as given in Tables 1 and 2, show that students in Group B post-redesign took fewer semesters from matriculation to enrollment in FYC than students in Group A pre-redesign. SPSS provides two sections in its output. The first section, Group Statistics, provides basic information about the group comparisons, including the sample size (*n*), mean, standard deviation, and standard error for mile times by group (Yaeger, 2019). As shown in Table 1, ~~Group Statistics,~~ the independent samples *t* test indicated a difference in the scores for Group A pre-design, $n = 40$, ($M = 2.15$, $SD = 1.12$) and Group B post-redesign, $n = 92$, ($M = 1.26$, $SD = 0.88$) conditions; $t(160) = 4.91$, $p = 0.00$, with a confidence level of .05.

The 40 students in Group A pre-redesign took an average of 2.15 semesters from enrollment in their first developmental English courses to their enrollment in FYC. In contrast, the 92 students in Group B post-redesign took an average of 1.26 semesters.

Table 1

From Matriculation to Enrollment in FYC: Group Statistics

Group	N	Mean	Std. Deviation
A	40	2.15	1.12
B	92	1.26	0.88

Next, I looked at the independent samples *t* test in Table 2, which has two rows. To determine which row to read, I looked at the Levene's Test right-hand column, *Sig.value*, which is the *p*-value, to determine if the variances between the two conditions are equal or not (Yaeger, 2019). If this value was $p < 0.05$, then the variability between the two conditions would be significantly different and I would need to use the second row, *Equal variances not assumed* (Yaeger, 2019). Because the Sig. value in the Levene's Test is $p = 0.00$, which is $p < 0.05$ (see Table 2), I concluded that the variance in semesters is significantly different between pre- and post-redesign. This test indicates that I should look at the second row labeled Equal variances not assumed.

Table 2

From Matriculation to Enrollment in FYC: Independent Samples t Test

	Lavene's Test		t-test for Equality of Means					
	F	Sig	t	df	Sig. 2-tailed	Mean Difference.	Std. Error Difference.	95% Confidence Interval
Equal Variations Assumed	9.385	.003	4.91	130.00	0.00	0.90	0.18	0.53/1.25
Equal Variations Not Assumed			4.46	60.58	0.00	0.90	0.20	0.49/1.29

The next column I need to look at is *Sig (2-tailed)* in Table 2, which "is the p = value corresponding to the given test statistic and degrees of freedom" (Yaeger, 2019). This p-value indicated whether or not the difference between the two conditions have statistical significance (Yaeger, 2019). If this value is $p < 0.05$, the difference would be statistical significance (Yaeger, 2019). In Table 2, the Sig (2-tailed) in the second row is $p = 0.00$. Because this value is less than 0.05, I concluded that a statistically significant difference had occurred between the mean number of semesters students took to enroll in FYC pre- and post-redesign. Thus, the null hypothesis, H_1, was rejected because significant changes did occur in student's time to enrollment after the redesign ($p = .00$) with students in Group B post-redesign taking less time to enroll in FYC than students in Group A pre-redesign.

Time to passing FYC. Next, I conducted an independent samples *t* test in SPSS to study the time, in semesters, from first enrollment in developmental English to successfully completion of FYC. The results of the independent samples *t* test, as given in Tables 3 and 4, show that students in Group B post-redesign took fewer semesters from

matriculation to enrollment in FYC than students in Group A pre-redesign. As shown in Table 3, the independent samples *t* test indicated a significant difference in the time between the two groups for Group A pre-redesign, $n = 38$ ($M = 3.37$, $SD = 1.32$) and Group B post-redesign, $n = 92$ ($M = 2.32$, $SD = 0.98$), conditions; $t(128) = 5.0$, $p = 0.00$, with a confidence interval of .05. The 38 students in Group A pre-redesign took an average of 3.37 semesters from enrollment in their first developmental English courses to their successful completion of FYC. In contrast, the 92 students in Group B post-redesign took an average of 2.32 semesters.

Table 3

From Matriculation to Completion of FYC: Group Statistics

Group	N	Mean	Std. Deviation
A	38	3.37	1.32
B	92	2.32	0.98

Next, I looked at the Independent Samples *t* Test in Table 4, which has two rows. To determine which row to read from, I looked at the Levene's Test right-hand column, Sig. value, which is the *p*-value, to determine if the variances of the two groups are equal or not equal (Yeager, 2019). If this value was $p < 0.05$, then the variability between the two conditions would be significantly different and I would need to use the second row, Equal variances not assumed (Yaeger, 2019). In Table 4, the Sig. value in the Levene's Test is $p = 0.00$, which is $p < 0.05$, so I can conclude that the variance in semesters is

significantly different between pre- and post-redesign. This test indicates that I should look at the second row Equal variances not assumed.

Table 4

From Matriculation to Completion in FYC: Independent Samples t Test

Equal Variations	Lavene's Test		t-test for Equality of Means					
	F	Sig	t	df	Sig. 2-tailed	Mean Difference.	Std. Error Difference.	95% Confidence Interval
Equal Variations Assumed	9.385	.003	5.00	128.00	0.00	1.05	.21	.64/1.47
Equal Variations Not Assumed			4.24	54.61	0.00	1.05	.24	.58/1.53

The next column I needed to look at was Sig (2-tailed) in Table 4, which "is the p-value corresponding to the given test statistic and degrees of freedom" (Yaeger, 2019). This *p*-value indicated whether or not the differences between the two conditions had statistical significance (Yaeger, 2019). If this value was $p < 0.05$, the difference would have statistical significance (Yaeger, 2019). In Table 4, the Sig (2-tailed) in the second row was $p = 0.00$. Because this value was less than 0.05, I concluded that a statistically significant difference had occurred between the mean number of semesters students took to pass FYC pre- and post-redesign. Thus, the null hypothesis, H_2, was rejected because significant changes did occur in student's time to successful completion of FYC after the redesign ($p = .00$) with students in Group B post-redesign taking less time to successfully complete FYC than students in Group A pre-redesign.

Interpretation

Redesign did affect the length of time to enrollment and completion of FYC. The answer to the research question – What were the effects of developmental English program redesign for underprepared students' academic success at an open-access university? – appears to be quicker entry into and out of FYC, a college-level course. The premise of academic momentum, the theoretical framework for this project study, states the importance of students earning college credit as quickly as possible. This study shows that the developmental English program redesign had a positive effect in moving underprepared students into and through FYC. This study shows that the post-redesign Group B took approximately one semester less than the pre-redesign Group A to enroll in the college level course, FYC, from time of initial enrollment in developmental English courses. The exact amount of time was 0.89 semester, for Group B took an average of 1.26 semesters while Group A took an average of 2.15 semesters. Likewise, this study shows that the post-redesign Group B took approximately one semester less than the pre-redesign Group A to successfully complete FYC from time of initial enrollment in developmental English courses. The exact amount was 1.05 semesters, for Group B took an average of 2.32 while Group A took an average of 3.37.

The differences between Group A pre-test and Group B post-test was statistically significant, which I did not anticipate from my position at the micro level of involvement with individual students. Thus, these results show that students skipping the two lowest levels were not, as a group, disadvantaged in completing the ENGC 090-FYC sequence. Additionally, a higher percentage of students in Group B did successfully complete FYC

than did students in Group A. Fifty-six percent of the students in Group B passed FYC while 34% of the students in Group A passed FYC. This confirms the idea that too many precollegiate classes prevent students from completing a college-level course. This was not to say the content of those lower classes were at fault, but the amount of time students must invest in them might surely be the reason for stopping out before completion of FYC.

Section 3: The Project

Introduction

In 2012, the study site eliminated the developmental English sequence and instituted IRW. However, the effects of this redesign had not been shared with the stakeholders at the study site, namely the first-year composition instructors and director, the developmental English instructors and director, the school's retention committee, and interested faculty. I have chosen a policy recommendation, or position paper to be delivered to these local stakeholders. In addition, I presented the position paper at a national conference to situate the study's results in the national context on developmental English reform. Thus, Section 3 includes this study's project, a policy recommendation, also known as a position paper, with a presentation, along with the definition of the genre of a position paper, its goals, and rationale. Additionally, the section includes a literature review providing the rationale for using a position paper with presentation. After the literature review, I present the position paper's implementation, possible barriers, support system, and implementation timeline. Finally, I describe how I evaluate the effectiveness of the position paper and its possible impact on social change.

The term *position paper* has a variety of definitions. In higher education, a researcher presents information in a position paper about an issue and seeks to convince the reader that the opinion about that issue is persuasive (Brock University, 2019; Eötvös Lorand University, 2017; Metropolitan Community College, 2019; Rutgers University, 2017; Simon Fraser University, n.d.; Smith, 2015). This definition appears in two textbooks: *Writing in the Content Areas* (Benjamin, 2005) and *Writing Today* (Johnson-

Sheehan & Paine, 2009). This academic definition does not seem to have a basis in the professional world for associations see a position paper in quite a different light. For some educational organizations, a position paper provides an official position (American Montessori Society, 2018; National Association for Gifted Children, n.d.; Young Adult Library Services Association, 2019). Regardless, a position paper disseminates information.

Goals have been important to any project because goals support the project elements of decisions, direction, and performance (Zwikael, Chih, & Meredith, 2018). The first goal for this project was to share information with the study site's stakeholders, increasing an understanding of the effects of the 2012 DE program redesign. The second goal is to disseminate knowledge about the effects that might drive decision making about the future of the DE program. The third goal is to disseminate knowledge within a national context.

Goals need to be specific, measurable, attainable, realistic, and time related (Doran, 1981; Zwikael et al., 2018). Each of the above goals meet these five criteria. First, they were specific because the information/knowledge is in the form of a position paper with presentation. Second, they were measurable by using the evaluation protocol given below. Third, the goals were attainable because I have already written the position paper and have planned the process to share and disseminate. Fourth, they were realistic because I know that faculty and staff have presented to the various stakeholders and because I have presented in the national context at conferences. Finally, these goals were time related because I have assigned a month to give each presentation.

Rationale

As the overall goal for the project is to share knowledge and disseminate information, a position paper seems to be the best project for this study out of the four basic genres of projects suggested by Walden University. The Center for Research Quality (2018) at Walden University quantitative checklist suggests the following genres: (a) an evaluation report (for an evaluation study), (b) a curriculum plan, (c) professional development training curriculum and materials, and (d) a policy recommendation with detail (position paper).

Evaluation Report

An evaluation report would not be appropriate because the study was not evaluative. By using an evaluation, a researcher seeks to determine the effectiveness and efficiency of those projects, policies, and programs (Chen, 2014; Spaulding, 2014). Evaluators collect a variety of data including multiple user and stakeholder perspectives (Newcomer, Hatry, & Wholey, 2015; Spaulding, 2014). An evaluation report would not be an outcome for the type research I conducted because I investigated only one aspect of the DE program, that of the number of students that completed FYC and the number of semesters those students took to achieve that success.

Curriculum Plan

A curriculum plan would not be appropriate because the study did not investigate classroom level issues. Curriculum is a program of study that delineates lesson plans, student assessment, and pedagogical strategies (Khan & Law, 2015). According to Alsubaie (2016), curriculum must incorporate all the elements that a specific educational

program encompasses such as assessments, goals, instructional resources, learning experiences, and objectives. A curriculum plan would not be an outcome for the type of research I conducted because I did not investigate the day-to-day activities within classrooms.

Professional Development Training

Professional development training curriculum and materials would not be appropriate because the purpose of this study was not about training others but about informing them. Professional development is the act of maintaining one's qualifications for employment (Speck & Knipe, 2005). Various approaches include attendance at communities of practice, conferences, mentoring, professional association memberships, self-study and taking a class, (Gast, Schildkamp, & van der Veen, 2017; Kennedy, 2016). A professional development opportunity would not be an outcome for the type of research I conducted, quantitative nonexperimental causal-comparative.

Position Paper

A position paper is the most appropriate of the four genres for the project. A position paper is, "an essay that presents an arguable opinion about an issue" (Metropolitan Community College, 2019). As the purpose of the study is to address the problem that the DE stakeholders do not know the effects of DE program redesign, a position paper is the best way to disseminate the information about the effects of the redesign.

An evaluation report would not be appropriate because the study was not evaluative. A curriculum plan would not be appropriate because the study did not

investigate classroom level issues. Professional development training curriculum and materials would not be appropriate because the purpose of this study was not about training others but about informing them. A position paper is the most appropriate of the four genres because the purpose of the study is an issue, the effects of the 2012 redesign.

A position paper presentation addresses two goals of the study site. The first goal is to share knowledge, for higher education institutions are in the "business of knowledge" (Cacho & Ribiere, 2018). Thus, a position paper presentation to stakeholders at the study site is appropriate.

The study site's second goal was to expand the view of scholarship by implementing Boyer's teacher-scholar model. Boyer's (1990) model has encompassed scholarship that met the traditional view of original research and publication along with three more types of scholarship. Those three types have been scholarship of integration (interdisciplinary synthesis of information), scholarship of application or engagement (disciplinary expertise combined with traditional service), and scholarship of teaching and learning (including public sharing of knowledge, application opportunities, and professional evaluation; Boyer, 1990). Providing a position paper with presentation would meet the traditional scholarship of original research and the newer scholarship of teaching and learning, which included public sharing.

Review of the Literature

In this literature review, I have discussed the genre of the position paper and why this genre was appropriate to address the interconnecting problems presented in this

study. A corollary issue, the teacher-scholar model for faculty, helped to explain why this genre was appropriate.

The Research Process

I used the following Walden University Library databases with a time delimiter of 2014 to 2019: Academic Search Premier, Education Research Complete, ERIC, and Sage Premier. I used the following key terms and subject headings: white paper, position paper, developmental education, developmental English, IRW, academic silos, adjunct faculty, shared governance, teacher-scholar model, Boyer model, and knowledge sharing. Following the guidelines of Dr. Pacheco-Vega (2016), I used citation tracing in Google Scholar. In that database, I searched for articles that were older than a few years, using the above key terms and subject headings. I then looked for the 'Cited by [number]' link below the entry of each article. If a number was given for an article, I clicked on the link to see the list of works that had cited the original article. In addition, I looked at the reference lists for journal articles published within the last two to three years to determine if any of those references would be applicable for my literature review.

The Position Paper Genre

In this section, I have reviewed the literature related to the use of position papers on policy recommendations in academia.

Definition. The term *position paper* has had a variety of definitions. In higher education, a researcher has presented information in a position paper about an issue seeking to convince the reader that the opinion about that issue has been persuasive (Brock University, 2019; Eötvös Lorand University, 2017; Metropolitan Community

College, 2019; Rutgers University, 2017; Simon Fraser University, n.d.; Smith, 2015). This definition appeared in two textbooks: *Writing in the Content Areas* (Benjamin, 2005) and *Writing Today* (Johnson-Sheehan & Paine, 2009). This academic definition did not seem to have a basis in the professional world for associations have seen a position paper in a different light. For them, a position paper has provided an official position (American Montessori Society, 2018; National Association for Gifted Children, n.d.; Young Adult Library Services Association, 2019).

Research. Although no research articles appeared to have been published in the last 5 years about position papers, their use has been briefly addressed in the literature. One of the few articles discussed the importance of position papers to an organization, the World Society of Emergency Surgery (WSES; Bala et al., 2018). This article described the required elements for a position paper sanctioned by the organization, namely a knowledge gap, a review of options, and a position representing an official stance supported by WSES (Bala et al., 2018).

Actual position papers discussing issues in education appeared more frequently in peer reviewed literature during the last 5 years than did research studies. One article appeared in the *Journal of Astronomy & Earth Sciences Education:* "Position Paper on Use of Stereoscopy to Support Science Learning (Price, Lee, Plummer, SubbaRao, & Wyatt, 2015). Two articles appeared in journals focused on school psychology: "Position paper for guiding response to nonsuicidal self-injury in schools" (Hasking et al., 2016) and "CASP position paper: Specific learning disabilities and patterns of strengths and weaknesses" (Christo & Ponzuric, 2017). Regardless of the lack of peer reviewed articles

about position papers, they have been used extensively in academia to present opinions. For example, papers coming from the Community College Research Center (2017) have supplied much of the research and background information for the impetus in developmental education redesign.

Boyer's Teacher-Scholar Model

The teacher-scholar model has stemmed from a publication by Boyer (1990) for the Carnegie Foundation for the Advancement of Teaching. Traditionally in higher education institutions, scholarship had been defined as original research and academic publication. Boyer sought to broaden that academic scholarship by proposing four forms of scholarship: (a) discovery, (b) integration, (c) application, and (d) teaching (Boyer, 1990; Gardner, McGown, & Moeller, 2010; Moser, 2014). First, the scholarship of discovery has entailed original research and its publication by the researcher, with both as a continuous process (Braxton & Lyken-Segosebe, 2015; Moser & Ream, 2015). Second, the scholarship of integration has involved an interdisciplinary synthesis of information (Bogenschneider, 2018; Bogenschneider, Corbett, & Parrott, 2019; Day, Wadsworth, Bogenschneider, & Thomas-Miller, 2019). Third, the scholarship of application or engagement has involved disciplinary expertise combined with traditional service (Greenhow, Gleason, & Staudt-Willet, 2019; Juergensmeyer, 2017; Leibowitz & Bozalek, 2018; Rice, 2019; Tang, 2018). Fourth, scholarship of teaching and learning has included public sharing, application opportunities, and professional evaluation (Kern, Mettetal, Dixson, & Morgan, 2015; Toth & Sullivan, 2016). These four forms would replace the single form of the scholarship of discovery, which had been the gold standard

at most universities in the United States (Geertsema, 2016; Reano, Masta, & Harbor, 2019; Walls, 2016). As Urban (2017) has written, tenure and promotions committees have needed to consider the importance of a variety of scholarship researchers, clinicians, and instructors who do not fit the traditional view of an academic.

O'Meara (2015) has argued that Boyer's book on the teacher-scholar model, *Scholarship Reconsidered* (1990) has been crucial in promoting the acceptability of the scholarship of teaching and engaged scholarship. Moreover, Ruscio (2013) explained how U.S. college faculty members could benefit by accepting the idea of the teacher-scholar model. She supported her perspective with examples from her teaching experience at Washington and Lee University in Lexington, VA, which had embraced the teacher-scholar model.

Research, Perspectives, and Commentaries

As a new area, peer reviewed literature on the topic of the teacher-scholar model has not been extensive. The literature in the past 5 years on the teacher-scholar model has included perspective pieces, commentaries, and research. Some have focused on institutional initiatives (Crow et al., 2018; Mtawa, Fongwa, & Wangenge-Ouma, 2016; Slapcoff & Harris, 2014; Zuidema, Daichendt, & Fulcher, 2019) with others on disciplinary perceptions such as the English field (Gray, 2017; Larson, 2018; Sullivan, 2015; Toth & Sullivan, 2016), nursing (Limoges & Acorn, 2016), and librarianship (Hays & Studebaker, 2019). Regardless of focus, all advocated for the use of the teacher-scholar model.

Institutional Initiatives.

Some researchers studied institutions that had implemented the Boyer model of scholarship and were encountering a second-generation of faculty Crow et al. (2018) investigated an institution of higher education that had implemented the Boyer model of scholarship early and was now experiencing challenges as it moved in its second-generation of using the model. The study surveyed faculty and administrators on their perceptions on how well the institution had integrated the teacher-scholar model. Zuidema et al. (2019) viewed the teacher-scholar model from the perspective of faculty teaching at schools that were a part of the Council for Christian College & Universities (CCCU). Although teaching had always been a strength of these schools, the authors asserted that the institutions must encourage and support a variety of intellectual projects. The authors provided benchmark practices developed from a survey of CCCU chief academic officers. They also provided successful strategies from Point Loma Nazarene University in San Diego, CA, and Dordt College in Sioux Center, IA. Slapcoff and Harris (2014) explained their university, McGill in Montreal, Canada, used Boyer's teacher-scholar model to build the Inquiry Network. This center has helped faculty to develop research and scholarship understanding and opportunities for students. Mtawa et al. (2016) used Boyer's teacher-scholar model as the theoretical framework for a study on university-community engagement. They saw Boyer's model, which integrated four dimensions – discovery, integration, application, and teaching – as benefiting communities (external audiences) and academia (internal audiences). They interviewed policy and academic staff members at the Sokoine University of Agriculture in Tanzania

conducting focus groups with that population and analyzed government documents. Their study centered on the question "to what extent are CE [community engagement] activities undertaken in the context of knowledge exchange?" Researchers found that institutions had been positively affected by using the Scholarship of Teaching and Learning approach.

Some researchers have focused on the use of the Scholarship of Teaching and Learning approach through their academic disciplines. According to Andelora (2005), various practitioners (Alford & Kroll, 2001; Kroll; Lovas, 2002; Madden, 1999; Reynolds, 1998, 2005; Reynolds & Holladay-Hicks, 2005; Sommers, 2004; Tinberg, 1993; Tinberg, Duffy, & Mino, 2007) have helped to form the teacher-scholar model as a standard identity for community college teachers. Sullivan (2013) and Toth and Sullivan (2016) have added to the idea of the teacher-scholar model as normative in that field. Toth and Sullivan (2016) studied the efficacy of the teacher-scholar model for composition instructors at community colleges. They asked members of the Two-Year College English Association how realistic the teacher-scholar model was for them. The survey consisted of multiple-choice and open response questions on instructors' use of published scholarship. The researchers found that the teacher-scholar ideal was realistic and important for a subset of that faculty. Sullivan (2013) has advocated taking the model further. He has promoted the inclusion of *activist* to teacher-scholar because of the precarious nature of colleges' policies and programs due to current economic and political forces. Larson (2018) also discussed the role of community college instructors as teacher-scholars. In his perspective, the role is complicated by "tensions over practice and

theory." Even though the first responsibility of faculty at 2-year institutions is to teach (Gray, 2017; Larson, 2018), some writers explored the importance of the scholarship of discovery, original research and its publication, at those institutions. Gray (2017) asserted that administrations must also provide support for researchers and their agendas. She brings the perspective of a Canadian scholar to the teacher-scholar model. Just as institutions experienced benefits from using the Scholarship of Teaching and Learning approach, so did academic disciplines.

Project Description

The proposed project is a position paper with presentation to be delivered to the stakeholders of developmental English at the study site. The stakeholders at the study site include administrators, faculty, and staff. The presentation would be made at meetings of the retention committee, first-year composition faculty, developmental English faculty, and Faculty Colloquium.

Implementation

Implementation of this project would start summer 2019 and continue to March 2020 (Figure 1). The presentation to the retention committee could occur in January, to the faculty meetings in February, and to the Faculty Colloquium in March. To meet with the retention committee, I would need to submit a request to the vice president of academic affairs. To meet with the first-year composition faculty, I would need to ask that program's director. To meet with the developmental English faculty, I would need to ask that program's director. To participate in the Faculty Colloquium, I would need to complete an application at the start of the semester. For the presentation at the annual

conference of the National Association for Developmental Education, I would need to submit a proposal in July 2019.

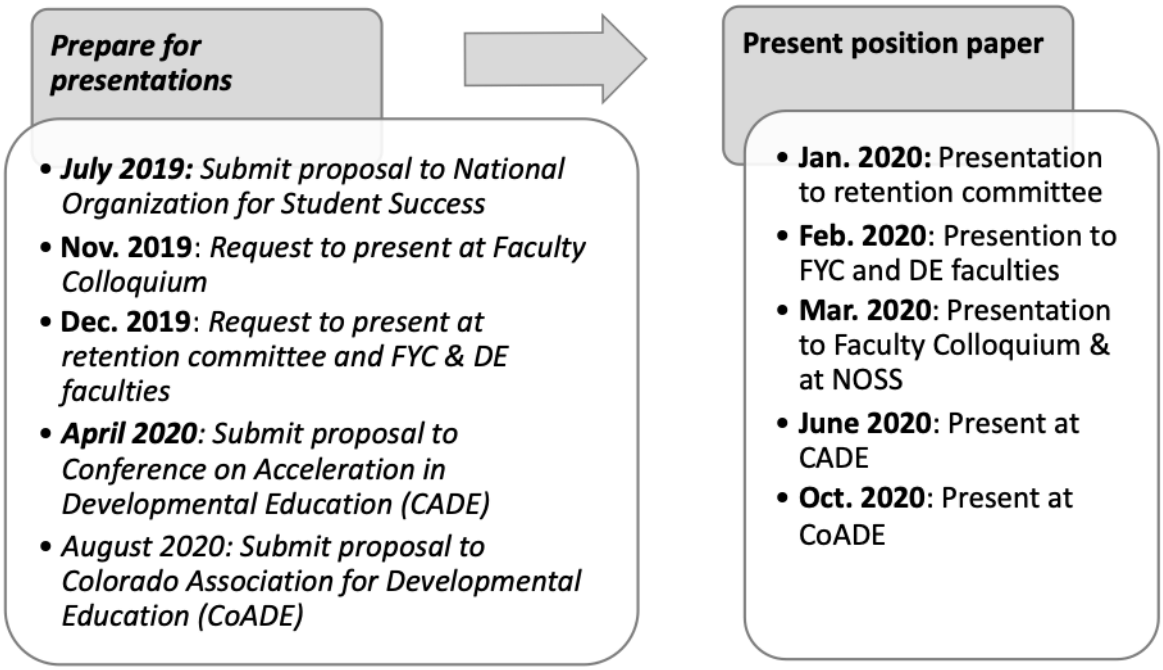

Figure 1. Project Implementation

Resources and Barriers

The resources needed for this project would be a computer, a projector, copies of the executive summary for each person in the audience, and copies of the complete position paper for those interested in the details of the study. The existing supports for this project at the study site include my supervisor, who is the director of Developmental Education; the vice president of academic affairs, and my colleagues, the developmental English faculty. The existing supports for this project at the national venue would be the chairperson for breakout presentations and the roaming IT staff at the conference center.

Potential barriers. One potential barrier would be a rejection of my request to address the retention committee, English faculty department meetings, and/or Faculty Colloquium. Another potential barrier would be rejection of my proposal to speak at NADE 2020.

Potential solutions to barriers. A potential solution to the above barrier would be to appeal to the assistant vice president for academic affairs for access to the various groups. A solution for presenting at NADE is that I have a guaranteed spot whenever I submit a proposal because I won that organization's "Outstanding Research Proposal" in 2017.

Roles and Responsibilities

As I am the principle investigator of this study, my role is to develop the overall presentation, arrange logistical issues, and implement the presentation. First**,** I need to develop the overall presentation, which includes a PowerPoint® and handouts. The PowerPoint will follow the organization of the position paper, and the handout will be an executive summary of the position paper. This handout will be given to all participants at the presentations. A second handout will be the position paper itself that will be available in paper and by email.

Second, I need to arrange the logistics of the presentations. First, for permission to speak with the study site's retention committee, I must apply to the assistant vice president for academic affairs. I will do this in a face-to-face meeting with that administrator. At the same time, I will speak with her about presenting at a Faculty Colloquium. Second, for permission to speak with the FYC faculty, I must apply to the

FYC director in the English department. Third, for permission to speak to the developmental English faculty, I must apply to the director of the developmental education program. Finally, to present at a Faculty Colloquium, I must complete an application that the assistant vice president for academic affairs will review for acceptance. For the state and national conferences, I will need to submit presentation proposals in which I provide a 50-word precis for the conference booklet and a 250-word summary.

Third, I will need to implement the presentations. For the local, state, and national, implementation will initially involve printing the handouts, checking on the technology available in the rooms, and examining the rooms' layouts. For the local stakeholders, public relations will involve word-of-mouth as I contact various members of each of the local stakeholder groups. I will explain the importance of the presentation and ask them to mention the upcoming presentations to colleagues. For the state and national conferences, I will rely on their handbooks, in which appears the presentation precis. Finally, implementation will be the actual presentation to each group. I will use a remote to advance slides so that I can move around the room. In addition, I will encourage questions and discussion as part of the presentation.

Project Evaluation Plan

I will use a goals-based evaluation to assess my position paper project. Goals-based evaluation is a judgement based on a program's goals and objectives (Caffarella & Daffron, 2013; Hansen, 2005; Scriven, 1991). The primary goal of this project is to share information with the study site's stakeholders, increasing an understanding of the effects

of the 2012 DE program redesign. The second goal is to disseminate knowledge about the effects that might drive decision-making about the future of the DE program. The third goal is to disseminate knowledge within a national context.

The evaluation will involve a mixed methods design, including both formative and summative feedback. A mixed methods design uses both qualitative and quantitative approaches. Formative evaluation will provide feedback that will be put back into the document (Lodico et al., 2010, p. 18) to generate information from the presentations' small group discussions and full group question-and-answer segments. This formative information will aid in continuous project improvement.

The qualitative data collection will originate in the small groups where notetakers will record their groups' ideas on flipcharts and then share those ideas with the full group. Additional qualitative data will emerge in the full group where a notetaker will record the members' questions and the presenter's answers. I will collect each groups' flip charts and notes to analyze the information using what Lodico et al.'s (2010) calls a thematic approach. Through this analysis, I will be able to determine how well the goals of sharing knowledge/disseminating information about the redesign.

The quantitative data will derive from a Likert scale survey (Garayta, 2016) that group participants will complete. This survey is available at the end of the position paper found in the Appendix. To analyze the survey responses, I will use descriptive statistics such as frequency distributions and measures of central tendency (mean, median, and mode; Lodico et al., 2010). I will use this formative evaluation information to adjust my later presentations.

A summative evaluation at the end of the project will have the purpose of influencing decision making. I will derive the summative evaluation by compiling the qualitative and quantitative statistics from each presentation.

The key stakeholders for this project are the study site's administrative officers, namely the vice president for academic affairs and the assistant vice president for academic affairs. They are the key stakeholders because they have the decision-making authority over the developmental English program.

Project Implications

Social Change Implications

Social change involves a modification in individuals' interactions and relationships that make improvements in their lives and communities (Walden University, 2019b). At the macrolevel, social change has transformed civil rights and women's rights in the United States. At the microlevel, social change has transformed individuals' lives through education. Traditionally, educational institutions have provided students with knowledge needed to improve themselves and impact their communities in positive ways (Walden University, 2019a). In addition, through increased course work and the gaining of further knowledge of the world around them, students can themselves seek to create social change (Brown & Bates, 2017). In other words, the effects of education can generate positive social change.

Postsecondary education can mean higher wages (Schanzenbach, Bauer, & Breitwieser, 2017) and better health for students (Liu, Belfield, & Trimble, 2014). As this project study investigated a strategy for improving learning and retention of

underprepared college students, the results show that one program is more effective than another in helping students in helping them progress towards a degree. This study shows that the accelerated IRW design allows more students to complete a gateway course, which provides them with a stronger trajectory towards a degree. Degree completion is positively correlated with higher earnings (Zeidenberg, Scott, & Belfield, 2015)

For the individual. These results are important for the student population in developmental English is composed of Black, Hispanic, and low-income students at a higher percentage than White and middle- to higher-income students (CAPR, 2019). Being able to complete more quickly FYC, and possibly a degree, allows for quicker entry into employment at a living wage. One caveat, however, is that the higher wages only come to those individuals who have earned a degree (Liu et al., 2014; Schanzenbach et al., 2017). However, accumulating course credits with no degree does not show to increase an individual's wages (Hillman, Tandberg, & Fryar, 2015).

For the institution. Implications of social change for the study site involves the developmental English program, its students, and their instructors. Developmental English can be viewed as a venue for social justice. According to Boylan (2019), these courses provide a gateway, rather than a barrier, for students who had been initially deemed not college material. Students involved in developmental course work receive a second chance at a postsecondary education. The results of the study provide validation that the job they are doing is having a positive effect on students. Furthermore, that job is providing more students with success beyond the courses that those instructors are teaching.

In the larger context. Increased postsecondary education can affect the economy by lower rates of unemployment (Greenstone & Looney, 2011; Schanzenbach et al., 2017) and an increase in America's ability to compete (Eberly & Martin, 2012). The findings in this study could guide other programs with the related consequence of increasing the nation's wealth and fiscal vigor.

Importance of Project to Local Stakeholders

The importance of the project for local stakeholders lies in dissemination of knowledge about an ongoing educational policy. Developmental English faculty need to know the effects of the major shift in policy; otherwise, they are working blind, not knowing if the single IRW course has improved students' ability to move forward in their education. Additionally, it is a matter of their self-efficacy, for when developmental English instructors look at only their students' results, they can get discouraged by the seemingly high rate of withdrawals and failures.

Retention committee. Because of ongoing changes from the state legislature, faculty and staff on the retention committee also need to have statistics to guide their recommendations. As of February 16, 2019, no data analysis had been presented to the retention committee members about the effects of the 2012 redesign. Even though the direction that committee was headed in their recommendations to further redesign, or even eliminate the developmental English program, is away from the current design, members need to understand where the program has been and where it is currently as they make their recommendations to the administration.

In addition, the information presented would help to break down silos because faculty and staff could see what has been happening outside of their fields and responsibilities. This outside-of-their-discipline knowledge can help them achieve a better understanding of what is happening in the developmental education program and provide a better understanding of a segment of the student population.

Faculty Colloquium. For this same reason as breaking down silos, presenting at a Faculty Colloquium would allow faculty and staff who are not on the retention committee to better understand the developmental education program and the student population that the program serves. The issue of how to help underprepared students succeed should be of interest to all on campus because those students comprise 47% of the incoming first-year students who come from Colorado high schools (Colorado Department of Higher Education, 2018). Thus, a presentation at a Faculty Colloquium provides a needed outlet for the results of this study.

Importance of Project in Larger Context

This project is important in the larger context of the national debate about student success and developmental education because little has been published on the topic of course redesign in terms of IRW.

First, peer reviewed literature from the last 5 years on the topic of the effects of developmental English redesign is minimal. One article discussed online delivery of developmental English whereas another discussed the use of an embedded tutor to help students achieve success (Raica-Klotz et al., 2014). Vick, Robles-Pina, Martirosyan, and Kite (2015) also researched the importance of tutoring, but their study dealt with students

meeting tutors in a writing center. Bers (2018) discussed a variety of approaches, what they were and their effectiveness. Campbell and Cintron (2018) described the corequisite model: Louisiana. Dees, Moore, and Hoggan (2016) described how the use of reflective practice while designing and implementing a redesign enhanced the project.

Second, literature on a redesign of the type that the study site undertook is scarce. One series of articles discussed scholar-practitioner partnership in developing an IRW course (Caverly, Taylor, Dimino, & Lampi, 2016). Another article discussed a research-based IRW course developed at Bridge Valley Community and Technical College in South Charleston, West Virginia (Pierce, 2017). Hayes and Williams (2016) provided data on program redesign in Maryland that showed a positive impact on student success. Two articles showcased the California Acceleration Project, an IRW course redesign (Hern & Snell, 2014; Stahl, 2017). Phillips and Giordano (2016) discussed program development in courses given by the University of Wisconsin Colleges plus the academic support provided to underprepared students.

Third, literature on this topic, IRW redesign, from institutions of higher education in the Rocky Mountain West appeared to be nonexistent. Only one article showed up in a search. In it, Jaggars et al. (2015) explored three programs but the one from Colorado was about developmental math rather than developmental English. Most of the articles dealing with developmental English redesign were classroom rather than program, level. In addition, one article discussed the use of metacognition (Pacello, 2014).

Section 4: Reflections and Conclusions

This study project is a position paper describing the effects of the study site's DE program redesign (See Appendix). In this section, I first explain the project's strengths, its limitations, and recommendations for the mitigation of those limitations. Second, I explain alternative approaches to addressing the study's problem and describe what I learned about project development, providing an analysis of my learning. Third, I provide a reflection on the importance of the study and project overall. Finally, I close with a description of the potential impact for positive social change and recommendations for future research.

Project Strengths and Limitations

The project derived from this study is a position paper presented to local stakeholders and national audiences. The local stakeholders are administrators, faculty, and staff at the study site who belong to the school's retention committee, the first-year composition program, the developmental English program, and who attend the monthly Faculty Colloquium. The national audiences are members of the National Association for Student Support (NOSS, 2019; formerly the National Association for Developmental Education, NADE) and participants at the Conference on Acceleration in Developmental Education (CADE, 2019). The statewide audience are members of the Colorado Association for Developmental Education (CoADE, 2019).

The Position Paper Genre

Definition. The term position paper has a variety of definitions. In higher education, a researcher presents information in a position paper about an issue and seeks

to convince the reader that the opinion about that issue is persuasive (Brock University, 2019; Eötvös Lorand University, 2017; Metropolitan Community College, 2019; Rutgers University, 2017; Simon Fraser University, n.d.; Smith, 2015). The definition comes from two textbooks: *Writing in the Content Areas* (Benjamin, 2005) and *Writing Today* (Johnson-Sheehan & Paine, 2009). This academic definition does not seem to have a basis in the professional world for associations to see a position paper in a different light. For them, a position paper provides an official position (American Montessori Society, 2018; National Association for Gifted Children, n.d.; Young Adult Library Services Association, 2019).

Research. Although no research articles appeared to have been published in the last 5 years about position papers, their use has been briefly addressed in the literature. One of the few articles discussed the importance of position papers to an organization, the World Society of Emergency Surgery (WSES; Bala et al., 2018). This article described the required elements for a position paper sanctioned by the organization, namely a knowledge gap, a review of options, and a position representing an official stance supported by WSES (Bala et al., 2018).

Actual position papers discussing issues in education appeared more frequently in peer reviewed literature during the last 5 years than did research studies. One article appeared in the *Journal of Astronomy & Earth Sciences Education* (Price et al., 2015). Two articles appeared in journals focused on school psychology (Hasking et al., 2016; Christo & Ponzuric, 2017). Regardless of the lack of peer reviewed articles about position papers, they have been used extensively in academia to present opinions. For

example, papers coming from the Community College Research Center (2017) has supplied much of the research and background information for the impetus in developmental education redesign.

Strengths of the position paper genre. The genre of the position paper has a number of strengths. First, detailed understanding of a person's views can be known even if a presentation is not possible. Second, a position paper can speak for itself, which means it can reach a broader audience beyond a presentation. Third, it is suited to those who have difficulty speaking in front of a group. Fourth, a position paper can provide information sooner than waiting for publication in an academic journal, enabling conversation in a timelier manner. Fifth, it can provide information in a reduced manner.

Weaknesses of the position paper genre. The genre of the position paper does have some weaknesses. First, a position paper is less flexible because it cannot be revised as might happen in a presentation. Second, it is not considered an academic genre because it is not peer reviewed. Third, a position paper depends on the audience's willingness to read a document. Fourth, position papers require that the author heavily revise and edit to create a shorter length than the doctoral study. Knowing what information to keep and what to omit can be difficult for the author. Although the genre of the position paper has both strengths and weaknesses, for this project study the strengths outweigh the weaknesses.

Strengths of the position paper for this study. In general, the strength of the position paper is that it will address two goals of the study site. Its first goal is to share knowledge, for higher education institutions are in the business of knowledge (Cacho &

Ribiere, 2018). Sharing a scholarly position paper discussing a local problem would align with this first goal. The school's second goal is to expand the view of scholarship by implementing Boyer's (1990) teacher-scholar model. Boyer's model states that besides the traditional scholarship of original research and publication, three other types of scholarship are available to teacher-scholars. These three types are the scholarship of integration, in which scholars seek to blend information across disciplinary topics and disciplines, the scholarship of engagement, in which scholars seek to apply a their expertise outside of the university, and the scholarship of teaching and learning, in which scholars study the processes of teaching and learning in a systematic manner with the results that teacher-scholars can apply and evaluate (Boyer, 1990). Providing a position paper would meet the traditional scholarship of original research and the newer scholarships of integration and teaching and learning.

Further strengths. Besides the two general strengths, the position paper has three strengths that provide historical and theoretical context to ground the school's current investigation of developmental education reforms. The first strength of the position paper with presentation is the opportunity to explain to stakeholders the data analysis related to the effects of the developmental English program redesign. This opportunity aligns with Boyer's (1990) scholarship of teaching and learning, which includes public sharing. In addition, this opportunity provides a way to use professional networks (Nolan & Molla, 2017; Rincón-Gallardo & Fullan, 2016) to increase campuswide understanding of the effects of student placement in developmental English.

The second strength is the opportunity to provide the background on the theoretical framework grounding the 2012 program redesign. That framework was Adelman's (1999, 2006) theory of academic momentum (Attewell et al.). Adelman (1999, 2006) stated that the more college-level credits that students earned in their first year of study and their continuous progress towards a degree would increase their probability of graduation **(**Tinto, 2013). Thus, students' success in their first college courses predicts their ultimate college success as measured by a degree whereas slow academic momentum leads to lower degree completion. Although many current administrators, retention committee members, and faculty knew about this theory grounding the 2012 redesign, many current stakeholders are not aware of this framework. Therefore, providing background reasoning for the 2012 redesign places the current project contextually.

Weakness of the position paper for this study. The position paper has two weaknesses. One weakness is that the stakeholders must be willing to read the document. This can be mitigated by showcasing the position paper in a face-to-face presentation. A second weakness is that I might remove too much information or information important to the stakeholders that would be unknown to me.

Just as the position paper genre has both strengths and weaknesses, the position paper for this study also has both attributes. However, the strengths far outweigh the weaknesses**.**

Limitations and Mitigation Recommendations

Even though the position paper presentation project provides the opportunity to interact with stakeholders, the project does have limitations. First, stakeholders may refuse my request to address their groups. They may not see the relevancy of the study or they may already have time slots booked. To address this limitation, I will make use of my pre-existing connections with various administrators and faculty leaders at the university. Drawing upon pre-existing connections has been seen as an approach that can achieve and sustain educational improvement and transformation (Rincón-Gallardo & Fullan, 2016). In this case, I would ask the assistant vice president for academic affairs for access, for she is the one who chairs the retention committee and determines who presents at the Faculty Colloquium. I have already established a personal connection with her. Next, I would contact the director of the First Year Composition program and the developmental education program to facilitate meeting with those groups. I have already established personal connections with these two individuals. Second, the stakeholders who are part-time instructors may not attend the department meetings, for they may not see the relevancy of the study or consider themselves powerless to affect change. Many adjunct instructors do not attend such meetings because they are not paid for their time (Thirolf & Woods, 2018**).** To address this limitation, I will again draw upon my pre-existing connections to encourage the faculty to attend. As I am part of one faculty group, I can urge them to attend by relying on past encounters as mentor and colleague. For the other faculty group, first-year composition instructors, I would speak to individuals whom I know and urge them to attend and bring a colleague.

Nevertheless, the most important limitation is the fact that a position paper is not peer reviewed or published, which means it will not have as much validity as studies that have been published in a peer reviewed journal. Peer review is a process by which subject experts review articles submitted to a journal editor for publication (San Diego State University Library, 2019; Walden University, 2019c). These experts read and then evaluate the articles on their scholarly merits that include content, research quality, and writing (Nicholas et al., 2015). In addition, the experts provide developmental feedback to the authors so that they can improve their articles (Atjonen, 2018). According to the San Diego State University Library (2019), scholars consider peer reviewed literature to be of a higher quality and importance than literature not peer reviewed. Position papers are generally not peer reviewed because they are unpublished. Instead, scholars consider them gray literature and not as useful as peer reviewed literature (Paez, 2017). However, in this case, the review by my doctoral committee chair, the second member, and one other independent research faculty mitigates this issue,

Recommendations for Alternative Approaches

Alternative approaches to addressing the research question for this study could have been a mixed methods research design. In a mixed-methods design, the researcher uses both the quantitative and qualitative approaches to collect and analyze data, synthesize the findings, and draw inferences (Tashakkori & Creswell, 2007, p. 4). With this design, I would have obtained students' and instructors' perceptions on the effects of the redesign. By integrating this information with the quantitative data, the research would have a more personal layer to the results. Including qualitative data with

quantitative data in a mixed methods approach can provide a richer understanding of the issue under study than using either quantitative or qualitative data alone (Alfeld & Larson, 2015). Further, since the field of education seeks to explain a social world including both methods provides a more complete view of the issue.

Alternative Definitions of the Problem

I defined the local problem as the need for stakeholders, in particular developmental English instructors, to understand the effects of the 2012 developmental English program redesign. One alternative definition of the problem could have been the need for a review of the post-redesign program that would include an investigation of all courses in the program: pre-college reading and composition (ENGC 090), reading studio (READ 092), writing studio (ENGC 092), and learning community (ENGC 094). This definition would have focused on the post-redesign program exclusively. Another definition of the local problem could have been an investigation of the outcomes of the students who were in the lowest tier of the pre-redesign program (ENGC 030; Accuplacer Sentence Skills subtest equal to or under 50) and their counterparts post-redesign. This definition would have focused on complete transcripts for each student to determine his/her academic trajectory. This definition might also have allowed for mixed-methods research design with interviews and focus groups for students still at the study site or easily contacted by phone or email.

Alternative Solutions to the Local Problem

As the local problem was the need for local stakeholders to understand the effects of the 2012 DE program redesign. Some alternative solutions to a position paper to those

stakeholders would be possible. One alternative solution to this local problem could be for the study site's Office of Institutional Research to provide semester reports on the developmental English student enrollment data to the developmental education program director. This solution occurs at many state institutions – Colorado Mountain College, Aims Community College, and Pikes Peak Community College as discovered at a state meeting for developmental education faculty. A second possible solution could be to organize the instructors, who are all adjuncts (but one) to enter data from their students' transcripts into an excel file. This collection of data is allowed under federal guidelines to protect student information for it is to be used to improve instruction. In this case, the instructors would have to back track semester by semester to keep the data up-to-date. This action would be a lot to ask of adjuncts, especially because most adjuncts are not motivated by conducting research (Pons, Burnett, Williams, & Paredes, 2017).

Scholarship, Project Development, Evaluation, Leadership, and Change

During my time in this doctoral program, I have grown in my scholarship, project development, leadership, and as an agent of change. In the following, I describe what I have learned in the processes specific to certain scholarly activities: researching a problem, developing a position paper, and reflecting on my growth both personally and professionally throughout my doctoral experience.

What I Have Learned about the Research Process

The research process is much more complicated than what I thought prior to undertaking this project study. I had never done quantitative, qualitative, or mixed-

methods research; my previous research had been either descriptive or literary. I appreciate that the program is set up to scaffold the research process.

Problem, questions, and framework. Gradually, through coursework, I learned how to draft research questions for quantitative, qualitative, and mixed methods research. I learned how to use a theoretical framework as a foundation for my research. I learned how to explain this framework, taking an explanatory PowerPoint I had developed during a course to a national conference. I now look for the theory that supports the research as I read journal articles so that I can better understand the perspectives of the researchers, and approaches they take in their conceptualizations of the problem.

Literature review. In addition, I learned how to do a literature review through the course work and the project study. First, I learned some effective methods to approach the research in databases to discover peer reviewed articles. For example, I used the Advanced Search feature of the journal databases in the Walden University Library to narrow the scope of my search. I also used both the Walden databases and Google Scholar to conduct citation tracing (Pacheco-Vega, 2016). In Google Scholar, I searched for articles that were older than a few years, using key terms and subject headings. I then looked for the 'Cited by [number]' link below the entry of each article. If a number was given for an article, I clicked on the link to see the list of works that had cited the original article. In addition, I looked at the reference lists for journal articles published within the last 2 to 3 years to determine if any of those references would be applicable for my literature review. I then located any subscription-based journal articles in a Walden database or open-access articles online.

Second, I learned how to use Zotero, a reference management software. I set up Zotero so that I could download documents and bibliographic data directly from a library database or website. After watching a Walden Library webinar on Zotero, I moved beyond the basics of downloading to curating my documents into folders from which I created reference lists for each section of my literature review. This step helped me organize my thoughts, so that I could do the next steps in the literature review process: analysis and synthesis. Zotero is an important scholarly skill that I developed as a result of my doctoral research experience at Walden University.

IRB process. Another area of personal learning was the whole IRB process. I now know how to write an IRB proposal and interact with my school's IRB office. Although I have always been precise in my writing, I was amazed at the level of precision I had to achieve on the IRB form. I also learned that the IRB offices are not all the same. For example, I only had to complete one Collaborative Institutional Training Initiative (CITI) module for Walden University's IRB process, but I needed to complete three modules for my university's IRB process. Moreover, I no longer feel intimidated by the process or the office.

Quantitative research. The data collection process allowed me to become acquainted with my school's Office of Institutional Research. At first, I felt intimidated by this office also because of comments I had heard from other faculty members. However, I learned that if I was straight forward with them, and perhaps a little humble, I could get the data that I needed. The next learning experience at this stage was analyzing the data with the SPSS statistical package. Although I had had a class on this process, I

had not remembered much about the workings of SPSS. Fortunately, one of my committee members was able to help me with that process. I would like to take a statistics class on my home campus to help me retain the learning from this part of the doctoral study.

Writing. Although my first course using APA style almost ended my participation in this doctoral program, I learned enough in that course to keep me interested in learning more, so I persevered with the program. I had used APA citation format before but the actual composing in APA style I had not experienced. I learned to avoid phrasal verbs such as going to, I learned I could be repetitious with key words, and I learned that the simpler the sentences the better. This way of writing was all new to me, an English composition instructor. I do believe that learning how to use APA has strengthened my writing ability.

Deadlines. I learned that to be a productive scholar, I need to set hard deadlines for myself. When I was taking the coursework, I was able to get the work done on time and well. However, when I got into the EDUC 8090 courses where I have had to set my own deadlines, I have struggled. I now see that if I do further scholarly work, I need to start with my final product in mind and work backwards to create a specific schedule to follow. Otherwise, I will not get that work done, and I do want to do further scholarly work.

What I Learned about the Project Development Process

What I learned about the project development process primarily came from following the list of required items in the Walden University quantitative checklist

(Center for Research Quality, 2018). First, I needed to be sure that I understood what my project, a position paper, was. As multiple formats for position papers exist in scholarly and popular writings, I had to decide which one to use. I finally settled on the format from Xavier University (n.d.) because other doctoral students at Walden University had used that model (Burch, 2018; Matthey, 2016; Reed, 2016; Roane, 2017).

Second, I needed to consider implementation concerns. For this task, I needed to decide on the needed resources, existing supports, potential barriers, and potential solutions to barriers. Additionally, I needed to consider a timetable for implementation. Third, I needed to create a project evaluation plan for the project deliverable, provide a justification for that plan, and explain the goals of that evaluation.

Fourth, I needed to consider the implications of the project, summarizing possible social change and providing the importance of the project for local stakeholders and for the larger context. In conclusion, what I learned about project development is that I needed to consider more than the writing of the position paper.

Reflection on My Growth as a Scholar

A scholar is one who can do original research, write up the research, and present or disseminate that research (Ruscio, 2013). I understand how to apply theory to underpin research, I know the process of applying for IRB approval if needed. I view others' research in a different way, more skeptical perhaps but also more open. I see opportunities for research all around me but also wonder how that research could be done in a timely manner with all of the steps in the process that are needed.

Growth as a Practitioner

As a practitioner, I principally work with college students who do not place into college-level, first-year composition. I also work with students who have placed into first-year composition but need additional help in a 1-credit supplementary course. I have experienced exponential growth as a practitioner while working on this project study. My growth has shown in my conduct towards my students and the content that I provide.

Conduct towards my students. First, my struggles in the program have helped me to be more compassionate towards and empathetic with my students. I worked full-time as a college instructor through much of the doctoral program. I remember times when I did not have enough time to do the classwork in the way I wanted, but I would remind myself that I did get the work in to the learning management system. Second, the feedback I have received on my coursework and doctoral study have served as models for the feedback that I give my students. When I want to try something new, I look if it aligns with the theoretical frameworks I value. The PowerPoint I developed on self-efficacy changed the way I looked at my actions in the classes that I teach.

Content that I teach. First, I learned to use theory to support classroom actions. In particular, I have learned to gradually release control in the classroom, moving away from pedagogy towards andragogy (Knowles, 1984). In addition, I have embraced Bandura's (1997) social cognitive theory by implementing various aspects of self-efficacy (Cassidy, 2011; Kitsantas & Zimmerman, 2009) in my student encounters. Second, using the Walden University Writing Center (2017), I have gained new ways to approach various writing skills. For example, I teach students how and why to use a

reverse outline during the revising step of the writing process (Walden University Writing Center, 2017). Third, I read more journal articles looking for ways to improve my teaching and learning. Before my doctoral experience, I would have just Googled the terms. Now, I go to a university database to discover the latest thoughts on a topic. For example, I have recently researched the teaching of vocabulary in developmental English and college classrooms. The journal articles (Chai & Welz, 2019; Francis & Armstrong, 2018; Stahl & Armstrong, 2018; Townsend, Bear, Templeton, & Burton, 2016; Willingham & Price, 2009) that I found have helped me strengthen the teaching and learning of vocabulary in my reading and composition course.

Leadership

Although I have had few opportunities in my current position as a reading and composition instructor or formal leadership roles, I have seen growth in my informal leadership abilities. My informal leadership role has expanded because I became the only full-time instructor in a developmental English program of ten instructors. In addition, the director of the program is quarter-time with her main office in another building. This situation allows me to provide informal leadership.

According to Hasan (2017), one quality of a leader is confidence. Through the Walden doctoral program, I have increased my confidence in dealing with conflict. Whereas before enrolling, I avoided conflict at all costs, now when conflict appears, I can tactfully confront the situation. The discussions in each course has helped me to become better about dealing with conflict.

I have changed my self-talk. Now, I do not say, “I am too old,” for if I can do a doctoral program in my sixties, I can do anything. I speak up, problem solve, and try to refocus the thinking with those who are picturing only problems. However, I know that I cannot control their thoughts and actions, only my own. I celebrate the progress that I make in my classroom and in my studies. I know that I can choose my response to both problems and progress.

Another quality of a leader is the ability to inspire or encourage others. Observing how my Walden instructors encouraged the variety of individuals in the discussion boards has helped me to see what to do and what not to do to encourage others. I use this knowledge to help my coworkers navigate the changes that have occurred during the last 2 years in our department. These changes included moving offices twice, once to the north of campus, and then a year and a half later, to the south of campus. I approached these changes without complaint, explaining to colleagues the benefits of each move.

Another substantial change was the move from the developmental education program from the purview of the university’s community college division to the university’s academic affairs division. This action required the developmental education program director adding directorship of the tutoring center and the writing center to her duties. Again, I approached these changes without complaint, listening to the concerns of others and checking with our director to make sure my explanations were correct.

Change

When I see change coming, I now ask myself who is introducing or requiring the change, what is in my control, and what is out of my control. One way I have learned to

respond to this change is by researching for a possible position paper. Even if I never deliver that paper to my supervisor, I have investigated the situation and can share information with others on that topic.

A big change is coming to in my program. Colorado is planning to eliminate developmental education at state-run institutions. That action means I will need to transition into another department and teach a different set of courses. Negative feelings about this change have been expressed. I also know that I will not be a part of the planning for this changeover to corequisite courses because I am not on that committee. However, what I can do is to provide information to my supervisor and others from my research and experience talking with those who have made this transition in other states and at other Colorado schools. I see myself as a moderate voice in this change, neither a naysayer nor an avid disciple of the change. I have already weathered program redesign as is evident from the topic of my doctoral study. This time I see the change coming in advance and can start putting to use skills I learned in the doctoral study. Aspects of program management, andragogy, and assessment will help me with the transition.

I can convey this reasonableness to my colleagues who will transition with me. At this point, very few will transition because they have master's degrees in education rather than the required masters in English; plus, they are part-time. Change will hurt them because they will no longer have their job.

Reflection on Importance of the Work

The importance of the work overall lies in the fact that few studies have been conducted to determine the effects of program redesign after the shift of developmental

education reform Complete College America, 2012). Prior to 2012, some researchers had stated that developmental education was not helping students succeed (Bailey, Jeong, & Cho, 2011; Calcagno & Long, 2008; Martorell & McFarlin, 2007). However, in April 2012, Complete College America published a report, "Remediation: Higher Education's Bridge to Nowhere" (2012) that showcased developmental education's failure and advocated its elimination. Complete College America rapidly gained financial support from the Bill and Melinda Gates Foundation and the Lumina Foundation (Fain, 2012). With their help, the organization gained publicity and validity with legislators who concluding that ending developmental education would quickly and easily increase graduation rates and time to degree completion (Boylan, Brown, & Anthony, 2017; Walters, 2012).

The importance of what was learned lies in my study's results indicating that skipping the two lowest levels of a sequenced developmental English program did not harm students placed into developmental education. Instead of harming students' progression, the results showed that more students succeeded in their first college English course, regardless of less time to learn the learning outcomes needed for FYC. Some of the lower level outcomes were no longer taught because of the amount of information that instructors now had to teach because of the compression into one course and the integration of reading and composition. Instead of 18-credit hours for those students starting at the lowest level in each discipline, now students enrolled in one 3-credit course with the same results expected of the students. Pre-redesign, 24% of Group A, successfully completed FYC whereas after redesign 58% of Group B successfully

completed FYC. Nevertheless, the post-redesign number was still low. Therefore, the importance of this study shows that more needs to be done to help underprepared students successfully navigate through FYC.

Implications, Applications, and Directions for Future Research

In this section, I have discussed first, the potential impact of this research for positive social change on individuals, the study site, and society; and second, recommendations for practice and further research.

Potential Impact for Positive Social Change

On individuals. Fifty-two more students enrolled in FYC and fifty more students experienced success in a college level course. This success could have potential impact for positive social change because many of these students were members of underrepresented groups. This change in their lives' trajectory will have long-term consequences for themselves, their families, and their friends. Another consequence could be higher earning power, which would lift individuals out of a low level of Maslow's Hierarchy of Needs and move them into the next level, Belonging (Maslow, 1954).

On the study site. Developmental education can be viewed as a venue for social justice. According to Boylan (2019), developmental education provides a gateway, rather than a barrier, for students who had been initially deemed not college material. Thus, the potential impact on the instructors is validation that the job they are doing is having a positive effect on students. Furthermore, that job is providing more students with success beyond the courses that those instructors are teaching.

On society. The potential impact of this research on policy is that other teacher-scholars and administrators can use the results of this study to determine the efficacy of an approach to program redesign.

Recommendation for Practice

The section discusses two recommendations for practice and three recommendations for future research.

First recommendation for practice. I suggest two recommendations for practice. The first recommendation is not returning to the three-level sequence for developmental English, but to look for further approaches to increase underprepared student success in first-year composition. As this study has shown positive results after the implementation of the scaled down version of developmental English, returning to the previous sequence would be detrimental to student success. With this redesign, the number of students passing ENGC 090 increased by 12%, and then 100% of those students passed the first semester of FYC. This increase is statistically significant. However, the pass rate could be better. Therefore, the institution needs to investigate other approaches such as the corequisite model.

Second recommendation for practice. The second recommendation is to include the developmental English instructors in decision-making. Even though nine out of ten developmental English instructors at the study site are part-time, they need to be a part of the decision-making. The American Association of University Professors (AAUP) emphasizes this view by advocating that adjuncts be allowed to participate in departmental decision-making (Beaky, Besosa, Berry, Martínez, & Bradley, 2013). This

participation is especially important for developmental education programs that have primarily part-time faculty, as do most programs in the United States (Gerlaugh, Thompson, Boylan, & Davis, 2007). As the majority of the faculty at the study site are part-time, this recommendation is worthy of consideration.

Furthermore, part-time faculty want to be involved in decision-making. After surveying 1,239 part-time community college faculty, Ott and Dippold (2018) concluded that adjunct instructors did want more knowledge of and participation in the department for which they taught. These instructors were especially interested in activities such as academic program review, assessment of student outcomes, and teaching techniques (Ott & Dippold, 2018). This recommendation would meet that need for program level participation.

Lastly, part-time faculty want to be seen as valued members of the program and college. Inclusion in decision-making would show the adjunct faculty that the administration and full-time faculty respected their views (Rhoades, 1996). Adjuncts who are respected and see their roles as important have more self-efficacy. Self-efficacy is an individual's belief that he/she can achieve a goal (Bandura, 1997). Instructor self-efficacy impacts teaching and learning in number of ways. First, instructors with self-efficacy show positive attitudes towards change and innovation (Fuchs, Fuchs, & Bishop, 1992), competency in planning, organizing and implementing (Skaalvik & Skaalvik, 2007), and less burnout (Skaalvik & Skaalvik, 2007). Second, students who have instructors with self-efficacy show an increase in motivation (Moore & Esselman, 1992), achievement

(Ross, 1992); self-efficacy (Anderson, Greene, & Loewen, 1988), and attitudes (Cheung & Cheng, 1997),

Recommendations for Future Research

The current study researched only one aspect of the DE program redesign. Future research needs to investigate the efficacy of the added supplemental support in aiding success. Two groups of students received supplemental support post-redesign. The first group were students who scored in the lowest third on the Accuplacer Sentence Skills subtest (< 50). They enrolled in a 2-credit learning community course (ENGC 094) attached to specific ENGC 090 courses with the same instructor. Thus, students took 5-credit hours of English. Research into the effectiveness of the redesign for this group of students would help the school to determine the needs of the most underprepared students. The second group to receive supplemental support were students who scored in the middle of the Accuplacer Sentence Skills subtest (51–69). They enrolled in the 1-credit ENGC 092 Writing Studio. Research into this added, supplemental support would help the school to determine the necessity of such courses.

A further avenue for research is to investigate the efficacy of skipping ENGC 090 altogether. Post-redesign, the study site accelerated students who had scored in the top third of the Accuplacer Sentence Skills subtest (> 70) into FYC with a 1-credit writing studio. Research into this cohort would determine the effectiveness of skipping ENGC 090.

Conclusion

The purpose of this study was to determine the effects of the developmental English program redesign on the academic success of underprepared students at an open-access university. This study was relevant to the study site because it had yet to inform stakeholders on the effects of the 2014 program redesign. The study was also relevant to the discipline of developmental education because few studies had been conducted on the effects of this type of redesign, acceleration with integrated reading/writing courses. Using a quantitative causal-comparative study, I compared the academic success of underprepared students who matriculated 2009 and 2014 and who initially enrolled in developmental English courses. The students who enrolled in the redesigned developmental English course showed statistically significant increases in academic success over students who had enrolled pre-redesign. The academic success was measured by successful completion of their next English course, first-year composition. The project for this study was a position paper, explaining the study and its results, which I will present to faculty, staff, and administrators at the study site (See the Appendix). The purpose of the position paper will be to share the knowledge gained in the study and to provide information for decision-making. In addition, the results of this study will contribute to a growing body of research concerning the effects of different approaches to help underprepared students increase their academic success in higher education.

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Appendix A: The Project

Position Paper on Effects of a Developmental English Program Redesign

The two goals of this position paper are to (a) convey the results of a research study on the effects of the 2012 developmental English program redesign and (b) provide recommendations that could support and guide stakeholders at the study site regarding future directions of that program.

Introduction

In fall 2012, the study site, a public university in the western United States, redesigned its developmental education program to increase student academic success. A developmental education program provides pre-collegiate English and math courses. For the English section, the university eliminated two of the three levels of instruction in both the writing and reading sequences into one level each, and then integrated reading and writing courses in fall 2013. In addition, students who would have enrolled in the highest level of developmental English were accelerated to first-year composition (FYC) with a required writing studio corequisite.

This position paper examines the effects of that redesign and makes recommendations based on those effects. The redesign concerned three areas for students initially enrolling in developmental English courses fall 2009 and fall 2014

1. Time from enrollment in developmental English to time to enrollment in FYC
2. Time from enrollment in developmental English to time to successful completion of FYC with a grade of ‘C’ or better.

3. The number of students completing FYC pre-redesign compared with number students completing FYC post-redesign.

The research study results showed that students at the study site in the fall 2014 group completed FYC faster and at higher rate than similar students in the fall 2009 group.

Background of Existing Problem

The study site is the baccalaureate education provider for 14 counties that cover approximately 30,000 square miles and represent 28% of the state's population. It also has a state legislative mandate to award baccalaureate and graduate degrees along with 2-year degrees and vocational certificates. This dual mandate allows the university to provide a developmental education program similar to programs in the state community college system. Admission to the 4-year programs is selective, while admission to the one– and 2-year programs is open-access.

The study site's developmental English program has shifted structure since its inception. Prior to 2006, the university housed its developmental English courses in the English department. In 2006, the university created a stand-alone developmental education program comprised from three disciplines: math, reading, and writing. This move expanded the offerings to a three-course sequence for reading and a three-course sequence for writing. The university used the ACT college readiness test and the Accuplacer placement test to identify students for each level. In 2010, the university started to consider the effects of the developmental education programs on student success. According to the school's *2015 Progress Report*, the university's vice president for academic affairs appointed faculty and staff to the new Working Group to Improve

Student Academic Success (WGISAS). The school's administration gave the group a number of charges. One charge was to examine all aspects of admission, course placement, and course enrollment for students. A second charge was to examine student movement toward success and that success and then propose approaches if improvement was needed. Subsequently, the group proposed 15 recommendations, one of which has pertained to this project study. In that recommendation, the group advocated students complete all their developmental education requirements during their first 30 hours of coursework. This recommendation aligned with the Institution's 2010 Strategic Planning Goal 1, Section 2, Subsection c, which mandated a reduction in the time students were enrolled in developmental education.

Design change part 1. To implement the recommendation of shortening students' time in developmental education, the university accelerated coursework and provided supplementary courses for students underprepared for college level composition. In fall 2012, the university eliminated the two lowest developmental reading courses and retained the highest developmental reading course, the 3-credit hour READ 090. Students who had scored below Accuplacer reading comprehension 79 enrolled in READ 090. Students who had scored above Accuplacer reading comprehension 79 enrolled in FYC and a 1-credit hour supplemental reading course (READ 092). At the same time, the university eliminated the two lowest developmental writing courses, retaining the highest developmental writing course, the 3-credit hour course, ENGC 090. Students who had scored below Accuplacer sentence skills 70

enrolled in ENGC 090. Students who had scored above Accuplacer sentence skills 70 enrolled in FYC and a 1-credit hour supplemental writing course (READ 092).

Design change part 2. In fall 2013, the university combined READ 090 and ENGC 090 into one 3-credit hour course, ENGC 090. Depending on the Accuplacer scores for the above students, they were also required to enroll in a 1-credit hour reading or writing studio. Those students needing both reading and writing studios enrolled in a 2-credit hour learning community, ENGC 094 that was attached to specific ENGC 090 courses. Students who had scored above 70 on the Accuplacer sentence skills subtest and above 79 on the Accuplacer reading comprehension subtest could enroll directly in FYC. They did not have to take the developmental English course, ENGC 090. However, they had to enroll concurrently in a 1-credit hour supplemental course in either reading studio (READ 092) or writing studio (ENGC 092) depending on their Accuplacer subtest scores. By the end of spring 2014, the developmental English program had reverted to its prior configuration in general; the difference between the redesigned and the pre-2006 design was the provision of supplemental courses. By fall 2014, implementation of the redesign had been in place for one year. However, stakeholders – administrators, faculty, and staff – do not know the effects of developmental English program redesign for the academic success for the school's underprepared students. As the principal researcher, I then sought to understand those effects.

Review of Literature

In the literature review, I have provided details concerning the study's theoretical framework of academic momentum, a history of developmental education in the United States, and the current developmental reading and writing reform initiatives.

Theoretical Framework

Academic momentum has provided the theoretical framework for this study. The School's Working Group to Improve Student Academic Success (WGISAS) used the theory of academic momentum to support its recommendations about course acceleration to increase success of underprepared students. As I am determining the effects of that acceleration, the theoretical foundation for this study is academic momentum

Academic momentum and its source. Academic momentum is an educational theory concerned with the speed in which students earn college-level credits. In academic momentum, the more college-level credits that students earn in their first year of study and their continuous progress towards a degree increases their probability of graduation (Adelman, 1999, 2006; Tinto, 2013). Students' success in their first college courses predicts their ultimate college success as measured by a degree. According to Adelman (1999, 2006), students impede their momentum when they enroll part-time. Attewell, Heil, and Reisel (2012) agreed with this perspective. They also indicate that taking a break between leaving high school and starting college can impede momentum and subsequent success (Attewell et al., 2012). Slow academic momentum leads to lower degree completion.

Academic momentum's major theoretical propositions. Academic momentum includes three main propositions. The first proposition states that undergraduates' early academic credit load and their progress set a course that clearly affects degree completion (Adelman, 1999, 2006; Attewell & Monaghan, 2016; Attewell et al., 2012; Belfield, Jenkins, & Lahr, 2016; Davidson & Blankenship, 2016). Losing momentum can seriously hinder a student's probability of graduation. According to Adelman (1999, 2006), students would need to earn at least 20 college-level credit hours, degree applicable by the end of the first year of enrollment to create and maintain momentum. In other words, credits earned in developmental education (DE) courses would contribute nothing to students' momentum because those credits are not college-level. Students' early academic course load mattered to achieve academic momentum.

The second and third propositions extend the idea of momentum. The second proposition stated that this early momentum has its own effect on students' timely graduation (Adelman, 1999, 2006). As a factor in students' success, then, academic momentum overshadows all other causes of academic success. The third proposition stated that certain actions would increase academic momentum. These actions included earning summer term credits and maintaining continuous college enrollment; the summer term credits needed to come from new classes rather than those a student had to retake (Adelman, 1999, 2006; Attewell et al., 2012). In other words, stopping-out for summer work or other issues hampers momentum and eventual graduation.

Relationship between theory and study. As the theory of academic momentum was the framework for the developmental program redesign at the school, it is the most

logical framework to use to determine the effects of course acceleration on underprepared students' academic success. Therefore, this study's approach and question tested the theoretical framework of academic momentum by analyzing college transcripts of those students who enrolled in ENGC 090 fall 2014, one year after completion of the program redesign accelerating coursework. In addition, I compared college transcript information for students who enrolled in ENGC 090 in fall 2010 prior to the redesign. By comparing pre- and post-redesign cohorts, I determined the effects of academic momentum through acceleration.

Review of the Broader Problem

Higher education institutions have provided multiple types of learning assistance for their students. Developmental education has been one type. Other types of learning assistance have included Supplemental Instruction, a specific method of peer tutoring (University of Missouri-Kansas City, 2017); supplemental instruction, a corequisite help; tutoring centers; and writing labs (Norton & Agee, 2014). In the following history section, I initially use the term *learning assistance* instead of *developmental education* because the term *developmental education* was not used until the 1960s in the United States.

Historical overview. The need for learning assistance in higher education has had a long history in the United States. To understand its place, Arendale (2014) divided its history into six phases ranging from 1636 to today. In the early years of the United States, the phases lasted many years, sometimes bridging centuries, whereas the later phases (those after World War II) have been shorter. Although individuals in organizations such

as the Bill & Melinda Gates Foundation (2017) and Complete College America (Jones, 2015 have believed that the large number of students needing developmental education today has been an anomaly, a review of learning assistance has proven otherwise. For example, when the first college in the American colonies opened, the percentage of students needing assistance was 100% (Boylan & White, 2014). In school year 2011–2012, about 29% of first- and second-year students at 4-year schools and 41% of those at 2-year schools have enrolled in developmental education courses (Skomsvold, 2014). The percentage of students needing assistance has fluctuated since the opening of the first college.

Phase 1, 1636–1800. The first instance of learning assistance for underprepared students occurred early in U.S. history. In 1636, the young men from Massachusetts Bay Colony were unprepared for the rigors of university coursework in the newly established Harvard College (Boylan & White, 2014). As the language of instruction was Latin (Statutes of Harvard, 1961), they needed assistance (White, Martirosyan, & Wanjohi, 2014). Tutoring by men educated in England provided that assistance. Throughout this phase, tutoring served as the primary method of delivering help for 100% of the student body (Arendale, 2014; White et al., 2014). The need for these tutorials continued until English replaced Latin in textbooks and lectures after the American Revolution ended in 1781 (Brubacher & Rudy, 1976).

***Phase 2, 1800–1862*.** Admitting underprepared students continued into the 19th century. As the new nation had few high schools (Boyer, 1983), many students moved from elementary school directly into college, matriculating underprepared (Arendale,

2014). Shortly before the start of Civil War in 1860, 290 out of 331 admitted students needed remedial help at the University of Wisconsin; 88% of the incoming students needed extra help (Arendale, 2014). The many underprepared students placed an academic burden on institutions, but without those students, the schools would have been facing financial hardship. Therefore, to meet the students' educational needs, colleges and universities added preparatory academies (Arendale, 2014; Boylan & White, 2014). Learning assistance had moved from outside the institution to part of the institution; learning assistance was a more organized method of helping underprepared students than individual tutoring from previous years.

Phase 3, 1862–1945. Learning assistance continued as a part of higher education institutions after the Civil War. To meet the educational and vocational needs of the expanding nation, Congress passed the first Morrill Act of 1862 (Brier, 2014) and the second Morrill Act of 1890 (Bracey, 2017). These Congressional acts allowed for the development of more colleges and universities in areas of the nation that did not have any. The action broadened the student base to include overlooked students such as farmers in the Midwest, immigrants from European countries (Brier, 2014), and enslaved people freed after the Civil War (Bracey, 2017).

A large number of students seeking admittance to colleges and universities was still underprepared for college coursework. In 1865, 88% of the admitted students needed preparatory courses (Arendale, 2014). In 1868, 100% of the incoming students needed preparatory courses at the new Illinois Industrial University, which later became the University of Illinois (White et al., 2014). In 1880, 87% of students at American

institutions needed preparatory courses (White et al., 2014). In the early 1900s, 50% of all students entering universities had to take preparatory courses (Boylan & Bonham, 2014). Even at the Ivy League universities, 50% of the students had to enroll in preparatory courses (Boylan & Bonham, 2014) even though most had attended secondary schools (Arendale, 2014; Brier, 2014).

To accommodate these many underprepared students, colleges and universities changed the way they had provided learning assistance. Instead of preparatory academics, higher education administrators added remedial classes to their curriculums. For example, in 1874, Harvard University, a men's institution, started the first remedial English course because most newly enrolled students were underprepared regardless of their family backgrounds (Arendale, 2014). By1876, Vassar College, the first women's institution equivalent to Harvard, also included remedial classes with 45% of its students taking such classes (Arendale, 2014). Echoing the enrollment issues from before the Civil War, many colleges needed those underprepared students to avoid financial hardships and possible closings (Arendale, 2014). By the end of the 19th century, 80% of all higher education institutions had some form of remedial education (Boylan & Bonham, 2014), and 40% of all first-year students had enrolled in remedial courses (Arendale, 2014). Tensions began to show between institutions that wanted to provide access and those who feared a lowering of standards (Casazza, 1999). Institutions needed the underprepared students for financial reasons but were also concerned about the effects of enrolling them.

At the start of the 20th century, a new form of higher education entered the picture: the junior or community college. These 2-year colleges originally were viewed as

pre-baccalaureate institutions that provided the first 2 years of a 4-year degree (Rudolph, 1968). They were also viewed as schools for those students who wanted to stay in their community while getting an education (Rudolph, 1968). Gradually the 2-year colleges took on the role as the main remedial education providers. Thus, by World War II, higher education in the United States was serving a wide variety of students, many of them underprepared for that level of coursework.

Phase 4, 1945–1964. In this phase, a new group of students desired a college education. Veterans returning from World War II were using of the Servicemen's Readjustment Act of 1944, popularly called the G.I. Bill, to attend colleges and universities (Bannier, 2006). Most of these veterans were underprepared for college coursework because they had not taken a college prep program in high school or completed high school. College administrators found that they needed to provide these new students with learning assistance (Bannier, 2006). As a result, remedial education classes became a part of most higher education institutions (Arendale, 2014) and those institutions were becoming more aware of the significance of learning assistance programs (Bannier, 2006). Higher education institutions continued to enroll underprepared students; during the 1960s, 50% of entering students at community colleges were underprepared for college level work (Arendale, 2014). Many of the underprepared students were from populations previously marginalized in higher education, such as students who were from non-Anglo European backgrounds or students from lower socioeconomic status backgrounds (White et al., 2014). Purposefully, institutions enrolled these groups of underprepared students to try to create equity in

higher education. This new purpose for enrolling underprepared students differed from past phases when institutions needed to enroll those students to maintain solvency.

Phase 5, 1964–1980. The Civil Rights Movement promoted the inclusion of compensatory education, or education that combined remedial work and support services targeted to federal legislative priority groups, namely first-generation students, economically disadvantaged students, and students of color (Arendale, 2005). As in the 1960s, 50% of students admitted to community colleges needed preparatory work, now called developmental education (Arendale, 2014). Educators formed professional organizations to advocate for remedial programs and provide professional development (Arendale, 2014). The College Reading and Learning Association was established in 1968, and the National Association for Developmental Education was established in 1976 (Boylan, 2016). Universities also added professional graduate programs to educate instructors and administrators to work with underprepared students. Appalachian State University started the first graduate program in developmental education in the 1960s. Researchers at Appalachian State also founded the National Center for Developmental Education and received a grant to initiate the Kellogg Institute for the Certification of Adult and Developmental Educators (Arendale et al., 2009; Bannier, 2006). The field of developmental education was becoming professionalized.

Phase 6, 1980–2017. As in the other phases, underprepared students still desired college educations; however, new stakeholders had appeared. Some of those stakeholders gathered at Harvard Symposium 2000: Developmental Education (Arendale, 2000) where Casazza (1999) stated, “[underprepared students] have always been and always will be

students who are very capable of succeeding but simply in need of additional assistance" (p. 4). The percentage of entering students needing developmental education had decreased since the early 1990s when 50% of the students needed preparatory courses. In 1983, 29% of students entering 4-year needed at least one developmental education course. Twenty years later, in 2003, that number had decreased one percent to 28% for students entering 4-year schools. At community colleges that year, 43% of entering students needed developmental courses. Even though the numbers are lower than in past decades, the raw number seemed so large that various groups announced the need of developmental education as a crisis. To overcome this crisis, Achieving the Dream (Quint, Jaggars, Byndloss, & Magazinnik, 2013), Complete College America (Jones, 2015), the Bill & Melinda Gates Foundation (2017), and other philanthropic organizations (Barnhardt, 2017; National Center for Developmental Education, n.d.) dedicated research, advocacy, technical assistance, and money to study developmental education. At the same time, organizations tied to universities, such as the National Center for Developmental Education (n.d.) and the Community College Research Center (2017) studied the effectiveness of developmental education. In addition, grants from foundations spurred direct intervention by state governments to redesign DE and mandate methods of delivery and pedagogies (Colorado Community College System, 2013; Davenport, 2016).

Developmental education has come a long way from the tutoring of colonists' sons. The history shows that developmental education is not new and the percentage of students needing help has changed for the better although still needed by many students.

Regardless, of other changes in pre-college education, the need for developmental education will continue into the next decade.

Redesign Approaches

To redesign developmental English programs, institutions have used various methods of acceleration. In education circles, acceleration has multiple definitions. It can refer to approaches and programs intended for K–12 students identified as gifted and talented (Great Schools Partnership, 2013). Acceleration can also refer to approaches that provide groups of students (class, school, and district) with more demanding assignments early in their educational sequence (Great Schools Partnership, 2013). In addition, acceleration can refer to early placement of high school students into college courses (Steenbergen-Hu, Makel, & Olszewski-Kubilius, 2016). For the purpose of this study, acceleration is an educational approach that strives to move underprepared college students as quickly and successfully as possible through developmental education (Hern & Snell, 2014; Hodara & Jaggars, 2014; Jaggars, Hodara, Cho, & Xu, 2015; Scrivener et al., 2015).

Course sequencing. All methods of developmental English course acceleration eliminate course sequencing. Course sequencing occurs when a school provides more than one level of development education. At the study site, developmental English had three levels before the redesign in 2012. Depending on students' Accuplacer sentence skills scores, they might be placed in ENGL 030, 060, or 090. Therefore, a student might take 1, 2, or 3 courses before enrolling in FYC. This method was education institutions (Henry & Stahl, 2017; Jaggars et al., 2015; Xu, 2016).

Why eliminate course sequencing? Critics of this traditional method of developmental English believe that students have too many exit points, both structural and curricular (Henry & Stahl, 2017). Others critique the negative "academic, economic, and psychological" impacts of developmental course sequences (Xu, 2016, p. 503).

How to eliminate course sequencing? Researchers have suggested and practitioners have implemented two types of sequencing elimination: compression (Hern & Snell, 2014) and corequisite coursework (Adams, Gearhart, Miller, & Roberts, 2014; Adams & McKusick, 2014; Henry & Stahl, 2017; Jaggars et al., 2015; Schak, Metzger, Bass, McCann, & English, 2017). Institutions have combined elimination of course sequencing with either integration of reading and writing or corequisite remediation. The study site eliminated course sequencing and then combined the remaining courses, developmental reading and developmental writing.

Integrated reading/writing. Integrated reading/writing (IRW) was the second half of the reform implemented at the study site to increase underprepared students' academic success. In IRW courses, institutions combined their existing developmental reading and writing courses into one course (Hayes & Williams, 2016; Saxon, Martirosyan, & Vick, 2016a). Instead of learning about reading and writing as discrete topics, students wrote about what they read (Edgecombe, Jaggars, Xu, & Barragan, 2014; Grabe & Zhang, 2013). In addition, students analyzed readings from the view of a writer and analyzed their own writing with the eyes of a reader (Goen & Gillotte-Tropp, 2003).

According to advocates, IRW helped students with their learning and their time in coursework. IRW has helped students to learn how to use self-directed reading and

writing strategies disciplinary learning (Quinn, 1995). McGinley's (1992) research showed that reading and writing helped individuals to think about a topic or task in interrelated yet distinctive ways. Likewise, Goen-Salter (2008) and her colleagues at San Francisco State University saw the link between writing and reading as crucial and by integrating the two disciplines students, whether prepared for college or not, would benefit.

In addition, administrators at institutions saw IRW as a way to reduce students' time in DE courses (Edgecombe et al., 2014; Hern, 2012; Holschuh & Paulson, 2013) because one course from each level of the traditional DE sequence would be eliminated (Jaggars, Edgecombe, & Stacey, 2014). On the other hand, instructors have expressed concern that this model would not allow some students enough time to develop their reading and writing abilities (Saxon et al., 2016a).

Social-constructivism has supported the integration of reading and writing. Both subjects share cognitive, language, and social foundations (Fitzgerald & Shanahan, 2000; Kucer, 2009; Parodi, 2007; Perin, Lauterbach, Raufman, & Kalamkarian, 2016; Quinn, 1995; Shanahan & Lomax, 1986; Taylor, Dimino, Lampi, & Caverly, 2016; Tierney & Pearson, 1983). Advocates for using this theory have seen "reading and writing as social and cultural tools for acquiring and practicing learning" (Quinn, 1995, p. 306). Thus, the scholarship of teaching and learning has found the social aspect of reading and writing has an importance.

Recent studies on the effectiveness of IRW to increase college students' academic success were few. Quinn (1995) predicted that research in integrating reading and writing

would fall by the wayside once states implemented Common Core Standards. He foresaw that schools would once again see reading and writing as discrete entities. His predication has proven true. This lack of studies has occurred even though many institutions and state higher education systems have implemented IRW. In 2003, Goen and Gillotte-Tropp (2003) studied two groups at San Francisco State University. One group took an IRW course while the other took the two traditional courses of reading and writing. They found a significant improvement in academic success for the students in the IRW group. In 2014, Edgecombe et al. published a study at Chabot College in California on that school's use of IRW. The researchers found an increase in student success. In 2016, Hayes and Williams (2016) studied IRW at the Community College of Baltimore County. They also found an increase in underprepared students' success in passing the developmental English course. Also, in 2016, Edgecombe published an overview of Virginia's statewide initiative, but the measure of effectiveness was intertwined with its placement reform so an understanding of IRWs effectiveness could not be determined. No other recent empirical studies on the effectiveness of IRW for students appeared during my searches.

Other research on IRW has focused on the IRW course instructors. Saxon et al. (2016a) and Saxon, Martirosyan, and Vick (2016b) conducted a survey with instructors who were members of the National Association of Developmental Education and who had attended an IRW professional development event at the association's annual conference. In Part 1, Saxon et al. (2016a) discussed the most frequently cited issues in teaching IRW courses. One challenge that instructors expressed was time management.

Many instructors believed that IRW would not provide enough time for students to learn the multitude of skills taught in developmental reading and writing (Saxon et al., 2016a). Edgecombe et al. (2014) also found time management to be a concern at Chabot College. However, instructors at Chabot College also claimed that the pace had benefits for their students (Edgecombe et al., 2014). A second challenge Saxon et al. (2016a) found was the balancing of reading and writing. Likewise, Hayes and Williams (2016) reported that Community College of Baltimore County instructors had a concern about this issue too. A third challenge the NADE members mentioned was finding appropriate curriculum materials (Saxon et al., 2016a).

In Part 2 of the series, Saxon et al. (2016b) provided information on the most popular strategies employed by instructor of IRW courses. The most cited strategy was collaborative group work which was corroborated by researchers in a study at a North Carolina community college (Vick, 2015). The next most cited strategy was to write about the readings. However, Goen and Gillotte-Tropp (2003) have said that integrating reading and writing should be more than this approach. Rather, the integration needed to show how reading and writing were connected in their language, practices, and structures (Zamel, 1992). The third most cited strategy was the use of technology. Although no empirical studies confirm the effectiveness of technology specifically in integrating reading and writing, a study by Martirosyan, Kennon, Saxon, Edmonson, and Skidmore (2017) found the use of instructional technology widespread in developmental education courses.

Other researchers have studied the role that instructors played in creating IRW courses. Hassel and Giordano (2015) expressed the need for faculty to be involved in the design and implementation of IRW. Hayes and Williams (2016) outlined their process for creating a new reading/writing course. Dees, Moore, and Hoggan (2016) found that online professional development materials had a positive impact in helping instructors as they transitioned from writing subject specialist to academic literacy specialist. Using a more intense type of professional development, a university professor and two community college faculty members participated in a Research-to-Practice partnership to develop and implement an IRW course (Caverly, Taylor, Dimino, & Lampi, 2016; Lampi, Dimino, & Taylor, 2015; Taylor et al., 2016)

Evidence from Research

Study Design and Approach

I chose a quantitative nonexperimental, causal-comparative research design to determine the effects of the developmental English program redesign on students' academic success. As I am comparing success rates and persistence of two groups, Group A pre-redesign and Group B post-redesign. As students in both groups have scored below 70 on the Accuplacer Sentence Skills subtest, this design is appropriate.

Population and Sample

The population for this study was students at the study site who enrolled in ENGL 030 and ENGL 060 in fall semester 2009 and students who enrolled in ENGC 090 in fall semester 2014. The sample were students from the population who had scored below 70 on the Accuplacer Sentence Skills subtest. Thus, Group A were students who met the

Accuplacer criterion and who enrolled in fall 2009 in ENGL 030 and ENGL 060 prior to program redesign (n = 112) whereas Group B were students who met the Accuplacer criterion and who enrolled in ENGC 090 in fall 2014 post-redesign (n = 159)

I compared the two groups on the dependent variables: (a) time to FYC enrollment and (b) time to successful completion of FYC with a grade of C or better. The data came from student transcripts and test results. The test records included student's ACT composite and subtest scores, ACCUPLACER subtest scores, and a CCHE index score. The index score reflected the intersection of a student's ACT score and high GPA. Academic success was measured by time to completion of FYC with a grade of C or better and the number of credit hours completed. The raw data came from student records archived in the university's database overseen by study site's Institutional Research Office.

Research Question for Data Analysis

This position paper presents the research from a study based on the research question that follows.

Research question: What were the effects of developmental English program redesign for underprepared students' academic success at an open-access university?

I conducted an independent samples *t* test in SPSS to study the time, in semesters, from first enrollment in developmental English to enrollment in FYC. The independent samples *t* test showed a significant difference in the scores for Group A pre-design, *N* = 40 and Group B post-redesign, N = 92. In other words, the 40 students in Group A pre-redesign took an average of 2.15 semesters from enrollment in their first developmental

English courses to their enrollment in FYC. In contrast, the 92 students in Group B post-redesign took an average of 1.26 semesters. The difference of 0.89 semesters shows that students in Group B post-redesign took significantly less time to enroll in FYC than students in Group A pre-redesign. This study shows that the post-redesign Group B took approximately one semester less than the pre-redesign Group A to enroll in the college level course, FYC, from time of initial enrollment in developmental English courses.

Students in Group B post-redesign took significantly less time to successfully complete FYC than student in Group A pre-redesign. I conducted an independent samples *t* test in SPSS to study the time, in semesters, from first enrollment in developmental English to successful completion of FYC. The independent samples *t* test showed a significant difference in the scores for Group A pre-redesign, $N = 38$ and Group B post-redesign, $N = 92$. In other words, the 38 students in Group A pre-redesign took an average of 3.37 semesters from enrollment in their first developmental English courses to their successful completion of FYC. In contrast, the 92 students in Group B post-redesign took an average of 2.32 semesters. The difference, 1.05 semesters, was statistically significant. Thus, statistically significant changes did occur in underprepared student's time to successful completion of FYC after the redesign. Likewise, this study shows that the post-redesign Group B took approximately one semester less than the pre-redesign Group A to successfully complete FYC from time of initial enrollment in developmental English courses. The exact amount was 1.05 semesters, for Group B took an average of 2.32 whereas Group A took an average of 3.37

With this redesign, more students who placed into developmental English with an Accuplacer score less than 70 and enrolled in developmental English fall 2014, completed FYC with a grade of C or better. Thirty-nine percent of the students from fall 2014 passed FYC as compared to 27% from fall 2009. This 12% increase in completion is statistically significant.

Summary of Findings from Data Analysis

Admittedly, because those in Group A started one to two semesters below Group B, a difference in time to enrollment and completion should be expected. However, the difference is statistically significant, which I did not anticipate from my position at the micro level of involvement with individual students. Thus, these results show that students skipping the two lowest levels were not, as a group, disadvantaged in completing the ENGC 090– FYC sequence. Additionally, a higher percentage of students in Group B did successfully complete FYC than did students in Group A. Fifty-six percent of the students in Group B passed FYC whereas 34% of the students in Group A passed FYC. This appears to confirm the idea that too many pre-collegiate classes prevent students from completing a college-level course. This is not to say the contents of those lower classes were at fault, but the amount of time students must invest in them might surely be the reason for stopping out before completion of FYC. Redesign did affect the length of time to enrollment and completion of FYC.

The answer to the research question – What were the effects of developmental English program redesign for underprepared students' academic success at an open-

access university? – appears to be quicker entry into and out of FYC, a college-level course.

The premise of academic momentum, the theoretical framework for this research study, states the importance of students earning college credit as quickly as possible. This study shows that after the developmental English program redesign a positive effect occurred in moving underprepared students into and through FYC.

Recommendations Connected to Evidence and Related to Audience

As the findings of this study showed that changes did occur in student academic success after the developmental English program redesign, the promise of increasing success for underprepared students at the study site must continue. Recommendations for practice and research must be considered.

Recommendations for Practice

Recommendations for practice must focus on the practices of teaching and learning to aid students' academic success. First, the study site must retain the DE redesign. As the redesign has shown positive effects in moving more students into and through FYC more quickly, the school must not revert to the three-level reading and writing sequences for DE. Returning to those previous sequences would be detrimental to student success. However, the effects, although statistically significant, were small. Therefore, my second recommendation is that study site must investigate approaches that would increase the number of DE students enrolling in and completing FYC even more quickly. One such approach is the corequisite model in which students take developmental English and FYC simultaneously.

Recommendations for Future Research

The current study researched only one aspect of the DE program redesign. Future research needs to investigate, first, the efficacy of the added supplemental courses in aiding success and second, the efficacy of skipping ENGC 090 altogether. In the redesign, students who score in the lowest third on the Accuplacer Sentence Skills subtest (< 50) must take a 2-credit learning community course (ENGC 094) attached to specific ENGC 090 courses with the same instructor. Thus, students take 5-credit hours of English. Research into the effectiveness of the redesign for this group of students would help the school to determine the needs of the most underprepared students. Likewise, students who score in the middle of the Accuplacer Sentence Skills subtest (51–69) take the 1-credit ENGC 092 Writing Studio. Research into this added, supplemental course would help the school to determine the necessity of such courses. Finally, the study site accelerates students who have scored in the top third of the Accuplacer Sentence Skills subtest (> 70) into FYC with a 1-credit writing studio. Research into this cohort would determine the effectiveness of skipping ENGC 090 altogether.

Conclusion

The study site implemented the developmental English program redesign in 2012 to increase students' academic success. The evidence from the literature about similar redesign efforts supports the idea that the accelerated structure and integrated reading/writing can be associated to increases in course completion and persistence. Moreover, the evidence from the research study conducted has supported continuation of

this program and strengthening it with ongoing budget commitment and data analysis to help both students and the study site achieve their goals.

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