


2015

A Program Evaluation of a Remediation Program for Underprepared College Students

Jane Neuenschwander
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Jane Neuenschwander

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Walden University
2015

Abstract

A Program Evaluation of a Remediation Program for Underprepared College Students

by

Jane M. Neuenschwander

MA, West Virginia University, 2008

BS, Miami University, 1977

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

August 2015

Abstract

This participant-oriented program evaluation study was prompted by the problem that a cohort remediation program for underprepared freshmen at a small, private university in Appalachia was implemented for 1 year and dropped without any review of the program's impact on retention. The purpose of this project study was to conduct a summative program evaluation that recorded perceptions from the cohort program's participants and to compare their retention rates with underprepared students' retention rates from the subsequent year's individualized remediation. The study was guided by Tinto's retention theory, which posits that academic and social integration is critical to retention. A Chi-square test was employed to compare the retention rates of underprepared students in the 2012 cohort program versus similar students in 2013 with a different remedial approach, and found no statistical significance in retention rates. Qualitative data collected sought to answer the question about cohort participants' perceptions of benefits or detriments to retention at this university. Based on content analysis of qualitative data, key findings showed communication and implementation flaws in the cohort remedial program that warranted ending it. However, continuing acceptance of underprepared students highlights the need for evidenced-based decisions about future remedial programming at this university. Local positive social change will come from presenting the evaluation report to administrative stakeholders with the power to improve programs serving underprepared students. The data gathered for this study provides the baseline retention data needed to measure gains in future remediation of underprepared students, and has a potentially wider social change, to further match which remedial program components yield gains in retention.

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Dedication

This is dedicated to Dr. Ned Neuenschwander, my husband, for his unwavering belief in me, and his support of my career goal.

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Section 1: The Problem

Introduction

Many colleges and universities identify, conditionally admit, and then provide remediation for the retention of students who are considered underprepared. In other words, underprepared students are those who have not met the full academic requirements for admission and who are deemed not ready for freshmen, college-level courses (Bahr, 2010; Barbatis, 2010; Deil-Amen, 2011). It is widely reported that nearly one-third of all U.S. students entering postsecondary education are placed into courses designed as remedial or developmental (Bachman, 2013; Bettinger, Boatman, & Long, 2013; Laskey & Hetzel, 2011; Stewart & Heaney, 2013). The approaches to remediation vary among postsecondary institutions, but the basic intention of this type of programming is to address students' academic shortcomings and prepare students to succeed at college (Ciampa & Revels, 2013). The problem addressed in this study was that a university used a cohort-styled remediation program with underprepared students but discontinued it after one year without any evaluation. This action created a gap in evidence-based practice because the university did not collect and analyze data to assess the benefits or detriments of this remediation option before making changes in their subsequent remediation approaches.

A cohort-styled remediation program would seem to be rooted in the seminal theory of Tinto (1975), who proposed that the more students became academically and socially integrated into a college or university, the less likely they are to leave before graduating. Before this theory was developed, the lack of student retention was

considered to be only a reflection of individual aptitude or motivation on the part of students. The theoretical shift suggested by Tinto's work in the 1970s took into account the role of universities as part of the reason students stayed or left school voluntarily before graduating (Tinto, 2006).

The purpose of this project study was to conduct a summative program evaluation of the cohort remediation program implemented with underprepared students at the university associated with this study, and to provide data for the university's deliberations on the future of developmental education at this institution. Postsecondary institutions significantly control and influence the nature of the educational encounters their students' experience in college, and institutions can have programming in place that unintentionally causes students to decide to leave college before graduation (Schroeder, 2013). While the problem of retaining underprepared students in college is neither a new nor localized problem, solution options must be reviewed by asking questions that take into account the latest research on the topic and also by matching the needs of each specific institution to viable local solutions (Tinto, 2010). Additionally, the problem of underprepared students and their persistence to graduation is only a subset of the wider problem of retention facing postsecondary education.

Researchers have tested and expanded Tinto's foundational theory of retention, showing that student retention hinges on multifaceted combinations of academic success, social involvement, and demographics (Campbell & Mislavy, 2012). This study's examination of underprepared students and retention took into account the recent literature on issues including: college admission requirements, rates of retention and

graduation, expanded college access, extended years of adolescence, and the need for colleges and universities to sustain adequate enrollment and diversity.

The problem identified for this study focused on examining the one-time cohort remediation program, and a summative program evaluation was a good fit for the problem because program evaluations are an essential part of good programs (Fitzpatrick, Sanders, & Worthen, 2011). The study included qualitative research within the phenomenological paradigm and a quantitative comparison of retention results for two different remediation approaches. Quantitative data collected came from institutional databases after permission was granted from the university. Qualitative data were collected through voluntary interviews with college students and faculty members directly involved in the cohort remediation program. The program's curriculum components were examined to see how they did or did not support the underprepared students' persistence to a second year at this university. Although Heaney and Fisher (2011) found no single solution assured underprepared students will persist to graduation, there were specific aspects of this cohort program's curriculum that students and faculty reported as being particularly beneficial for supporting retention. The analysis of the quantitative and qualitative data generated by this study's program evaluation provided limited insights about which curricular components need to be reinstated from cohort program or eliminated from the current approach to gain the highest retention results at this institution.

The sections that follow will define the local problem where a one-time cohort approach to remediation was dropped without evaluation. A rationale is included to point

out the general need for more focused research on various remediation options and their impact on retention and the specific needs assessment aspect for the university associated with this project study. Evidence of the local problem details the setting and sample population for this study. Next is a brief look at the literature's arguments supporting and opposing remediation or developmental education options for underprepared students in postsecondary education.

This study also provides a set of definitions associated with the topics of remediation and retention, as well as the significance of the gap in institutional practice of evaluating remediation programs for data-driven revisions. Guiding questions for both quantitative and qualitative inquiry precede a literature review that examines remediation research from higher education and the identification of underprepared students. Finally, Section 2 outlines the methodology of responsive evaluation, Stake's participation-oriented approach to program evaluation (Mertens & Wilson, 2012), and how that program evaluation theory frames this project study.

Definition of the Problem

The local problem prompting this study was that a specific remediation program for underprepared freshmen at a small private university was implemented for one year and then dropped without any review of the program or follow-up with the students and faculty involved. Over one-fourth (26%) of the freshmen matriculating in the fall of 2012 at this study's university were enrolled in the one-time remediation program. With that percentage of freshmen students in remediation, it seemed prudent to examine retention rates and student perceptions to better understand the program's successes or

shortcomings. Identifying a university's most promising remedial practices benefits both the university and its students because the balance of academic quality and institutional student diversity comes from data-driven decisions (Davis & Palmer, 2010).

In general, the population of underprepared students is often made up from students with first-generation, low socioeconomic, handicapped, or minority backgrounds (Heaney & Fisher, 2011). Assuring as many students as possible can thrive at an institution of higher education maintains the student diversity important for a healthy college environment. At the same time, college-level courses must preserve the rigor and high academic standards at the university, and remedial courses must create a foundation for the success of underprepared students in the subsequent courses required to earn their chosen degrees. Throughout this balancing process, institutions need to gather information about academic, nonacademic, and personal needs of the underprepared students in their remediation programs to make informed decisions about which elements in the programs positively influence underprepared students' success and retention (Fowler & Boylan, 2010).

Rationale

Research on remediation options and retention is generally thin, and the research that does exist suggests that remediation effects are widely nuanced (Long, 2012; Torraco, 2014). A better understanding of the differences in remediation criteria and remedial approaches may provide insights to identify improvements to existing remediation programs. Furthermore, more purposeful research may reduce the possible problems of either misplacing too many students unnecessarily into remedial programs or

not providing programs to students who need them to persist to graduation. Some stakeholders at the university connected to this study question the value of offering any remediation or developmental courses. The comparison of past and current remediation practices served as a needs assessment to aid informed discussions about continuing, discontinuing, or modifying remedial or developmental courses and services at the study's university.

Evidence of the Problem at the Local Level

In April of 2012, a total of 146 students were accepted to begin their freshman year at the university selected for this project study. At that time, over 45% of the accepted students for the fall of 2012 were classified by this university as underprepared. A report by Bettinger, Boatman, and Long (2013) gave a national number of 35% to 40% of first-year students were placed into postsecondary remediation programs or courses at a similar point in time. At the study university's April count, the incoming included 79 (54%) students classified by their high school GPAs (HSGPA) or ACT or SAT scores as being ready to begin credit-earning college courses. Sixty-seven (46%) students were classified as underprepared because their HSGPAs or college admission scores were below the minimum requirements for this university. These underprepared students were required to take two or more noncredit, remedial courses and a preselected science course in their first semester of their freshman year. All first-year students beginning in the fall of 2012 were also required to complete a one-credit course called freshman year seminar (FYS). Then no formal follow-up study was conducted to check the retention rate of these underprepared students nor was other information collected from students or faculty

involved in the program regarding their perceptions of the program's benefits or detriments for retention. This project study provided a program evaluation to correct a gap in institutional practice because there had been no data collected or analyzed to determine the impact of the cohort style of remediation used in 2012–2013 academic year.

The university involved in this project study is a private, not-for-profit, faith-based institution located in the Appalachian region of the United States. Fall 2012 enrollment data from the Integrated Postsecondary Education Data System (IPEDS) reported a total enrollment of 1,549 students and an undergraduate enrollment of 1,164 students (U.S. Department of Education, Institute of Education Statistics, 2010). The undergraduate enrollment was about 56% female, with an ethnic composition of the students being about 77% white, 4% African American, 1% Hispanic/Latino, 2% Asian, 3% nonresident alien, and 13% of the students undeclared. Although small in size and limited in ethnic diversity, this university considers its reach to be both national and international, as well as valuing its mission to education local students and have them return to serve and lead in their communities after graduating. At the university's 2015 commencement ceremonies, it was announced that nearly one-third of the graduates assembled were the first in their families to earn a college degree.

A judgment of the value of the one-time, cohort remedial program could not be determined without reporting data about the benefits or detriments associated with it. Questions about the extent to which this cohort-styled remediation program affected participating students' retention were not formally asked. The cohort remediation

program provided some benefits for underprepared students, and some program elements may be judicious to reinstate in revised remedial programming. Conversely, ending the program as a whole seemed justified because extending the time to earn a degree has been found to negatively impacted students' persistence (Boatman & Long, 2010; Martorell & McFarlin, 2011). Finally, the cohort program, although ended, caused unintended, negative consequences that need to be remedied for the students involved and who still persist at the university, such as the problem where these students were not allowed to register for classes and select housing at the same time as their classmates due to their lower credit totals recorded on transcripts. Finally the findings of this study may be helpful first in reviewing decisions about the university's criteria used to designate students as underprepared and second for designing future remediation curriculum for underprepared students admitted to this university.

Evidence of the Problem from Professional Literature

Overall, the research on remediation for the retention of first-year, underprepared college students showed mixed results and no clear evidence for either argument of continuing or discontinuing remedial education for undergraduate students. Valentine et al.'s (2011) systematic review of 109 studies of retention programs for at-risk college students found only a small number of retention benefits associated with the remediation programs considered. However, many of the studies lacked details about which remediation elements and student characteristics' were needed for the most effective remediation, and due to that fact, Valentine et al. (2011) suggested that future remediation program evaluations describe the nature of the interventions in greater detail

to provide more conclusive arguments. Although both proponents and opponents of remediation for underprepared students agree about a heavy reliance on testing instruments, there are dissimilar reasons and viewpoints fueling the arguments for offering or eliminating remediation programs for underprepared students.

Defending postsecondary remediation. Proponents of offering remediation in higher education argue that remedial programs are part of educational institutions' function of democracy, and as such, remediation supports institutional diversity (Tierney & Garcia, 2011). At a time when the link between education levels and potential income is widely publicized, more students from underprepared, underserved, and marginalized groups (like economically disadvantaged, minority, first-generation, and learning disabled groups) seek postsecondary educational opportunities as a way to increase their socioeconomic status (Stuart, Rios-Aguilar, & Deil-Amen, 2014). Collectively many of these students may be labeled as underprepared or at-risk and placed in remedial courses based entirely on a single score from a cognitive assessment instrument. As accurate as standardized tests may be for measuring cognitive skills, the tests do not measure factors of attitude, motivation, willingness to seek help, and the desire to affiliate with an institution, which are equally important to student retention (Boylan, 2009). Thus using only test scores as a narrow definition of an underprepared student may reduce student diversity on some campuses.

Opposing postsecondary remediation. Opponents of remediation at 4-year institutions of higher education contend the programs redirect human and financial resources away from other educational priorities (Davis & Palmer, 2010). Remediation

has become a widespread and costly intervention often based only on arbitrary, standardized test scores with little attention to the diagnostic value of the tests themselves (Scott-Clayton, Crosta, & Belfield, 2014). The practice of using a single test score for course placement may be assigning too many students into unnecessary remedial coursework. Additionally, the stigma associated with a remedial label (Sriram, 2013) and the added cost of time and money to students to take noncredit courses have been found to be one cause of the attrition of students admitted as underprepared (Boatman & Long, 2010).

In the absence of clear-cut, convincing research data on remediation approaches that support retention, arguments for or against the inclusion of postsecondary remediation programs for underprepared students continues (Doyle, 2012). This project study's program evaluation filled the gap in practice where a one-time cohort approach to remediation was dropped without evaluation. Evidence of the local problem was detailed, as well as the rationale for a needs assessment of remediation at the study's university. The arguments found in the literature supporting and opposing remediation education for underprepared students in postsecondary education served as the foundation for designing a balanced program evaluation on the issue.

Definitions

College readiness: The American College Testing (ACT, 2014) defined college readiness as, "the acquisition of the knowledge and skills a student needs to enroll and succeed in credit-bearing first-year courses at a postsecondary institution (such as a two-

or four-year college, trade school, or technical school) without the need for remediation” (“About the condition of college and career readiness,” 2015, para. 2).

College remediation: In broad terms, college remediation describes courses and other support services, like tutoring, special advising, mentoring, or study centers, provided by postsecondary institutions to assist underprepared students persist to graduation (Martorell & McFarlin, 2011). Generally, remedial courses offered are in the content areas of reading, writing, and mathematics, and the credits associated with the courses do not count toward degree completion (Long, 2012). Additionally, remedial courses in the form of freshman seminars may present information related to study skills, time management, support systems available at the institution, and other topics appropriate for first-year college students.

Developmental or remedial courses: Courses taught at postsecondary institutions covering below-college-level content are labeled as developmental or remedial (Radford, Pearson, Ho, Chambers, & Ferlazzo, 2012). Distinctions between the terms developmental and remedial are noted in some research articles; however, the terms are often used synonymously. The purpose of developmental or remedial courses is to improve students’ abilities to handle college-level material and ultimately succeed in college (Bettinger, Boatman, & Long, 2013). There is a current preference of the term *developmental* because *remedial* seems to have a more negative connotation. However, this research study, like much of the published research reviewed, uses the two terms interchangeably.

Independent remediation: This phrase identifies the remediation approach where students were strongly advised, but not required, to take two or three remedial courses. This is unlike the 2012 cohort remedial approach described in this study where students were automatically placed into a remedial program based on certain scoring criteria.

Integrated Postsecondary Education Data System (IPEDS): Every college, university, technical, and vocational institution that participates in the federal student financial aid program is required to report institutional data to the U.S. Department's National Center for Educational Statistics (NCES). The data are collected, analyzed, and made public to show the trends in postsecondary education (U.S. Department of Education, Institute of Education Statistics, 2010).

Intrusive advising: An advising method that places the responsibility on the advisor, not the student, for establishing the initial contact and maintaining high-involvement in academic matters is termed proactive or intrusive advising (Swecker, Fifolt, & Searby, 2013).

Persistence: Both persistence and retention relate to students' progress through postsecondary education. However, Tinto (2012) noted a slight difference between the two terms, defining *persistence* as the students' view and *retention* as the institutions' view of students' advancement to the goal of graduation.

Additionally the persistence rate is the level at which students continue enrollment and complete their degree at any institution of higher education (IHE). It is worth noting that it is possible for students to persist to a degree even if they do not stay

at their initial institution of enrollment and thus count negatively against the original IHE's retention rate (Tinto, 2012).

Retention: The continued enrollment of first-time freshmen from one fall to the following fall is the definition used for the purpose of IPEDS reporting (Swecker, Fifolt, & Searby, 2013). With this narrow definition, it makes sense that institutional rates of retention are not equal to, and are, on average, lower than reported student persistence rates (Tinto, 2012).

Underprepared students: Students lacking academic skills in one or more of the basic areas of reading, writing, or mathematics by evidence of low high school GPAs or low standardized test scores, generally defines an underprepared student (Stewart & Heaney, 2013). However, across various institutions of higher education, there is no singular agreement on a test score that delineates prepared versus underprepared students (Deil-Amen, 2011; Tierney & Garcia, 2011). Often, but not exclusively, students categorized as underprepared come from low income, first-generation, handicapped, or ethnic minority populations (Stewart & Heaney, 2013).

Significance

Remediation, intended to support retention of underprepared college students, is an ongoing issue in higher education due to the pressure for maintaining high retention rates as one comparative measure of success for colleges and universities. It is recurrently noted in studies on retention that roughly one-third of college freshmen need at least one remediation course (Jackson & Kurlaender, 2013; Long, 2012; Sriram, 2013; Tierney & Garcia, 2010). In addition to offering remedial coursework in reading, writing, or

mathematics, universities have used programs of special advising called proactive or intrusive advising, mentoring, or learning communities to facilitate remediation grounded in Tinto's (1975) seminal theory of retention. From the studies of college retention conducted over four decades, the past research and theory needs to transition into ongoing and informed decision-making about the practical application of remediation options to benefit students (Tinto, 2012). Locally, this research study generated limited data about which approach, of two most recently utilized, best strengthened remediation to support retention at this university.

A variety of stakeholders, including students and their future employers, university administrators and admission officers, faculty, and parents, have a mutual interest in the establishment of enduring remediation programs that result in student retention and graduation. For students and their parents, earning a college degree has potential economic returns and social mobility associated with it because students leaving without a degree are likely to have lower earning potentials and social status (Valentine, et al., 2011). At the university level, there is less diversity when not retaining underprepared students because these students often come from first-generation, low socioeconomic, handicapped, or minority backgrounds (Heaney & Fisher, 2011). For this reason, remediation programs are vital to maximize institutions' levels of diversity (Tinto, 2012).

Although Tinto's theory frames the mission of postsecondary institutions as being the education, support, and retention of students (Laskey & Hetzel, 2011), the university in this study needed to evaluate its past remediation practices to make informed decisions

about future programs as a way to fulfill this university's stated mission of educating men and women for a life of community leadership and service to others. Tinto (2012) also pointed to an all too common gap in institutional practice, like at the university of this study, where "unfortunately, too many decisions are made without evidence of whether one course of action would yield a better outcome than another, or whether an action already taken has produced its intended outcome" (p. 117). This point supports the study's goal of gaining evidence about the retention rates of the two different programs used for remediation and about what institutional actions best supported underprepared students' retention.

Guiding/Research Question

This summative program evaluation study provided quantitative empirical data and qualitative narratives to appraise the retention outcomes as well as the student and faculty experiences of the one-time remedial program used in 2012–2013 at the project study's university. The program ended without any examination of the persistence of underprepared students in that program and whether the program met any stated goals for improving retention rates.

Retention outcomes from fall of freshman year to fall of sophomore year were reported by a quantitative, nondirectional null hypothesis test conducted with archived data about the freshmen matriculating in the fall semesters of 2012 and 2013 and their respective second fall semesters of 2013 and 2014. The quantitative research compared the persistence data of the underprepared students who participated in the two differing approaches to remediation offered at this university in 2012 and 2013.

The summative program evaluation was guided by the following quantitative and qualitative research questions:

1. Did underprepared students, defined by lower than the required admission high school GPAs or ACT/SAT scores, enrolled in the 2012 remedial cohort program persist to sophomore year at a similar rate as the underprepared students who matriculated in 2013 and who did not participate in a remedial cohort program at a small, private university in the Appalachian region?

H_{1_0} : There is no difference between underprepared students in the 2012 cohort program and the underprepared students who matriculated in 2013, who did not participate in a cohort remedial program, in terms of persistence to sophomore year at this university.

H_{1_A} : There is a difference between underprepared students in the 2012 cohort program and the underprepared students who matriculated in 2013, who did not participate in a cohort remedial program, in terms of persistence to sophomore year at this university.

2. What components of the 2012 remedial program are perceived by underprepared students who completed the cohort program as having a beneficial or detrimental impact on their progress toward a second year at this university?
3. What components of the 2012 remedial program are described by faculty who taught the courses in the cohort program as having the most positive or negative impact on students' academic progress and success?

Review of the Literature

The literature review for this project study included the major issues of providing college remediation services and identifying how to determine who is an underprepared student. Individual colleges and universities need to assess and then design their approach to remediation based on specific data about the students each college purports to attract and educate at their institution of higher education (Tinto & Cullen, 1973). Additionally, research on best practices in remediation for retention should be explored to serve as potential models for remediation programs and services at each institution.

One reason for providing remediation programs for the underprepared subset of a college's student body is because institutions depend on sustained enrollment for vitality (Shaw, 2011). As institutions of higher education seek to maintain and even expand their enrollment numbers, one consequence is that the cultural and academic diversity of students being accepted into colleges and universities grows (Austin & Sorcinelli, 2013). There are definite benefits from increasing diversity but also drawbacks, like the fact that expanded enrollment leads to the admission of students who are considered by the college as academically underprepared to take on their traditional, first-year college-level coursework, and these students often require remediation support systems to persist to graduation.

It is widely accepted that being unprepared for college puts students at risk for not completing their college degrees (Bahr, 2010; Barbatis, 2010; Bettinger & Long, 2009; Deil-Amen, 2011; Jackson & Kurlaender, 2013; Martorell & McFarlin, 2011; Tierney & Garcia, 2011). Arguments for and against providing remediation for such college students

can be found throughout more than 200 years of U.S. higher education history (Parker, Bustillos, & Behringer, 2010). The paradox remains that remediation is needed for some admitted students to persist to college graduation while at the same time remedial or developmental education is not considered by some stakeholders as appropriate curricula for higher education.

From a review of literature about underprepared college students, the terms *remedial* and *developmental* were commonly found and often used interchangeably in relation to the types of programs and services offered to underprepared college students. The term *remedial*, with its connotation of correcting or curing some deficiency, seems to have fallen out of favor since the 1970s, with the term *developmental* gaining popularity because it represents these programs as promoting growth and unfinished learning (Parker et al., 2010). The use of the terms *remedial* or *developmental* is a minor problem compared to the two primary issues related to underprepared college students which are: (a) what postsecondary institutions do to support the students they admit as underprepared for college-level coursework and (b) how students are identified as being underprepared.

Postsecondary Institutions and Their Underprepared Student Services

The cultural and academic diversity of students being accepted into colleges and universities has changed as access to higher education has expanded (Domina & Ruzek, 2012). The increasing demand for postsecondary education is evident by the fact that 69% of U.S. high school graduates in 2008 enrolled in 2- or 4-year colleges for the fall of 2008 (Kelly & Schneider, 2012). At the same time, the need for remedial programs

accelerated, because nearly one-third of all U.S. students entering postsecondary education were judged to need remediation to succeed at college-level coursework (Bachman, 2013; Bettinger, Boatman, & Long, 2013; Laskey & Hetzel, 2011; Stewart & Heaney, 2013).

Although any student may decide not to stay in his or her selected school until graduating, underprepared students are more likely not to persist to graduation and cause a loss of the institution's tuition assets, but also cause a college's diversity to diminish (Burks & Barrett, 2009; Demaris & Kritsonis, 2011; Morrow & Ackermann, 2012). Underprepared student populations often include a high number of students from either first-generation, low socioeconomic, disability, or minority backgrounds who, when retained, contribute to the cultural diversity of the institution (Heaney & Fisher, 2011). Thus remediation for the retention of underprepared students is a more prominent issue for postsecondary institutions where a relatively large percentage of the matriculating students are identified as being underprepared, which is the situation at the university of this study. The university where this project study took place is not unlike many small, private colleges and universities across the country that depend on tuition for financial vigor (Shaw, 2011). As a result of this financial reality, Kelly and Schneider (2012) found that university stakeholders promote student retention, remediation, and graduation more than ever before. Recruitment and retention numbers become indirect concerns for employees of small campuses (Zdziarski, 2010).

The brief, historical overview of retention in Demetriou and Schmitz-Sciborski's (n.d.) review of literature followed the shift from retention concerns related to intuitional

survival seen in the 1800s, to the emphasis of student-controlled persistence of the 1930s. Not surprisingly, the studies from the 1930s pinned retention responsibility solely on students as evident of these studies using terminology like “student mortality” to refer to students’ failure to graduate (Demetriou & Schmidt-Sciborski, n.d., para.1). By the 1960s and onward, retention became a well-researched subfield of higher education, concentrating on the expanding enrollment numbers and greater diversity that, in turn, increased the numbers of underprepared students in postsecondary education and the associated remediation and retention problems of those students.

Theoretical Framework for the Study

Theories of college student retention emerged in the 1970s with the published research work of Spady and Tinto. Tinto’s seminal theory of retention stated that the more academically and socially involved a student was in college, the less likely the student would leave before graduating (Demetriou & Schmitz-Sciborski, n.d.). Tinto’s early research served as the basis for other researchers in the 1980s—such as Astin, Bean, Pascarella, and Terenzini—to conduct their own studies and contributed scholarly findings to advance retention theory. As retention theories continued to evolve, a number of variables were noted and isolated for research including: academic preparation, academic engagement, social engagement, the financing of postsecondary education, and various demographic characteristics of students, like gender, ethnicity, socioeconomic status, first-generation, and others (Demetriou & Schmitz-Sciborski, n.d.). These variables, as well as the models found in Tinto’s research over the span of many years, are ones that

helped formulate a range of factors included in the program evaluation for this project study.

Retention according to Tinto. Retention research extensively repeats the core idea that a student's academic and social involvement are crucial to his or her decision about leaving college before graduating (Burks & Barrett, 2009). Tinto and Cullen's (1973) early theoretical model of attrition and persistence was limited to the traditional 18- to 24-year-old college students at residential 4-year colleges and universities. Within that population, Tinto and Cullen (1973) focused on multiple components of retention including: students' prior school and family backgrounds; students' academic aspirations and how well those matched to their selected institution's goals; students' experiences of academic and social integration with their institution; students' external commitments; and finally the outcomes of students either dropping out, transferring, or graduating. These components were relevant for this project study as the underpinning for coding the interview transcripts that resulted from the program evaluation at this 4-year liberal arts university with a traditional-aged college student population.

The basic theory that evolved from Tinto's (1975) theoretical synthesis of the available research at that time identified the phenomenon of student dropout as a longitudinal, interactive process as shown in Table 1. Additionally a distinction was made between students dropping out as a result of "academic dismissal" or "voluntary withdrawal" (Tinto & Cullen, 1973, p. 82). It was noted that often a student's academic dismissal is a result of poor grade performance that related to the lack of a student's academic or social development. However, another possibility for academic dismissal

might be caused by a student's extreme social integration to the detriment of his or her academic achievements.

Table 1

A Conceptual Schema for a Student's Dropout Decision from College

	Academic experiences:	Academic integration:	
Academic	• Grade performance	• Goal commitment	
Preparedness	• Develop intellectually	• Program "fit"	
	• Student/ faculty interactions		Student
			Retention /
Individual	Social experiences:	Social integration:	Attrition
preparedness	• Peer interactions	• Institutional commitment	
	• Extra-curricular activities	• Institutional "fit"	
	• Informal student/faculty interactions		

On the other hand, a student who voluntarily withdraws may not have experienced any extreme academic struggles, but instead the student felt a sense of incongruence between himself and the intellectual and social climate of the institution. Both of these reasons for students not persisting to a second year were not explicitly self-reported by students interviewed for this study.

Extension and utilization of Tinto's theory. Tinto's key points from years of research framed part of the summative program evaluation. Tinto (1988) elaborated on his own retention theory and added stages to the longitudinal process of student persistence that he called separation, transition, and incorporation. In his description of these stages, separation meant that students would need to disassociate themselves with their past communities, at varying degrees, to be able to persist in college. Within the transition stage, Tinto noted the high possibility of students leaving because they were neither as closely tied to their past communities nor fully accepted into their new college communities, and as such, students would experience "stress and sense of loss and bewilderment" (Tinto, 1988, p. 444). Lastly the incorporation stage required students to complete the task of academic and social integration which is foundational to Tinto's retention theory. The simplified interpretations of these stages led researchers to debate the limitations of Tinto's retention theory where the effect of cultural differences, like being a first-generation college student or a minority student on predominantly white campus, was not taken into account.

Palmer, Davis, and Maramba's (2011) qualitative research with 11 African American male students argued that Tinto showed a failure to recognize a different cultural variable of separation for the African American college students. Their study claimed that the African American students needed to retain a strong connection to their families to be successful in college and that separation was not required for these students' retention. The question that framed their study asked 11 young men what factors they attributed to their college success. Each of these men began in the remedial

program at a historic Black college and university (HBCU) and persisted to graduation at the same institution. The students were all between the ages of 20 and 22 years old and collectively had an average accumulative college GPA of 2.7. These students attended the same HBCU in a mid-Atlantic state, which had an undergraduate enrollment of about 6,000 students, and 91% of the college students attending were African American.

The researchers used a short open-ended questionnaire and in-depth individual interviews to gain qualitative data and rich descriptions of the academic and social experiences of these students. The researcher used constant comparative analysis to identify reoccurring themes. Short follow-up phone interviews were conducted to clarify issues from the themes that developed from the interview process. The two major themes reported were first, the importance of the students' families to use role modeling to communicate the importance of a higher education degree, and second, the fact that even if the students' influential family members had not earned an advanced degree, these family members were equally effective at promoting the students' college success. The researcher used these findings to argue that Tinto's suggestion of needing to separate from one's past to persist in college was not accurate in the case of these 11 African American males and that family connectedness was the repeated theme for these students to meet their graduation goal.

One limitation of this study was the fact that the sample was quite small, and there were interviews from only one HBCU student body. Another limitation was that only males were interviewed even though the HBCU was coeducational. The researchers did admit a potential bias in that each of them are African American and may have personal

experiences of their own which may have influenced their coding decisions. They also missed Tinto's statement in his research on stages that stated "though these stages may apply to the process of departure in an abstract form, they need not apply without modification in each and every student career" (Tinto, 1988, p. 446).

Even with the numerous limitations of the aforementioned study, others questioned if Tinto's theory is only applicable to a stereotypical, 4-year, liberal arts, residential college student. Some wondered if the theory did not adequately account for the retention of unique college student populations like first-generation students. Swecker, Fifolt, and Searby (2013) looked specifically at the first-generation population in their quantitative study of how proactive academic advising might predict retention for these students. First-generation students can often be a subset of underprepared students because of a parallel status of poor socioeconomics and weak academic preparedness often due to students' attendance at low-performing high schools (Swecker et al., 2013), and these first-generation students may require remediation services to persist to graduation. Additionally these students may be similar to the African American males in the former study, in that they may need to remain connected to families rather than make a full separation as Tinto's separation stage suggested was necessary for students' persistence (Tinto, 1988).

Swecker et al.'s (2013) study was conducted in a southeastern state at a 4-year residential institutional. In the fall of 2009, 10,500 undergraduate students were enrolled with that population composed of 60% Caucasian, 25% African American, and 15% other. Thirty percent of the incoming freshmen were first-generation college students. It

is likely that this study's university also has a relatively high number of first-generation students in the underprepared student groups due to the university's location in Appalachia and its mission to serve the local student population. Thus the research from Swecker et al. (2013) informed this project study about the need to explore first-generation status as extensively as possible, and at the very least, through a direct question asked of the students interviewed for the study.

The question that grounded Swecker et al.'s (2013) research was if the number of proactive advising meetings (formerly called intrusive advising where the advisor initiates much, if not all, of the meetings with advisees) would correlate to first-generation student retention (Swecker et al., 2013). The independent variables of this research included the first-generation students' gender, race, and major and the total number of face-to-face advising meetings for each these students their freshman year, with the dependent variable being the retention of first-generation students from the fall of 2009 to fall 2010. The data analyzed for the 363 students included in the study showed, as one might expect, a significant relationship between the number of meetings and student persistence to sophomore year enrollment. Variables that showed no significant relation to retention of these first-generation students were gender, race, and college major. This study determined that there was a 13% increase in the odds of retaining a student for each meeting with his or her advisor. An interesting observation from this study was that although the advising numbers related significantly to the retention of these first-generation students who did persist to sophomore year, of the study's 363 students only 83, or 23%, returned for a second year at the same institution.

This seems to indicate that the use of advising was not enough to positively impact the retention of these first-generation students and suggests other remediation options may need to be offered for such students to succeed to graduation at that institution. That study pointed to a need for additional studies to determine specific remediation strategies for first-generation students and their unique characteristics that may tend to classify them as underprepared for college.

Woosley and Shepler (2011) also researched first-generation students, but these students attended college at a medium-sized, Midwestern, public college. These researchers concluded that the first-generation students involved in their study integrated into college their freshman year similar to their peers who were not first-generation (Woosley & Shepler, 2011). Predictor and criterion variables were identified as a way to answer the research question about which of Tinto's (1993) identifying variables were most valuable for integration predictions with first-generation students. The predictor variables for this study were comprised of pre-entry factors of gender and college admission test scores, and factors gathered by a national Making Achievement Possible, MAP-Works survey taken early in the students' college career to determine students' commitment to higher education, students' campus involvement, and students' academic behaviors. Criterion variables of social integration, academic integration, institutional satisfaction, and distress from homesickness were based on Tinto's (1993) longitudinal attrition model. Correlations between predictor variables and criterion variables, when found, were small in the Pearson correlations of all variables (Woosley & Shepler, 2011). The data displayed in the Pearson correlation table supported an intuitive notion that

students' positive perceptions of the campus environment and the academic success held by the first-generation students was important to students' integration and persistence at the institution. The findings of this study were in sharp contrast to the qualitative study of African American men by Palmer, Davis, and Maramba (2011). Woosley and Shepler's (2011) study supported Tinto's longitudinal attrition model for understanding first-generation students' integration and retention at their study's institution. Woosley and Shepler also reported higher retention results for first-generation students in their study than did Swecker, Fifolt, and Searby (2013) in their study. The varying conclusions of these studies show the discrepancies found in current retention research and the need to examine the problem from the unique perspective of each institution during the program evaluation design of this project study.

Tinto's shift to examining institutional action. Tinto's (2012) book, *Completing College: Rethinking Institutional Action*, shifted focus to closely examine the classroom experience, faculty andragogy, and other actions of institutions of higher education. This recent work augmented student retention literature and practice, and emphasized the need for fixing institutions instead of fixing students. Tinto (2012) drew attention to the common gap in institutional practice where "unfortunately, too many decisions are made without evidence of whether one course of action would yield a better outcome than another, or whether an action already taken has produced its intended outcome" (p. 117). This mirrored the gap in practice at the university that has prompted this study, and also provided one rationale for including faculty interviews within the program evaluation design.

Although the extensive research and writing of Tinto serve to inform and challenge postsecondary institutions to deal with retention for all students, Tinto's (1993) longitudinal attrition model may not adequately predict the retention of underprepared students and the unique pre-entrance characteristics that are associated with the first-generation, minority, low socioeconomic, or disability student subgroups often making up the majority of the underprepared student population. That gap highlights the need for further research into alternative programs and services, including remedial or developmental options that lead to the retention of underprepared college students.

Hunter Boylan (2009), Director of the National Center for Developmental Education, proposed an alternative model for assessing, placing, and advising underprepared students. Boylan's model served to scaffold the quantitative exploration within the total program evaluation used for this project study as seen in Table 2. This model, known as T.I.D.E.S.—Targeted Intervention for Developmental Education Students, used a combination of cognitive, affective, and personal information as a way of evaluating and improving both academic courses and supportive services for underprepared students. Boylan's baseline then provided a standard of performance used to measure the extent of the developmental program's contribution to underprepared students' persistence, and was helpful for making a similar measurement for the program evaluated in this study. This study examined some measures of academic and social integration, as displayed in Table 2, used in Boylan's research.

Table 2

Boylan's Baseline Data Matched to Quantitative Data Collection

<u>Boylan's Baseline</u>	<u>Collected for This Study</u>
Number and percentage of underprepared students placed into developmental courses	Yes
Number of students in developmental courses earning a C or better in each course	No
Retention rate at the end of first semester for students in developmental courses	Yes
Underprepared students' grades in first, college-level course after developmental courses	No

Remedial or Developmental Programs' Structure and Results

In a recent review of literature on the topic of remediation for retention, Long (2012) indicated that identifying best practices in remedial or developmental education, as documented by sound research, is sparse. Research about how to make remediation work or work better has shown some promise, but Long described such research as being at an "infancy" stage (p. 189). Interventions with encouraging results included programs that improved faculty instruction, increased student support services, or accelerated the process of taking remediation coursework. One other beneficial approach for remediation was the use of cohorts or learning communities (Purdie & Rosser, 2011), which was one of the two approaches used for the remediation of underprepared students at the study's university.

Factors related to retention of the underprepared students. Laskey and Hetzel's (2011) 3-year, quantitative, longitudinal study asked two related but discrete questions: one question was what noncognitive attributes influence students' persistence,

and the other question was if developmental courses or tutoring supported underprepared student persistence. One question focused on students while the other focused on institutional practices, and thus they mirrored Tinto's (2006) themes of students' perspective on persistence and colleges and universities' accountability for retention.

Laskey and Hetzel (2011) studied a private, midsized university in the Midwest that enrolled 115 underprepared students into a program called Conditional Acceptance Program (CAP). These students scored below the minimum published scores of their study's institutional admission of an ACT composite of 20 and a high school GPA of 2.0. The CAP students were required to take developmental courses, as well as meet with a tutor weekly throughout their first semester of college. Laskey and Hetzel's study's CAP remediation approach is similar to the cohort program evaluated in this program evaluation; the underprepared students at this study's university were required to take developmental courses and a selected science course but did not have required weekly tutoring. Additionally the underprepared students at this study's university were also assigned to one of the three remedial faculty members as their advisor. This became a variation on *intrusive advising* because the underprepared students had weekly class contact with their advisors, who were also their professors in one of their remedial courses.

Students in Laskey and Hetzel's (2011) study self-reported the noncognitive attributes related to student success of neuroticism, extraversion, openness, agreeableness, and conscientiousness by taking the Five Factor Inventory. Demographic data of gender and age, precollege data of ACT scores and high school GPAs, and

college data of GPAs for developmental courses, retention, and the number of tutoring sessions attended were also collected for each student. Data analysis using *t* tests, chi-squares, bivariate correlations, and regression analysis produced a number of findings to inform postsecondary institutions about underprepared students. Related to student personality traits, the research showed that extraversion was inversely related to retention and good college GPAs, which may be explained by the fact that students can integrate socially to excess and to the detriment of their academic integration (Tinto, 1988). Additionally the traits of conscientiousness and agreeability correlated to a high use of tutoring services while neuroticism had a positive relationship with students' college GPAs. Considering the institutions' use of precollege data to predict students' college success, neither the students' high school GPAs nor their ACT score were good predictors of achievement or retention. Tutoring did, however, have a positive effect on the underprepared students' retention and college GPA. Finally, the study reported that two-thirds of the CAP students were retained. Both the university from that study and the project study are private institutions and had specialized, required remediation programs for their underprepared students. The use of a cohort approach to remediation at both of these institutions supported the premise of balanced academic and social integration noted in Tinto's retention theory (1975).

College readiness and college completion. A quantitative study, using longitudinal datasets from the California State University (CSU) system of higher education showed that the CSU readiness measures were a significant predictor on four educational outcomes (Jackson & Kurlaender, 2013). The research was driven by

questions about the relationship between college readiness measures and college success; along with how well different readiness indicators predicted short-term and long-term success by students in the CSU system. Two short-term outcomes measured were college GPAs at the end of freshman year and persistence to enroll for a second year of college; and two long-term outcomes researched were the completion of a bachelor's degree and if that completion took more than 4 years. The short-term outcome like that of the CSU study—persistence to the start of sophomore year—was included as one measurement for the program evaluation of this project study.

The setting for Jackson and Kurlaender's (2013) study is the largest public higher education system in the United States—California State University (CSU). There are 23 campuses which educate 1 out of every 10 California high school graduates (Jackson & Kurlaender, 2013). The administrative data set spanned 6 years and separated the student data into two cohorts; being students who matriculated to CSU in 2003 and 2004.

Descriptive tables, graphs, and regression tools were utilized to analyze the datasets.

California State University (CSU) determined readiness of students admitted to their institution by one of five different measurements which included: an SAT score of 550 for math and 500 for English; an ACT score of 20 for math and 22 for English; a score of 3 or higher on relevant advance placement (AP) exams; a transfer from college-level courses like dual enrollment programs; or lastly a placement examination, if none of the other measurements were available. Throughout the article by Jackson and Kurlaender (2013) points were repeatedly made about the need to include high school GPAs to CSU's measurement system to assure better classification and placement of

students as ready or not-ready for college coursework. This may be a bias of the researchers, because their data found that the measurements in place were a significant predictor on all four outcomes, even without data from high school GPAs. College-ready students, identified by the CSU pre-college measurement options, had these college-ready students' first-year GPA 0.2 percentage points higher than the underprepared students. College-ready students also were 6.1 percentage points more likely to return for a second year of college; 8.7 percentage points more likely to complete a bachelor's degree; and 12.8 percentage points higher to earn their degrees in four years. The research also found that there was little impact on the results of the relationship between readiness status and graduating on-time when demographic data of race/ethnicity, gender, income, and parents' level of education were included. Another contradiction to the researchers' urging to include high school GPAs for measuring readiness was their report that, for the dates of this study, less than half of the students enrolled in CSU were classified as college-ready in spite of an overall high school GPA average of 3.33 for the same student body. That average collective score of high school GPAs would seem to imply that at least half of students should have been college ready.

Three additional findings from Jackson and Kurlaender's (2013) CSU study included that Caucasian students were more likely to be college ready and also more likely to complete a bachelor's degree in a shorter time and with higher college GPA records than African Americans, Latinos, and Asians. Females were less likely to be college-ready out of high school, but more likely to complete their bachelor's degree and maintained a higher college GPA than males. Lastly, students from low incomes were

less likely to enter designated as college-ready, and as underprepared students they had lower outcomes on all four of the outcomes studied than their higher-income peers.

All of the research by Jackson and Kurlaender (2013) determined that students who needed remediation fared worse on the educational outcomes of their study, and that finding supports a supposition that students who require remediation are different from students deemed college-ready. This difference, in turn, makes it difficult to isolate the effects of remediation on college students because the limitation of having any viable comparison group for the underprepared students being studied. To overcome this research dilemma, some research used regression discontinuity (RD) where data is collected from students slightly above and below the margin of needing remediation to create a comparable control group. This was not the approach used for this project study. Instead, the manner for comparing remediation impacts on underprepared students at the university connected to this project study was accomplished by comparing retention rates of the underprepared students admitted in two sequential years, but who experienced two different remediation approaches. There was no significant statistical difference found between the retention of these two groups of underprepared students from the quantitative data collected and analyzed. The qualitative data coded for the program evaluation of the cohort remediation approach lead to a limited number of inferences for the best practice of remediation at the study's institution. This program evaluation also added to the broad understanding of how the cohort remediation compared to individualized developmental course remediation in both positive and negative ways.

Negative results of remediation. The intentions of remedial or developmental programs and services are to address students' academic shortcomings and prepare students to succeed at college-level courses. Yet some research showed remediation may have an adverse effect, such as a negative stigma or an extension of time for reaching graduation which led to discouragement and the attrition of underprepared students (Sriram, 2013). Longitudinal, regression discontinuity (RD) research by Martorell and McFarlin (2011) to isolate the causal impact of remediation, found little evidence that remediation improved later academic performance for students. The study examined administrative records of more than 250,000 Texas freshman students starting college in the academic years of 1991-92 and 1999-2000, enrolled in 2- or 4-year public colleges, and followed the sample students for six years. Assignment to remediation courses at Texan postsecondary institutions was determined by fixed scores from the state-developed test given to all Texas college candidates. The results of that research did not support the hypotheses (a) that remediation increased the time needed to earn a degree or (b) that remediation improved the chance for graduating (Martorell & McFarlin Jr, 2011).

Positive aspects of remediation. The ideal goal of serving underprepared college students manifests the democratic principles of access and opportunity (Parker, Bustillos, & Behringer, 2010). The current depth and breadth of inequities in U.S. kindergarten through high school education requires the use of remedial education in higher education (Davis & Palmer, 2010). The early research studies were descriptive and compared underprepared students with their college-ready peers that lead to a biased estimate of the remediation's' impact. Yet even with mixed research results, it is plausible that

remediation can have an effect on different types of underprepared students. Bettinger, Boatman, and Long (2013) reported, from their literature review of numerous studies, that remediation had a more positive effect on women than men and also on older, non-traditional students than their younger peers. Additionally a negative effect from remediation was found on students from a low socioeconomic status compared to students coming from higher income backgrounds.

The quantitative study utilizing 28,000 longitudinal data sets from Ohio conducted by Bettinger and Long (2009) found that students placed in remedial education were more likely to persist to graduation than students with similar test scores and backgrounds who were not required to take remediation courses. The regression analysis research took into account selection bias by comparing observationally alike students who attended different colleges based on the premise that students tend to select colleges relatively close to their homes. The archived data collected included student transcripts, applications, and standardized test results; and the indicator of success was degree completion. Although this is only one study reporting the positive effects of remediation on persistence, the sound quantitative research methodology used for the study launched other research to test the effect of remediation for retention (Boatman & Long, 2010; Bettinger, Boatman, & Long 2013).

Continued research is needed to better match which student characteristics are enhanced by developmental programs and services. Such research may provide insight about the best practices of remediation. Approaches of using a cohort-styled remediation did show promise for improved retention of underprepared students in Laskey and

Hetzel's (2011) study, and the cohort-approach was examined in this project study, but does not strongly support the assumption that cohort-styled remediation enhances academic and social integration. On the contrary, a stigma of being identified as underprepared may have negated the remediation courses' objective to increase students' college success. Finally, additional, purposeful research about the characteristics of underprepared students may make identification more clear and consistent and not misplace students into, or out of, appropriate first-year courses; like seemed to be the case for students placed into this study's cohort remedial program.

Identifying Underprepared College Students

Identifying the college readiness of students heavily depends on the measure of core content knowledge assessed by standardized testing (Maruyama, 2012), and yet test scores alone may not be the best identifier for underprepared student placements. Students, lacking academic skills in one or more of the basic areas of reading, writing, or mathematics by evidence of low standardized test scores; get identified as underprepared students (Stewart & Heaney, 2013). In other words, test results are used to label the students as not being college-ready. However, across the various institutions of higher education, there is no singular agreement on a test score that delineates prepared versus underprepared students (Deil-Amen, 2011; Tierney & Garcia, 2011). This lack of clarity prompted Maruyama's (2012) quantitative research on how the use of ACT scores only, to classify students' readiness for college-level coursework in mathematics, does or does not predict students' success in college-level mathematics courses.

Maruyama (2012) analyzed national data and separate data from the state of Minnesota looking for predictors for academic improvement made by students taking developmental mathematics courses and any corresponding relationships between the students' ACT scores and their grades earned in their first college-level mathematics course. The comparison of students' math grades from the first college-level math course taken, specifically college algebra or pre-calculus/analytical geometry, and their composite SAT scores of 900, from a sample size of 1610 student records nationally, showed that for overall college performance 90% of the students passed their math courses, 77% earned a C or better, and 48% earned a B or better (Maruyama, 2012). This example supports Scott-Clayton's (2012) assertion that students are often improperly labeled with current practices that depend heavily on only test scores for placement, and as a result, too many students are being placed unnecessarily into remedial courses.

Misplaced students. Scott-Clayton, Crosta, and Belfield's (2014) quantitative research used a rich predictive model and existing administrative data from community colleges to explore the question of over-placement and under-placement of students in remedial courses. Non-selective, also called "open access," 2- and 4-year institutions of higher education often uses tests, like COMPASS or ACCUPLACER, as assessment tools for students' placement into courses. The conclusion of the research by Scott-Clayton et al. (2014) underscored the difficulty of accurately predicting which students will or will not succeed in college based on test scores alone. Regardless of the screening tool used, this same study found one-fifth to one-third of the students were likely to be misplaced depending on the remedial subject area used to classify a student as

underprepared. The students' placements were either into credit courses that they were underprepared to take or placements into remedial courses that were not necessary for the students' later success (Scott-Clayton et al., 2014).

Another quantitative study on the misplacement of students by Scott-Clayton, Crosta, and Belfield (2014) examined what impact adding high school GPA to a standardized test score had on improving correct placements. The results showed that the combination of test scores and high school GPA data generated the best placement fit. Using a test score only was like a snapshot of a student's ability, whereas utilizing both a test score, plus the high school GPA record provided a full photo album of a student's efforts and abilities. One-time testing results and high school GPAs measure different academic competencies (Tinto & Cullen, 1973). Elsewhere, the North Carolina Community College System's (NCCCS) policy revision used both scores from standardized placement tests and high school GPA, instead of test scores only, and had research projections that showed incorrect placements were expected to drop from 30% to 15% (Scott-Clayton, Belfield, & Crosta, 2014). These studies supported a number of other studies' conclusions that the combined use of test scores and high school GPA records were the most reliable manner, to date, for identifying students as either underprepared or college-ready. The individual test scores on normed-referenced tests indicate how many more, or fewer, answers a student gets correct as compared to the other test-takers. There are those who argue that a heavy reliance on relative performance results is an inaccurate and unfair way to make important educational decisions about students' readiness for college (Maruyama, 2012; Scott-Clayton & Rodriguez, 2012).

Moreover, an emphasis on a single test score from a norm-referenced test may mask non-cognitive criteria, like the willingness to persevere or seek help when challenges arise, that a student needs to be successful in college (Scott-Clayton et al., 2014); or mask the barriers, the like socioeconomic status of a student, that may hinder a student from testing well enough to be accepted into a college of his choice.

Socioeconomic status (SES) and the SAT. Some researchers question the possible impact that socioeconomic status (SES) has on admission testing results (Sackett et al., 2012). The quantitative research of Sackett et al. (2012) included 110 colleges and universities for a study of the 2006 composite SAT scores as a predictor of college freshman's GPAs. A series of regression models examined the following predictor data combinations: SAT composite score only; high school GPA only; both SAT and GPA; and socioeconomic status (SES) added to SAT and GPA.

The results of that study matched that of a number of prior studies on three points: (a) high school GPAs alone were found to be a slightly better predictor of college success than the SAT scores alone; (b) the regression coefficient was smaller when SAT and high school GPA scores were used in conjunction than when either the SAT or GPA score was used alone; and (c) even when SES was controlled, the predictive power of SAT and high school GPA together was greater than either of the two individual criteria alone (Barbatis, 2010; Cortes, 2013; Neuburger, Goosen, & Barry, 2013; Sackett et al., 2012). This research also found that any SAT and SES relationship was likely due to educational opportunity, school quality, and other social factors; and as such, a college admission policy that relied only SAT results for admission would screen out more lower-SES

students than higher-SES candidates (Sackett et al., 2012). This, as well as the earlier studies reviewed, indicated that the admission and remediation placement decisions based only on standardized testing is problematic for underprepared students (Barbatis, 2010; Cortes, 2013; Neuburger, Goosen, & Barry, 2013; Sackett et al., 2012).

As part of this project study's program evaluation, questions were asked about the criteria used for students' admission in to the study's university and how that related to classifying students as underprepared by test scores. The recorded admission policy and the cohort-remediation criteria for placement were not aligned. Additionally, the remediation placement criteria were not clearly explained or communicated to students in a timely manner. This caused both confusion and resentment for many of the cohort remedial students and their parents.

Testing results and remediation numbers. The American College Testing (ACT) organization measured nearly 1.8 million of all 2013 U.S. graduates during their high school years, or in other words, about 54% of all 2013 U.S. graduates ("About the condition of college and career readiness," 2014). Table 3 shows that of those students tested, 31% failed to meet any of the four benchmarks (English, reading, mathematics, and science) of ACT college readiness. These students, who met no benchmarks, were determined to not be prepared for college-level coursework.

Table 3

Percent of ACT-Tested High School Graduates by Benchmark Subject Attainment, 2013

Status	Percent
Met No Benchmarks	31%
Met 1 Benchmark	16%
Met 2 Benchmarks	14%
Met 3 Benchmarks	13%
Met All 4 Benchmarks	26%

Note. ACT. (2014). About the condition of college and career readiness. Retrieved January 12, 2015 at <http://www.act.org/research/policymakers/cccr12/readiness1.html>

Interestingly, the ACT results of 2013 and the usual figure reported in research about the amount of remedial students entering postsecondary education were both nearly one-third of the U.S. students accepted into colleges and universities (Bachman, 2013; Bettinger, Boatman, & Long, 2013; Laskey & Hetzel, 2011; Stewart & Heaney, 2013) which may raise questions about how much institutional processes depend on standardized testing to assign students to remediation coursework (Scott-Clayton, 2012).

Research can be found that questions the current processes for identifying underprepared students and provides the rationale to focus part of the program evaluation's search on institutional admission policies and practices. Since standardized test scores alone were determining a student's first-year placement in courses, the program evaluation needed to explore the potential mismatch of students included or excluded wrongly into the study university's remediation program.

Tributary Issues Related to Underprepared College Students

Although the two primary issues of what a college does to support its underprepared students and how a college first identifies the underprepared to be admitted are the focus of this literature review, there are four other issues to consider when addressing the entirety of this problem. These contributing aspects of the underprepared college student problem include: college and university admission requirements; retention and graduation rates; expanding college access in the United States; and the cultural shift that has extended American students' adolescent years.

High admission requirements as a solution. Some universities' stakeholders argue that strictly adhering to high admission standards solves the underprepared student problem. Another recent solution for underprepared students, in public institutions of higher education, has an increasing number of state departments of education designating their community colleges as the primary providers of developmental education for the public higher education system (Perin, 2013). Yet, the need to meet enrollment or diversity goals in a competitive recruitment market may cause the admission requirements of the 4-year colleges and universities to vary; allowing for underprepared students to receive conditional admission. In these instances, universities knowingly admit students who fall below their published minimum admission scores and then provide remediation with the hope that it can support underprepared students' persistence to graduation at a similar rate as the students identified as being college ready.

Institutional criteria for classifying underprepared student are ambiguous, with substantial variations between institutions (Deil-Amen, 2011; Tierney & Garcia, 2011). A

student might be admitted to one institution as college ready and another as underprepared. It is not easy to predict, even with pre-college factors of test scores and high school GPAs, which students will persist, progress, and graduate; however increasing the admission selectivity is an easy way for an institution to increase their retention rating (Cortes, 2013). It is not surprising that highly selective applicant acceptance rates correlated to higher graduation rates. Institutions that were most selective (i.e. less than 25 percent of applicants accepted) had the highest graduation rates at 86 percent for a 6-year graduation, while institutions with open admissions where nearly all applicants are admitted, like most community colleges, had only a 33 percent 6-year graduation rate (Snyder & Dillow, 2013).

Retention and graduation rates. In the current economic climate, retention rates, defined as the continued enrollment of first-time freshmen from one fall to the following fall; and graduation rates, defined as graduating within 6 years of beginning college, are increasingly important to both students and institutions of higher education (IHE) (Swecker et al., 2013). For students, graduation can mean personal financial gains associated with a college degree; and for IHE, retaining and graduating students means positive revenue streams and notable graduation reputations to attract future students (Alarcon & Edwards, 2013). Unfortunately, there is research about underprepared students which reinforces the argument that these students are at risk for not persisting to graduation (Deil-Amen, 2011; Jackson & Kurlaender, 2013). Extending students' time to earn a degree, by requiring underprepared students to take non-credit courses before beginning degree courses, is one factor that may negatively impact students' persistence

(Bettinger, Boatman, & Long, 2013; Martorell & McFarlin, 2011). This then lowers the IHE's tuition revenue and possibly its reputation for successfully graduating students. The decrease of total tuition revenue may influence admission decisions by college and universities to expand their pools of accepted students to include more underprepared students.

Expanding college access. As access to higher education has expanded, so has the cultural and academic diversity of students being accepted into colleges and universities (Austin & Sorcinelli, 2013). The natural tension between admission staff and faculty over the issue of underprepared students was succinctly stated by Boylan (2009) when he wrote, "Postsecondary institutions must serve the students they have, not those they wish they had..." (p.20). Reaching enrollment numbers for institutional sustainability and for notable, student-body diversity may push the university's admission staff to admit students who fall below the published standards; while many faculty advocate to restrict admission to only students with the highest academic records. The situation for the university faculty then becomes one of offering education that betters the students admitted, versus seeking better students to admit. Additionally, expanding access to college for students from the Appalachian region, where the university of this study is located, is part of its mission to enrich the local communities by educating future leaders. The university's mission speaks to the egalitarian tradition of U.S. higher education and the idea of access to higher education being universal in the United States.

Universal education. A seminal paper, written in 1974 by Martin Trow, described the history of student access to higher education in the United States as moving

from “elite” to “mass” education, and Trow saw the future moving to “universal” education (Matkin, 2012, p. 7). Trow, professor emeritus of public policy at the University of California, Berkley, defined the system of higher education as being “elite” when up to 15 percent of high school graduates attended college; with “mass” higher education being between 16 to 50 percent; and “universal” higher education being more than 50 percent of high school graduates taking some type of postsecondary schooling. The move from elite to mass higher education began when the federal government’s G.I.’s Bill of Rights funded college opportunities for veterans of World War II (Demetriou & Schmitz-Sciborski, 2011). That legislation led to greater federal government involvement in higher education with the establishment of federal grant and loan programs for the masses in the 1960s and 1970s (Gilbert & Heller, 2013). Currently the expansion of community colleges and the growing online educational opportunities provided the impetus toward the reality of universal higher education and an ever-widening diversity of students in postsecondary education; including those being classified as underprepared. Domina and Ruzek (2012) reported that more than 70% of high school graduates enrolled in some type of postsecondary education which would mean that the United States meets Trow’s definition of “universal” education. Thus the numbers seem to suggest that more students see postsecondary education as the natural progression after high school to move into future careers. This expansion of schooling leads to a delay in taking on more traditional adult roles.

Extended years of adolescence. Arnett (2004) coined the term “emerging adulthood” for the time period, from late-teens to late-twenties, where students no longer

feel like an adolescent, yet do not describe themselves as an adult (p. 4). This new period of life for young people, in industrialized countries, developed due to a less urgent need for young people's labor; a rise in the average age of marriage and parenthood; and the increasing requirement of postsecondary education for gainful employment (Arnett, 2004). The shift from industrial to technical work for a growing number of U.S. jobs increased the necessity of postsecondary education (Schwartz, Zamboanga, Luyckx, Meca, & Ritchie, 2013). Further, the open and extensive higher education system, available to U.S. students, helped create and support "emerging adulthood" in American society (Arnett, 2004).

The fact that most American students expect their schooling to continue beyond high school has caused many adolescents to take their high school learning less seriously (Arnett, 2004) and makes them seem less prepared for college rigors than students of prior generations. More than 70% of high school graduates enroll in some type of postsecondary education, but a large number of these same students underestimate the skills they will need for college admission and success as demonstrated by not taking adequate college preparatory classes in high school (Domina & Ruzek, 2012). This lack of planning by some students in high school obviously increases their potential of being underprepared for college.

Thus the tributary matters of extended adolescence and the expansion of college access for U.S. students, as well as postsecondary institutions' public reporting of retention, graduation rates, and admissions standards complicate the underprepared student problem facing all institutions of higher education.

Implications

Colleges and universities continue to question and seek solutions in a multitude of ways for their concerns about underprepared students' persistence to graduation. Remediation approaches from noncredit remediation courses, developmental coursework embedded in core academic courses, social support services, proactive or intrusive advising, summer bridge programs, to learning communities are used, but often not assessed to determine the level of success they may or may not have for the persistence of underprepared students.

A gap in data-driven decision making about how to improve retention is not unique to any one university (Tinto, 2012). A program evaluation report to stakeholders generated by this study may help fill the evidence-gap for deciding future remediation programs for the university. Quantitative data that compared the retention rates of two different remediation approaches—a cohort for remediation coursework or more individualized remediation coursework—used at the university did not show one approach to be more effective than the other for the retention of underprepared students. However, qualitative data collected from interviews with students and faculty who participated in the cohort remediation program gave voice to the concerns and compliments of what a cohort program provided to the students involved. All of this information comes at a time when the university administration is weighing options for offering, amending, or discontinuing remedial programs and services in the future at this institution of higher education.

Summary

As the review of literature highlights, the problem of underprepared college students is complex and historically tenacious. The motivation to earn a college degree for students and their parents has economic implications, because students leaving college without a degree are likely to have lower, life-time earning potentials (Valentine, et al., 2011). For colleges and universities, positive student retention and graduation rates equate to a consistent flow of revenue and the reputation needed to attraction of future students (Alarcon & Edwards, 2013; Shaw, 2011). These concerns directly or indirectly pressure institutions of higher education to establish plans and policies for the retention of all students, not just those students deemed underprepared.

Tinto's (1975) seminal theory that connects students' level of academic and social integration into their postsecondary institution with the students' decisions to stay or leave before graduation serves as the foundation on which the program evaluation for this study was built. Gleaning details about underprepared students' demographics and family background, individual attributes and perceptions, and pre-college academic records provided the lenses for evaluating the cohort-style program of remediation and for determining its impact on retention of the students in the cohort.

Additionally an accurate and consistent measurement for determining who is an underprepared student was reviewed as a part of the program review. Although the use of standardized test scores and high school class rank or GPAs are commonly used for college admission, non-cognitive factors, like the willingness to persevere or to seek help when challenges arise may off-set low scores on the traditional admission predictors of

college success and may distort the classification of what it means to be an underprepared student (Scott-Clayton et al., 2014). The wide variety of research conclusions highlights the importance of this project study to specifically determine the potential benefits and detriments of this university's remediation efforts for retention, because the underprepared students admitted represent a notable percentage of incoming freshmen in the local setting.

Section 2: The Methodology

Introduction

The problem that prompted this project study came from the lack of an evaluation of a one-time remediation program for underprepared college students, implemented in 2012 at the study's university, and the purpose of this study was to complete a program evaluation on it. The methodology section explains the multi-method, summative program evaluation used for this project study. The description of the study's research process includes a brief explanation of the responsive evaluation approach to participant-oriented program evaluation; the identification the proposed study's population and its data sources; as well as the quantitative and qualitative samples of the study. Data collection, analysis, results, and a discussion of the findings are reported, along with the limitations, ethical concerns, and conclusions associated with this study.

Program Evaluation

Program evaluation is a flexible research approach which allows for the use of quantitative, qualitative, or multi-methods research (Lodico et al., 2010). Program evaluation differs from other forms of social research in that a dominant role of an evaluator is to be a manager and communicator while also being a researcher (Mertens & Wilson, 2012). Five broad categories of program evaluation include: object-oriented, management-oriented, consumer-oriented, expertise-oriented, or participated-oriented program evaluations (Fitzpatrick, Sanders, & Worthen, 2011). These frameworks provide the conceptual foundations for a number of nuanced evaluation techniques falling under or between these broader categories of program evaluation.

Responsive Evaluation

This project study utilized a specific participation-oriented approach to program evaluation called responsive evaluation developed by the theorist Robert E. Stake in the early 1970s (Fitzpatrick, Sanders, & Worthen, 2011). Following in Stake's footsteps, Guba and Lincoln refined responsive evaluation, in the 1980s, to make this constructivist approach to program evaluation take on an advocacy component where disenfranchised stakeholders become the focus of an evaluation (Mertens & Wilson, 2012). This advocate perspective guided my project study because I gave weight to the qualitative data collected from interviewees with the students who participated in the cohort remediation program being evaluated. While seeking records of goals and objectives related to the remedial program, this study discovered that any institutional administrative data about the remedial program's goals and objectives were not kept as public records, but instead as the private records of an administrator who left the university at the end of the 2012—13 academic year. That situation left a gap in evidence-based practices at the university related to remedial programming and services. The only public documentation about the cohort-styled remediation program located was an object description within the university's 2012—13 academic catalog (Appendix B).

The participation-oriented, responsive evaluation method stresses the importance of the evaluator being responsive to the persons closest to the program and to advocate for those in the program with the least power (Mertens & Wilson, 2012). This study's program evaluation was conducted in a way to give the student participants a voice to express how the cohort remediation impacted their first-year college experience from

their viewpoints. Although using a multi-method research approach, this responsive evaluation program evaluation drew heavily on qualitative research so that future remediation options for underprepared students at this study's university may be based on best practices gathered from past students' experiences.

Sequentially, this program evaluation study first quantitatively compared the remediation rates of the underprepared students, who matriculated in 2012 and were placed in the cohort-styled remediation program, with underprepared students who matriculated in 2013 and experienced a more individualized remediation program. Next qualitative data was collected and coded from interviews with participants directly involved in the cohort-styled remediation program to provide their perspectives about the impact the remediation cohort program had on their first-year in college and beyond. By using the responsive evaluation approach, the program evaluation which resulted from this study might become a foundational guide to future adaptations to the current remediation program for underprepared students at the study's university. With a program evaluation approach to research, results cannot be generalized. However data discovered that did show positive remediation practices, may be shared internally at this university with stakeholders and externally through conference presentations with other institutions having similar underprepared populations, especially in the Appalachian region.

Setting

This project study was conducted at private, liberal arts, faith-based university in the Appalachian region. The Integrated Postsecondary Education Data System (IPEDS)

report for fall of 2012 gave a total enrollment of 1,549 students and an undergraduate enrollment of 1,164 students (U.S. Department of Education, Institute of Education Statistics, 2010). The make-up of the undergraduate student body at that time was about 56 percent female; with the student body composition: 77 percent White, 4 percent African American, 1 percent Hispanic/Latino, 2 percent Asian, 3 percent non-resident alien, and 13 percent of the students undeclared. In spite of the university's small size and limited ethnic diversity, it takes pride in attracting students from the Appalachian region, across the country, and around the world. Additionally, there is a strong commitment to its commitment to the mission of educating local students and preparing them to return to be local leaders in the Appalachian region.

Remediation Programs at the Setting

In recent years, the university associated with this project study has used two different approaches to remediation programs for underprepared students. A cohort-styled remediation approach was implemented for the 2012—13 academic year and then discontinued. The 2013—14 academic year brought on a more individualized approach to remediation for the admitted underprepared students. It is important to note that during each of the two academic years studied, the remedial courses for reading, writing, and mathematic content and skill development were taught by the same faculty members.

Population & Data Sources

The project study's target population was first-year, first-time college students attending the 4-year institution and who were classified as being underprepared for college-level coursework. Underprepared students for this study were defined as those

who were accepted and placed into at least two remedial college courses at the university connected to this study, which matches the university's definition of underprepared students.

Data collected for the quantitative research included archived, administrative quantitative data on the persistence of the underprepared students at this university and those same students' demographic data of gender, high school GPA, admission test scores, declared or undeclared major as an incoming freshman, and number of remedial courses taken in the first fall semester.

Qualitative data was collected from both students and faculty through individual interviews. The interviews conducted with cohort remedial students included students who persisted and who left the university. The students' experiences and perceptions about the program, and its benefits and detriments on their persistence were recorded and coded. Both male to female students were interviewed.

One additional data source for this evaluation study included an interview with one of the three faculty members, who served as professors for the remedial courses, to gather the faculty member's experiences and anecdotal evaluations of the cohort remediation program.

Quantitative and Qualitative Samples

The sample for the quantitative research was freshman students classified as underprepared and who matriculated in either 2012 or 2013 at this university. The rates of retention were compared for two groups; with one group being the 2012 underprepared students who were required, based on standardized admission scores, to take pre-selected

remediation courses and a core science course together as a cohort; and a second group being the 2013 underprepared students who were strongly advised, but not required, to take remediation courses on an individual basis. The students in both groups were identified as underprepared as determined by set scores on standardized admission tests.

The qualitative sample data came from the individual interviews conducted with six of the 2012 remedial cohort students ($N = 73$) who volunteered to be interviewed. Five students, who remained at the study's university, met with me in person and one student who left was interviewed by phone. Additionally, six other students volunteered but were disqualified from being interviewed due to the fact they were students in courses taught by the researcher. The response rate of students volunteering to be interviewed was 16% ($n = 12$ out of 73); while the number interviewed as 8% ($n = 6$ out of 73) and included four males and two females.

Additionally the three faculty members, who taught the remedial courses, were invited to take part in a focus group interview, but all declined to participate in the focus group. After IRB approval for a change in the collection of faculty data for individual interviews was granted, the faculty members were invited again to be interviewed. The second invitation requested faculty members to agree to individual interviews. In the end, only one faculty member consented and was interviewed.

Data Collection

This multi-method study collected quantitative data to address the question of comparative retention rates between two different remediation approaches used in the fall semesters of 2012 and 2013 at this university. Then qualitative data was collected from

both students and faculty involved in the 2012 cohort remediation group to further identify and evaluate components of the cohort remedial approach for benefits or detriments that were perceived by students and faculty related to the retention of those students. What follows are the details of the quantitative collection of student data and qualitative collection data from student and faculty interviews.

Quantitative Data Collection

Archived data was accessed from the university's student information system for the college enrollment data of the freshman populations of the matriculating 2012 and 2013 students and their persistence to sophomore years of 2013 and 2014 respectively; as well as some student demographic data; and the student enrollment in remedial reading, writing, and mathematics courses for fall semesters 2012 and 2013. The data sets did not have student names; however student identifications numbers were necessary for matching students enrolled each fall to determine retention numbers and matching the number of remediation courses taken by each student.

Qualitative Data Collection with Students

Students who had been members of the 2012 remedial cohort program ($N = 73$) were all invited to be privately interviewed for this study. The university email system was used with permission, and a person within the university information system was able to place an invitation message into an email sent individually to each of the participating 2012 cohort students' university email addresses. This option was used to keep students' identity unknown to the researcher. This also allowed the invitation to go to both students who remained and those who left, because the university-issued Gmail

accounts are permanent addresses even after students leave the university. The text of the invitation was placed in the body of the email and the consent form was added as an attachment to the same email.

The email invitation went to all 73 students (36 students remaining at the university and 37 who left) who had been in the 2012 cohort remedial program. All responses from students agreeing to be interviewed came within the first three days after the email was sent; with five students (3 males and 2 females), who persisted at the university and who were not students in any of the researcher's courses, and one student (male) who had left the university scheduled to be interviewed. Additional responses from students willing to be interviewed came from six of the researcher's current students (5 females and 1 male), who came to identified themselves as students from the cohort remedial program. All of these students expressed their interest in being interviewed, but understood that it was not possible due to the ethical concerns of being interviewed by someone who was also grading their coursework. These students asked to be informed of this study's results and to be able to discuss the program at the end of the research. Their sincere interest in the program evaluation seemed to indicate that they had something they wished to say about the remedial program. A list of these students not interviewed, as well as the six students who were interviewed, received an electronic copy of the program evaluation report.

The low response rate ($n = 12$ out of 73; 16%) to the request for interview volunteers was not surprising, and many factors may have weighed into it. The email invitation went out to the students near the end of the persisting students' spring

semester. This was a time when final projects were coming due and exams were looming. Students may not have wanted to add any other responsibility to an overly busy schedule. Secondly, students may not have felt comfortable talking to someone they did not know about a program that would identify them as an underprepared student; a stigma effect may have come into play. Finally, students who have left the university were very likely not to check an old email account associated with this study's university, especially if they left with negative feelings. The possible reason the one departed student completed a phone interview may be linked to his expressed, strong desire to return to the study's university as evident in his comment, "Actually, last year when I was at my other school, I was coming back to; filled out my return application; I got accepted and everything. It was just that they didn't give me enough money" (Male 2).

The interviews were conducted at a conference center meeting room on campus or by phone for the convenience of the participants. Consent forms were signed, and a signed copy was returned to students, before interviews began. Each interview lasted no longer than 45-minutes, with many lasting about 30-minutes. The students seemed relatively guarded with their answers even though they were encouraged to be honest. The use of both closed and open-ended questions helped gather useful information to support the literature's theories and concepts (Creswell, 2012) while capturing thick details on the perceived benefits and detriments of the cohort remediation program.

The qualitative research data was gathered from the taped, transcribed, and coded interviews, and each interview followed the interview protocol for students (see Appendix C). The intention was to interview a similar number of both students who

persisted and who left the university from the cohort remediation group. However as expected, more students who remained at the university volunteered to be interviewed than students who had left. It is possible that departed students may not have been as aware of the invitation as the retained students due to the use of the university's Gmail addresses which may no longer be checked regularly by departed students.

Qualitative Data Collection with Faculty

Separate from the student invitations, the three faculty members who taught all the remedial courses were invited to be interviewed as a focus group. Emails were sent collectively to these three faculty members; with the body of the email explaining the study and the format of the interview, and the consent form added as an attachment to the email. It was expected that the collegial working history, both within this group and the group with the researcher, would facilitate a conversational and non-threatening interview environment; however the faculty failed to agree to the focus group request. The one-hour focus group session would have asked questions complimentary to the questions from the student interview protocol. Open-ended questions were planned to allow participants to “best voice their experiences unconstrained by any perspectives of the researcher” (Creswell, 2012, p. 218). However, concerns of privacy and confidentiality may have been factors for why one faculty member explicitly declined and the others simply failed to respond to the invitation to meet as a group.

Later one faculty member indicated a willingness to talk privately about the remedial program, and a request for a change of faculty data collection from a focus group to individual faculty interviews was submitted and approved by the Internal

Review Board. A second invitation to the entire remedial faculty went out, in another email invitation, to explain the change from a focus group to individual interviews. Only one of the three faculty members agreed to that format and completed the interview with the individual faculty interview protocol (see appendix D).

In summary, the collection of quantitative data to address the question of comparative retention rates between two different remediation approaches used, and the qualitative data collected from both students and faculty involved, provided the format to identify and evaluate components of the cohort remedial approach for benefits or detriments that were perceived by students and faculty.

The data analysis and results are presented together next, as these two phases of the research were tied together temporally, and one—the results—was the natural outcome of the other (i.e., analysis). The quantitative analysis and results are presented first, followed by the qualitative data and results, reflecting the order in which data was collected.

Data Analysis and Results

The data assembled for a quantitative comparison of retention rates for the two different remedial approaches, as well as descriptive statistics on the 2012 remedial cohort students, gave context for the qualitative data gathered from student and faculty interviews. The reporting of both quantitative and qualitative data takes advantage of the strengths of each research methodology to give measurements on outcomes and attitudes (Lodico, Spaulding, & Voegtle, 2010). A separate look at first the analysis and then the

results of each of the quantitative and qualitative data follow preceding to the discussion of findings in the section which follows.

Quantitative Data Analysis

The quantitative aspect of this study was framed by the research question, “Did underprepared students, defined by lower than the required admission high school GPAs or ACT/SAT scores and enrolled in the 2012 remedial cohort program, persist to sophomore year at a similar rate as the underprepared students, who matriculated in 2013 and who did not participate in a remedial cohort program?” The use of a Chi-square inferential statistical test compared the two student groups’ retention rates underprepared students matriculating in 2012, who were required to participate in the remedial cohort, with underprepared students matriculating in 2013 in the individualized remediation approach.

Additionally the dependent variable of persistence was compared to independent descriptive variables from the 2012 cohort remediation group including: (a) the demographic data of gender; (b) the high school experience data of GPA and college admission test scores; and (c) the college experience data of declared or undeclared major, and the number of remedial courses taken freshman year. Again the dependent variable in each case was the persistence to begin sophomore year at the same university. This archived data did not have any students’ names associated with it. However, student identification numbers were necessary to determine which students and how many students did or did not persist to their sophomore year at this university.

Quantitative Data Results

The quantitative research results found no statistical significance between the retention rates of the cohort remediation students who matriculated in 2012 and the independent remediation students who matriculated in 2013 as shown in Table 4.

Generally the acceptable p -value for educational research is set at less than .05 (Lodico, Spaulding, & Voegtle, 2010). As shown in Table 5, the Chi-square test $\chi^2 = .042$; $p = .838$ is not statistically significant and the conclusion is to fail to reject the null hypothesis.

Table 4

Cross-tabulation of Remedial Groups Identified by Year and Retention

		Retain		Total
		Yes	No	
Year	2012 (cohort remediation)	36	37	73
	2013 (independent remediation)	29	32	61
Total		65	69	134

Note. 2012 is the cohort remediation and 2013 is the independent remediation (i.e., underprepared students who did not participate in a cohort remediation program.)

Or in other words, there was no detectable difference between the cohort and the independent remediation groups' rate of retention to their sophomore year at the university where they matriculated as freshmen.

Table 5

Chi-Square Tests for Cross-tabulation of Remedial Groups Identified by Year and Their Retention

	Value	Chi-Square Tests	
		df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.042 ^a	1	.838
N of Valid Cases	134		

^a 0 cells (.0%) have expected count less than 5. The minimum expected count is 29.59.

Looking at some aspects of students' demographic data for the 2010 cohort remediation students was done to determine if any broad patterns, within such data sets, might highlight factors that signaled which students were more likely to persist to their sophomore at this university. None of the results showed statistical significance when comparing the dependent variable of retention with the independent variables of the 2012 cohort remediation students including: (a) the demographic data of gender; (b) the high school experience data of GPA and college admission test scores; and (c) the college experience data of declared or undeclared major and the number of remedial courses taken freshman year.

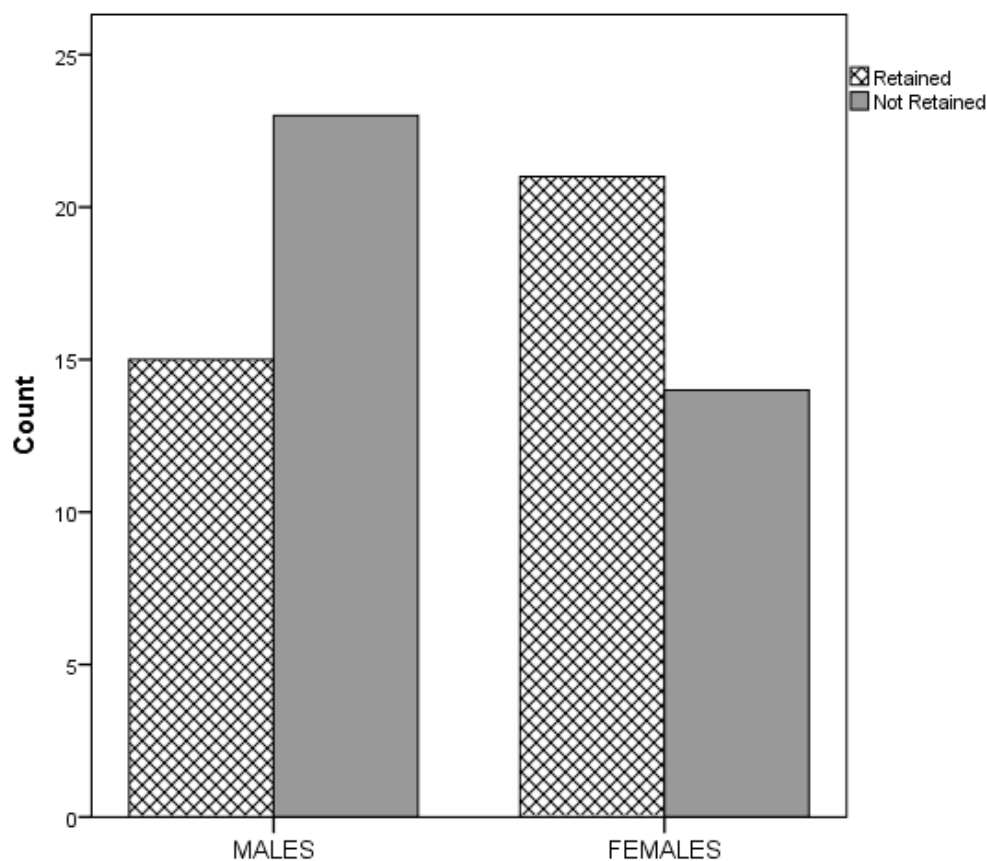


Figure 1. Retention statistics of the 2012 cohort remedial students by gender. $\chi^2 = 3.071$, $df = 1$, $p = 0.080$.

Nearly half of the 2012 cohort remediation students returned ($n = 36$ out of 73; 49%) to this study's university in the fall of 2013; including 15 males and 21 females. There were 23 males and 14 females of the cohort group (51%) who did not return to the same university (see Figure 1).

Table 6 displays an examination of the 2012 remedial students' high school experiences, as measured by students' high school GPAs, which showed the retention and

non-retention numbers within various identified GPA ranges were not significant to each other at the .05 level.

Table 6

Cross-tabulation of 2012 Cohort Remedial Students Retained Compared to High School GPAs

		Retained		Total
		Yes	No	
HS GPA Ranges	2.0 to 2.49	4 _a	2 _a	6
	2.5 to 2.99	5 _a	11 _a	16
	3.0 to 3.49	16 _a	12 _a	28
	3.5 to 3.99	11 _a	8 _a	19
	4.000	0 _a	4 _b	4
Total		36	37	73

Note. Each subscript letter denotes a subset of Retained yes; no categories whose column proportions do not differ significantly from each other at the .05 level. $\chi^2 = 7.950$, $df = 4$, $p = 0.093$.

Another factor examined, as part of the high school experience of the 2012 cohort remediation group, was measured by students' scores from college admission tests, like the ACT and SAT tests (see Figures 2 and 3). The descriptive statistics of the composite ACT and SAT admissions scores from the underprepared students matriculating in the fall of 2012 also showed that the retention and non-retention numbers within each scoring number range were not significant to each other at the .05 level. There were 54 records of ACT scores and 31 records of SAT for the group making a total of 85 admission records for 73 students because some students submitted both ACT and SAT scores.

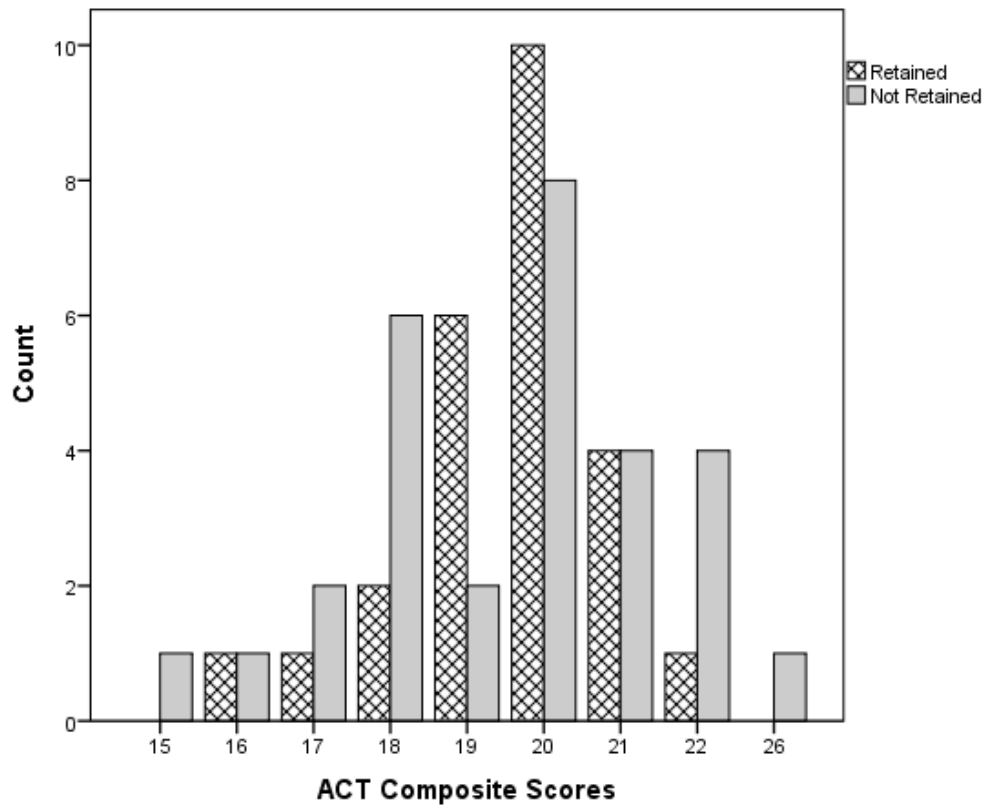


Figure 2. Retention statistics of the 2012 cohort remedial students ACT composite scores. $\chi^2 = 8.104$, $df = 8$, $p = 0.423$.

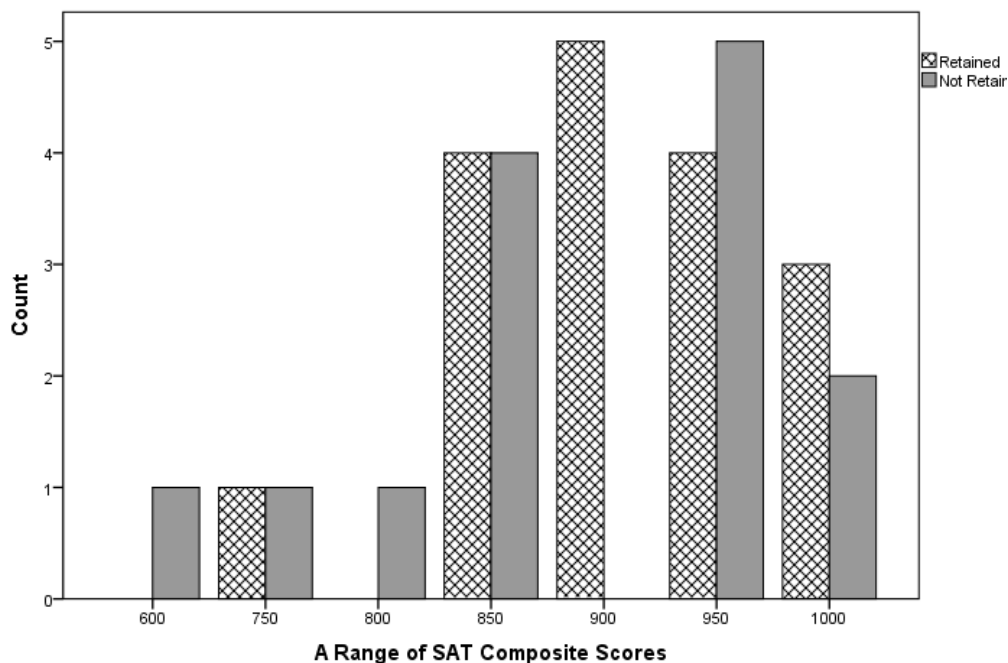


Figure 3. Retention statistics of the 2012 cohort remedial students SAT composite scores. $\chi^2 = 7.087$, $df = 6$, $p = 0.313$.

Lastly, college experience data was explored in relation to retention which included the declaration of a major when a student matriculated and the number of remediation courses taken (two courses—REA 101 and ENG 101; or three courses—MAT 101 added to REA 101 and ENG 101) for the first semester of college. The statistics for students declaring or not declaring a major were very similar when looking at retention (see Figure 4). Of the underprepared students who matriculated in 2012 and who declared a major, 31 of the 62 students (50%) were retained. Similarly, 5 of the 11 students (45%) who listed “undecided” as their major were retained.

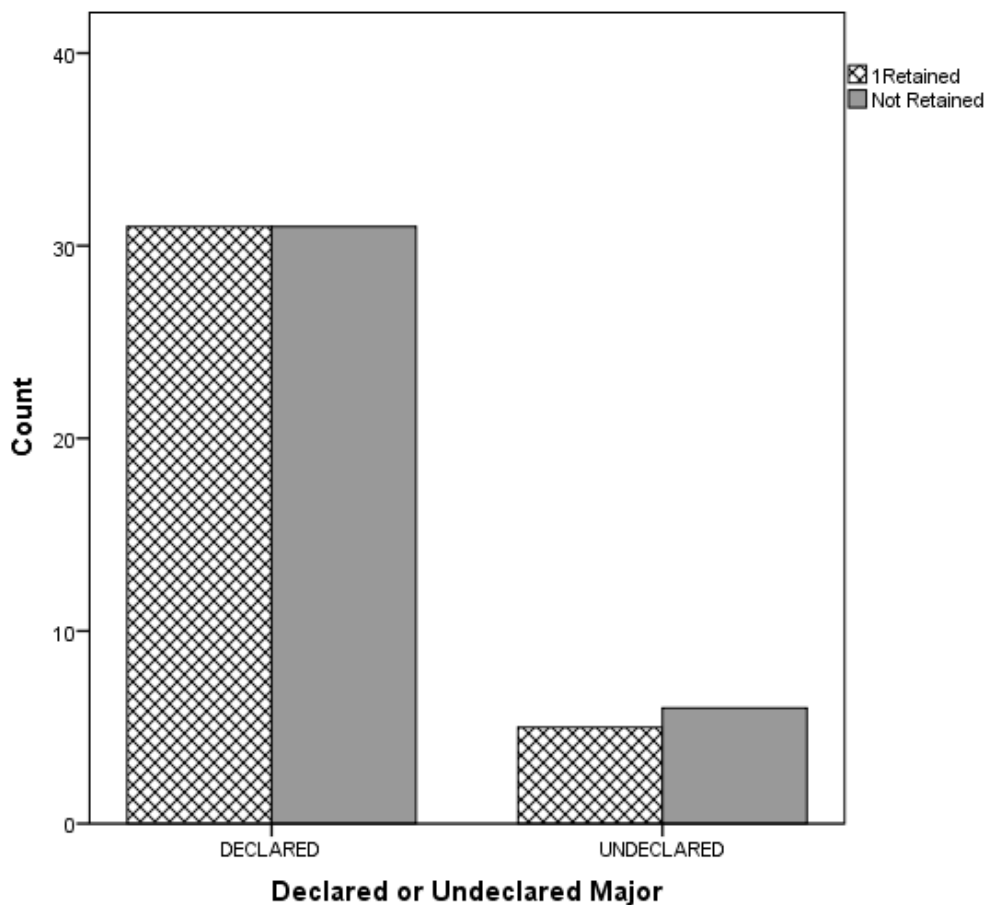


Figure 4. Retention statistics of the 2012 cohort remedial students by declared or undeclared major. $\chi^2 = 0.077$, $df = 1$, $p = 0.781$.

Looking at retention from the variable of the number of remedial courses taken first semester, this data also did not show a .05 level of difference between the retained and not retained data (see Figure 5). There were 20 students taking only two remedial courses (reading and English) as part of the 2012 cohort program; of which 11 were retained (55%) and 9 were not retained (45%). The other 53 students in the cohort program were required three remedial courses, and 25 of those students (47%) were

retained while 28 students (53%) were not retained. The student group needing three remedial courses first semester had the higher drop-out percentage.

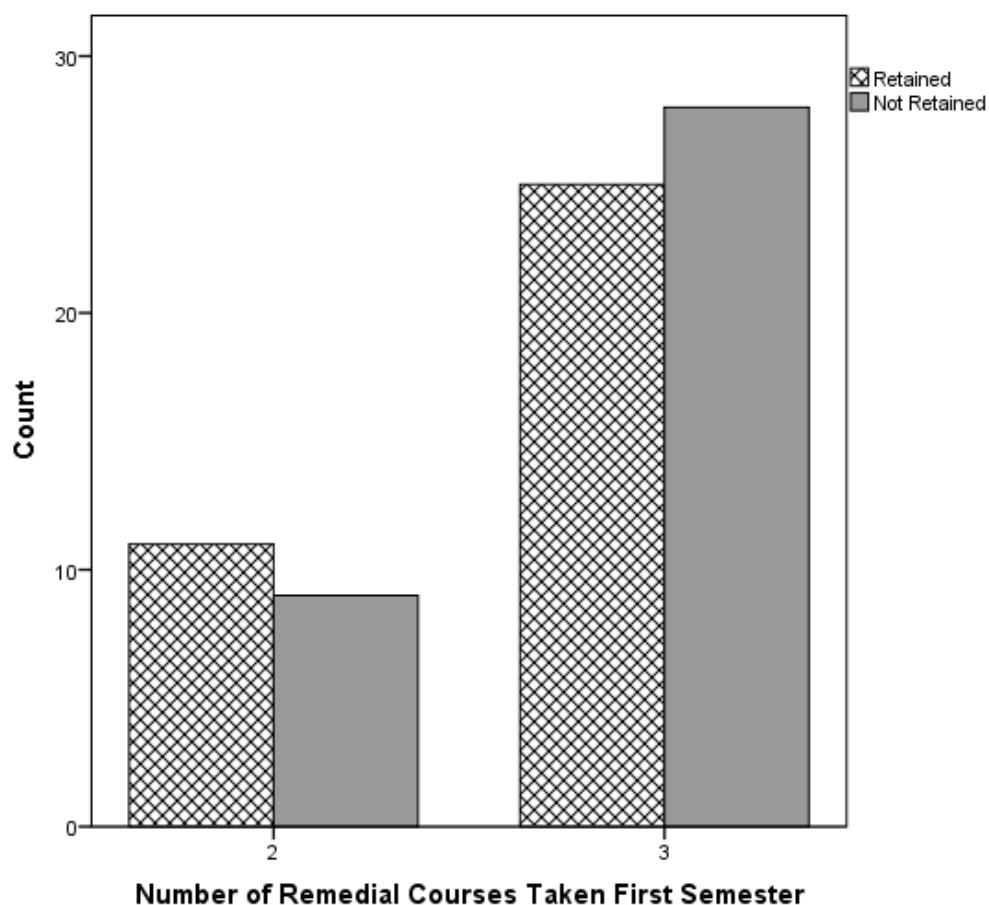


Figure 5. Retention statistics of the 2012 cohort remedial students by number of remedial courses taken. $\chi^2 = 0.356$, $df = 1$, $p = 0.551$.

Retention Rate Comparisons. Although this study focused on underprepared students and to compare them with students classified as “college ready” may not be a valid comparison, it is interesting to look at the 2012 and 2013 matriculating freshman classes at this study’s university as a whole (see Table 7). Some differences between

2012 and 2013 numbers in Table 7 are worth noting. There was a 9% decrease in the total freshman enrollment between 2012 and 2013 and at the same time a 16% decrease in the number of underprepared students admitted to the matriculating freshman class of 2013 as compared to the underprepared students in the freshman class of 2012.

Interestingly for the total freshman enrollment data, a smaller percentage number of remedial students were admitted in 2013, and the comparative number of remediation students retained for 2012 and 2013 also showed a decreased percentage of 19%. That means relatively less remedial students were retained in 2013 than in the previous year.

Finally, a review of both of the total freshman classes' data for enrollment and retention comparisons showed 162 of 279 students (58%) were retained from the 2012 matriculating class, and 144 of 253 students (57%) were retained from the class matriculating in 2013 (see Table 7).

A report by the National Student Clearinghouse Research Center, showed 72.9% of all students who started at a 4-year, private non-profit college in 2012 returned for a second year at the same institution (Schoenecker & Reeves, 2008). The retention rate for this study's university (58% in 2012) fell well below that comparable rate. However, the same report showed 58.2% of all students who began college at all institutional sectors (4-year public, private, and for-profit institutions) were retained at the same institution for a second year of college. Shown in Table 7, the 58% and 57% retention rates for the study's full freshman classes, matriculating in 2012 and 2013 respectively, more closely matched the 2012 National Student Clearinghouse's reported data of 58.2 % retention

rates of all institutions than the 72.9% retention rate for private colleges. This variance could raise questions of admission policy and future remediation programming.

Table 7

Comparisons of Remediation Student Numbers and Retention Rates of Freshman Classes 2012 and 2013

	Matriculating Fall 2012 (Cohort Remediation Year)	Matriculating Fall 2013 (Independent Remediation Year)
Total freshman class enrollment	279	253
Males	128 (46%)	160 (63%)
Females	151 (54%)	93 (37%)
Total freshman class enrollment as subsets		
Remediation students	73/279 (26%)	61/253 (24%)
Males	38/73 (52%)	40/61 (66%)
Females	35/73 (48%)	21/61 (34%)
Non-remediation students	206/279 (74%)	192/253 (76%)
Males	90/206 (44%)	120/192 (63%)
Females	116/206 (56%)	72/192 (38%)
Retention Rate for Remediation students only		
Retained to soph. yr.	36/73 (49%)	29/61 (48%)
Not retained to soph. yr.	37/73 (50%)	32/61 (52%)
Retention Rate for Non- remediation students only		
Retained to soph. yr.	126/206 (61%)	115/192 (60%)
Not retained to soph. yr.	80/206 (39%)	77/192 (40%)
Retention Rates Combined	162/279 (58%)	144/253 (57%)

Note. Remediation students are defined as students who took two or three remediation courses (REA 101, ENG 101, MAT 101) in the fall semester. The remediation students who matriculated in 2012 were required to enroll in the cohort remedial program. The remediation students who matriculated in 2013 were advised to take remedial courses and independently selected to take either two or three remedial courses.

In summary, no significant difference was found between the retention rates of the underprepared students in the 2012 cohort remediation group and the 2013 underprepared students who took remediation courses independently. A closer look at some demographic data from the 2012 cohort remediation group being evaluated also showed no significant differences when examining gender, high school GPAs, composite admission test scores, declared majors, or number of remediation courses taken and retention rates.

Qualitative Data Analysis

Qualitative data was taken from interviews with students and faculty, then transcribed and coded for the process of segmenting the text into broad themes (Creswell, 2012). Manual sorting and coding was completed from the transcribed interviews to examine and organize the themes and the frequency with which they appeared throughout all the interviews. These themes were first broadly categorized as the students' perceptions of either benefits or detriments of the 2012 cohort remedial program. Then reoccurring words and phrases within the broad themes highlighted issues of the limited program benefits perceived by students; the misplacement of students; poor communication about the program; the problem related to choice; how knowledge of remedial placement may have changed decisions to attend this university; feeling behind in progress to graduation; and seeing themselves as being different than their regular-admitted classmates.

Interview protocols were developed and used for student and faculty individual interviews (see Appendices C and D). The broad themes of perceived benefits and

detriments served as the foundation of the questioning. Interviews were recorded, then transcribed and coded. Topics that were raised by at least two interview participants were charted into tables of reoccurring issues for perceived benefits (see Table 8), and perceived detriments (see Table 9).

Table 8

Perceived Benefits of the Cohort Remedial Program

BENEFIT PERCEIVED	No benefits	Courses that were beneficial	Second chance; want to do better than HS	Expressed that the remedial program helped
Male 1		math and writing	x	x
Male 2		writing	x	x
Male 3		writing	x	x
Male 4		freshman seminar		x
Female 1	x	none		
Female 2	x	none		
Faculty		advising	x	x

Table 9

Perceived Detriments of the Cohort Remedial Program

DETRIMENT PERCEIVED	Misplaced into remediation	No choice to be in program	Expressed felt different that non-remedial student	Courses that were not beneficial	Program put student behind in schedule to graduate	Program not explained clearly
Male 1		x		geology	x	x
Male 2	x	x	x	reading	x	x
Male 3		x	x		x	x
Male 4		x	x	geology	x	x
Female 1	x	x			x	x
Female 2	x	x	x	geology	x	x
Faculty	NA	NA	NA	NA	x	x

The collection of qualitative data from students was framed by the research question, “What components of the 2012 remedial program are perceived by underprepared students, who completed the cohort program, as having a beneficial or detrimental impact on their progress toward a second year at this university?” A similar research question was foundational for the qualitative research with faculty which asked, “What components of the 2012 remedial program are described by faculty, who taught the courses in the cohort program, as having the most positive or negative impact on students’ academic progress and success?”

Seven interviews were conducted; five students who persisted, one student who left the university after freshman year, and one faculty member. Six of the interviews were conducted in person and one as a phone interview, each lasting 30 to 35 minutes.

Qualitative Data Results from Student Interviews

The broad themes of perceived benefits and detriments served as the basis of the questioning used to gather qualitative data. Perceived issues were coded if they were raised by at least two interview participants, and these issues included: (a) the limited program benefits perceived by students, (b) the misplacement of students, (c) poor communication with students about the purpose of the cohort remedial program, (d) the problem related to having a choice of being in the program, (e) how students’ advanced knowledge of their remedial placement may have changed some of their actions and decisions about attending this university, (f) feeling behind in progress to a timely graduation, and (g) seeing themselves as being different than their regular-admitted classmates. A closer look at direct quotes from the interviews details the resulting themes

of perceived benefits and detriments of the 2012 cohort remedial program and provided rich narratives for the responsive program evaluation.

Student perceptions of program's benefits. The benefits enumerated by the students for the cohort program were few; with some students flatly saying there were no benefits. Female 2 firmly stated when asked about the program's benefits,

No. I don't think it has had a positive outcome on anything regarding my education. It has frustrated me beyond belief and still to this day, it will, and I feel like it will forever. It put me behind, big time.

Female 1 simply stated, "I don't think it was beneficial," but later in the interview added,

I know the school said that it was a stepping stone due to our SAT or ACT scores; that it was to help us progress more into college level courses, but I thought the college-level courses I was taking were actually easier than the Magis Program classes I had.

For those who offered specific benefits, or expressions of positive aspects of the cohort remedial program, a couple students explicitly mentioned the remedial writing course and the professor who taught it. Male 1 said, "For me personally, it was the writing course because I was not very good at writing and actually taking the college writing and then an actual writing course, writing composition, I feel like, helped me." Another student recalled that the faculty member teaching remedial writing was easily approachable and answered many questions about the university that were beyond writing strategies.

[This professor] was there to help me with my papers a lot. Any time I had a question about college in general, [the professor] was there for me and just explained to me how to get through this program. That was very helpful. (Male 2)

Four of the six students interviewed did not directly challenge the idea that they needed remediation, and their comments mirrored the remedial program's implied intention of helping underprepared students transition from high school to college-level coursework. Comments, like one made by Male 3, showed that some students came to accept the university's assessment that they would benefit from the remedial program.

My [initial] reaction was definitely like feeling incompetent and just wondering what was going to happen and what I was going to do with it and how it would benefit me. I guess when they [professors] started talking about it, I mean, it was only going to last a semester. I was thinking to myself that it is definitely going to help me out because the transition from high school to college is going to be difficult, so why not have someone help you out with that? (Male 3)

One student admitted that being accepted into the university's remedial program was his second chance. He commented,

That's what made me feel like the Magis Program [was a good idea]. There were a lot more students who come in, who maybe sluffed off in high school, and [the program] gave them an opportunity. I feel like that's what I did. It gave me an opportunity and I took it and ran with it. I have a 3.3 GPA right now. In high school, it was 2.1, so it's a good jump, I would say. (Male 1)

Other students, who also did not vocally challenge their placement during the interview, were more careful and guarded in how they described benefits of the program. An example of this cautious wording came from Male 4 as he said,

I felt pretty, (lengthy pause) I wouldn't say insignificant because that is kind of a rough term to use; maybe a little step higher, like a little more positive than that, but I felt pretty bad. To start with I was a business major and having students in business meet over there; and having us, Magis students, meet in a different location kind of made me feel a little bad. But after they [professors] explained what it was, I only saw it as a positive thing, and I always felt like it was something that would make me a better student in the long run.

Student misplacement. The question of misplaced students raised in the quantitative analysis resurfaced in the student interviews. Of the six students interviewed, two students gave details about why they questioned being placed in a remedial program. Both of these students expressed strong feelings that they were misplaced into the remedial program, but also conveyed that they did not feel like they had any way to question and change that decision during the summer orientation or opening week of their freshman year.

One student who felt misplaced was Female 2. She was a first-generation college student and lived close enough to campus that she could have been a commuter student, but chose to live on campus. She volunteered information during her interview that she had ranked sixth in her high school graduating class and had a composite score of 22 on her ACT admission test. Together we determined that it was only the ACT sub-test

English score of 19 that triggered her placement into the program. She stated she would have taken the ACT again to improve that score to keep from being placed in remediation if she had known about how scores would affect her placement. Her reaction to being told at summer orientation about her placement into the remedial program was expressed this way,

It was really, really upsetting and offensive. I felt like we're paying to come here. We're just like any other student. If we weren't qualified to be here, then don't accept us. Don't belittle us and call us out [in front of our classmates during orientation]. (Female 2)

The second student who felt misplaced was Male 2. He was not a first-generation student and was an out-of-state student, who was recruited for one of the athletic teams. Male 2 stated that he had a 3.8 high school GPA and that he was told his “test scores would not be a problem” by the person recruiting him for his sport. He perceived that comment to mean his admission scores were acceptable. Male 2 described his reaction to being placed into the remedial program as,

Surprised is not the word—[more like] kind of upset. I felt like I did very well in high school so I wouldn't have to be in a program like that. Basically, the way they [professors] explained it to us, we are in college but we are not ready to take college courses, so that didn't make sense to me. It really wasn't working out for me. Each time I asked a question like, ‘Why am I in this program?’ no one could give me a correct answer. So I really didn't like the program at all.

This student did transfer to another college after his freshman year.

Poor communication about remediation. All of the students interviewed presumed that they had been fully and unconditionally admitted to the university upon being accepted and were not told otherwise until they came to campus for orientation. This late announcement of their placement into such a program made the students feel stuck, because they felt there was no time to change schools for the upcoming fall semester. Female 1 stated,

I don't know how to say it. It was just, when I learned about it and especially like when it became too late to drop any courses, I was just annoyed by the fact that I was in it because I heard that there were some students who had their parents or someone sign off and they could actually get out of it, and I didn't find out until it was too late. (Female 1)

Female 2 recalled,

I was at orientation and had already deposited and made my final decision to come here. They [professors] called us into a room and basically told us, all at once, we were in there because we didn't have high enough ACT scores or SAT scores and in order for them [the university] to accept us, they created a program for us.

Male 2 remembered,

I know when we first learned that we were in the Magis Program, a lot of students were about to back out, but they said they were going to take it for one semester, and after fall semester a lot of freshmen did leave.

Male 4 considered the way students were informed of their placement as a drawback of the program and said,

A detriment [of the program] would probably be how we found out we were in the Magis Program a week before school and also the classes we took; having us not select the four classes we wanted.

The problem related to choice. Repeatedly, the students interviewed said they wish they had been given a choice about being in the remedial program or not.

If you want to take Magis, you can, but if you don't, you can get started on your regular college courses. If you barely made it through high school and you still want to succeed, I would suggest the Magis Program for you to get accustomed to college classes and the college life, said Male 2.

Similarly, Male 3 responded,

Well, they should get the word out a lot sooner so if students don't want to be in it, they can try to get themselves out of it, I guess you could say, or like they could simply volunteer to be in the program just to help them out with the transition.

Having no choice of courses and being limited to the same twelve credit hours for the first semester and was discouraging to students. Female 2 capsulized the program as,

They placed us in a set amount of credits our freshman year when we entered in the fall, and it felt like high school classes. We switched basically with the same group of students from class to class. We were all placed in a geology course. We all had a writing [course] and a reading [course] and then our math varied,

different things, but it did not feel any different from high school. It was a shame.

The courses didn't even really count.

Uniformly, the required science course in geology was not fondly remembered as described by Male 1 who said, "I took geology, which I found wasn't really necessary," or by Male 4's comment, "They put us all in geology, which I don't really understand... I would never have picked geology."

Male 1 explained his perception of being "behind" by saying,

Once I understood what it [the remedial program] was and how restrictive it was, I was actually upset. I felt I was behind because we are only allowed to take 12 credit hours and some classes you had to repeat [remedial courses did not count for required entry-level college courses in literature, composition, and mathematics].

Male 3 collaborated saying, "The 12 credits in the first semester, that helped me out, but it also makes you fall back in credits. It puts you behind, so then you have to take more credits [in the later semesters]." Female 1 explained her feelings about the semester choices saying, "I was pretty frustrated that I had to follow through with it [the remedial program] because I wasn't going to transfer or anything."

Changing decisions. When discussing the extension of the topic of choice, some students further explained that they may have decided to go to a different college if they had been told earlier about being placed into the remedial program. Female 1 said, "I would have questioned if I had to have been put in it [remedial program]. And then

knowing that it would put me back even further, I would have maybe considered something different.”

One of the students interviewed did choose to transfer to another college. Male 2 said, “Maybe if we would have known we were in the [remediation] program before we said we were going to go to [this university], we probably would have reconsidered going there.” Not being informed about remedial placement before arriving for orientation and feeling that he was misplaced, Male 2 sought other colleges where he could also receive an athletic scholarship, and he left after his freshman year. He was the only departed student who responded to my invitation to be interviewed, and his expressed desire to return to this university may be the reason he gave an interview. He remains friends with students at the study’s university and declared that he would like to return, but financial issues prohibit him from coming back.

Feeling behind for graduation. Even though only one of the six students interviewed for this study left the study’s university, all the students quickly identified the added time, and more importantly added expense, associated with extra semesters or summer courses needed to complete their college careers as a major detriment of the 2012 cohort remediation program. Students often used the word “behind” as they talked about this problem. Female 1 explained the problem of extended time to graduate by saying,

I guess the biggest thing is just warn people beforehand that they are going to be in it [the remedial program], and let them know that they are probably going to have to stay longer than 4 years.” She later added, “And this school is not cheap

to go to so that is why, if I wouldn't have had my scholarship for [my sport], I wouldn't be here and I would have had to go to another school.

With the published yearly tuition cost of \$27,830 and an additional cost for room and board ranging from \$5000 to \$6000 annually, the financial outlay for extra time on campus may have negatively factor into decisions of persistence for some students.

Remedial students' perceptions of how they were different. The students placed into the 2012 remedial cohort program perceived that they were different from their freshman classmates who were automatically admitted. In the interviews, statements like, "...we weren't in the same bracket as regular college students," (Male 2) or "I felt like we [the remedial cohort students] were still in high school" (Female 2) articulated their perceived difference. Male 4 described his feelings saying,

As I was in it, all I thought was, not negative thoughts, but just doubting thoughts; and a lot of students in the Magis Program were thought of, as not below, but a little behind other people in learning things.

Students reflected with sincerity that the extra remedial courses were intended to help them make a more successful transition from high school to college-level coursework; however they did not feel highly motivated to do the remedial courses. As a consequence of this attitude, these students expressed that they did not earn exceptionally high grades in the remedial courses. Female 2 reflected, "I did not take my freshman year seriously at all. Looking back, my grades were actually worse my freshman year and that's bizarre considering they were easier courses and geared to be easier, but I think it backfired."

In summary, the resounding themes which emerged from the qualitative data collected through interviews with the students was that the students were not informed about their required placement into a remedial program in a timely manner, that the criteria for placement into the program was not clearly communicated, and that the students perceived they had fallen behind in making the usual progress to graduation. Overall, the students interviewed did not give the impression from their answers that they were more academically or socially integrated into the university as a result of their participation in the cohort remedial program they experienced their freshman year.

Qualitative Data Results from the Faculty Interview

The interview with one of the faculty members teaching courses for the 2012 remedial cohort program highlighted similar, but fewer problems. The faculty member more readily articulated the intended benefits while at the same time acknowledging two notable detriments also mentioned by students; those being detriments of poor communication and falling behind for a timely graduation. Additionally the faculty member explained the role of advising that the students did not see as an associated part of the program's design. The inclusion of the faculty data further enriched the narrative for the program evaluation report.

Faculty's belief in the benefits of the cohort remedial program. The faculty member interviewed strongly believed in the program's potential, while also acknowledging its major faults. When asked about the possible benefits of the program, the faculty member responded, "... when we first started it [we really didn't understand] what it should have looked like, could have looked like, or how it could have been

implemented, but it was a good idea. It was a good idea.”

The interview with the faculty member reiterated that fact that underprepared freshman students are part of college classes each year. From this faculty member’s point of view, the 2012 remedial program was able to support students who were not fully prepared, for one reason or another, but who were capable of succeeding in college. The faculty member described it this way,

I think the [program was a] support system for the kids. First of all, it made them become aware of the fact that they came in underprepared, which is a hard thing for them to accept. About three weeks into the fall semester, I would say, the majority [of the students] would be angry with their high schools, for good reason, honestly. They would be angry that, ‘Here I am at a college level, not being able to take a college level course because I am not prepared.’ Now, of course, some of it was their own choice. They didn’t work as hard and you get the, ‘I wished I would have worked harder in high school’ but some of it is just that [being pushed to prepare] was not the emphasis [from their high school experience]. For them to have somebody here [at college] who said, ‘Yes, but it’s fixable, and this is how we can fix it. We can look at your gaps and work toward that [getting prepared],’ I think [that message] was a comfort to them.

The comment showed the commitment the faculty member had to helping underprepared students succeed.

Benefit when the program faculty are also advisors. The three faculty members teaching the remedial courses in 2012 were also assigned to be the advisors for this

cohort group of students. Each faculty member had one-third of these students (24 or 25) as advisees. Matters of grades, conduct, personal problems, campus problems, and scheduling of classes are the usual issues that a college advisor handles. From the viewpoint of the faculty member interviewed, seeing advisees in class on a weekly basis enhanced the rapport between the students and this faculty advisor.

Faculty member's perceived program detriments. Two of the pronounced faults uncovered in the student interviews—how students first learned about their placement into the 2012 program and the extension of time the program caused to reach graduation—were repeated by the faculty member interviewed. The faculty member explained the issue of poor initial information about the program by saying,

No, and I feel like they [the students] were told, 'Oh yeah, you're all set. Just come in [to college] and we'll take care of you.' But [we did] not tell them how they were set or how they were being taken care of. That was a struggle, when that all happened, to keep the kids even wanting to continue, but I think that was where the faculty really played a big part by saying, 'Look, we know this wasn't done correctly, but this is where we are at and this is a good thing.'

As for the issue of extending college beyond four years by being in the program, the faculty member commented that "the cost to take classes in the summer still was a burden to those kids as well. So that was also another area that really needed worked on." Finally the faculty member's overall assessment was best summarized with these words,

They [the students] are looking for someone that they know they can trust. I really felt like that was a really important part, and I'm still in touch with a lot of kids

who even have graduated from here. I feel bad that the program is not going on anymore because we need it.

The fact that one only faculty perception was reported, there is no way to know if the overall impressions and opinions, of that faculty member interviewed, mirrors or contradicts the feelings of the other two faculty members teaching remedial courses for the program. Each of the faculty teaching the remedial courses in the 2012 cohort program taught the remedial courses for the 2013—14 academic year. However that was the end of their teaching careers at this university due to adjunct instructors taking over all remedial courses.

In summary, quantitative results showed that the retention of underprepared students was not significantly different between the cohort or independent approaches. Qualitative results found major themes from both student and faculty interviews that the cohort program was poorly explained and that the cohort program extended the time a student would be at this university before graduating. Student perceptions also highlighted the fact that students felt like they were different from classmates who were not in the program. Faculty emphasized the ongoing need for some type of remedial coursework, while acknowledging the shortcomings of the 2012 cohort program. This data provided the material for the discussions of how the findings address the research questions about retention and the program components that students and faculty perceived as benefits or detriments for underprepared students' retention.

Discussion

Discussing various discoveries about the cohort remediation approach may help stakeholders know more about intended and unintended impacts of the one-time remedial program at this university. Data discussion reduces and combines information into a form that provides meaningful interpretations to stakeholders (Fitzpatrick, Sanders, & Worthen, 2011). The quantitative data provides a baseline of retention rates for the underprepared students at the study's university. The qualitative data collected through interviews added a depth of understanding to this study and the program evaluation that was not possible from only examining quantitative data. The students and faculty gave voice to the poor notification and unclear placement criteria that was not noticeably apparent in quantitative data and graphs. Furthermore, these may support data-driven improvements of remediation programs and services for future underprepared students attending the study's university. The following findings and discussions focus on the retention rates for two remedial approaches, retention related to descriptive statistics with a detailed look at high school GPAs and college admission scores, the classification of being an underprepared student, falling behind for graduation, how college athletics integrates students, what integrated students say, and finally what faculty say about the retention of underprepared students.

Student Retention for Different Remedial Approaches

The quantitative research question examined student retention and asked, "Did underprepared students, defined by lower than the required admission high school GPAs or ACT/SAT scores and enrolled in the 2012 remedial cohort program, persist to

sophomore year at a similar rate as the underprepared students, who matriculated in 2013 and who did not participate in a remedial cohort program at a small, private university in the Appalachian region?” The findings from comparing the retention rates of underprepared students matriculating in 2012 with underprepared students matriculating in 2013 experiencing different remediation approaches showed no significant difference; therefore no inferences could be made about the impact of the two varying approaches used for remediation at the study’s university in 2012 and 2013 (see Tables 4 and 5).

As a point of discussion, the fact that there was no significant difference in retention rates was not surprising because the issue of retention is so complicated, and there was no way to adequately identify and control all the variables that students use to make personal decisions about persistence. It is important that no causation by remedial approaches be read into this study because there were too many uncontrolled variables. Further detailed studies of underprepared student characteristics would need to be examined and analyzed to be able to make any possible causal connections for why one remedial group was retained at a higher rate. Reason’s (2009) literature review of persistence research articles concluded that the influences on students’ behaviors and decisions to remain in college are multi-dimensional; thus future research and remedial practice must also be multi-dimensional.

One finding that was uncovered was that the same professors taught the remediation courses in both the 2012—13 and 2013—14 academic years. That consistency of instruction across the academic years may be a factor in why there was no significant difference between students who were retained from the cohort in 2012 and

those retained from individual sections of remedial courses in 2013. For instance, faculty who had taught in the Magis Program may have unconsciously brought some of the cohort program's curricular or instructional strategies to their work with student in the following year. This seems to support Tinto's (2012) contention that "the classroom is the building block upon which student retention is built" (p.124).

Student Retention and Descriptive Statistics

Findings from descriptive statistics reported and graphed for the 2012 cohort group also showed no significant differences related to retention. Each of the independent variables including: gender, high school GPAs', admission testing scores', declared or undeclared major, and the number of remedial courses taken first semester were examined separately against the same dependent variable of retention. Although none of these variables exhibited the .05 level difference for influencing retention in this study, there were two noteworthy points that might lead to further and closer studies on underprepared students—those being high school GPAs and college admission scores.

Retention and high school GPAs. The high school GPAs for the 2012 cohort group (see Table 7) showed that students in the 3.0 and the 3.5 GPA ranges were most likely to be retained. It was not surprising that the lower GPA student were less likely to be retained. However, those students with high school GPAs in the 4.0 range were also less likely to be retained. The question of why students with 4.0 high school GPAs were not retained requires further examination.

Another point of discussion is that further investigation into the matches of these students' high school GPAs and their admission test scores is needed to see if any

potential high school grade inflation may be making students' overconfident and unrealistic about their ability to do college-level coursework as might be evidenced by a high GPA and low standardized test scores.

Retention and college admission scores. Next considering ACT admission scores, 60% of the 2012 cohort remedial students with a composite ACT between 18 and 21 were retained; while 50% of the students with an ACT composite between 15 and 17 were also retained; but only 20% of students reporting an ACT composite of 22 or 26 were retained (see Figure 2). Most likely, the small number of students being reported in the higher score range ($n = 5$ out of 54) influenced that anomaly. Similarly for SAT scores, students within the 850 to 949 composite score range were mostly likely to be retained; while students with scores below and above that range were less likely to be retained (see Figure 3).

Another discussion point arises from this study's college admission score data that suggests further investigation is needed to see how closely students' self-perceptions of college success match their cognitive abilities demonstrated on college admission tests. Again this points to the difficulties in predicting student retention, and the need to look at cognitive, affective, and personal information when implementing and evaluating academic programs for underprepared students as was suggested by Boylan's (2009) research.

Criteria for Admission and Classification of Being Underprepared

A further finding about the study's university was that the Academic Life Committee (ALC) works closely with the admissions' staff for the purpose of enrollment.

The last published standard for automatic admission into this university, which was in 2011, stated that students needed at least a 3.0 high school GPA and admission test scores of either a 20 or higher ACT composite score or a 940 or higher SAT composite score. Using those criteria, 22 of the 73 students (30%) in the 2012 remedial cohort group had neither the high school GPAs nor the college admission test scores required for automatic admission. Or in other words, these students were not deemed “college ready” at this institution. Also within the 2012 remedial cohort group, 15 of the 73 students (21%) had high school GPAs of 3.0 or greater, but had composite test scores that were below the automatic admission requirement for college admission tests.

What was confusing to uncover and needs further discussion was that of the 73 students in the 2012 remedial cohort group, 36 of them (49%) had high school GPAs of 3.0 or higher and composite college admission scores that were at or above the automatic requirements numbers of ACT 20 or SAT 940. With such a combination of high school GPA and college admission composite scores these students should have been automatically admitted to the university and classified as “college ready.” That data leads to the conclusion that a large number of students were misplaced as underprepared students at this university in the 2012—13 academic year, and could this be yet another reason for a lack of statistically significant differences between the two cohorts.

Upon further investigation of the 2012 remedial program enrollment criteria, it was revealed that low scores in ACT reading or English sub-tests; or a low score on the sub-test of SAT verbal were used as triggers that moved the 36 students, who qualified for automatic admission, into the 2012 remedial cohort program. The seeming

misplacement of these 36 students may have been a contributing factor to some students' departure, as was alluded to in the guarded word choices, like "upset," "felt insignificant," or "upsetting and offensive" that voiced the surprise and dismay of students when they learned they were considered underprepared by this institution. It is important to note that this placement information was not shared with the students until their summer orientations, and that late notification made students feel trapped and deceived.

Although the quantitative data analyzed does not show any significant difference in the retention of the 2012 and 2013 remediation groups, the misplacement of many students into the 2012 cohort group may have skewed the results. Further disaggregation of data may be needed to determine if a difference would emerge without misplaced students' data included in a statistical comparison of the two groups.

Being Behind for Graduation

Although unintended, a subtle problem of "being behind" was a finding uncovered as a result of the interviews. That problem was these cohort remedial students were last in line to register for classes and to select housing at the end of their first year because of how their restriction of credit hours kept these students "behind" in credits earned compared to most of their regularly-admitted classmates. For example, some students only earned 25 credit hours their first academic year and were still considered freshmen, in the recording system, when they return for the second fall on campus. This happened because sophomores are classified as students who have earned between 27 and 59 credit hours. Such problems were not corrected because no formal evaluation was

done to notify the university of this unintended consequence of the 2012 cohort remedial program. Fortunately, the university did extend up to nine credit hours of free courses, to be taken in the summer, for the cohort students who persisted through the end of their second academic year. This was as a way to catch up credits for some students as long as there were courses offered in the summer that students needed for their degree.

Participation in College Athletics Providing Integration

Four of the six students shared during their interviews that college athletics was a major reason for attending this university. Twenty-one NCAA Division II athletic teams are active on campus—11 men’s and 10 women’s varsity teams . The student athletes interviewed (3 male and 1 female) described how the team affiliation provided academic support because of mandatory “study tables” and socialization because of the many hours shared with teammates and coaches in training and competitions. This athletic connection may have trumped the cohort remedial program in providing academic and social integration for these students; with the retention of three of the four student athletes.

Integration of Students Interviewed

The five students interviewed for this study and who persisted at this university, all described a high level of academic and social integration at the time of the interview. Comments like, “I couldn’t be at a better university for me,” (Male 4) or “Everyone really cares about you here,” (Female 1) or “This is a good school, and that is why I wanted to stay,” (Male 1) showed the connection that these students have made to this institution even with their candor about detriments of the cohort remedial program. In the

end, further studies are needed to determine what factors caused students, like these, to achieve the integration necessary for persistence.

Faculty Findings and Discussions

The three faculty members, who taught in the 2012 remedial cohort program, taught their remedial content courses as stand-alone courses in fall of 2013 and were then replaced by adjunct instructors for the remedial course options in the fall of 2014. Of the three faculty members who taught in the cohort program, only one agreed to be interviewed, and none of them remained in full-time teaching positions at the university after the 2013—14 academic year.

A discussion of the ongoing changes in remedial approaches, in such a short period of time and without formal evaluations of the approaches, is lacking. The absence of evaluations, and the discussion of them, points to a gap in practice for evidence-based decisions related to the programming for the retention of underprepared students the study's university.

Overall the findings and related discussions of this project study created a full program evaluation of statistical data and supportive narratives. Looking at the retention of the underprepared students involved in two approaches for remediation, as well as some descriptive characteristics of the 2012 underprepared student group; admission criteria and underprepared classification; falling behind to graduate; participating in college athletics; the successful integration of students interviewed; and the faculty insights all provided findings that were incorporated into the Evaluation Report.

Project as an Outcome / Overview

The project that resulted from this multi-methods research study was the Evaluation Report to be shared with various stakeholders who were directly involved in the 2012 cohort remedial program and with others charged with making decisions about future remediation programming at this university. The Evaluation Report (see Appendix A) summarized the results of the full research study, proposed ways to share findings with stakeholders, and added recommendations for changes in the cohort remediation approach used in 2012.

Limitations

A limitation of this research was this project study was that it was non-experimental (i.e., causal claims about any changes or improvement in student retention being due exclusively to the short-term orientation program were limited). The qualitative data collected from student interviews came from a small number of students who volunteered to be interviewed (N = 6) rather than a survey request made to the entire group. Additionally, there is a limitation that only one faculty member who taught in the program was interviewed. For all persons interviewed, the accuracy of the qualitative data has limitations due to the participants' memory and truthfulness. Moreover the interviewees' perceived benefits or detriments may not reflect the overall sentiments of the entire cohort remediation group or faculty. Data from mostly students who persisted and a faculty member who valued the program may have distorted the program evaluation report to a more positive bias of the cohort remedial program. Finally, the overall study's size and scope was not generalizable.

Ethical Considerations

There were a few broad ethical considerations taken into account related to this study. The research was conducted in an educational setting with students, and I was mindful of FERPA regulations, as well as the Belmont Principles of beneficence, justice, and respect for persons (Sims, 2010). I did not interview any student who I was teaching to avoid the potential for a student to feel like his answers could jeopardize his standing in the courses we had together. The participating students are all over the age of 18 years and voluntarily agreed to be interviewed. They were presented with participant recruitment information and a copy of the adult consent form to be signed prior to volunteering to be interviewed. Additionally, a photocopy of the signed consent form was given to each participant before the interview began.

Workers may be considered a vulnerable population if there are concerns that information shared or opinions expressed might negatively impact employment with the institution being evaluated. It may be that this situation kept all three professors from agreeing to do a focus group interview. It was learned that two of the three professors were no longer employed by the university, and the third professor moved into an administrative position. It was also learned that the remedial courses for the current academic year were all taught by adjunct faculty. This change in the teaching staff may be a contributing factor for why all declined to participate in the focus group; with two also ignoring the second request of agreeing to a private interview.

Another other ethical consideration was that I am an employee of this university and needed to complete an IRB for this university, as well as for Walden University. Finally, I had to carefully manage personal biases and any potential conflicts of interest.

Conclusion

This multi-method project study arose from a gap in practice at the study's university where a one-time remediation program for underprepared college freshmen ended and was never evaluated. The quantitative research question guiding the study was a query about the comparative retention rates of a group of underprepared students required to be in a cohort remedial program in the fall of 2012 and a group of underprepared students admitted in the fall of 2013 in a more individualized remediation program.

The overarching qualitative questions probed the perceived benefits and detriments of the cohort remediation approach for retention of the underprepared students at this study's university, as well as gathered suggestions for any improvements to that remediation program. Transcribed and coded interviews from cohort participants provided qualitative narrative data for the responsive evaluation.

Although initiated with good intentions—that being the support of underprepared students to persist at the study's university—the 2012 cohort remedial program had disconcerting flaws that were not discovered due to the lack of a program evaluation, thus it was good that the program, as implemented in 2012, ended after only one academic year.

The initial idea for the cohort remedial program might have been that identifying and placing underprepared students together in a cohort for remediation would best achieve the academic and social integration foundational to Tinto's (1975) retention theory. Nevertheless, some of the students interviewed perceived that they were different from their freshman classmates who were automatically admitted. The statement from Male 2 saying, "...we weren't in the same bracket as regular college students," or description by Female 2 that, "I felt like we [the remedial cohort students] were still in high school" articulated some of the perceived differences. Some students grudgingly admitted that the remedial courses were intended to help start their college career with a good GPA, but because of their poor attitude toward being in remedial courses, their GPAs were not as good as they could have been with more effort. With such comments, it seemed that the students interviewed did not come away from the program feeling either academically or socially integrated as a result of it.

Two unambiguously perceived detriments that surfaced included: (a) poor communication that included the late notice of being placed in a remedial program, along with vague and inconsistent explanations of how the placement was determined; and (b) the concern by students about being behind in earning a degree in four years. Ramifications of the late notice of placement into a remedial program at this university may have kept students and parents from taking a hard look at the question of how academically prepared an individual student was to attend a 4-year college. Some students, if presented with the remedial criteria earlier in the decision process, may have taken the admission tests again or might have considered attending a 2-year college

program; with the plan to transfer into the university after earning an associate's degree. It is also possible that many students would have selected a different 4-year institution that would not have required them to do remedial coursework, or at least not remediation with the limitations of taking only 12 semester hours for the first and second semesters of college.

Students' concerns about their timely progress to graduation may be one consideration that factored into why some of the 37 of the total 73 cohort remedial students (51%) were not retained by this university. Multiple research studies on the topic of retention pointed out that the addition of extra courses, especially courses that do not give students academic credit toward their chosen degree, can factor negatively into the decision of persistence (Boatman & Long, 2010; Martorell & McFarlin, 2011). In contrast, 36 cohort remedial students (49%) have persisted. These students are likely to graduate from this institution, but many need five years, or the addition of multiple summer sessions, to complete their undergraduate degrees in four years.

The summative program evaluation captured the retention comparisons and rich descriptive data to be presented to administrative and faculty decision-makers at the study's university and the Evaluation Report (see Appendix A) that represents the by-product and outcome of the project study to be presented to key stakeholders. The interviews associated with this project study provided an opportunity for some student stakeholders to have grievances heard. Also the Evaluation Report that resulted from the study can potentially provide administrative and faculty stakeholders data to make evidence-based decisions about possible revisions or augmentations of remedial

programs and services for the underprepared students accepted in the future at this university.

Section 3: The Project

Introduction

The project associated with this research study was the Evaluation Report generated from a participant-oriented program evaluation. The problem identified was that a college remediation program was implemented and ended without including any summative assessment measures associated with that program. The project's goals and rationale—along with a review of literature which connects retention theory to the development of the program evaluation used for this project—are provided to substantiate the use of a program evaluation with the identified problem. Lastly, the roles and responsibilities all persons associated with the program evaluation are explored and reported.

Project Goals

The Evaluation Report, and its recommendations, was produced from the program evaluation of a one-time, cohort remedial program implemented for underprepared college freshmen at a small, private university in the Appalachian region. This university's assessment gap stemmed from the cohort program ending without any summary evaluation completed or any follow-up data collected to note the level of retention which resulted from this remedial approach. Even the subsequent independent remedial program, that followed the cohort program and is still in place, does not have evaluation measures associated with it to direct the university's ongoing discussions about potential changes in programs for the underprepared students accepted into the university. The lack of evidence-based decisions made about services rendered to the

underprepared students is a problem that maybe reversed if the use of the Evaluation Report provides foundational data for building evaluation habits and records to examine the trends in the retention rates of this university's underprepared students.

Purpose/Goal of the Evaluation Study

This program evaluation study recorded insights into students' and a faculty member's perceptions of the beneficial components of this university's cohort remedial programming. Implementing suggestions for improvements, offered by program participants who were interviewed, might result in raising the 49% retention rate of the underprepared students, who matriculated in 2012, to a rate closer to the university's non-remediation students' retention rates of 61% for the same time frame recorded in Table 7.

The need for striving towards a higher institutional retention rate for underprepared students is rooted in the implied assertion that a remedial program prepares students to succeed in college. The retention data gathered from the 2012 and 2013 underprepared students at this university does not support that claim when looking collectively at the number of remedial versus non-remedial freshman students retained at this institution in 2012 and 2013 (see Table 7).

Purpose/Goal of Evaluation Report

The goals of the Evaluation Report were: (a) to report a comparison the retention rates of the underprepared students who experienced a cohort remedial program in 2012 with those who experienced a more independent remediation program in 2013; (b) to give an opportunity for cohort remedial students and faculty to describe their remediation experiences which were then coded to discover repeated themes of the perceived benefits

and detriments; and (c) to provide a summary evaluation of the cohort approached remediation used at this university to give recommendations for future, evidence-based decisions about the remediation of underprepared college freshmen accepted at the institution. These were compiled into the program Evaluation Report (Appendix A) and presented to various stakeholders at the study's university.

Rationale

The university's Appalachian location and its mission to educate local students and send them home again to enrich their own communities necessitates there are programs which support the retention of underprepared students accepted to the university. Additionally, formative and summative assessments must be in place to measure to what extent the program impacts the retention of the underprepared students. Such attention to evaluation, for the purpose of evidence-based decisions on remedial programming, has not been practiced, and a program evaluation of the 2012 cohort remedial program can serve as a starting point for the assessment and improvement of remedial programs at this university.

The acceptance of underprepared students into colleges and universities is a long-standing problem across a wide spectrum of institutions of higher education (Bachman, 2013; Bahr, 2010; Barbatis, 2010; Bettinger, Boatman, & Long, 2013; Deil-Amen, 2011; Laskey & Hetzel, 2011; Stewart & Heaney, 2013). However, the expansion of access to college for a growing diversity of students has made changing demands on educational institutions to support these students' retention (Long, 2012). A subset of underprepared college students come from low socioeconomic communities, like rural Appalachian, and

often are first-generation college students. As first-generation students, they may come to college socially overwhelmed and academically underprepared even though they may be highly capable of college success if supported during their transition from high school and home to their freshman college experiences (Swecker, Fifolt, & Searby, 2013).

The problem of supporting a wide variety of underprepared students warrants a program evaluation of recent remediation practices at the university. The Evaluation Report of the 2012 cohort remedial approach provides a baseline for additional evaluations of the subsequent years of programming. It also seems prudent to then collect and analyze similar data to more fully determine any patterns of benefits and detriments with the differing remediation programs implemented at the study's university.

Review of the Literature

Of the five classifications for program evaluation detailed by Fitzpatrick, Sanders, and Worthen (2011), a participant-oriented approach best fit the needs of the students and faculty directly involved in the cohort remediation program and various stakeholders who might use this program evaluation for future evidenced-based decisions. Within the participant-oriented approach, the constructivist method of responsive evaluation is participatory and democratic (Visse, Abma, & Widdershoven, 2012). Using naturalistic inquiry and the element of advocacy of program evaluation (Mertens & Wilson, 2012), the multiplicity of data collected while conducting this project study reinforced the use of multi-method research, thus quantitative and qualitative data were collected for this study.

This study's program evaluation evolved as participants provided context and history to the remediation program approach evaluated for this project study. Then the resulting analysis looked at the congruence between the intended outcomes of the cohort remedial program and the perceived outcomes of the participants in constructing an Evaluation Report that provided the advocacy element. The purpose and standards of program evaluations found in various research articles was foundational in designing the program evaluation used in this study.

Purpose of Program Evaluation

The research approach utilized for this program evaluation was guided by the fact that multi-methods research involves choices of design, data collection, and analysis (Fitzpatrick, Sanders, & Worthen, 2011). While quantitative methods assessed program outcomes, qualitative methods were used to describe the character and implementation of the program. The sequential collection and analysis of quantitative data and then qualitative data, used for this program evaluation, made the process iterative and flexible which allowed for contemplation of what the data said and how it could be used by various stakeholder groups.

Programs having insufficient or unclear program goals or having short durations may cause a program evaluation to provide dubious results (Fitzpatrick, Sanders, & Worthen, 2011), and both of these situations were evident with the cohort remediation program. The use of both formative and summative evaluations would have been valuable, but were not a part of the implementation and adaption of the cohort remedial program used in the 2012—13 academic year. The lack of documentation and the one-

year implementation identified with this project study's problem might classify the resulting summative program evaluation as premature. However, the process of evaluation is an iterative one and the results of program evaluations can help launch refinements to future programs (Kushner, 2015). Specifically from this program evaluation, formative and summative assessments could be embedded into existing or new remedial programs for underprepared students matriculating at the study's university. It is from this starting point that the administrative stakeholders can make data-driven decisions for the future and build ongoing evidence to support or eliminate remediation practices at this institution. An even further extension of this program evaluation might be the development of models of best practices in remedial college education programming for other similar institutions in the Appalachian region and beyond.

Standards for Program Evaluations

The Joint Committee on Standards for Educational Evaluation (Yarbrough, Shulh, Hopson, & Caruthers, 2011) identified four attributes of ethical evaluation as propriety, accuracy, feasibility, and utility. The position of propriety, as first in this list, highlights the importance given to the rights and dignity of all persons involved in an evaluation—from program recipients to administrative stakeholders. Accuracy standards are in place to ensure an evaluation will both reveal and convey information which can help determine a program's merit. Feasibility standards advance the practice of realistic, diplomatic, and frugal program evaluations. Finally, utility sets the Joint Committee's Standards as benchmarks for guiding and also judging program evaluations as products

(Fitzpatrick, Sanders, & Worthen, 2011). Each of these four attributes guided the development and reporting of the program evaluation associated with this project study.

The Program Evaluation Report and Presentation

The obvious goal of any program evaluation report is to provide an accurate and fair account that is easily understood and has the maximum use for stakeholders (Fitzpatrick, Sanders, & Worthen, 2011). Frye and Hemmer (2012) captured the essence of program evaluation when they wrote that, “program evaluation should be designed to determine whether change has occurred...intended or unintended” (p.288). With that in mind, an evaluation report must identify the change measured, as well as if, and to what degree, change occurred.

Program evaluations can be put to use in various ways; one being to support accountability, for implementing changes in programs, or for planning of future programs. Learning is a complex and dynamic process, so ideally educational evaluations should be reported well before a program ends. It is best to be in contact with stakeholders along the way. However, the program evaluated for this project study had ended before this program evaluation began. This fact makes the presentation of the program evaluation’s findings more difficult because many people directly involved with the cohort remedial program evaluated have “moved on.”

The reporting of a program evaluation requires an identification of the stakeholders and attention to how the needs and interests of stakeholders differ. Stake’s responsive evaluation approach framed program evaluation toward a process where the perspectives of multiple stakeholders anchor the design of responsive program evaluation

(Visse, Abma, & Widdershoven, 2012). Highlighting the relational aspects of providing the inclusion of vulnerable voices into dialogues between various stakeholders, Visse, Abam, and Widdershoven (2012) included a table of reflective questions to guide persons conducting responsive evaluation that helped frame the interview questions used in this study's qualitative data collection of the program evaluation. Administrators are typically interested in the outcomes and impacts of a program. Program managers, which were the professors in this study, are interested outcomes and impacts too, but they want details of data to help determine ways to improve a program. Finally, stakeholders who receive the services of a program; the students and by extension, the parents in this study; are interested in a general report of the successes or failures. This program evaluation gave voice to vulnerable stakeholders, who were the 2012 remedial cohort students and faculty, to honor the participatory and democratic process of responsive evaluation used in this project study.

Program evaluation presentation options. Program evaluations need to be tailored to the stakeholder audiences and how the reports can be used (Fitzpatrick, Sanders, & Worthen, 2011). The use of Fitzpatrick, Sanders, and Worthen's (2011) "checklist of potential stakeholders and audiences" served to identify the stakeholders who should receive some form of the program evaluation report (p.289).

There are a variety of communication styles and levels of the audiences' interaction with a program evaluation report. The least interactive reports include final written reports, executive summaries, and shorter written reports like newsletters or interim emails. Potentially more interactive reporting includes the use of verbal

presentations supported by videos, PowerPoints, or posters where an audience both sees and hears the report and may have the possibility to ask questions and seek clarifications on what was reported. Finally, an interactive program evaluation reporting could include workshop-styled discussion or electronic chat rooms or web-conferences where stakeholders would be asked to use or react to the report in some way.

Connecting this program evaluation report to Tinto. The pivotal and recurrent work in college retention by Vincent Tinto (1975) grounded the data collection for this program evaluation. The theoretical framework for much of the recent retention research stated that the more academically and socially integrated a student becomes at her college, the less likely it is that she will leave that institution voluntarily before graduating (Tinto, 1975). Over the years, Tinto has expanded his research to explore various nuances of that basic premise; including research on how first-generation, socioeconomic status, and non-cognitive dispositions of students; or how faculty andragogy and university responsibilities might factor into decisions of persistence for college students. From that research, Table 10 details the connections between Tinto's research and this program evaluation's design for interview protocols (see Appendices C and D).

As seen from a review of literature, one program evaluation approach within the constructivists' paradigm includes responsive evaluation, and it was used for this project study. The responsive evaluation approach comes from the values branch of program evaluation and focuses on the identification of multiple values and perspectives through

qualitative methods (Mertens & Wilson, 2012). The use of both quantitative data and qualitative data for this program evaluation allowed for various perspectives to surface.

Table 10

Aspects of Tinto's Retention Theories Used to Guide Program Evaluation

Aspect of Tinto's Retention Theory	Quantitative and Qualitative Data Collection
A student's academic and social involvements are crucial to his decision about leaving college before graduating (Tinto, 1975).	<ul style="list-style-type: none"> Retention rates for the cohort student group compared to the subsequent year's remediation group will be analyzed to determine the levels of connection to the institution.
There is a distinction between students dropping out as a result of "academic dismissal" or "voluntary withdrawal" (Tinto & Cullen, 1973, p.82).	<ul style="list-style-type: none"> Reasons for students not persisting to a second year will be reported in an aggregate form for underprepared students matriculating in 2012.
Stages to the longitudinal process of student persistence include separation, transition, and incorporation (Tinto, 1988).	<p>Student interview questions for this aspect will include:</p> <ul style="list-style-type: none"> (for separation and transition data) Describe what you remember from the first month or two as a freshman here at WJU. (for separation data) Are you the first person in your immediate family to attend college? If so, describe what that means to you and to your family. (for incorporation data) Do you feel you "fit" or "belong" to this college now? If so, when do you remember first feeling this way? If not, why do you feel like you do not "fit" or "belong"?
Institutions need to examine the classroom experience, faculty andragogy, and other actions of institutions of higher education, with an emphasis on fixing institutions instead of fixing students (Tinto, 2012).	<p>Faculty interview questions for this aspect will include:</p> <ul style="list-style-type: none"> How did you establish a sense of community in your developmental courses taught with the cohort remediation program? Was your approach different or the same the following year? What differences, if any, do you make when teaching developmental courses? Did you serve as an advisor to some of the underprepared students in the cohort program? If so, how many?

Implementation

The Evaluation Report that is a product of this project study needs to be shared with the various stakeholders identified by the program evaluation. Even though the cohort remedial program has ended, its Evaluation Report can provide a starting point for further data collection related to the remediation practices for underprepared students at this university.

Potential Resources and Existing Support Systems

Four members of the university's faculty or staff have been assigned to complete a review of the current remedial courses offered at the university. This existing group is the most logical starting point for presenting the Evaluation Report that resulted as a product of this project study.

Another potential support system may be admission staff members who are involved with the recruitment of future students. Their input about admission criteria being used currently may supplement the findings of the Evaluation Report of this project study and also help facilitate clear communications that was a notable problem with the cohort remediation program's implementation in 2012.

Potential Barriers

One major barrier to the reception of this Evaluation Report is the fact that this report evaluated a program that ended in 2013. The remediation programs and services at this university have moved onto other remedial options, and there may be reluctance to take a backward look; especially when the research results on retention showed no significant difference between the cohort or more independent remediation approaches.

Proposal for Implementation

The Evaluation Report will be presented to the identified stakeholders once the degree process has ended. An electronic document will be emailed to university administrators charged with making decisions about potential programs or strategies for serving underprepared students. Printed copies of the program evaluation and a discussion-styled presentation will be offered to university professors and staff involved in a committee study of the university's current remediation coursework. Finally, electronic copies of the program evaluation will be sent through the university email system to all the students who volunteered to be interviewed—both those who were interviewed and those who were disqualified due to the conflict of being a current student of the researcher—and all faculty members who taught remedial courses for the cohort remediation program will also receive electronic copies of the program evaluation.

Roles and Responsibilities of Student and Others

As an evaluator, first there is a responsibility to meet the requirements of propriety, accuracy, feasibility, and utility found in the standards for program evaluations (Yarbrough, Shulh, Hopson, & Caruthers, 2011). Secondly, the evaluator must reach out to the various stakeholders and invite each group to consider the Evaluation Report's findings and recommendations. The evaluator can offer to facilitate further discussions about current and future remediation programs and services at the university. Finally, stakeholders have to take an active interest in the Evaluation Report and be willing to devote time and energy to explore the issue of remediation of underprepared students at this university.

Project Evaluation

The Evaluation Report also serves to articulate the experiences of the cohort students to honor the participatory and democratic process of responsive evaluation used in this project study. The utilization of the Evaluation Report as a baseline for evidence-based decisions about programs and services for underprepared students would demonstrate that the project achieved a measure of success.

Implications Including Social Change

The obvious goal of all college remedial or developmental programs is to support the retention of students classified as underprepared for college-level coursework (Boylan, 2009). However, underneath this overarching goal, it would seem that a number of varied measureable objectives and strategic plans would be in place for the implementation of any remedial or developmental program.

Local Community

The program evaluated for this project study did not have publicly assessable records of either measureable objectives or strategic plans. The only document uncovered was a partial-page description of the program in the 2012—13 academic catalog (Appendix B). All other records of the cohort program's design or implementation seem to be the private work of one administrator, who left the university in the summer of 2013. Without ongoing and consistent assessments of the remediation programs and services utilized by underprepared students at this university, there is no way to make evidenced-based decisions to maintain or revise existing programs meet a goal of increasing the retention rates of the underprepared students accepted at this institution.

Conclusive assessment of the success or failure of the 2012 cohort remediation program for underprepared college students at this study's university could not be determined. Student retention counts for the remedial program throughout the 2012—13 academic year were publically reported in faculty meetings. However, no other data were shared with the whole faculty. The reluctance of the faculty members, directly involved in the program, to participate in interviews left major gaps in reporting specific objectives and strategies in the program evaluation conducted. Instead the program evaluation relied on quantitative data, from archived university administrative records, to measure the program's success relative to the retention rate of the 2012 remedial students as compared to the 2013 remedial students' rate of retention, who experienced a more independent remedial treatment. There was no significant difference between the retention rates of these two remediation approaches. The results failed to reject the null hypothesis that there is no difference between underprepared students in the 2012 cohort program and the underprepared students who matriculated in 2013, who did not participate in a cohort remedial program, in terms of persistence to sophomore year at this university. The findings included in the program evaluation indicate the need for further study and discussions about underprepared students' identification and support at this university.

Far-Reaching

Further research on remediation options and developmental college curricula may provide a better understanding of what approaches match best with various underprepared college students. The research that does exist suggests that remediation

effects are widely nuanced (Torraco, 2014). A comprehensive examination of the problems of identification and placement of underprepared students may result in better measurement tools or suites of tools that can determine who and how students persist to graduation when they begin underprepared.

Conclusion

The Evaluation Report, generated from this project study, provided a summative report of a remedial program that was short-lived and poorly implemented. The use of responsive program evaluation allowed participants of the cohort remedial program a forum to express perceptions and offer suggestions for improvement to the programming offered at the study's university. The goal of filling an assessment gap was completed with the program evaluation. However, the goal of using this report for evidenced-based decision making about issues of underprepared students was anticipated, but not yet realized. The data collected and analyzed for the program evaluation reflected what was and can still be accomplished for underprepared students accepted to the study's university.

Section 4: Reflections and Conclusions

Introduction

The practice of assessment—both the assessment that resulted in the program evaluation generated for this study and self-assessment of individual students interviewed for this study—documented and expanded learning of the study’s participants and the researcher. This section includes the examination of this project study’s strengths and limitations; recommendations for alternative approaches to this study; a personal reflection of scholarship and leadership; a reflection of the importance of this project study; a consideration of the implications of this study and its practical applications, as well as indications for future associated research; and finally conclusions.

Project Strengths and Limitations

The Evaluation Report that resulted from this program evaluation merits the disclosure of strengths and limitations associated with it and the project study. Advancing limitations can provide a bridge for future studies and help judge the findings (Croswell, 2012). The partnership between the skills of evaluators and the first-hand knowledge of stakeholders is a strength of participant-oriented evaluation (Fitzpatrick, Sanders, & Worthen, 2011), and that evaluation approach was used in this project study.

Strengths of This Project Study

The strength of this project study came from the multi-method research approach. Measuring various aspects of a construct with different measures can increase understanding and is a reason for the use of multi-method design (Fitzpatrick, Sanders, & Worthen, 2011). The use of quantitative data provided the framework for assessing the

Magis Program's outcome goal of improving the retention of underprepared college freshmen. Then the qualitative data collected from student and faculty interviews enriched the program evaluation with personal perceptions and experiences. The sources of numerical and narrative data complemented each other to give a more detailed picture of the 2012 cohort remedial program; especially with the limited number of historic records uncovered.

Member checks were used to validate the findings of the qualitative data collection and analysis. Each interview participant received an email with the section of this study pertaining to the qualitative data analysis, along with the request to read and comment on any necessary changes to the findings as reported. However the lack of responses from any of the six students or the faculty member interviewed could be considered a weakness instead of the intended strength of the member check process.

Limitation of This Project Study

Overall results of the study are not generalizable due to the small size and scope of the study. The project study is non-experimental which means there is a limit to any causal claims about the retention of underprepared student retention being due to the short-term remediation program associated with this project study. The qualitative data included only 6 of 73 students (8%) and 1 of 3 faculty (3%). The small sample size makes the perceived benefits or detriments recorded and coded suspect when projecting them as the overall sentiments of the entire cohort remediation group or faculty. Additionally for everyone interviewed, the accuracy of the qualitative data has limitations due to the participants' truthfulness and memory.

Potential limitations of the Evaluation Report come from the fact that this evaluation was not initially requested by any of the stakeholders. The report may also have been skewed to a more positive narrative because more students were interviewed who have stayed opposed to those who have left.

Recommendations for Alternative Approaches

The use of a multi-methods research provided a more detailed description of the cohort remedial program than relying on either quantitative or qualitative data alone. However because of the small sample size, the qualitative data may have biased the program evaluation report toward a more positive viewpoint, because only participants who volunteered to come forward were interviewed. The collective voice of the seven interview participants may not fully articulate the perceptions of the whole group of participants involved in the 2012 cohort remedial program. An alternative for collecting qualitative data from a larger sample would have been to create a questionnaire that could have been sent by email and returned anonymously. The results from a survey may have increased the volume and the variety of qualitative data gathered.

Another approach for increasing the qualitative data, by increasing the number of interviews conducted with students, would be to use the snowball or networking sampling approach. For the snowball approach, key informants would have been identified who could have provided detailed and specific knowledge about the topic, and then asked to refer others (Lodico, Spaulding, & Voegtle, 2010). This purposeful sampling approach would have been appropriate with the program evaluation project of this study because the results were not generalizable.

Scholarship, Project Development, and Leadership and Change

A repeated phrase used throughout the doctoral studies was “iterative process.” The full understanding of that phrase cannot be appreciated until the project study nears completion, and one reflects on the process of being a student to becoming a scholar. The beginning years of doctoral coursework were a guided study that served to fill in knowledge gaps in the content area of the chosen degree. The end of a doctoral process was about the work one proposed and then contributed to a chosen field of study.

Although I had worked in curriculum and instruction, as an instructional designer for many years, the doctoral program expanded my knowledge in the areas of leadership roles and policy questions within a wider realm of curriculum and instruction. From that vantage point, I was able to ascertain and describe a curriculum and instruction problem related to programming for underprepared college students at this project study’s university.

The detailed and long-term work with my selected problem allowed me to develop my own expertise as a doctoral scholar. I move onto live out the iterative process as the program evaluation generated moves from a doctoral study to a document to frame discussion and design of remediation at the study’s university. My work allows me to take on a leadership role in developmental college education and an advocacy role for underprepared students at the university.

Reflection as a Scholar and Practitioner

An early challenge I had while moving into the role of scholar was learning how to “stand on the shoulders” of various experts within my research topic and allow their

works to guide my process in becoming an expert myself. Finding and using extensive numbers of research articles, as well as learning to read them closely and critically, moved me towards developing the scope and size of a self-directed study. In doing so, I was able to create the unique proposal for a program evaluation for the remediation of underprepared college freshmen at my study's university.

I learned to respect the iterative process and remain open to change. To earn a doctoral degree, you must learn to be organized and detailed-minded; to develop collegiate rapport; to be flexible and patient while working through unexpected issues; to establish accountability; and to confidently defend what you know to be true from the study you ultimately produce. Finally, as the iterative process dictates, one ends the process with questions for further study.

As a practitioner in educational research, I learned to search out and investigate important and timely problems in education; formulate meaningful questions and hypotheses, design relevant research, disseminate accurate results and analyses, and finally work with other practitioners to implement appropriate change. The process was complicated and required a commitment to details that I did not possess when I began. As a practitioner, I struggled to slow down so I could go further and deeper in developing the mindset and habits of a professional at this level of education.

Reflection as a Project Developer

My past experiences with action research proved foundational for the more elaborate and detailed work expected to develop research at a doctoral-level. As a classroom teacher, I utilized, and as a university professor I model and teach about action

research as a way to conduct research in a classroom setting. Action research provides a pragmatic framework to improve individual educational practices (Lodico, Spaulding, & Voegtle, 2010), and it supports systematic inquiry that can result in the quick implementation of changes in a classroom. As such the Evaluation Report, produced from this evaluation study, can serve as an action research for this university's future remediation programming.

Although the background research and intellectual effort necessary for writing a literature review, as well as writing of the prospectus, proposal, and final study were done individually, my doctoral-level project development was not done in isolation. The collaboration with faculty chairs and fellow doctoral colleagues was essential to being able to clearly articulate a problem; design a successful project study to address that problem; and then see the project's program evaluation through to completion.

Reflection on the Importance of the Work

The importance of this research project and the resulting program evaluation was to give a voice to the university students who were placed and the faculty who taught in the 2012 cohort remedial program. The success of programs for underprepared students requires these students to accept and commit to the programs. The way to reach acceptance and commitment from students is to directly involve them in the ongoing assessment of the programs. To most effectively support students, who are accepted into college as underprepared, the programs and services need ongoing and embedded assessments to measure what works and what does not work. The programs for these students, like the students themselves, are ever changing. Both quantitative and

qualitative data collection and analysis can serve to help stakeholders make evidenced-based decisions about curriculum, advising, mentoring, and other various components of remedial or developmental programming. This study's program evaluation provided a starting point for that collection and analysis of data locally.

Once assessment becomes a habit locally, the next challenge will be to continue the research for the purpose of identifying best practices in remedial or developmental curricula and services. This university can especially focus on first-generation college students' needs because of the expressed mission and the students that mission attracts to the institution. The expanded access and interest of underprepared students to earn an undergraduate degree warrants the further research on the retention of such students.

Implications, Applications, and Directions for Future Research

Students who are identified as underprepared for college-level coursework, but who are still accepted into a college or university, begin their undergraduate careers with a mixed message. The politically correct message is, "Come here, and we will help you succeed." The more cynical message may be, "Come here; we need every student we can get." The reality of the problem of accepting underprepared students lay between the two messages. Institutions of higher education need such students for intellectual and cultural diversity and to live-out the democratic principle of education. These students need their educations for the potential socioeconomic gains it affords. The mutual need of colleges and underprepared students provides the opportunity to improve both entities.

The program evaluation associated with this project study provided an examination of a past program; provided a forum the students and faculty directly

involved in the program to share perceptions of what the program did and did not accomplish, as well as offer suggestions for improvements; and finally provided a starting point for further assessment, data collection, and analysis. Ultimately future research and curriculum design into developmental education at a collegiate level can be fostered at this university and shared as best practices with similar universities.

The future research needs to extensively examine the methods and criteria for identifying underprepared students. Additionally, research also needs to be conducted on the program currently in place and evaluate it according to rates of retention of underprepared students. Finally, research needs to be expanded to identify components within effective development programs and match those to the student needs being met. This suggestion for further research is extensive, but necessary, if the problem of underprepared students is to be seriously addressed within the culture of evidence-based decisions for remediation options at this university.

Conclusion

This project study began with the exploration of problems within the wide realm of curricular studies, and narrowed into multi-method research study resulting in a program evaluation of a specific remediation program for a group of underprepared college freshmen. The problems related to the retention of underprepared students in institutions of higher education persists after years of research on retention generally and the retention of underprepared students specifically (Bachman, 2013; Bahr, 2010; Barbatis, 2010; Bettinger, Boatman, & Long, 2013; Deil-Amen, 2011; Laskey & Hetzel, 2011; Stewart & Heaney, 2013).

The historic expansion of college access has challenged educational institutions' to identify and evaluate their roles in the retention of students; students collectively and as identified subsets of student groups (Long, 2012). Underprepared college students often come from low socioeconomic communities; are first-generation college students; or are students with handicaps or minority backgrounds (Heaney & Fisher, 2011). Although with programs and services to support underprepared students' transition from high school to college, these students seem as likely to succeed in college as their regular-admit classmates (Swecker, Fifolt, & Searby, 2013).

The problem identified for this project study was that a cohort remediation program was implemented in 2012 for underprepared students accepted at the study's university, and the program ended, after only one academic year, without a summative assessment of the program. This study's multi-methods research used quantitative data to compare the retention rates of underprepared students who experienced a cohort versus an independent approach to remediation. There was no significant difference on retention of underprepared students using these differing approaches at this university. This qualitative data provided an assessment of outcomes for the program evaluation report.

The qualitative data gathered, through individual interviews with students and faculty from the 2012 cohort remediation group, added details and descriptions of the characteristics of the program. The responsive program evaluation advocated for the viewpoints of participants to be heard.

The program was initially designed in isolation and was poorly implemented. The lack of clear communications about the program's goals and objectives, as well as the

criteria used to place students into the program, was a major detriment to the students the program hoped to serve. With the program's flaws uncovered for this program evaluation, it is good that the program ended after a year.

That being said, the intention of the cohort remediation program, to support the retention of underprepared students accepted to this university, was good. The need for remedial programming remains. With the program evaluation generated for this project study providing a baseline, this university has the opportunity to improve remedial programs for their underprepared students accepted in the future, and the potential to expand developmental college curricula for other similar universities.

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Appendix A

Project Evaluation Report

Executive Summary

This program evaluation was initiated to examine and assess a cohort remediation program for underprepared freshmen implemented in the 201213 academic year, known on campus as the Magis Program, at a small, private university in the Appalachian region. This program ended after one year without any review of the program's impact on students' persistence.

The purpose of this program evaluation was to produce a summative record of the perceptions of the students and faculty directly involved in the cohort remedial program; as well as to report a comparison of the retention rates between underprepared students in this program and the individualized remediation approach used in the subsequent academic year. The presumed intention of the cohort remediation program was to support and advise underprepared college freshmen to persist to graduation, yet that goal was not expressly documented.

Guided by Tinto's (1975) foundational retention theory that the academic and social involvement of college students is critical to retention, this program evaluation used the participant-oriented approach of responsive evaluation to collect qualitative data. This data, gathered from student and faculty interviews, explored which curricular components were perceived by participants as beneficial or detrimental to students' progress toward a second year at this university.

The overall findings showed that the documentation of the program was sparse; the introduction of the program to the students and parents was poorly implemented; and the selection criteria and program outcomes were not clearly explained to students. The 2012 cohort remediation program, although faulty, possessed some positive merits and this program evaluation investigated both the flaws and assets.

Additionally a quantitative research question framed the comparison of the rate of retention between underprepared freshmen students in the 2012 Magis Program versus similar students in remediation in the subsequent year. However, no statistical significance was found between the two remedial approaches' used in 2012—13 and 2013—14 academic years for the retention of the students at this university.

This evaluation report should be utilized as a starting point for the review and possible revisions of programs for the underprepared students accepted at this university. A committee of administrators, faculty, and admissions staff should examine current policies and curriculum related to programs and services for the support of underprepared students. Additionally, retention rate data on the full freshman classes and their underprepared student sub-groups from classes, who have matriculated since the 2013—14 academic year, need to be collected and analyzed.

Finally, the positive social change desired from this program evaluation, and shared later in more detail in this report, was to identify improvements for a developmental college program that may be used to make evidenced-based decisions about future developmental program and services for the underprepared students accepted at this university.

Introduction to the Program Evaluation Report

Program evaluation is a flexible research approach which allows for the use of quantitative, qualitative, or multi-methods research (Lodico et al., 2010). Program evaluation differs from other forms of social research in that a dominant role of an evaluator is to be a manager and communicator while also being a researcher (Mertens & Wilson, 2012).

The cohort-styled remediation program evaluated was called the Magis Program. The word “magis” is defined on Whitaker’s (2010) Latin dictionary web site as “to greater extent, more nearly; rather, instead; more” (“Download words,” n.d.). Implied in the program’s title, and learned through the work of this program evaluation, was that the remedial program would offer “more” to support the success of these students, or that these students would take a pre-set freshmen curriculum “instead” of selecting courses individually.

The local problem prompting this study was that this remediation program for underprepared freshmen was implemented for one year and then dropped without any review of the program or follow-up with the students and faculty involved. Over one-fourth ($n = 73$ of 279; 26%) of the freshmen matriculating in the fall of 2012 at this university were enrolled in the one-time remediation program called Magis. With that percentage of freshman students in remediation, it seemed prudent to examine this group’s retention rates and students’ perceptions to better understand the program’s successes or shortcomings. Identifying the most promising remedial practices benefits

both the university and its students because the balance of academic quality and institutional student diversity comes from data-driven decisions (Davis & Palmer, 2010).

Purpose of the Evaluation

The purpose of this participant-oriented program evaluation of the one-time, Magis Program was to gather information about academic, nonacademic, and personal needs of the underprepared students and the faculty who were involved in the program. The evaluation looked for perceptions about remediation program elements that positively influenced underprepared students' success and retention similarly to what has been done in various education research studies on college retention (Fowler & Boylan, 2010). In turn, elements identified as supporting success in this program evaluation may be used to make evidence-based decisions about future developmental programs at this and other similar institutions of higher education in the Appalachian region.

Stakeholders/Audiences

The use of Fitzpatrick, Sanders, and Worthen's, (2011) "evaluation audience checklist" (p.289) helped determine the audiences for this program evaluation report. The audiences identified included university administrators who approved the implementation of the cohort remediation program, the faculty who implemented the cohort remediation courses, the underprepared students in the 2012 cohort remediation program and their parents, admission staff members, and university faculty and staff tasked to review the past and current remediation programs and services.

The needs of various stakeholders have been presented with this program evaluation. Administrators are interested in the outcomes and impacts of a program.

Program managers, who were the professors who implemented this program or will be involved in the design and development of future programs, are interested outcomes and impacts too, but they want details of data to help determine ways to improve a program. Finally, stakeholders who received the services of this program; the students and by extension, their parents; are interested in a general report of the successes or failures.

Focus of the Evaluation

In April of 2012, a total of 146 students had been accepted to begin their freshman year at the university. The in-coming freshmen count in April 2012 included 79 (54%) students classified by their high school GPAs (HSGPA) or ACT or SAT scores as being ready to begin credit-earning college courses. Sixty-seven (46%) students were classified as underprepared because their HSGPAs or college admission scores were below the minimum requirements for this university. A report by Bettinger, Boatman, and Long (2013) gave a national number of freshmen in college remedial programs as being between 35 to 40 percent at a similar point in time. These early admission data confirmed a need for a remedial program for the 2012 fall semester at this university.

The freshman class that matriculated in the fall of 2012 included a total of 279 students; with 206 students (74%) classified as non-remedial, and 73 students (26%) classified as remedial or underprepared. The students identified as underprepared students were placed into the cohort remediation program for their freshman year.

Description of the Magis Program

The Magis Program limited students placed into it to 12 credit hours for his first semester. These courses included developmental reading and writing courses taught by

faculty who were willing to and experienced in developmental college teaching. Magis Program students also were enrolled in an academically appropriate mathematics course and in Physics 108; an introductory geology course. This course fulfilled one of two elective core requirements in the sciences needed for all students to graduation from this university.

Each of the courses taken by the Magis Program students fall semester were 3 credit hour, except for First Year Seminar (FYS 101); a one-credit course designed generally for college acclimation and required for all freshmen matriculating in the fall semester. The Magis students took their remedial and geology courses together, but were randomly mixed in with their fellow freshman classmates for FYS 101.

According to the university's 2012—13 Undergraduate Catalog (2012), placement into the Magis Program was determined by the following criteria: Students who place into College Writing (ENG 101) and/or College Reading (REA 101) enter the University in the Magis Program. Placement into ENG 101 and REA 101 is by the student's best ACT/SAT score. Students in this program must follow a prescribed curriculum for their first year. ENG 101, REA 101, and Algebra Review (MAT 101) are considered developmental or pre-college courses, and a total of six credits of this developmental coursework will count toward graduation credit. All developmental courses will be factored into a student's GPA. Magis students must successfully complete ENG 101 and REA 101 during their first-semester. Withdrawing from either of these courses or earning a C- or lower in these courses may result in academic dismissal. (Undergraduate catalog, 2012, p. 16)

The catalog further detailed that students in the Magis Program who earned a first-semester accumulative GPA of between 2.0 to 3.0 were required to take pre-determined English and literature courses, as well as two more courses approved by the students' advisors (Course catalog, 2012, p.16). This required course load limited these students to a total of as low as 25 earned semester credits, and they remained classified as freshmen in academic records as they moved into their second year on campus due to the fact that sophomore standing is defined as earning a "minimum of 27 semester hours" (Course catalog, 2012, p.41).

For any of the Magis students who earned higher than a 3.0 cumulative GPA first semester, they took the pre-determined English and literature courses and three additional courses approved by the students' advisors. These Magis students, who took a total of five courses second semester, could have earned as many as 28 semesters hours for their first academic year in college. Magis students who earned under a 3.0 for the fall semester were again limited to a total of 12 credit hours. For all the students in the Magis Program, only 6 of the 9 credit hours of remedial courses taken fall semester counted toward graduation, and so these students fell behind the progress usually made freshman year toward to a degree.

Unintended consequences resulted from the limited course load. One consequence was the overall retention rate for the 2012—13 freshman class was skewed lower by the restricted course load placed on students in the Magis Program because of some students in this program were still classified as freshmen at the end of their first academic year. This classification also caused them a disadvantage when for registering

for their college classes and housing for their second year at the university because the order student registered was determined by total credit hours earned.

The cohort-styled remediation approached used at this university in 2012—13 appears to be rooted in Tinto's (1975) seminal theory of retention which states that the more academically and socially integrated a student is in his college, the less likely he is to leave before graduation. However, the communication about and the implementation of the Magis Program was racked with problems and did not support the academic and social integration of the majority of the students who were placed into the program.

Much of the conceptual design of the Magis Program seemed to have been drafted by one or two people in isolation, and specific goals and objectives were not explicitly shared with those directly involved in the program. The only public documentation found was a one-page description of the "Magis Program" (Program Evaluation Appendix B) in the 2012—13 Undergraduate Catalog (Undergraduate catalog, 2012, p.16).

The inferred and over-arching goal appeared to be to help underprepared freshmen persist to graduation by providing a curricular path during freshman year to bridge the gap between high school and college-level coursework for students placed into the Magis Program. At the end of the 2012—13 academic year, the Magis Program had ended and records about the program, as a whole, were not publicly available.

Evaluative Research Questions

This participant-oriented, summative program evaluation was guided by the following evaluation questions:

1. Did underprepared students (defined by lower than the published, required admission high school GPAs and ACT / SAT scores) enrolled in the 2012 remedial cohort program persist to sophomore year at a similar rate as the underprepared students who matriculated in 2013 and who did not participate in a remedial cohort program at this small, private university in the Appalachian region?
2. What curricular components of the 2012 remedial program were perceived by underprepared students, who completed the program, as having a beneficial or detrimental impact on their progress toward a second year at this university?
3. What curricular components of the 2012 remedial program were described by faculty, who taught the courses in this program, as having the most positive or negative impact on students' academic progress and success?

Information Needed for Evaluation

This report utilized both quantitative and qualitative research data to describe the findings and to support the judgments and recommendations about this cohort remediation program. The quantitative resources included archived data from the university's student information system for student demographic data, as well as the college enrollment data of the underprepared population of the matriculating 2012 and 2013 freshmen and their persistence to sophomore years of 2013 and 2014 respectively.

Independent variables examined for relationships to persistence of the 2012 Magis group included: (a) demographic data of gender, (b) high school experience data of GPA and college admission test scores; and (c) college experience data of declared or

undeclared major and the number of remedial courses taken freshmen year. The dependent variable was persistence to beginning sophomore year at the study's university.

Qualitative data was gathered through six interviews conducted with Magis participants. Six individual interviews were conducted with students; five students who persisted and one who left the university. These interviews were recorded, transcribed, and coded to determine any themes or patterns in the students' perceived benefits and detriments of the cohort program relative to their persistence or departure from the university. One additional qualitative data source included an interview with one faculty member who served as a professor for the remedial courses to gather a faculty member's experiences and evaluations of the cohort remediation program.

Overview of Evaluation Plan and Procedures

The quantitative research of this program evaluation compared the rates of retention of the 2012 remedial group of underprepared students (Magis), who were required to take pre-selected remediation courses and a core science course together as a cohort; to a second remedial group of underprepared students in 2013 who were strongly advised to take remediation courses on an individual basis. Archived, administrative data was received from the university information office with permission from the university to determine the retention rates of each of these two groups of underprepared students.

The qualitative data came from the individual interviews conducted with 2012 remedial cohort students who volunteered to be interviewed. Five students, who remained at the university, were interviewed in person; and one student who left was interviewed

by phone. Additionally the three faculty members, who taught the remedial courses, were invited to contribute to the evaluation, but only one member consented and completed an interview. All participants volunteered and signed consent forms to be interviewed.

The email invitation went to all 73 students (36 students remaining at the university and 37 who left) who had been in the 2012 Magis program. All responses from students agreeing to be interviewed came within the first three days after the email was sent; with five students (3 males and 2 females), who persisted at the university and who were not students in any of the researcher's courses, and one student (male) who had left the university agreeing to be interviewed.

Additional responses from students willing to be interviewed came from six students (5 females and 1 male), who were current students of the researcher conducting this program evaluation. All of these students expressed their interest in being interviewed, but understood that it was not possible due to the ethical concerns of being interviewed by someone who was also grading their coursework. These students asked to be informed of the evaluation results and to be able to discuss the program in the future. Their sincere interest in the program evaluation seemed to indicate that they had something to say about this program. These students, as well as the six students interviewed for the program evaluation, were included as stakeholders who received an electronic copy of this program evaluation report for member checking to validate the report.

The low response rate (18%) to the request for interview volunteers was not surprising, and many factors may have weighed into it. The email invitation went out to

the students near the end of the persisting students' spring semester. This was a time when final projects were coming due and exams were looming. Students may not have wanted to add any other responsibility to an overly busy schedule. Secondly, students may not have felt comfortable talking to someone they did not know about a program that would identify them as an underprepared student; a stigma effect may have come into play. Finally, students who have left the university were very likely not to check an old email account associated with this study's university, especially if they left with negative feelings. The possible reason the one departed student completed a phone interview may be linked to his expressed, strong desire to return to the study's university even though he was enrolled at another institution.

Evaluation Results

The quantitative and qualitative data gathered for this multi-method research provided rich information for the program evaluation report. The use of graphs and charts to display quantitative data results or the coding of qualitative data are presented in this section.

Quantitative Findings

The quantitative aspect of this study was framed by the research question, "Did underprepared students, defined by lower than the required admission high school GPAs or ACT/SAT scores and enrolled in the 2012 remedial cohort program, persist to sophomore year at a similar rate as the underprepared students, who matriculated in 2013 and who did not participate in a remedial cohort program?" The quantitative research results found no statistical significance between the retention rates of the cohort

remediation students who matriculated in 2012 and the independent remediation students who matriculated in 2013 as shown in Table A1. There was no detectable difference between the cohort and the independent remediation groups' rate of retention to their sophomore year at the university where they matriculated as freshmen.

Table A1

Cross-tabulation of Remediation Groups Identified by Year and Their Retention

	Year	Retain		Total
		Yes	No	
		2012 (cohort remediation)	36	
2013 (independent remediation)	29	32	61	
Total		65	69	134

Note. 2012 is the cohort remediation and 2013 is the independent remediation.

Generally the acceptable p -value for educational research is set at less than .05 (Lodico, Spaulding, & Voegtle, 2010). As shown in Table A2, this data ($p = .838$) is not statistically significant and the conclusion is to fail to reject the null hypothesis. Or in other words, there was no detectable difference between the remediation student groups.

Table A2

Chi-Square Tests for Cross-tabulation of Remedial Groups Identified by Year and Their Retention

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.042 ^a	1	.838
N of Valid Cases	134		

^a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 29.59

Independent variables examined for relationships to persistence for the 2012 Magis group included: (a) the demographic data of gender; (b) the high school experience data of GPA and college admission test scores; and (c) the college experience data of declared or undeclared major, and the number of remedial courses taken freshman year. The dependent variable in each case was the persistence to begin a second year at the same university.

Descriptive statistics reported and graphed for the 2012 Magis group are found in Appendix E and included: gender; high school GPAs; admission testing scores; declared or undeclared major; and the number of remedial courses taken first semester. Each of these independent variables was examined separately against the same dependent variable of retention. However, none of these variables exhibited the .05 level difference between retained and non-retained student data to state any significant difference for any of the variables checked for influencing retention in this study.

Qualitative Findings

Interview protocols were developed and used for student and faculty individual interviews (see Program Evaluation Appendices C and D). The broad themes of perceived benefits and detriments served as the foundation of the questioning. Interviews were recorded, then transcribed and coded. Topics that were raised by at least two interview participants were charted into tables of reoccurring issues for demographic data (see Table A3), perceived benefits (see Table A4), and perceived detriments (see Table A5).

Seven interviews were conducted; five students who persisted, one student who left the university after freshman year, and one faculty member. Six of the interviews were conducted in person and one as a phone interview lasting about 30 minutes each.

Table A3

Demographic Data Gathered from Interviews

	First-generation college student	NCAA DII athlete	Hometown within 30 miles of campus	Fit within the first month	Retained	First learned of placement at orientation
Male 1	x		x	NA	yes	
Male 2		x		no	no	x
Male 3		x		NA	yes	x
Male 4		x		no	yes	x
Female 1		x		yes	yes	x
Female 2	x		x	yes	yes	x
Faculty	NA	NA	NA	NA	NA	NA

Table A4

Perceived Benefits of the Cohort Remedial Program

BENEFIT PERCEIVED	No benefits	Courses that were beneficial	Second chance; want to do better than HS	Expressed that the remedial program helped
Male 1		math and writing	x	x
Male 2		writing	x	x
Male 3		writing	x	x
Male 4		freshman seminar		x
Female 1	x	none		
Female 2	x	none		
Faculty		advising	x	x

The qualitative data collected through student interviews added a depth of understanding to this study and the resulting program evaluation. The students gave voice to the poor notification and unclear placement criteria that would not have been apparent by quantitative data and graphs only.

Table A5

Perceived Detriments of the Cohort Remedial Program

DETRIMENT PERCEIVED	Misplaced into remediation	No choice to be in program	Expressed felt different that non-remedial student	Courses that were not beneficial	Program put student behind in schedule to graduate	Program not explained clearly
Male 1		x		geology	x	x
Male 2	x	x	x	reading	x	x
Male 3		x	x		x	x
Male 4		x	x	geology	x	x
Female 1	x	x			x	x
Female 2	x	x	x	geology	x	x
Faculty	NA	NA	NA	NA	x	x

Interpretation of Quantitative Findings

Retention data collected compared the attrition of underprepared students matriculating in 2012, who were required to participate in the remedial cohort, with underprepared students matriculating in 2013 in the individualized remediation approach. The use of a Chi-square inferential statistical test compared the two student groups' retention rates, and showed no significant difference; therefore no inferences could be

made about the impact of the two varying approaches used for remediation at the study's university in 2012 and 2013 (see Table 2).

This result was not surprising because the issue of retention is so complicated, and there is no way to adequately identify and control all the variables that come into play as students make personal decisions about persistence. One factor that was uncovered as a result of the program evaluation was that the same professors taught the remediation courses in both 2012 and 2013. That consistency of instruction across the two academic years may be a factor in why there was no significant difference between students who were retained from the cohort in 2012 and those retained from individual sections of remedial courses in 2013.

At the university associated with program evaluation, the Academic Life Committee (ALC) works with the admissions' staff for the purpose of enrollment. The last published standard for automatic admission into this university (which was in 2011) stated that students needed at least a 3.0 high school GPA and admission test scores of either a 20 or higher ACT composite score or a 940 or higher SAT composite score. Using those criteria, 22 of the 73 students (30%) in the Magis group had neither the high school GPAs nor the college admission test scores required for automatic admission. Or in other words, these students were not deemed "college ready" at this institution. Also within the 2012 remedial cohort group, 15 of the 73 students (21%) had high school GPAs of 3.0 or greater, but had composite test scores that were below the automatic admission requirement for college admission tests.

Finally, what was confusing to uncover was that of the 73 students in Magis, 36 of them (49%) had high school GPAs of 3.0 or higher and composite college admission scores that were at or above the automatic requirements numbers of ACT 20 or SAT 940. With such a combination of high school GPA and college admission composite scores these students should have been automatically admitted to the university and classified as “college ready.” That data leads to the conclusion that a large number of students were misplaced as underprepared students at this university in the 2012—13 academic year.

Upon further inquiry of the Magis program enrollment criteria, it was uncovered that low sub-scores in ACT reading or English sub-tests; or a low score on the sub-test of SAT verbal were used as triggers that moved these 36 students into the Magis program even though they had met the criteria for automatic admission into this university. The seeming misplacement of these 36 students may have been a contributing factor to some students’ departure, as was alluded to in the guarded word choices for the obvious anger felt by students interviewed. Responses, like “upset,” “felt insignificant,” or “upsetting and offensive” showed the surprise and dismay of students when learning they were considered underprepared by this institution. It is important to note that this placement information was not shared with the students until their summer orientations, and that late notification made students feel trapped and deceived.

Interpretation of Quantitative Findings

The benefits enumerated by the students for the cohort program were few; with some students flatly saying there were no benefits. Female 2 firmly stated when asked about the program’s benefits,

No. I don't think it has had a positive outcome on anything regarding my education. It has frustrated me beyond belief and still to this day, it will, and I feel like it will forever. It put me behind, big time.

Female 1 simply stated, "I don't think it was beneficial." However, later in the interview added,

I know the school said that it [the Magis Program] was a stepping stone due to our SAT or ACT scores; that it was to help us progress more into college level courses, but I thought the college-level courses I was taking were actually easier than the Magis Program classes I had. (Female 1)

For those who offered specific benefits, or expressions of positive aspects of the cohort remedial program, a couple students explicitly mentioned the remedial writing course and the professor who taught it. Male 1 said, "For me personally, it was the writing course because I was not very good at writing and actually taking the college writing and then an actual writing course, writing composition, I feel like, helped me." Another student recalled that the faculty member teaching remedial writing was easily approachable and answered many questions about the university that were beyond writing strategies.

[This professor] was there to help me with my papers a lot. Any time I had a question about college in general, [the professor] was there for me and just explained to me how to get through this program. That was very helpful. (Male 2)

Perceived detriments voiced by the students placed into the Magis Program included: feeling different than other freshman classmates, not being informed about their placement into the program in a timely fashion, not being able to make decisions about freshman courses, and falling behind in progress to graduation. The initial idea for the cohort remedial program might have been that identifying and placing underprepared students together in a cohort for remediation would best achieve the academic and social integration foundational to Tinto's (1975) retention theory. Nevertheless, some of the students interviewed perceived that they were different from their freshman classmates who were automatically admitted. The statement from Male 2 saying, "...we weren't in the same bracket as regular college students," or description by Female 2 that, "I felt like we [the remedial cohort students] were still in high school" articulated some of the perceived differences.

Some students grudgingly admitted that the remedial courses were intended to help start their college career with a good GPA, but because of their poor attitude toward being in remedial courses, their GPAs were not as good as they could have been with more effort. With such comments, it seemed that the students interviewed did not come away from the program feel either academically or socially integrated as a result of it.

The two most resounding detriments that surfaced included: (a) poor communication that included the late notice of being placed in a remedial program, along with vague and inconsistent explanations of how the placement was determined; and (b) the concern by students about being behind in earning a degree in four years. Ramifications of the late notice of placement into a remedial program at this university

may have kept students and parents from taking a hard look at the question of how academically prepared an individual student was to attend a 4-year college. Some students, if presented with the remedial criteria earlier in the decision process, may have taken the admission tests again or might have considered attending a 2-year college program; with the plan to transfer into the university after earning an associate's degree. It is also possible that many students would have selected a different 4-year institution that would not have required them to do remedial coursework, or at least not remediation with the limitations of taking only 12 semester hours for the first and second semesters of college.

Students' concerns about their timely progress to graduation may be one consideration that factored into why some of the 37 of the total 73 cohort remedial students (51%) were not retained by this university. Multiple research studies on the topic of retention pointed out that the addition of extra courses, especially courses that do not give students academic credit toward their chosen degree, can factor negatively into the decision of persistence (Boatman & Long, 2010; Martorell & McFarlin, 2011). In contrast, 36 cohort remedial students (49%) have persisted. These students are likely to graduate from this institution, but many need five years, or the addition of multiple summer sessions, to complete their undergraduate degrees in four years.

Although initiated with good intentions; that being the support of underprepared students to persist at the study's university; the 2012 cohort remedial program had disconcerting flaws that were not discovered due to the lack of a program evaluation, thus

it was good that the program, as implemented in 2012, ended after only one academic year.

Limitations of the Evaluation

A limitation of quantitative research done for this program evaluation was that it was non-experimental (i.e., causal claims about any changes or improvement in student retention being due exclusively to the short-term orientation program were limited). Any comparisons between the retention rates of the “college-ready” freshmen, or even the retention rates of the total freshman class matriculating in the fall semesters of 2012 and 2013, to the subset groups of underprepared students in each respective class, are not valid comparisons because regularly-admitted students are fundamentally different from their conditionally-admitted, underprepared classmates (Jackson & Kurlaender, 2013; Valentine, et al., 2011).

However, a complete data table containing the retention rates of the 2012 and 2013 freshman classes, as combined groups and also as subsets of non-remedial and remedial groups, is available (Evaluation Report Appendix A) due to the curiosity of various stakeholders wishing a look at the wider picture of retention at this university. Readers are reminded that the comparison for this program evaluation is limited to the retention records from the 2012 and 2013 remedial approaches used with underprepared students and qualitative data from the 2012 Magis Program specifically being evaluated.

The qualitative data collected from student interviews came from a small number of students who volunteered to be interviewed (n = 6 out of 73; 8%) rather than a survey request made to the entire group. Additionally, there is a limitation that only one faculty

member who taught in the program was interviewed. For all persons interviewed, the accuracy of the qualitative data has limitations due to the participants' memory and truthfulness. Moreover the interviewees' perceived benefits or detriments may not reflect the overall sentiments of the entire cohort remediation group or faculty. Data from mostly students who persisted and a faculty member who valued the program may have distorted the program evaluation report to a more positive bias of the cohort remedial program. Finally, the overall study's size and scope was not generalizable.

Implications

The major conclusion of the program evaluation of the 2012 Magis Program for underprepared college freshmen is that it was developed with good intentions but in isolation. The lack of multiple voices and viewpoints during the design and development of this remedial approach led to the critical flaws of placement, implementation, and communication that plagued the Magis Program.

Placement Problem

The criteria for automatic admission into this university, at the time of the Magis Program, required students to have a 3.0 or higher high school GPA and a composite college test score of either a 20 or higher on the ACT or 940 or higher on the SAT. One would have assumed that all of the students placed into the Magis Program fell below those measures. However, that was not the case; with 36 of the 73 students (49%) who were placed into the remedial cohort with both 3.0 or higher high school GPAs and college composite tests scores above the required cut-scores. This program evaluation

uncovered that various sub-scores of the college admissions tests were used to misplace these 36 students into the 2012 Magis Program.

Strengths

The notable strength of the 2012 Magis Program was, as intended, that it allowed students, who may have had less than the required automatic admission criteria but untapped talents, to attend and flourish at this university—to find their “magis.” From the 73 students recorded to be placed into the 2012 Magis program, 37 students (51%) were admitted with less than the automatic admission criteria. As one of the former Magis students interviewed explained, it was a “second chance” to make up for a less than stellar high school record and to push to do better. Another student said, “Some people, I look back at it, and they were in the Magis Program, people in our class, and they are doing exceptionally well in college, a lot better than people that weren't in the Magis Program; so that is also a little funny to see that.” His comment alluded to the conflicted feelings of the Magis Program students as they dealt with being admitted as an underprepared student. However, for the former Magis students, who have persisted and who were interviewed for this program evaluation, possess a maturity and a sense of accomplishment that is a rewarding strength of the implied goal of the Magis Program.

From the faculty point of view, the strength of the Magis Program was to establish early bonds of trust and collegiality between students and the professors bridging these students' paths from high school to freshman year in college. At the 2015 commencement ceremonies of this university, it was announced that nearly one-third of the graduating class were the first in their families to graduate from college. First-

generation college students have unique characteristics and needs that a program, like the Magis Program, can address. The support of underprepared students serves to strengthen this university's diversity and the wider communities' pool of future leaders.

Limitations

The limitations of the 2012 Magis are glaring but correctable. First, there were no goals or benchmarks publically recorded or explicitly communicated with the students, parents, or faculty involved in the program. This gross lack of transparency sidelined any goodwill that students may have accepted upon being placed into a remedial college program. Students interviewed for this program evaluation admitted that they were generally not inclined to make the most of the remedial coursework because they saw no clear reason for it. It is only with the reflection of students who persisted that allowed them to articulate reasons for their inclusion in such a program.

Secondly, the fact that students and parents were informed of placement into the Magis Program so late in the admission process, and that they also perceived there was no choice for them to remain at this university without being placed into the Magis program, undermined the academic and social integration needed to support many students' retention. Evidence of that is the fact that only 36 of the original 73 students recorded as students in the Magis Program (49%) are likely to persist to graduation at this university. This number compares poorly to the other retention statistics of this university. The fact the students did not understand the criteria for their placement and perceived they had no choice to be removed from the Magis program without

jeopardizing their admission to the university were flaws noted by all persons interviewed for this program evaluation.

Finally, the fact that a number of students were misplaced into a remedial program that they did not need was uncovered by examining admission requirements of automatic admission to mismatched criteria for placement into the Magis Program by sub-scores and not composite scores of college admission test. The 36 of 73 students (49%) placed into the Magis Program, who had met the requirements for automatic admission into this university, likely felt misplaced and that situation may have been a contributing factor as to why a number of Magis students were not retained.

Recommendations

There will continue to be students admitted to colleges and universities who are classified as underprepared. The reasons these students come to college underprepared are varied, and once admitted, are not as important as the programs available to support and change an unprepared college freshman into a successfully prepared college graduate. A cohort remedial program, like the 2012 Magis Program, can help underprepared students accomplish the goal of college graduation by first, clearly articulating criteria for placement into such a program, and secondly by embedding measurable assessment benchmarks into the program to guide students' progress.

Finally and most importantly, the students must choose and apply to be admitted into a selective developmental cohort program at the university. The matter of student choice is necessary for an underprepared student to commit to making the most of such a program and to fostering positive academic and social integration that can come from

membership in such a group. With the changes noted in this program evaluation taken into account and a group of stakeholders associated with this university committed to a collaborative design of developmental curriculum and support services; it is recommended that a revised cohort program, with a different title, be considered; then be thoughtfully implemented and continuously assessed against publically stated goals. The need for college remedial cohort programming is real and the impact of successful remediation for underprepared students can be life-changing.

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Evaluation Report Appendix A

Comparisons of Remediation Student Numbers and Retention Rates of Freshman Classes 2012 and 2013

	Matriculating Fall 2012 Cohort Remediation	Matriculating Fall 2013 Independent Remediation
Total freshman class enrollment	279	253
Males	128 (46%)	160 (63%)
Females	151 (54%)	93 (37%)
Total freshman class enrollment as subsets		
Remediation students	73/279 (26%)	61/253 (24%)
Males	38/73 (52%)	40/61 (66%)
Females	35/73 (48%)	21/61 (34%)
Non-remediation students	206/279 (74%)	192/253 (76%)
Males	90/206 (44%)	120/192 (63%)
Females	116/206 (56%)	72/192 (38%)
Retention Rate for Remediation students only		
Retained to soph. yr.	36/73 (49%)	29/61 (48%)
Not retained to soph. yr.	37/73 (50%)	32/61 (52%)
Retention Rate for Non- remediation students only		
Retained to soph. yr.	126/206 (61%)	115/192 (60%)
Not retained to soph. yr.	80/206 (39%)	77/192 (40%)
Retention Rates Combined	162/279 (58%)	144/253 (57%)
<i>Note. Remediation students are defined as students who took two or three remediation courses (REA 101, ENG 101, MAT 101) in the fall semester. The remediation students who matriculated in 2012 were required to enroll in the cohort remedial program. The remediation students who matriculated in 2013 were advised to take remedial courses and independently selected to take either two or three remedial courses.</i>		

Evaluation Report Appendix B: Course Catalog Description of Magis Program

Students who place into College Writing (ENG 101) and/or College Reading (REA 101) enter the University in the Magis Program. Placement into ENG 101 and REA 101 is determined by the student's best ACT/SAT score. Students in this program must follow a prescribed curriculum for their first year. ENG 101, REA 101, and Algebra Review (MAT 101) are considered developmental or pre-college courses, and a total of six credits of this developmental coursework will count toward graduation credit. All developmental courses will be factored into a student's GPA. Magis students must successfully complete ENG 101 and REA 101 during their first-semester. Withdrawing from either of these courses or earning a C- or lower in these courses may result in academic dismissal.

During the fall semester, Magis students will be enrolled in: ENG 101, REA 101, a math course based on their math placement test, First Year Seminar (FYS 101), and a core course that will be selected by their academic advisor. Magis students are required to earn a cumulative GPA of 2.0 during the fall semester in order to return for the spring semester. In the spring semester, Magis students who earned a cumulative GPA of 2.0-3.0 will take Process of Composition (ENG105), Literary Foundations (LIT 120), and two courses approved by their advisor. Students who earn above a 3.0 may take an additional three courses in consultation with their advisor.

Students in the program are eligible to apply for three to nine hours of WJU Summer school tuition remissions redeemable after the sophomore year provided the student is making appropriate progress towards graduation (successfully completing at least 15 credit hours each semester after leaving the Magis program, in good academic

standing at the end of the junior year, and on-track for major completion within the senior year). Please see the Director of Undergraduate Student Success for more information.

Transfer students bringing in 15 or fewer earned credit hours will be considered for placement into the Magis program. Transfer credit for pre-college courses (ENG 101, MAT 101, and REA 101) may or may not be accepted at the discretion of the Director of Undergraduate Student Success.

Evaluation Report Appendix C

Student Interview Protocol

Title of Study: *A Program Evaluation of a Remediation Program for Underprepared College Students*

Date:

Time of Interview:

Start time:

End time:

Interviewer: Jane Neuenschwander

Interviewee: (actual name and coded identifier for the study)

Location of Interview:

Interview Script and Notes:

“Hello and Welcome: My name is Mrs. Jane Neuenschwander. Thank you so much for agreeing to participate in this study. I appreciate and respect the time you’re willing to give to this project, and I will be mindful of keeping this interview to 45 minutes. I hope that you will find the experience to be valuable.”

Qualifications & Informed Consent Check:

Confirm qualifications:

- Check to see if this student participated in the 2012—13 Magis Program. Then check to see if this student is currently, or will be in the future, taking any education courses that I teach.

- Informed Consent Check:

“Did you bring the Informed Consent Form I sent you?”

If so, make sure it’s signed.

If NOT, be sure to have extra copies available for the student to read and sign.

Make a photocopy of the signed Informed Consent Form to give to the student.

“Your name or other personal identification will not be used in this research study. Your answers and comments will be kept private and confidential. Your answers, and the answers of others being interviewed, will be compared and compiled to see if consistent themes emerge. This information may help us make improvements in some of the courses you took during your first year in college.”

“Do you have any questions for me about the study, or information contained on the Informed Consent Form?”

Ground Rules:

“Ok, thank you (for consent to participate).”

Describe any ground rules for the interview including:

“Please speak for yourself and your own perspectives, and avoid speaking for others. I know it has been a few years since you were involved in the Magis Program. It is fine to say you do not remember if nothing comes to mind for any of the questions I ask.

“We have a need to respect the privacy of others, so there’s no need to disclose specific names of individual students or professors.”

“Do you have any questions? “

Purpose / Tone Set:

“The purpose of this study is to evaluate the Magis Program you took part in during your freshman year. The interview is designed to help you describe and share your experiences, ideas, and perspective with me. I invite you to feel free to relate your experience in a free-flowing open manner: The more details you can provide the better. Since the interview is recorded, you don’t need to worry that I’ll miss something or that you’re providing too much detail. The questions are intended to help you talk about your experiences. I might provide questions that seek clarification about what you’ve described, or ask you to provide examples or elaborate on certain aspects of the topic after you answer a question.”

“Do you have any questions before we begin?”

Questions:

Phase 1: Background – Rapport Building

“Ok, let’s begin:”

1. *“Tell me why you decided to come here for college?”*
2. *“What are some of the other colleges you considered attending?”*
3. *“Have members of your immediate family gone to college? If so, where did they go?”*
4. *“Describe what you remember from the first month or two as a freshman here at WJU.”*

5. *“Do you feel you ‘fit’ or ‘belong’ to this college now? If so, when do you remember first feeling this way? If not, why do you feel like you do not ‘fit’ or ‘belong’?”*

Demographic Information – Determine how far away from home the student is by question #1 or a follow up question about the student’s hometown. Determine if college athletics was part of the student’s decision to come to this college with question #2 or a follow-up question. Determine if this student is a first-generation college student from question #3.

TIME CHECK: _____

Phase 2: The Experience

6. *“When did you first learn about the Magis Program”(cognitive dimension)*
7. *“What was your first reaction to being in the Magis Program?” (affective dimension)*
8. *“Explain to me how the Magis Program worked?” (behavior dimension)*
9. *“Tell me something that was beneficial about being in the Magis Program for your transition between high school and college.”*
10. *“Tell me something about being in the Magis Program that has not been helpful to your college experience.”*

TIME CHECK: _____

Phase 3: Reflections

“What you’ve shared with me up to this point is very helpful in capturing your perspective. I’m wondering what you think about the Magis Program sitting here now, looking back on the experience.”

11. *“Describe for me three things that you have learned from the Magis experience.”*
12. *“What suggestions do you have for change / improvement?”*
13. *“What would you do differently as a student?”*
14. *“Are there any closing comments you would like to make?”*

TIME CHECK: _____

“It has been fascinating to hear your perspective. Thank you so much.”

“In conclusion, I would like to express my sincere appreciation for your participation in this study and taking time to share your experiences and ideas. I want to assure you again that your responses are confidential. If needed, I would like to request your permission to contact you for follow up information? Also I will email you a written transcript of this interview in a few days. I would like to read the transcript to see that I have correctly recorded our conversation today. Thanks again for participating in my study.”

Evaluation Report Appendix D

Faculty Interview Protocol

Title of Study: *A Program Evaluation of a Remediation Program for Underprepared College Students*

Date:

Time of Interview:

Start time:

End time:

Interviewer: Jane Neuenschwander

Interviewee: (actual name and coded identifier for the study)

Location of Interview:

Interview Script and Notes:

“Hello and Welcome: Thank you so much for agreeing to participate in this interview about the 2012—13 Magis Program. I appreciate and respect the time you’re willing to give to this project, and I will be mindful of keeping this interview to 45 minutes. I hope that you will find the experience to be valuable.”

Informed Consent Check:

“Did you bring the Informed Consent Form I sent you?”

If so, make sure it’s signed.

If NOT, be sure to have extra copies available for the student to read and sign.

Make a photocopy of the signed Informed Consent Form to give to the faculty member.

“Your name or other personal identification will not be used in this research study. Your name will not be disclosed in the project study or final evaluation. However, I want you to you realize that with such a small group and small campus, there relational risk of matching your involvement in this study.”

“Do you have any questions for me about the study, or information contained on the Informed Consent Form?”

Ground Rules:

“Ok, thank you for consenting to participate in this study.”

Describe any ground rules for the interview including:

“Please speak for yourself and your own perspectives, and avoid speaking for others. I know it has been a few years since you were involved in the Magis Program. It is fine to say you do not remember if nothing comes to mind for any of the questions I ask.

“We have a need to respect the privacy of others, so there’s no need to disclose specific names of individual students. Do you have any questions? “

Purpose / Tone Set:

“The purpose of this study is to evaluate the Magis Program and your role as one of the professors teaching this group of students. The interview is designed to help you describe and share your experiences, ideas, and perspective with me. I invite you to feel free to relate your experience in a free-flowing open manner: The more details you can provide the better. Since the interview is recorded, you don’t need to worry that I’ll miss something or that you’re providing too much detail. The questions are intended to help you talk about your experiences. I might provide questions that seek clarification about what you’ve described, or ask you to provide examples or elaborate on certain aspects of the topic after you answer a question.”

“Do you have any questions before we begin?”

Questions:

Phase 1: Background – Rapport Building

“Ok, let’s begin:”

1. *First I would like to you to tell me when you began teaching at WJU and what courses you have taught over the years.*
2. *When did you first learn about the Magis Program?*
3. *How involved were you in the planning of the Magis Program?*

TIME CHECK: _____

Phase 2: The Experience

4. *“Explain to me how the Magis Program worked?” (behavior dimension)*
5. *“What was your first reaction to teaching in the Magis Program?” (affective dimension)*

6. *“How did you establish a sense of community in your developmental course taught with the cohort remediation program? Was your approach different or the same the following year when teaching the developmental course?”*
7. *“What differences in teaching approaches, if any, do you make when teaching developmental courses and non-developmental courses?”*
8. *“Did you serve as an advisor to some of the underprepared students in the cohort program? If so, how many?”*
9. *“Tell me something valuable about using the Magis Program approach to developmental education on our campus.”*
10. *“Tell me something detrimental about using the Magis Program approach to developmental education on our campus.”*

TIME CHECK: _____

Phase 3: Reflections

“What you’ve shared with me up to this point is very helpful in capturing your perspective. I’m wondering what you think about the Magis Program sitting here now, looking back on the experience.”

11. *“What do you believe is the most meaningful things students took away from being in the Magis Program?”*
12. *“What did you take away from the experience from teaching in the Magis Program?”*
13. *“What suggestions do you have for change / improvement?”*
14. *“What would you do differently?”*
15. *“Are there any closing comments you would like to make?”*

TIME CHECK: _____

“It has been fascinating to hear your perspective. Thank you so much.”

“In conclusion, I would like to express my sincere appreciation for your participation in this study and taking time to share your experiences and ideas. I want to assure you again that your responses will be reported as a composite of our conversation. If needed, I would like to request your permission to contact you for follow up information? Also I will email you a written transcript of this interview in a few days. I would like you to read

the transcript to see that I have correctly recorded our conversation today. Thanks again for participating in my study.

Evaluation Report Appendix E

Quantitative Data Tables, Figures, and Comments

Independent variables examined for relationships to persistence for the 2012 cohort remediation group included: (a) the demographic data of gender; (b) the high school experience data of GPA and college admission test scores; and (c) the college experience data of declared or undeclared major, and the number of remedial courses taken freshman year. The dependent variable in each case was the persistence.

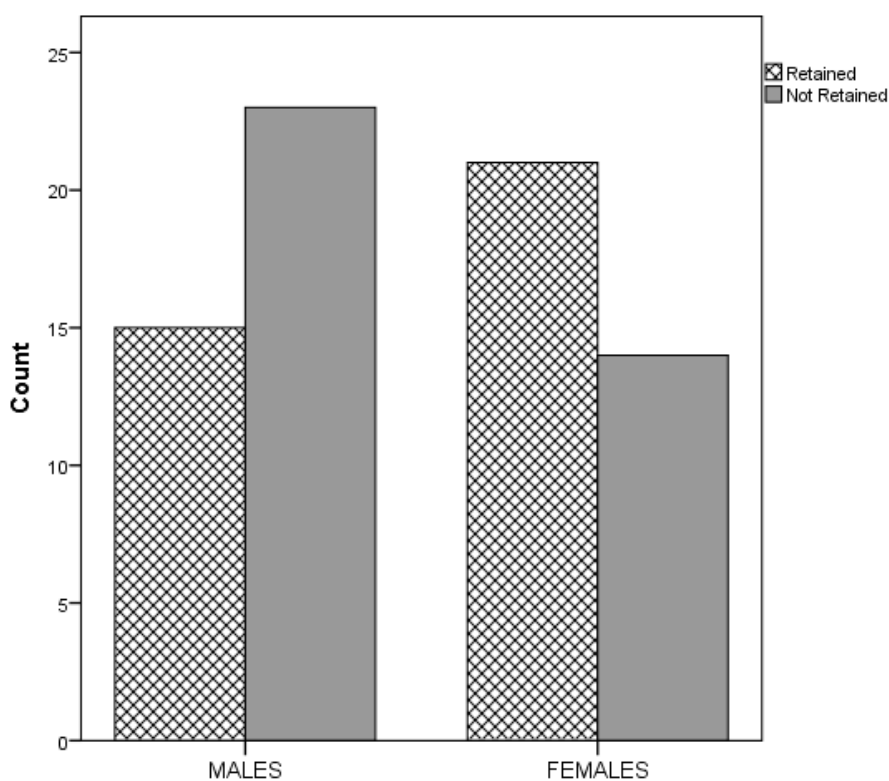


Figure E1. Retention statistics of the 2012 cohort remedial students by gender. $\chi^2 = 3.071$, $df = 1$, $p = 0.080$.

Nearly half of the 2012 cohort remediation students returned (N = 36 out of 73; 49%) to this study's university in the fall of 2013; including 15 males and 21 females. There were 23 males and 14 females of the cohort group (51%) who did not return to the same university (see Figure E1).

Table E1 displays an examination of the 2012 remedial students' high school experiences, as measured by students' high school GPAs, which showed the retention and non-retention numbers within five identified GPA ranges were not significant to each other at the .05 level.

Table E1

Cross-tabulation of 2012 Cohort Remedial Students Retained Compared to High School GPAs

		Retained		Total
		Yes	No	
HS GPA Ranges	2.0 to 2.49	4 _a	2 _a	6
	2.5 to 2.99	5 _a	11 _a	16
	3.0 to 3.49	16 _a	12 _a	28
	3.5 to 3.99	11 _a	8 _a	19
	4.000	0 _a	4 _b	4
Total		36	37	73

Note. Each subscript letter denotes a subset of Retained yes; no categories whose column proportions do not differ significantly from each other at the .05 level. $\chi^2 = 7.950$, $df = 4$, $p = 0.093$.

Another factor examined, as part of the high school experience of the 2012 cohort remediation group, was measured by students' scores from college admission tests, like

the ACT and SAT tests (see Figures E2 and E3). The descriptive statistics of the composite ACT and SAT admissions scores from the underprepared students matriculating in the fall of 2012 also showed that the retention and non-retention numbers within each scoring number range were not significant to each other at the .05 level. There were 54 records of ACT scores and 31 records of SAT for the group making a total of 85 admission records for 73 students because some students submitted both ACT and SAT scores.

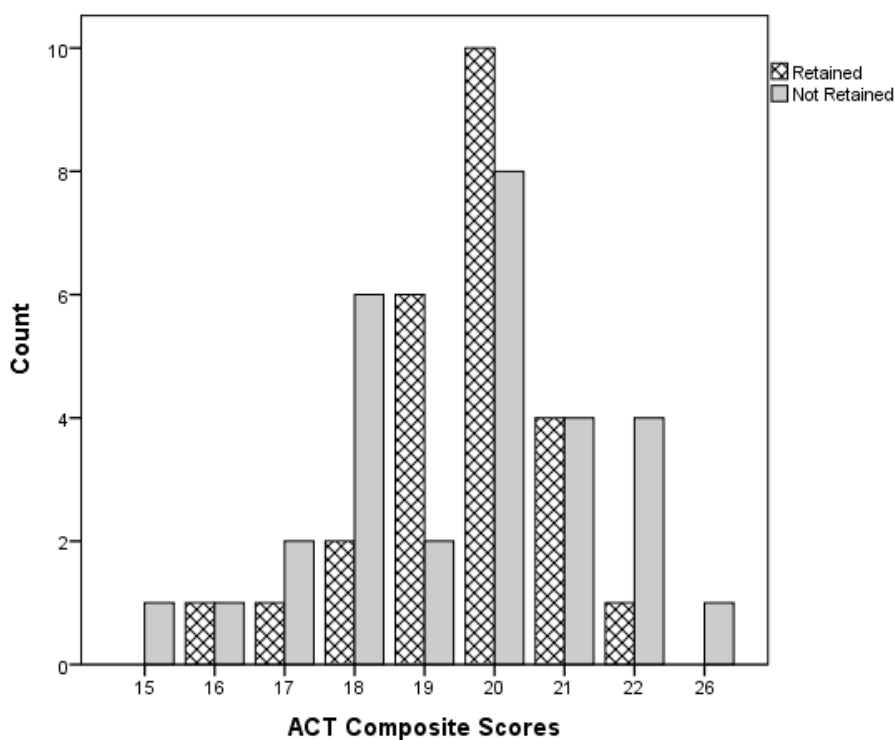


Figure E2. Retention statistics of the 2012 cohort remedial students ACT composite scores. $\chi^2 = 8.104$, $df = 8$, $p = 0.423$.

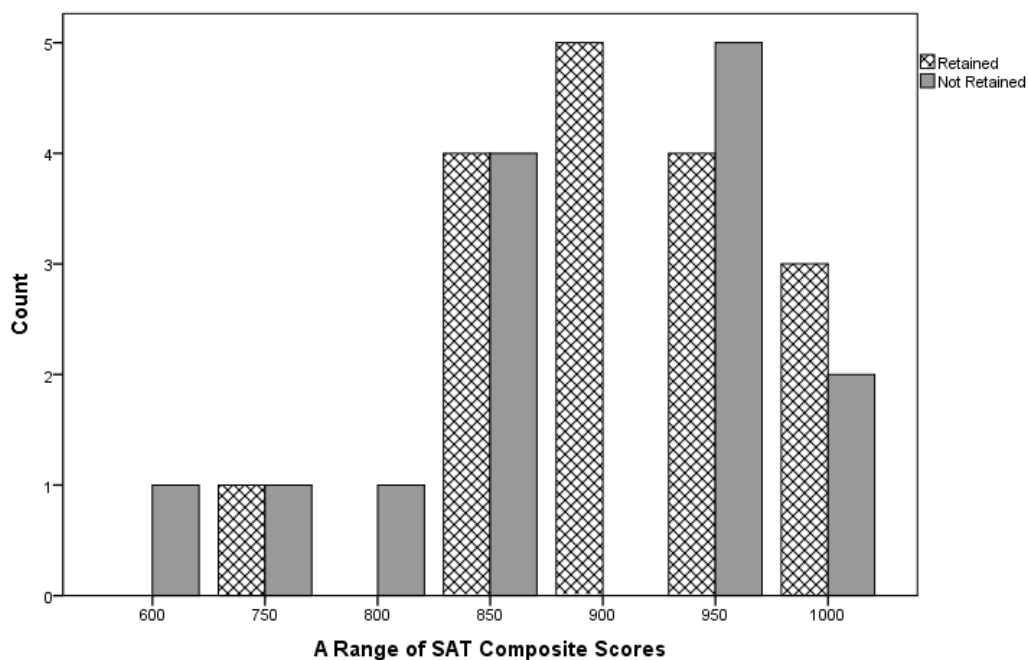


Figure E3. Retention statistics of the 2012 cohort remedial students SAT composite scores. $\chi^2 = 7.087$, $df = 6$, $p = 0.313$.

Lastly, college experience data was explored in relation to retention which included the declaration of a major when a student matriculated and the number of remediation courses taken (two courses—REA 101 and ENG 101; or three courses—MAT 101 added to REA 101 and ENG 101) for the first semester of college. The statistics for students declaring or not declaring a major were very similar when looking at retention (see Figure E4). Of the underprepared students who matriculated in 2012 and who declared a major, 31 of the 62 students (50%) were retained. Similarly, 5 of the 11 students (45%) who listed “undecided” as their major were retained.

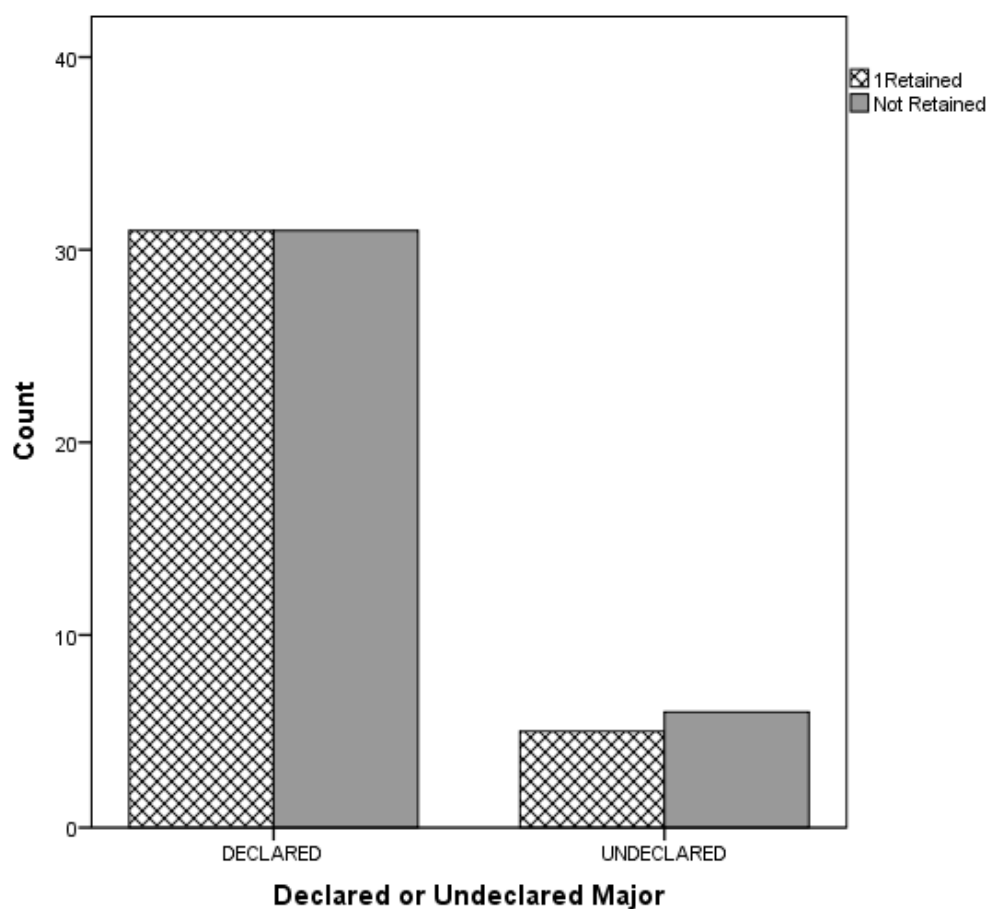


Figure E4. Retention statistics of the 2012 cohort remedial students by declared or undeclared major. $\chi^2 = 0.077$, $df = 1$, $p = 0.781$.

Looking at retention from the variable of the number of remedial courses taken first semester, this data also did not show a .05 level of difference between the retained and not retained data (see Figure E5). There were 20 students taking only two remedial courses (reading and English) as part of the 2012 cohort program; of which 11 were retained (55%) and 9 were not retained (45%). The other 53 students in the cohort program were required three remedial courses, and 25 of those students (47%) were

retained while 28 students (53%) were not retained. It is not surprising that the student group needing three remedial courses first semester had the higher drop-out percentage.

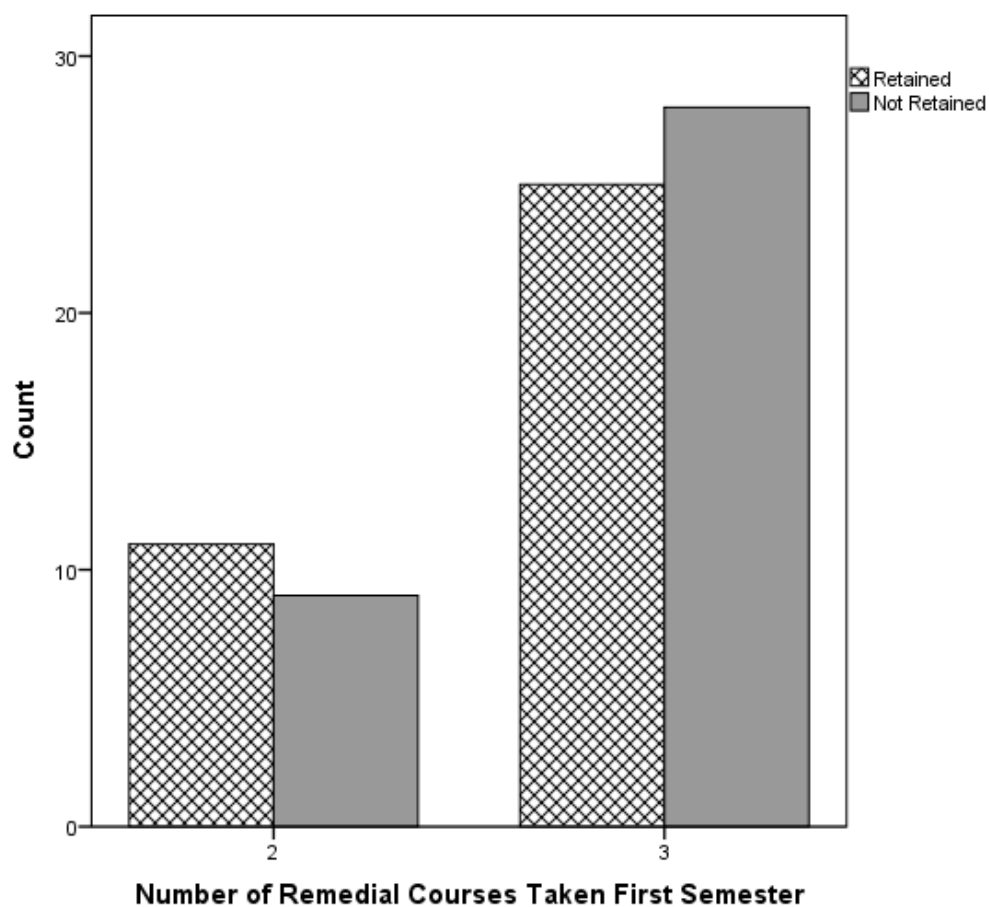


Figure E5. Retention statistics of the 2012 cohort remedial students by number of remedial courses taken. $\chi^2 = 0.356$, $df = 1$, $p = 0.551$.

Appendix B

2012—13 Course Catalog Description of Magis Program

Students who place into College Writing (ENG 101) and/or College Reading (REA 101) enter the University in the Magis Program. Placement into ENG 101 and REA 101 is determined by the student's best ACT/SAT score. Students in this program must follow a prescribed curriculum for their first year. ENG 101, REA 101, and Algebra Review (MAT 101) are considered developmental or pre-college courses, and a total of six credits of this developmental coursework will count toward graduation credit. All developmental courses will be factored into a student's GPA. Magis students must successfully complete ENG 101 and REA 101 during their first-semester. Withdrawing from either of these courses or earning a C- or lower in these courses may result in academic dismissal.

During the fall semester, Magis students will be enrolled in: ENG 101, REA 101, a math course based on their math placement test, First Year Seminar (FYS 101), and a core course that will be selected by their academic advisor. Magis students are required to earn a cumulative GPA of 2.0 during the fall semester in order to return for the spring semester. In the spring semester, Magis students who earned a cumulative GPA of 2.0-3.0 will take Process of Composition (ENG105), Literary Foundations (LIT 120), and two courses approved by their advisor. Students who earn above a 3.0 may take an additional three courses in consultation with their advisor.

Students in the program are eligible to apply for three to nine hours of WJU Summer school tuition remissions redeemable after the sophomore year provided the

student is making appropriate progress towards graduation (successfully completing at least 15 credit hours each semester after leaving the Magis program, in good academic standing at the end of the junior year, and on-track for major completion within the senior year). Please see the Director of Undergraduate Student Success for more information.

Transfer students bringing in 15 or fewer earned credit hours will be considered for placement into the Magis program. Transfer credit for pre-college courses (ENG 101, MAT 101, and REA 101) may or may not be accepted at the discretion of the Director of Undergraduate Student Success.

Appendix C

Student Interview Protocol

Title of Study: *A Program Evaluation of a Remediation Program for Underprepared College Students*

Date:

Time of Interview:

Start time:

End time:

Interviewer: Jane Neuenschwander

Interviewee: (actual name and coded identifier for the study)

Location of Interview:

Interview Script and Notes:

“Hello and Welcome: My name is Mrs. Jane Neuenschwander. Thank you so much for agreeing to participate in this study. I appreciate and respect the time you’re willing to give to this project, and I will be mindful of keeping this interview to 45 minutes. I hope that you will find the experience to be valuable.”

Qualifications & Informed Consent Check:

Confirm qualifications:

- Check to see if this student participated in the 2012—13 Magis Program. Then check to see if this student is currently, or will be in the future, taking any education courses that I teach.

- Informed Consent Check:

“Did you bring the Informed Consent Form I sent you?”

If so, make sure it’s signed.

If NOT, be sure to have extra copies available for the student to read and sign.

Make a photocopy of the signed Informed Consent Form to give to the student.

“Your name or other personal identification will not be used in this research study. Your answers and comments will be kept private and confidential. Your answers, and the answers of others being interviewed, will be compared and compiled to see if consistent themes emerge. This information may help us make improvements in some of the courses you took during your first year in college.”

“Do you have any questions for me about the study, or information contained on the Informed Consent Form?”

Ground Rules:

“Ok, thank you (for consent to participate).”

Describe any ground rules for the interview including:

“Please speak for yourself and your own perspectives, and avoid speaking for others. I know it has been a few years since you were involved in the Magis Program. It is fine to say you do not remember if nothing comes to mind for any of the questions I ask.

“We have a need to respect the privacy of others, so there’s no need to disclose specific names of individual students or professors.”

“Do you have any questions? “

Purpose / Tone Set:

“The purpose of this study is to evaluate the Magis Program you took part in during your freshman year. The interview is designed to help you describe and share your experiences, ideas, and perspective with me. I invite you to feel free to relate your experience in a free-flowing open manner: The more details you can provide the better. Since the interview is recorded, you don’t need to worry that I’ll miss something or that you’re providing too much detail. The questions are intended to help you talk about your experiences. I might provide questions that seek clarification about what you’ve described, or ask you to provide examples or elaborate on certain aspects of the topic after you answer a question.”

“Do you have any questions before we begin?”

Questions:

Phase 1: Background – Rapport Building

“Ok, let’s begin:”

15. *“Tell me why you decided to come here for college?”*

16. *“What are some of the other colleges you considered attending?”*

17. *“Have members of your immediate family gone to college? If so, where did they go?”*

18. *“Describe what you remember from the first month or two as a freshman here at WJU.”*

19. *“Do you feel you ‘fit’ or ‘belong’ to this college now? If so, when do you remember first feeling this way? If not, why do you feel like you do not ‘fit’ or ‘belong’?”*

Demographic Information – Determine how far away from home the student is by question #1 or a follow up question about the student’s hometown. Determine if college athletics was part of the student’s decision to come to this college with question #2 or a follow-up question. Determine if this student is a first-generation college student from question #3.

TIME CHECK: _____

Phase 2: The Experience

20. *“When did you first learn about the Magis Program”(cognitive dimension)*
21. *“What was your first reaction to being in the Magis Program?” (affective dimension)*
22. *“Explain to me how the Magis Program worked?” (behavior dimension)*
23. *“Tell me something that was beneficial about being in the Magis Program for your transition between high school and college.”*
24. *“Tell me something about being in the Magis Program that has not been helpful to your college experience.”*

TIME CHECK: _____

Phase 3: Reflections

“What you’ve shared with me up to this point is very helpful in capturing your perspective. I’m wondering what you think about the Magis Program sitting here now, looking back on the experience.”

25. *“Describe for me three things that you have learned from the Magis experience.”*
26. *“What suggestions do you have for change / improvement?”*
27. *“What would you do differently as a student?”*
28. *“Are there any closing comments you would like to make?”*

TIME CHECK: _____

“It has been fascinating to hear your perspective. Thank you so much.”

“In conclusion, I would like to express my sincere appreciation for your participation in this study and taking time to share your experiences and ideas. I want to assure you again that your responses are confidential. If needed, I would like to request your permission to contact you for follow up information? Also I will email you a written transcript of this interview in a few days. I would like to read the transcript to see that I have correctly recorded our conversation today. Thanks again for participating in my study.”

Appendix D

Faculty Interview Protocol

Title of Study: *A Program Evaluation of a Remediation Program for Underprepared College Students*

Date:

Time of Interview:

Start time:

End time:

Interviewer: Jane Neuenschwander

Interviewee: (actual name and coded identifier for the study)

Location of Interview:

Interview Script and Notes:

“Hello and Welcome: Thank you so much for agreeing to participate in this interview about the 2012—13 Magis Program. I appreciate and respect the time you’re willing to give to this project, and I will be mindful of keeping this interview to 45 minutes. I hope that you will find the experience to be valuable.”

Informed Consent Check:

- Informed Consent Check:

“Did you bring the Informed Consent Form I sent you?”

If so, make sure it’s signed.

If NOT, be sure to have extra copies available for the student to read and sign.

Make a photocopy of the signed Informed Consent Form to give to the faculty member.

“Your name or other personal identification will not be used in this research study. Your name will not be disclosed in the project study or final evaluation. However, I want you to you realize that with such a small group and small campus, there relational risk of matching your involvement in this study.”

“Do you have any questions for me about the study, or information contained on the Informed Consent Form?”

Ground Rules:

“Ok, thank you for consenting to participate in this study.”

Describe any ground rules for the interview including:

“Please speak for yourself and your own perspectives, and avoid speaking for others. I know it has been a few years since you were involved in the Magis Program. It is fine to say you do not remember if nothing comes to mind for any of the questions I ask.

“We have a need to respect the privacy of others, so there’s no need to disclose specific names of individual students. Do you have any questions? “

Purpose / Tone Set:

“The purpose of this study is to evaluate the Magis Program and your role as one of the professors teaching this group of students. The interview is designed to help you describe and share your experiences, ideas, and perspective with me. I invite you to feel free to relate your experience in a free-flowing open manner: The more details you can provide the better. Since the interview is recorded, you don’t need to worry that I’ll miss something or that you’re providing too much detail. The questions are intended to help you talk about your experiences. I might provide questions that seek clarification about what you’ve described, or ask you to provide examples or elaborate on certain aspects of the topic after you answer a question.”

“Do you have any questions before we begin?”

Questions:

Phase 1: Background – Rapport Building

“Ok, let’s begin:”

16. First I would like to you to tell me when you began teaching at WJU and what courses you have taught over the years.

17. When did you first learn about the Magis Program?

18. How involved were you in the planning of the Magis Program?

TIME CHECK: _____

Phase 2: The Experience

19. “Explain to me how the Magis Program worked?” (behavior dimension)

20. “What was your first reaction to teaching in the Magis Program?” (affective dimension)

21. *“How did you establish a sense of community in your developmental course taught with the cohort remediation program? Was your approach different or the same the following year when teaching the developmental course?”*
22. *“What differences in teaching approaches, if any, do you make when teaching developmental courses and non-developmental courses?”*
23. *“Did you serve as an advisor to some of the underprepared students in the cohort program? If so, how many?”*
24. *“Tell me something valuable about using the Magis Program approach to developmental education on our campus.”*
25. *“Tell me something detrimental about using the Magis Program approach to developmental education on our campus.”*

TIME CHECK: _____

Phase 3: Reflections

“What you’ve shared with me up to this point is very helpful in capturing your perspective. I’m wondering what you think about the Magis Program sitting here now, looking back on the experience.”

26. *“What do you believe is the most meaningful things students took away from being in the Magis Program?”*
27. *“What did you take away from the experience from teaching in the Magis Program?”*
28. *“What suggestions do you have for change / improvement?”*
29. *“What would you do differently?”*
30. *“Are there any closing comments you would like to make?”*

TIME CHECK: _____

“It has been fascinating to hear your perspective. Thank you so much.”

“In conclusion, I would like to express my sincere appreciation for your participation in this study and taking time to share your experiences and ideas. I want to assure you again that your responses will be reported as a composite of our conversation. If needed, I would like to request your permission to contact you for follow up information? Also I will email you a written transcript of this interview in a few days. I would like you to read

the transcript to see that I have correctly recorded our conversation today. Thanks again for participating in my study.