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A Mixed-Method Case Study on the Impact of Career Academies on Student Dispositions, Self-Efficacy, and Behaviors

Jessica Thompson Perry

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A Mixed-Method Case Study on the Impact of Career Academies on Student
Dispositions, Self-Efficacy, and Behaviors

By
Jessica T. Perry

A Dissertation Submitted to the
Gardner-Webb University School of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

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2017

Approval Page

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Abstract

A Mixed-Method Case Study on the Impact of Career Academies on Student Dispositions, Self-Efficacy, and Behaviors. Perry, Jessica T., 2017: Dissertation, Gardner-Webb University, Academies/High School/Transition/Student Dispositions/Behaviors/Self-Efficacy

The purpose of this case study was to examine the impact of career academies on student dispositions, behaviors, and self-efficacy at three high schools within the coastal plain region of east central North Carolina.

This mixed-method case study used program structures as well as teacher and administrator perceptions to estimate the effects of career academies on student academic dispositions, learning behaviors, and educational self-efficacy with greater accuracy.

The researcher developed a Career Academy Questionnaire to assess the perceived impact of the teachers and administrators on the career academies' impact on student dispositions, behaviors, and self-efficacy. The quantitative data consisted of the career academy teacher and administrator perceptions and program structures. The qualitative data consisted of teacher and administrator interviews. The researcher calculated the frequency of Likert scale intervals; calculated the mean score for each teacher and administrator based on their ratings of the Likert scale items; and compared the relationship between the career academy and the impact on student dispositions, behaviors, and self-efficacy.

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Chapter 1: Introduction

Nature of the Problem

For many students, high school represents a time of anticipation and advancement, as they begin the final stage of their K-12 education; however, for other students, the transition marks a time of concern and anxiousness (Law, Forehand, Miles, & Geltner, 2011). The transition from middle to high school involves a change in academic expectations, student development, and social structures (Blount, 2012). Research shows that ninth-grade students have a larger rate of course failures, decline in test scores, and more behavioral and discipline problems than students in all other grades (Blount, 2012). Faced with a new school culture, graduation requirements, different student groupings, and changing relationships with teachers, the students have a difficult time adjusting (Law et al., 2011). As a result, there have been several studies conducted on high school transition and the factors that make the transition difficult for students (Benner, 2011). The outcomes of these studies have prompted some schools and districts to turn their focus on programs or curriculums that revolve around the needs of ninth graders during this critical time and to assist students with the transition from middle to high school (REL Southeast, 2009).

Lounsbury and Johnston (1985) were commissioned by the National Association of Secondary Principals (2006) to find the answer to the question, “How fares ninth grade?” The two experts conducted an extensive study of ninth graders in 48 states and the District of Columbia. While shadowing the ninth graders and observing their daily school experiences, Lounsbury and Johnston discovered that there was “a mismatch between school policies and practices and the developmental needs of the students” (Black, 2004, p. 42). Furthermore, the experts found that most high schools “offered

little or no guidance to help ninth-graders adjust academically and socially” (Black, 2004, p. 42). As a result of their research, the experts predicted that the ninth grade would “continue to drift” and “mirror the worst of outmoded high school practices that do little to foster positive learning for all students” (Black, 2004, p. 42). In 1993, Anne Wheelock’s research supported this prediction. In her research, Wheelock described the ninth grade as “a minefield for the most vulnerable students,” particularly those who were disengaged and discouraged and failed to develop strong bonds with teachers and the school (Black, 2004, p. 42).

Additional research by Hertzog and Morgan (2001) helped to categorize the areas of most concern for students as they moved from middle to high school. The researchers developed an open-ended instrument based on teacher questions about the ninth-grade transition. The categories of concern identified by students with regard to the ninth-grade transition were curriculum, facilities, safety and discipline, teachers, counselors, and administrators (Hertzog & Morgan, 2001). The researchers found that schools with nine or more transition practices in these areas had statistically significant reductions in the retention-in-grade rate of freshman students and high school dropout rates (Hertzog & Morgan, 2001, p. 15).

Years of research have shown that many students have a difficult time transitioning from eighth to ninth grade. “The research indicates that facilitating young adolescents’ transition from middle school to high school requires programs that specifically address the transition period” (Mizelle & Irvin, 2000, p. 2). Mac Iver (1990) found that fewer students were retained in ninth grade when they experienced a high school transition program with several diverse articulation activities. These programs typically included activities that (a) provided students and parents with information about

the new school, (b) provided students with social support during the transition, and (c) brought middle and high school personnel together to learn about one another's curriculum and requirements (Mac Iver, 1990).

Neild (2009) sought to identify the nonstatistical factors that affect some students in being unsuccessful during their ninth-grade year. The researcher focused on students who struggled with the transition to ninth grade which results in the students marked by a failure to stay on track. Neild defined this failure of students to stay on track as being those who are off track for graduation and not having enough course credits in the usual allotment of time. The researcher then focused on the educational consequences of students who do get off track in the ninth grade. One obvious short-term consequence identified the fact that ninth graders who are off track fail to graduate. The failure to graduate could be due to courses the students failed having to be retaken and the deferment of the graduation date unless the students intensify their efforts to earn the absent credits for graduation with their cohort (Neild, 2009, p. 55). Neild found that a long-term educational consequence is that there is an increased risk for students to drop out of high school based on the researcher's review of a large urban district with student databases that track the educational progress of individual students from 1 year to the next. The researcher looked at the data for the Chicago Public Schools and found that the ninth-grade average for on-time graduation was 22%, compared with the 81% graduation rate for the students who were on track for high school. She also found that in Philadelphia, just 20% of ninth graders who were not promoted to the tenth grade on time were likely to graduate from high school within 6 years (Neild, 2009, p. 56).

Neild (2009) also researched how getting off track in the ninth grade correlated to national data. As a result, the researcher found that during 1996-2003, African-American

and Latino ninth graders were twice as likely as Caucasian students to spend an additional year in the ninth grade. Additionally, “approximately 5 percent of ninth-grade boys were retained in ninth-grade at almost twice the rate of girls” (Neild, 2009, p. 58). The researcher’s further analysis of the Common Core of Data (CCD) from the 2002-2003 and 2003-2004 school years showed that compared to districts in rural or suburban communities, school districts in large cities were more likely to have a tenth-grade enrollment that was no greater than 90% of their ninth-grade enrollment. Neild showed that 50% of the researched districts in large cities had tenth-grade enrollments that were 90% or less of the ninth grade, compared with 30% of school districts in rural and suburban areas (p. 58).

At the conclusion of reviewing the data, Neild (2009) then provided the answers for why ninth-grade students get off track. As a result, she established four general types of explanations or theories, based on her research, that she felt exemplified why the ninth grade posed obstacles for some students. The initial explanation is that the ninth grade concurs with life-course changes such as decreased parental guidance and increased peer influence. The researcher found that many studies had shown that parental control diminishes when children enter high school. This reduction of parental monitoring and support, in correlation with social influences, could lead to increased risk-taking behaviors and declining academic performance. Second, Neild used the explanation that ninth-grade students have difficulty when moving to a new school, which causes them to break the bonds they have formed with their middle school teachers and peers. The new school environment forces students to “negotiate new social relationships and adapt to the practices and routines of the new school” (Neild, 2009, p. 59). Next, the researcher focused on the idea that many students are inadequately prepared for high school. This

theory considers the students who were inadequately challenged before high school but earned respectable grades. As a result, these students may enter high school with limited math and reading skills and feel overwhelmed by the academic demands that high schools provide. The thought is that regardless of the students' academic levels, students have learned how to coast through to the next grade before high school but do not realize until it is too late that advancement to the next grade in high school requires earning credits. Finally, Neild analyzed the impact that high school organization and school climate had on ninth-grade students falling off track. The traditional organizational structure of the high school includes teachers sectioned off by subject-matter departments, changing to new classes after a designated period, and having new classmates from one class to another throughout the year. Neild found data from major cities that supported the idea that a "substantial minority of off-track ninth-graders tested at or above grade level or had no course failures or poor attendance in eighth grade, or both" (Neild, 2009, p. 61). The researcher felt that the group of minority off-track ninth graders resulted from student lack of ability to adapt to the high school organizational structure and climate.

At the conclusion of Neild's (2009) research, the researcher sought evidence of ways that schools can keep ninth graders on track. The researcher felt that each explanation or theory suggested a particular type of educational policy response. The researcher provided the following suggestions for school personnel and educational leaders as they work to provide solutions to the ninth grade falling off track issue:

If getting off track in ninth-grade is explained primarily by adolescent development, then the best response should be to surround young people with supportive and caring adults who can help them navigate the treacherous waters

of growing up. If the transition to a new school is the culprit, then the most appropriate response should be to find ways to ease the transition to a new school, postpone the transition to high school, or eliminate the transition altogether. If poor preparation for high school explains getting off track, then policy should be focused on improving instruction in the elementary and middle grades and providing academic catch-up opportunities for students who enter high school without the necessary skills. Alternatively, if large, anonymous high schools are the real problem, the policy focus should be on imagining new ways of organizing high school. (Neild, 2009, p. 63)

The researcher noted that the task of helping ninth graders be successful required the efforts of all educators, pre-K through eighth grade, to prepare students for the academic requirements of the ninth grade. However, the responsibility for implementing curriculum, school organizational features, and strong teachers belongs to the high schools, where there should be a focus on increasing the chances for all ninth graders to have a successful transition (Neild, 2009, p. 72).

All students participate in educational transitions at various times throughout their educational path such as the transition from elementary to middle school and middle to high school (Smith, 2006). In the United States, it is both normative and predictable for students to transition between the eighth and ninth grade (Benner & Graham, 2009); however, even with this expectation, it is important for educators to consider the unique “set of past experiences, personal resources, and expectations” that students bring with them during their transition (Benner & Graham, 2009, p. 357). As researchers continue to analyze the idea of educational transitions and the impact on students, they have narrowed down three main concerns that students have identified when transitioning:

academic, procedural, and social (Uvaas & McKevitt, 2013). The initial concern of academic changes during transition involves concerns with “new teachers and expectations, more homework, and difficult course work” (Uvaas & McKevitt, 2013, p. 70), while the second concern of the students represents the need to understand new school layouts and be able to adapt and manage multiple classes and different teachers. Last, the third concern of the students studied involves social adjustment, in that they worry about “adjusting to new classmates, making new friends, and learning the social expectations within the school” (Uvaas & McKevitt, 2013, p. 70). In addition, researchers have found that the students who experience difficulties during their transition from middle to high school, even when supported by peers, still experience a drop in grade point average (GPA) as a result of being the distraction of peer relationships (Smith, 2006). Benner and Graham (2009) surveyed 2,000 students from different racial/ethnic groups before and after they completed their transition to high school. The results of the survey showed that most “students felt increasingly lonely across the first 2 years of high school, and the higher levels of anxiety they experienced across the transition did not diminish with time” (Benner & Graham, 2009, p. 370).

The ninth-grade year represents the beginning of greater educational requirements for students and the accountability for high schools to help students successfully meet such requirements. “The ninth-grade is the foundation year for most high schools” (Habeeb, Moore, & Seibert, 2008, p. 2). The freshman year is the year schools are expected to establish the compulsion for students to plan for their future while providing them with the resources and platforms required to reach their goals. The success of students in the ninth grade serves as a critical element in the determination of the culture of a school (Habeeb et al., 2008, p. 5). “Those who succeed in their first year are more

likely to continue to do well in the following years and eventually graduate”

(Allensworth & Easton, 2005, p. 1). If there is a success in the execution of the first year of high school, the ninth-grade year can help to establish a school atmosphere focused on training ninth graders in the ways of success, which they can carry with them over the next 3 years. This positive spin on the ninth grade can help to alter the school atmosphere and “transform a school from the bottom up” (Habeeb et al. 2008, p. 7).

The concerns regarding the ninth-grade transition have been prevalent for many years. The identification of the “ninth-grade bulge,” the number of students not promoted out of the ninth grade (National High School Center, 2011), has been a cause for unease for educators since the 1970s. Based on research by Walt Haney and colleagues, it was found that in “the thirty years from 1970 to 2000, ninth-grade increasingly became a primary bottleneck grade” (Neild, 2009, p. 56). Today, ninth-grade graduation is still a concern. The average freshman graduation rate (AFGR) in 2009-2010 for North Carolina was 76.9, which was -1.3 points below the national average of 78.2 for ninth-grade graduation rates in 2009-2010 (U.S. Department of Education, 2013a). This average is a common metric for calculating a 4-year on-time graduation rate across all states of the United States. “The AFGR is the number of regular diploma recipients in a given year divided by the average of the membership in grades 8, 9, and 10 reported 5, 4, and 3 years earlier” (U.S. Department of Education, 2013a, p. 2). Additionally, in 2009-2010, the number of dropouts increased as the grade level increased. This increase in dropouts by grade level was true for 24 states; however, in North Carolina the largest group of dropouts for 2009-2010 were in the ninth-grade class with a 4.9% dropout rate. Figure 1 provides a glimpse of the national public high school numbers of students who dropped out for Grades 9-12 during the 2009-2010

school term.

State or jurisdiction	Grade 9 ¹		Grade 10 ¹		Grade 11 ¹		Grade 12 ¹	
	Number of dropouts	Event dropout rate	Number of dropouts	Event dropout rate	Number of dropouts	Event dropout rate	Number of dropouts	Event dropout rate
Total²	104,756	2.6	113,370	3.0	117,536	3.3	175,806	5.1
Alabama	864	1.4	1,128	2.0	1,048	2.1	862	1.8
Alaska	404	4.0	551	5.5	1,014	9.3	851	8.7
Arizona	4,207	5.1	4,594	5.7	5,269	7.0	10,795	13.6
Arkansas	720	1.9	1,130	3.2	1,427	4.4	1,613	5.3
California	13,849	2.6	15,518	3.1	20,625	4.2	42,587	8.9
Colorado	1,957	3.1	2,216	3.7	3,045	5.3	5,673	9.7
Connecticut	1,316	2.8	1,127	2.6	1,452	3.4	1,299	3.2
Delaware	546	4.7	386	3.7	299	3.4	288	3.5
District of Columbia ³	501	8.1	262	5.9	153	4.2	133	4.0
Florida	4,189	1.9	4,348	2.2	4,678	2.4	4,816	2.8
Georgia	5,800	4.0	5,095	4.2	4,074	3.8	2,800	2.9
Hawaii	562	3.7	816	5.7	726	5.8	632	6.0
Idaho	211	1.0	235	1.1	301	1.5	386	2.0
Illinois	3,482	2.0	5,287	3.1	3,970	2.7	5,801	4.0
Indiana	373	0.4	945	1.2	1,349	1.7	2,346	3.2
Iowa	363	1.0	713	1.9	1,276	3.5	2,747	7.1
Kansas	442	1.2	661	1.9	765	2.3	1,105	3.3
Kentucky	1,076	2.0	1,769	3.5	1,762	3.8	1,615	3.7
Louisiana	3,229	5.7	1,920	4.2	1,663	4.1	1,892	4.9
Maine	252	1.7	349	2.3	703	4.8	1,260	8.3
Maryland	1,998	2.7	2,029	3.0	1,686	2.7	1,369	2.2
Massachusetts	2,356	3.0	2,045	2.8	1,837	2.6	1,847	2.7
Michigan	4,305	3.1	6,661	4.9	5,318	4.2	6,699	5.3
Minnesota	337	0.5	453	0.7	796	1.2	2,752	3.7
Mississippi	2,399	6.0	2,651	7.3	2,339	7.3	2,023	7.0
Missouri	2,139	2.9	2,009	2.9	2,449	3.6	3,245	4.8
Montana	340	2.9	435	3.9	527	4.9	599	5.7
Nebraska	186	0.8	372	1.7	538	2.5	825	3.7
Nevada	790	2.3	1,389	4.0	1,294	4.4	2,071	8.0
New Hampshire	3	#	6	#	90	0.6	667	4.3
New Jersey	1,696	1.6	1,667	1.6	1,522	1.5	1,594	1.6
New Mexico	2,229	7.5	2,075	7.8	1,484	6.6	1,021	5.1
New York	7,354	3.1	8,222	3.5	6,674	3.4	8,931	4.7
North Carolina	6,553	5.1	5,535	4.9	4,769	4.8	3,338	3.8

Note. Public high school numbers of dropouts and event dropout rates for Grades 9-12, by grade and state or jurisdiction: School year 2009-2010 (Stillwell & Sable, 2013).

Figure 1. Summary of National High School Dropouts for 2009-2010.

Currently, several changes in education continue to aid in the “bulge” of ninth-grade students. In recent educational reform movements, three main stages of school reform impact the success of all students, more specifically ninth graders. The first stage is the implementation of the Common Core Standards which require a new set of required benchmarks that “define what students should know and be able to do at the end of each grade” (Glastris, 2012, p. 1). These standards are a result of the state-led effort to have common standards across states by the state leaders of 48 states, two territories, and the District of Columbia. The states and their leaders participated through their membership in the National Governors Association Center for Best Practices and the Council of the

Chief State School Officers (Common Core State Standards Initiative, 2016). The Common Core Standards set higher expectations for students, detailing the skills and information they should master to be considered college and career ready. The next stage of educational reform involves the development of new high stakes assessments based on the standards as defined in the Common Core curriculum. The goal of these evaluations is to provide parents, teachers, and policymakers with meaningful feedback that demonstrates the progress of students as they work to gain the skills needed for success in high school, college, career opportunities, and life (Common Core State Standards Initiative, 2016, p. 2). The assessments are the “tests used to determine whether students have mastered the standards” (Flannery, 2015, p. 1). Last, the increase in computer-based learning software where testing happens as students learn and create is the final stage of current educational reform (Glastris, 2012, p. 1). Upon the completion of this stage, student learning and completion of assessments will combine into one process, with high stakes testing as we know it disappearing (Glastris, 2012, p. 2). The purpose of all three of these reform efforts from states and educational leaders was to attempt to correct the blemishes in the past curriculum standards and assessment system, such as vagueness in skills covered, and increase the use of higher order thinking skills; however, the reforms do not account for the significant number of ninth-grade students who lack basic skills both academically and socially before being required to meet the demands of the reform. The new waves of school reforms are designed to get all students “to think critically and independently, solve complex problems, apply knowledge to novel situations, work in teams, or communicate effectively” (Glastris, 2012, p. 3).

It is important for educational leaders to identify the problem and develop effective solutions to address the problem to reduce the ninth-grade bulge and improve

high school transition and completion. The identification is critical to making the problem visible, as leaders work to develop steps to support the continuous progress of ninth-grade students as they move through the education pathway. Miao and Wheelock (2005) offered numerous suggestions for helping make the crisis associated with the ninth-grade bulge a critical factor for educational leaders. The first stage incorporates the notion of making the ninth-grade bulge visible to the public, so the data used in standardized assessments can contribute to the development of methods to assist low-performing ninth-grade students when considering school improvement methods. The researchers considered the school accountability policies of recent years which have defined school improvement with regard to testing score gains. The use of No Child Left Behind (NCLB) helped to create a new dimension for assessing school performance by requiring schools to report graduation rates to the public. The use of high stakes accountability being attached to test scores has contributed to using the ninth grade as a “holding tank for the weakest students and result in removing some from the test-taking population in later high school grades” (Miao & Wheelock, 2005, p. 2). As a result, the researchers suggested that educational leaders make the ninth-grade bulge visible and related to high school holding power by reporting district and school graduation rates based on ninth-grade enrollment for each subgroup. Also, the researchers looked at ways to provide a range of support services for students so schools can strengthen the transition from eighth to tenth grade. They felt that the use of extra academic support, when offered early and often, should be offered before students begin to fail, which could help improve course passing and strengthen student motivation to remain in school. The supports provided could include the use of audiotapes for students to listen to complete assigned readings, direct instruction in study skills as part of the ninth-grade curriculum,

the designation of a parent involvement coordinator to conduct meetings about attendance and discipline, and the collaboration of school leaders with community-based organizations to expand resources available to monitor student attendance and behavior.

Miao and Wheelock's (2005) next suggestion for educational leaders is to consider the revision of district and school policies and practices that may undermine school engagement. Again, the NCLB legislation created a bit of a worry that the pressure put on districts and schools to look good on analytical models added to the tampering of enrollments by school leaders. To eliminate this trend, the researchers suggested that leaders consider "alternatives to grade retention in every grade across each district to reduce the number students who arrive in the ninth-grade already overage for their grade" (Miao & Wheelock, 2005, p. 3). The researchers hold to the idea that retention, no matter the grade, undermines both achievement and motivation and contributes to truancy and discipline concerns. They also feel that schools that provide services for students when they need them will help to produce more positive student success results. Last, the researchers would like for educational leaders to consider comprehensive high school reform based on talent development principles beginning in the ninth grade. Districts where the ninth-grade bulge is of urgent concern, where sometimes only one half of the students who begin ninth grade graduate 4 years later, should consider "planning for and implementing schoolwide approaches designed to strengthen ninth-grade for all students, especially the most vulnerable" (Miao & Wheelock, 2005, p. 5). The idea of using the Talent Development High School model is one way for districts to do so. The use of the Talent Development High School model involves districts establishing small learning communities (SLCs) organized around interdisciplinary teacher teams with the sharing of the same students and common

planning time. Additionally, this model includes the use of curriculum that leads to advanced English and mathematics coursework, extra help sessions, and parent and community involvement activities that foster student career and college development (Miao & Wheelock, 2005, p. 5).

In a study conducted by West (2009), to show the potential of what could be learned if ninth-grade retention data were readily available by states showed that in North Carolina, for the 2004-2005 school year, every two in 10 students repeated the ninth grade. West found that 79.6% of North Carolina students were in the ninth grade for the first time and that the rates of first time ninth-grade students diminished as the size of the schools increased (p. 16). An additional study conducted by Jonsson (2004) reported that North Carolina annually retained about 15% of its ninth graders at that time. There was a visible connection between ninth-grade retention and dropout rates, with a display of one of five students failing to return to school for their tenth-grade year (Ratliff & Wilson-Jones, 2010, p. 2). Furthermore, a case study of one student's journey through high school by Schulte (2002) also showed that students with goals of completing high school can easily fall off track and become "at risk" of dropping out. The researcher found that the lack of success the student experienced in the ninth grade ultimately impacted her desire and ability to graduate from high school. All of this research helps to support the belief that "the ninth-grade year is a critical year" that can directly impact a student's ability to succeed in Grades 10-12 (Schulte, 2002, p. 2).

The declining graduation rates of ninth-grade students result in an increase in costs for individual students, their families, and communities. "Research and examples of effective practice together point to policy-wise and service-rich approaches that can reverse this trend" (Miao & Wheelock, 2005, p. 3). School districts that consider the use

of ninth-grade transition programs are taking the appropriate steps to making the completion of high school a top priority for their students.

When designing ninth-grade transition programs, Dynarski et al. (2008) recommended that schools and districts employ data systems that support an accurate diagnosis of the number of students who are at risk of dropping out. The What Works Clearinghouse encourages the assignment of adult advocates for students at risk of dropping out while providing academic support and enrichment to improve academic performance. Similarly, the What Works Clearinghouse suggests that the personalization of the learning environment and instructional process help to provide rigorous and relevant instruction that can better engage students in learning (Dynarski et al., 2008).

The use of interventions to ease the transition to high school encourages the use of effective practices that will exemplify the strategic objective of the program (Smith, Feldwisch, & Abell, 2006). It is critical to use the time that students spend in the ninth grade to include transition supports that are designed to assure all students have an equal opportunity to succeed. The interventions used should encompass programs that promote and maintain positive attitudes during the transition. There is also a need for staff to anticipate and prevent problems and provide special assistance to those whose problems make it highly likely that the transition will be difficult to negotiate. In addition, “the monitoring of student transition is critical to provide an adequate response to the first indication a student is having transition problems” (Center for Mental Health in Schools at UCLA, 2011, p. 1). Last, “the support for transition should include programs that are designed to ‘deepen students’ knowledge and skills, increase social and emotional problem-solving capabilities, and enhance student feelings of competence, self-determination, and connectedness with supportive others” (Center for Mental Health in

Schools at UCLA, 2011, p. 1).

Purpose

The purpose of this case study was to examine the impact that career academies, a form of ninth-grade transition programs, have on student academic dispositions, learning behaviors, and educational self-efficacy. The goal of this research was to examine career academies at three high schools within the coastal plain region of east central North Carolina and to identify the impact of student participation in this specific form of a ninth-grade transition program as the students progressed through high school and entered the workforce. This research can expand the identification of components a successful career academy can have on diverse groups of students based on the academy's context and implementation strategies.

Background and Significance of the Problem

Ninth-grade students comprise the highest percentage of the overall high school population, with promotion rates between ninth and tenth grade being much lower than rates for any other grades (National High School Center, 2011, p. 1). Furthermore, ninth-grade students are "3-5 times more likely to fail a class in the ninth-grade than students in higher grades" (Southern Regional Educational Board, 2002, p. 24). Researchers at John Hopkins University found that up to 40% of ninth-grade students in cities with the highest dropout rates repeat this grade level, but only 10-15% of those repeaters go on to graduate (Letgers & Balfanz, 2004). With these increasing numbers, it is dire for educators to seek ways to help ninth-grade students stay in school, graduate, and move on to meaningful and productive careers (Oakes, 2009).

Most educational leaders seek to provide students with educational opportunities that prepare them for success in school, career, and life in general; however, how that

success is defined and measured varies widely, because students learn and grow in various ways. “Research points to several interrelated domains of learning: knowledge (acquiring information), skills (the ability to demonstrate a particular behavioral repertoire), and dispositions (mindsets that become internalized, such as curiosity and persistence)” (Youth Development Executives of King County, 2012, p. 3). Nationally, high value has been placed on measuring student knowledge acquisition based on standardized testing; however, little attention has been focused on the other types of learning that can also impact a student’s success in school.

By naming and measuring these important skills and dispositions, sometimes referred to as “noncognitive factors,” and using the data to drive improvements in service delivery, we will be better to support young people where they are and target interventions effectively. (Youth Development Executives of King County, 2012, p. 3)

The noncognitive factors are substantially visible through the academic behaviors that are necessary to exceed in coursework at all levels. Academic behaviors are usually behaviors that are associated with being a “good student,” such as attending class regularly, arriving to work with necessary supplies and materials, paying attention, actively participating in classroom activities and discussions, and dedicating time outside of school to study and complete homework (Youth Development Executives of King County, 2012, p. 3). Attendance concerns, course failure in core subject areas, and disciplinary actions have all proven to be significant factors in student scholastic achievement. These alerts can assist educators in their identification of students who are at risk for high school failure (Youth Development Executives of King County, 2012, p. 3). These student behaviors are considered the visible, outward signs of student engagement and effort. Due to these

behaviors being observable, they tend to be easy to describe, monitor, and measure.

Academic behaviors are quite often an outcome of interest in evaluating interventions designed to improve students' school performance. Many programs, policies, and even curricula could reasonably be considered effective if they lead to an increase in student attendance, homework completion, studying or class participation. (Farrington et al., 2012, p. 8)

Research on academic behaviors has provided evidence that a student's academic behavior can play a central role in the determination of their grades in school. The single most important academic behavior is class attendance. A student's attendance can have a strong effect on academic performance. "Extended or repeated absences and truancy can indicate other problems interfering in an adolescent's education that would affect both attendance and course performance" (Farrington et al., 2012, p. 15); however, if there is not a clear indication that other factors exist, attendance has a strong impact on grades and is more foretelling of course failure than are student test scores.

Academic behaviors can have a direct and indirect effect on student grades and school success. In a direct notion, almost all high school student grades are based on student work, with the completion and submission of the work being academic behaviors. The indirect influence of academic behaviors includes the student's ability to complete higher quality work or simply learn more content and develop more skills (Farrington et al., 2012, p. 16). Research has shown that student academic behaviors can be affected by the extent to which student completion is observed, with teachers or other adult advocates interceding when student behavior declines below expectations. "There is strong evidence that academic behaviors are a major determinate of course grades and that improving students' academic behaviors would increase students' course performance" (Farrington et

al., 2012, p. 19).

Researchers believe there is a link between dispositions and efficient learning. Bertram and Pascal identified three core elements of effective learners: “dispositions to learn, social competence and self-concept, and social and emotional well-being” (Da Ros-Voseles & Fowler-Haughey, 2007, p. 3). These researchers argued that a singular focus on core subject areas such as language and math is not enough to sufficiently develop young minds. To encourage teachers to focus on wider outcomes when attempting to sustain the minds of students, the researchers identified four dispositions they felt are indicative of effective learning. The first disposition is that of independence, or the student’s ability to be self-sufficient, to self-organize, and to self-manage. Second, the student disposition of creativity focuses on the students being allowed to show their curiosity and interest in their world. The next disposition is the disposition of self-motivation which, when encouraged, can enable students to become independently involved and engrossed in activities and challenges. The final disposition addresses the idea of resilience, which is the student’s ability to bounce back after encountering barriers and frustrations while maintaining temperament, personality, and spirit (Da Ros-Voseles & Fowler-Haughey, 2007, p. 4).

In addition to Bertram and Pascal, other researchers have identified skills and dispositions that support student success in high school in the 21st century. The first indicator is that of motivation and engagement, which includes student self-management and future orientation, positive mindsets, and belonging and identity. In this area, the students will have school success because they can set short- and long-term goals, have positive beliefs regarding their potential and choices, have self-efficacy, and can form a personal identity in their educational environment. The indicator that addresses 21st century skills directly incorporates the student’s ability to develop interpersonal

relationships and use creativity and critical thinking when necessary. In this area, the students will demonstrate success when they can effectively learn from and work within a collaborative setting; effectively communicate, convey, and negotiate interest; have intellectual inventiveness used to generate, discover, and restructure ideas or alternatives; and demonstrate the ability to reflect on their assumptions and thinking for deeper understanding (Youth Development Executives of King County, 2012, p. 6).

Self-efficacy relates to a student's perception of their capabilities. It can have a clear self-evaluative dimension that can lead to high or low perceived student self-efficacy. Research has shown that "individual differences in perceived self-efficacy have been shown to be better predictors of performance than previous achievement or ability and seem particularly important when individuals face adversity" (Cassidy, 2015, p. 3). Researchers have found that there is a correlation between academic self-efficacy and academic resilience. Students are considered resilient when they are able to maintain a high level of motivational achievement and performance even when faced with stressful events and conditions that place them at risk of poor performance. Studies have found that a focus on "educational resilience may help address the gap in achievement between students who are successful and those who at risk of failure" (Cassidy, 2015, p. 2). Furthermore, researchers suggest that instead of having fixed academic resilience where individuals have fixed beliefs about their level of intelligence and ability, students should work to have a growth mindset. The growth mindset allows them to view their intelligence and ability as simply a foundation for improvement and the understanding that trials, including failure, are chances to develop their aptitude for success through effort and practice. To promote the growth mindset, students should focus on alterable factors that include social competence, problem-solving skills, independence, motivation and goal

orientation, positive use of time, family life, learning environments, and a sense of purpose (Cassidy, 2015, pp. 2-3).

Martin and Marsh (2006) examined the educational and psychological correlations of academic resilience. The researchers hypothesized that self-efficacy, planning, persistence, anxiety, and uncertain control were predictors of academic resilience. They proposed a 5-C model to predict academic resilience: confidence (self-efficacy), coordination (planning), control, composure (low anxiety), and commitment (persistence). The data analysis showed that academic resilience successively predicts three educational and psychological outcomes: “enjoyment of school, class participation, and general self-esteem over and above the motivation and engagement factors underpinning academic resilience” (Martin & Marsh, 2006, p. 14). The researchers’ findings support implications for pedagogical practice in that the identification of the distinct factors underpinning academic resilience assists in enabling more aimed intervention and support to increase student self-efficacy, control, planning, and persistence while also reducing their anxiety. In addition, the research supports findings of student abilities to deal with setbacks, challenges, and pressure in the educational setting (Martin & Marsh, 2006, p. 277).

Educational environments contain many potential influences on an adolescent’s self-efficacy. These influences include “how instruction is structured, the ease or difficulty of learning, feedback about performance, competition, grading practices, amount and type of teacher attention and school transitions” (Schunk & Meece, 2006, p. 74). Often, students who experience learning difficulties feel they lack the ability, which can decrease their self-efficacy. Teacher feedback on student performance conveys to students their progress and can raise self-efficacy but also lower self-efficacy because it establishes how far behind a student may be. Likewise, students may have a decrease in self-efficacy if they are in a

classroom with high competition and social comparison among their peers. Conclusively, “school transitions, middle to high school, can bring many changes in teacher relations, peer groups, classes and grading practices, all of which can influence a student’s self-efficacy” (Schunk & Meece, 2006, pp. 74-75). Researchers have found that “high school students with high self-efficacy for problem solving demonstrated greater performance-monitoring and persistence than did students with lower self-efficacy” (Schunk & Meece, 2006, p. 79).

To support student self-efficacy, schools must understand student developmental needs and help the student establish a sense of self-efficacy as it appeals to several sources. In the area of structure curricular and social experiences, schools and parents should work to structure curriculum and social experiences that aid in the development of student self-efficacy. The students will feel more self-efficacious about learning when they can make the connection between what they are learning and what they already know. Additionally, placing students in peer groups that model those similar to them can have a better effect on student self-efficacy for learning. It is always critical to keep parents informed and involved in school activities. When parents are knowledgeable of school activities, they can help to promote a positive influence on student self-efficacy about school at home. There also needs to be a focus on ensuring a smooth transition for a student. There is a natural stress associated with school transitions, which can reduce if transition programs are in place to help the students become familiar with their new environment and believe there is support to help them, which in turn can increase their self-efficacy for succeeding in the new school. Last, a student’s self-efficacy can enhance if there is a focus on teaching effective life skills they can use in the future. Some of these skills include study skills and other skills such as “self-control, conflict management and decision-making” (Schunk &

Meece, 2006, p. 89).

Research Questions

The questions examined within this case study range from the impact career academies can have on all types of students to more narrowed concentrations that involve the influence the academies have on specific student group interaction with education as they participate in the program. Therefore, discovering relationships that show specific outcomes and program components can assist in more precise reporting. The questions designed to focus this study and determine the outcomes were as follows.

RQ1. How do career academies impact the learning behaviors of participating students as the students transition through high school?

RQ2. What is the impact of career academies on student academic dispositions?

RQ3. How do career academies influence the educational self-efficacy of participating students as the students transition through high school?

Definitions of Key Terms

Academic resilience. “An increased likelihood of (academic) success despite environmental adversities” (Cassidy, 2015, p. 2).

American Recovery and Reinvestment Act (ARRA). Signed into law on February 17, 2009 by President Barack Obama. The Act is an “unprecedented effort to jumpstart our economy, save and create millions of jobs, and put down payment on addressing long-neglected challenges so that our country can thrive in the 21st century” (The White House, 2009, p. 1).

Behaviors. The actions of students within the educational environment that are positive or negative when interacting with instruction, peers, and staff.

Career academy. “School-within-a-school or small learning community (SLC)

that provides a college-preparatory curriculum with a career related theme” (Stern, Dayton, & Raby, 2010, p. 5).

Career readiness. An indicator of whether students are equipped with the skills and attributes they need to successfully seek and obtain gainful employment (Totura, 2015).

College readiness. “As a level of preparation a student needs to enroll and succeed, without remediation, in a credit-bearing general education course at a post-secondary institution that offers baccalaureate degree or transfer to a baccalaureate program” (Totura, 2015, p. 1).

Correlational method. The researcher has no control over the variables in the study. “This allows her to see if the two variables are correlated – whether changes in one are associated with changes in the other” (Gellert, 2013, p. 1).

Dispositions. A leaning toward a way of thinking or acting (Merriam-Webster, 2007).

MDRC. Manpower Demonstration Research Corporation.

Ninth-grade academy. “A year long, uniquely designed school program that provides ninth-graders with the resources and support they need” (Cook, Fowler, & Harris, 2008, p. 2).

Ninth-grade transition programs. Programs designed for first-year high school students that aid in the successful shift of students from middle school structures to high school academics and expectations.

NCLB. Amends the Elementary and Secondary Education Act of 1965 (ESEA) to revise, reauthorize, and consolidate various programs (Congress.Gov, 2002).

On track. A student has completed enough credits by the end of the school year

for promotion to the tenth grade and have failed no more than one semester in a core subject area (Allensworth & Easton, 2005).

Reform. “To improve (an existing institution, law, practice, etc.) by altercation or correction of abuses” (Collins Dictionaries, 2008).

Relationships. Small, personalized learning environments where teams of teachers and peers provide students with academic and social guidance (Lenz, 2008).

Relevance. “Education must have meaning every day” (Lenz, 2008, p. 1).

Retention. A term applied when a student has not obtained the necessary credits for promotion to a higher grade level.

Rigor. Employment of demanding project-learning, college-preparatory curriculum that sets high expectations for everyone (Lenz, 2008).

Self-efficacy. “The belief in one’s capabilities to achieve a goal or an outcome” (Kirk, 2016, p. 1).

School-to-Work Opportunities Act (STWOA) of 1994. “The Act sought to develop stronger ties between secondary and postsecondary learning and the workplace, and to increase student engagement and success in school” (America’s Future Workforce, 2013, p. 1).

SLC. “The practice of organizing secondary schools into smaller units” (Oxley, 2005, p. 44).

Standardized assessment. Any form of test that (1) requires all test takers to answer the same questions or a selection of questions from a common bank of questions in the same way, and (2) is scored in a “standard” or consistent manner, which makes it possible to compare the relative performance of individual students or groups of students (Great Schools Partnership, 2015).

Transition. The movement of students from one setting to the next.

Truancy. The act of being absent from school without permission.

Outline of Dissertation

The division of the dissertation includes five chapters and an appendix. The first chapter introduces the importance of a successful transition from eighth to ninth grade, school reform based on ninth-grade transition programs, the purpose of the study, and the background and significance of the study. Chapter 2 presents a comprehensive review of literature research on the ninth-grade transition, career academies, and research conducted to support the model's efficiency. Chapter 3 provides an analysis of the methodology, research methods, data collection, and data analysis used within the study. Chapter 4 provides a synopsis of the findings and synthesis of the data acquired from the qualitative and quantitative data. Chapter 5 provides a narrative exposition of the findings, answers to the research questions, conclusions, and recommendations. The references used in the dissertation follow, as do the appendices.

Chapter 2: Literature Review

Introduction

For many students, the promotion to ninth grade is exciting and welcomed. These students seem eager to experience the setting as well as academic and social demands of the high school. Typically, the successful ninth-grade students “are the students who have a high probability of graduating from high school within four years” (Neild, 2009, p. 53). For other students, the transition is not as appealing; and for some, the experience can become distressing and perplexing. These students seem to have a difficult time adapting to the new high school environment, teacher expectations, classroom structures, and the school culture (Roybal, Thornton, & Usinger, 2014). As a result, many of these students experience high rates of truancy, discipline referrals, failures, and retentions (Habeeb, 2013).

The purpose of this study was to investigate the impact career academies have on student academic dispositions, learning behaviors, and educational self-efficacy. The aim of this research was to examine career academies at three high schools within the coastal plain region of east central North Carolina. It was the desire of the researcher to identify the impact of student participation in this specific form of a ninth-grade transition program for students who seek to complete high school. It is important for educators to recognize the need for the ninth grade to “move from being a gatekeeper to the opportunity to a springboard to success” (Rennie-Hill & Warren, 2011, p. 7).

Ninth-Grade Transition Programs

There are multiple types of ninth-grade transition programs designed by schools and districts to ease the transition from middle school to high school. The design of some programs aims at meeting short-term results such as a 1-day orientation to the high

school, while other programs have more long-term results (Richards, 2009). Research suggests that students who participate in ninth-grade transition programs are more likely to experience a smooth transition to high school than students who do not have such an opportunity (Smith, 2006). Although the problems of transitioning to ninth grade are complex, the solutions to help ease this process “can be simple and affordable” (McCallumore & Sparapani, 2010, p. 61). These programs are designed to assist students in navigating decisions that involve dropping out of high school, academic advancement, or matriculation in college (Blount, 2012).

The early orientation and preparation transition programs are designed to assist eighth-grade students and parents in preparing for the transition to the ninth grade. The early orientation program is typically conducted by high school staff to help familiarize students, parents, teachers, and leaders with high school expectations such as study skills, the environment, and curriculum (Bottoms, 2008). The goal is for middle and high school administrators, teachers, parents, and students to work in conjunction throughout the final middle grade year. This collaboration can help increase the involvement of parents and families in the transition process while also raising the awareness of academic and extracurricular programs offered at the high school level. Similarly, the collaboration can increase the comfort level of students and reduce anxiety through orientation activities and resources that are designed to make the transition easier (Texas Comprehensive Center, 2008).

The summer bridge program is designed to assist incoming ninth-grade students with specific academic deficits through a 4- to 6-week program. Students are selected to attend after review of eighth-grade assessment data from state standardized testing, course grades, or behaviors predictive of dropping out such as absenteeism (Bottoms,

2008, p. 5). Teachers who have experience working with eighth-grade students and who have an awareness of the academic and social demands placed on high school students lead the program (Legters, Smerdon, & Early, 2008). The curriculum and instruction are designed to address mathematics and reading deficits as well as student study skills and career exploration (Bottoms, 2008, pp. 5-6). Butrymowicz and Shaw (2010) attributed improved passing rates, fewer discipline problems, and increased self-esteem to the use of summer bridge programs (p. 1).

Freshman advisory or seminar courses for ninth-grade students are in school transition courses that help to prepare students for success in their new high school environment. The courses assist students in the development of the skills and knowledge sets needed to meet the academic and social expectations of their new school and teachers (Legters et al., 2008, p. 2). Schools that opt to use the freshman advisory transition program typically offer classes to students who meet between two to three times per week. The meeting frequency allows for small-group sessions with teachers; that provides a time for the discussion of graduation requirements, an overview of the students' 4-year plan, presentation of scenarios that highlight the significance of grades and accessing supports, and the encouragement of extracurricular involvement (Hargrove, Godin, & Dodd, 2013). The freshman seminar course is a one-semester, stand-alone course for entering ninth graders. This course is designed to help students transition from the middle school setting, prepare for the increased academic rigor of high school, and meet the social and emotional challenges they may encounter over the succeeding 4 years (School-Connect, 2015). Students who participate in freshman seminar could use the opportunity to "catch-up" on coursework during the first semester (Texas Comprehensive Center, 2008, p. 7).

The double-dosing or catch-up course design is for students who are having trouble academically in reading and/or math. Neild (2009) suggested that “students with poor math and/or reading skills are usually overwhelmed by the academic demands of high school” (p. 59). Many schools assign struggling ninth-grade students in catch-up courses where they receive double the instruction in curriculum areas where they need additional support to address these deficiencies (Legters et al., 2008, p. 4). In the English/language arts catch-up course, the goal is for the ninth-grade students to receive an assist in the completion of college-preparatory English 9 with continued extra help and support throughout the second semester of their ninth-grade year, with the opportunity to acquire the applicable studying and listening skills that characterize independent learners. Likewise, the catch-up mathematics course is also expected to be one semester, with the students receiving support to complete Algebra I or its equivalent during the second semester (Bottoms, 2008, pp. 7-10). There are several schools and districts in various states that employ double-dose instruction as a student support strategy, with some having seen higher test scores among the students who were enrolled (Durwood, Krone, Mazzeo, Allensworth, & Nomi, 2010).

The career exploratory course is a type of ninth-grade transition program designed to help ninth-grade students identify their personal strengths and abilities, understand the career opportunities available to them in different career areas, and to practice the skills necessary to excel in the workforce or postsecondary institutions (Texas Department of Education, 2015). The courses are “built around mini, lab-based, authentic projects that can introduce ninth-graders to a wide array of occupational specialties” (Bottoms, 2008, p. 11). The development of exploratory career programs can use three design templates. First, schools can implement the Gateway to Technology course from Project Lead the

Way (2015), which provides students with a curriculum focused on engineering and technology-related careers, while enhancing the students' abilities to innovate, think critically, and collaborate to solve problems. The next option includes the redesigning of existing ninth-grade career introductory courses to incorporate a series of mini projects throughout the year. This option allows the students to have challenging, authentic projects related to a career field as well as experience in interdisciplinary collaboration between academic and career and technical teachers (Bottoms, 2008, p. 11). Last, schools could implement the development of a series of 4- to 6-week mini courses through the incorporation of existing career and technical courses around projects with strong literacy and math components that can provide a foundation for pursuing a program of study in an identified career (Bottoms, 2008, p. 12).

The Ninth-Grade Academy is a ninth-grade transition program that uses the SLC model to physically separate ninth grade from the general high school population, either on a separate hall, wing, floor or building (Habeeb, 2013, p. 20). The three models of the Ninth-grade Academies are High Schools That Work (2012), Career Academy, and Talent Development (Harris, Fowler, & Cook, 2008, p. 2). Although each academy has a different theme or design, the overall goal is to “separate freshman to help ease the transition to high school, and increase the number of successful ninth-grade students” (McCallumore & Sparapani, 2010, p. 451).

Career Academy Model

The career academy model is a school reform model structured as SLCs that combine academics with career and college preparation. Those students who participate in the program have opportunities to receive personal, supportive, and strategic guidance from school staff and business partners as members of the program. Career academies

focus specifically on a career-related theme, providing students with an integrated curriculum (Kwong, 2010). The academies involve clusters of students who will have the same teachers and classes throughout their high school career. Extensive collaboration between academic and technical disciplines provides opportunities for students to have teachers who “meet with each other on a regular basis, share in decision-making related to administrative policies, curriculum content, and instruction” (Stern et al., 2010, p. 5). The coursework for career academies is designed to meet the academic requirements of high school as well as college and career entrance requirements needed for the academy’s field of work focus, while “work-based learning opportunities help to tie classroom activities to internships with local employer partners” (Stern et al., 2010, p. 5).

The first career academies in the 1970s and 1980s mostly focused on workplace preparation but have since transitioned to preparing students for college and universities. The first academy in 1969 was an “Electrical Academy” based at Edison High School in collaboration with the Philadelphia Electric Company (Stern et al., 2010). With this program’s success, the model was later applied to other career fields such as business, automotive, health, environmental technology, law, horticulture, tourism, and aviation. The growth of the academy model was steady and has accelerated to several thousand programs throughout the United States today (Stern et al., 2010, p. 3).

The focus of career academies has shifted greatly since the early 1980s. Recent development of the Common Core State Standards that have been adopted by 42 states has changed the core academic curriculum that is used parallel with the career-related curriculum. As a result, academies now work to integrate more rigorous and relevant academic curriculum with an integration of career and technical education courses that

assist with introducing students to the workplace while in school (Kwong, 2010, p. 21).

Although the organizational structures of career academies have remained the same, the goals and target population of students have changed since the initial inception of the model in Philadelphia in 1969. Originally, the career academy model was designed as prevention for high school dropouts, by increasing student preparation to enter a career for “students who began high school at risk of school failure” (Kemple & Snipes, 2000, p. 1). However, with new Common Core Standards and accountability testing requirements, the model centers on all students “developing the critical-thinking, problem-solving, and analytical skills” they will need to be successful (Common Core State Standards Initiative, 2016, p. 1). Thus, academies now work to integrate more rigorous and relevant academic curriculum with an integration of career and technical education courses that assist with introducing students to the workplace while in school (Kwong, 2010, p. 21).

The current career academy model is a school-within-school program that operates within the high school and offers career-related curriculum based on an explicit career theme, academic coursework, and career experience through partnerships with local business partners (REL Southeast, 2009). These types of ninth-grade transition programs aim to keep students engaged in school and prepare them for a successful transition to postsecondary education and employment (Kemple, 2008). As SLCs, the academies “combine academic and career-related courses to enhance both the rigor and relevance of the high school curriculum” (National High School Center, 2007, p. 12). There are typically 30-60 students enrolled in career academies per grade. The students take all classes together, remain with the same group of teachers over time, follow a curriculum that includes rigorous academic courses as well as career-orientated courses,

and participate in work-based learning activities (MDRC, 2014). The academies “aim to expose students to an array of careers while preparing them to graduate from high school and seek post-secondary education” (Visser, Altuna, & Safran, 2013, p. 3). The academies embody partnerships with local employers and postsecondary institutions to help expand student exposure to career options, skill requirements, and work-based learning experiences. In a career academy evaluation completed by MDRC, it was found that career academies increased the likelihood of staying in school until the end of the senior year, improved attendance, and increased the number of credits earned toward graduation (National High School Center, 2007).

In 2008, the North Carolina Department of Public Instruction conducted research on ninth-grade academies to determine the impact the academies had on students. The research was an attempt to establish more personalized and responsive high school learning environments (Harris et al., 2008). The study examined 82 schools in North Carolina that implemented ninth-grade academies. The results showed that the nonpromotion rates of ninth-grade students who participated in ninth-grade academies were significantly lower than the state average for all North Carolina schools (Warren, Fazekas, Rennie-Hill, Fancsali, & Jaffe-Walters, 2011, p. 8).

Although there has been a plethora of research on the academy model, the previous studies were unable to clearly establish conclusive evidence that the differences between the academy students’ high school experiences and outcomes in comparison to traditional students were a result of the career academy itself or from other outside variables. Evidence of the career academy model’s ability to stimulate concrete outcomes that fully impact student dispositions, self-efficacy, and behaviors will assist school administrators, teachers, and district staff as they work to develop career academies based

on the Career Academy National Standards of Practice and the needs of their current and future students. School staff can examine the areas of creating learning environments that are personalized and orderly, improving instructional content and practice, preparing students for life beyond high school, and stimulating change in student lives (Quint, 2006).

Federal Legislation

The STWOA of 1994 was enacted by the federal government to help develop stronger connections between secondary and postsecondary student learning and the workplace. The goals of the act were to assist students in learning best by “engaging in authentic, meaningful experiences within the context of the workplace and that integrated school and work-based learning” (America’s Future Workforce, 2013, p. 1). STWOA called for school reform that focused on “creating systems-not merely new programs, but also a structure of linked opportunities beginning in middle school, taking root in high school and continuing through post-secondary training” (Hughes, Bailey, & Mechur, 2001, p. 6). STWOA “specifically identifies Career Academies as a ‘preferred approach’ to creating such partnerships and implementing the principles embedded in the legislation” (Kemple & Snipes, 2000, p. 5). In 2001, research conducted by Columbia University researchers identified four key accomplishments of STWOA and its impact on education. The first accomplishment was the idea that the act improved attendance in school and decreased the likelihood that students participating in school-to-work programs would drop out. Second, the act helped to promote a high level of excitement and enthusiasm from both teachers and employers involved in school-to-work programs. Third, the act helped to increase the growth of career academies in high schools and the development of SLCs. Last, the researchers found that STWOA helped to influence the decision of many states to expand school-to-work initiatives when federal funds end

(America's Future Workforce, 2013).

The funding for STWOA ended in October 2001 for all states, which left funding to individual states or school systems. In 2009, ARRA included \$77 billion for education, although there was no an explicit target of those funds for school-to-work programs (America's Future Workforce, 2013, p. 2). The act provided the foundation for a generation of education reform by "encouraging states to adopt standards and assessments that ensure that high school graduates are prepared for college or a career" (U.S. Department of Education, 2009, p. 1). President Barack Obama and the Secretary of Education both indicated that the funds from ARRA were to be used not only to create and save jobs but to "advance reforms" (Goodwin, Lefkowitz, Woempner, & Hubbell, 2011, p. 49). The administration's priorities were best indicated by statements of promises for use of the funds from ARRA that included

college- and career-ready standards and high-quality, valid and reliable assessments for all students; development and use of pre-K through post-secondary and career data systems; increasing teacher effectiveness and ensuring an equitable distribution of qualified teachers; and turning around the lowest-performing schools. (Goodwin et al., 2011, p. 49)

In 2013, President Obama included \$1 billion dollars to "expand the number of career academies and increase opportunities for students to participate in college preparatory and career and technical curricula in their schools" (U.S. Department of Education, 2013b, p. 1). It was the desire that the funding for the initiative would assist in creating 3,000 new career academies while increasing the number of students served by 50% (U.S. Department of Education, 2013b, p. 1). If successful, career academies could then increase student achievement and reduce the drop-out rate, increase

postsecondary attainment, help industries hire American workers, improve the earning prospects of students, and align with other efforts to ensure youth and adults have the skills and credentials the economy needs (i.e., \$1.1 billion to support career and technical education; \$8 billion community college to career fund; U.S. Department of Education, 2013b, pp. 1-2).

High School Redesign Efforts

The need to redesign high schools has been prevalent for several years. There is a demand to establish education relevance for individual students in addition to the diverse workplace that students are expected to enter. In 2005, Bill Gates titled American high schools “obsolete” while stating that high schools could not “teach our kids what they need to know today” (The Association for Career and Technical Education, 2009, p. 2). In addition to Bill Gates, others have seen the need to redesign high schools and meet the needs of our 21st century learners. In a 2009 literature review conducted by Alberta Education, researchers identified several sets of fundamental principles that are assisting to guide current high school redesign efforts. The researchers’ analysis of the literature helped them to establish some common themes used to advance and center the focus on meaningful high school redesign efforts (Albert Education, 2009, p. 9). The first theme involved mastery learning, where the students are required to display mastery or establish their depth of understanding of curriculum through performance-based evaluations. The next theme included the idea of rigorous and relevant curriculum. With this theme,

all students are expected to attain learner objectives as defined in challenging and engaging curricula, curricula that have been designed to meet the career and/or postsecondary aspirations of students as well as the needs of the business

community and high education institutions. (Albert Education, 2009, p. 9)

Next, the literature recognized the theme that relates to the personalization of instruction which includes meeting the distinctive needs of every student through differentiated instructional practices. The fourth theme that was identified was that of flexible learning environment or environments created “in terms of time (scheduling and pacing) and structure (e.g., internships, project-based learning)” (Albert Education, 2009, p. 9). Additionally, the researchers focused on the theme of educator roles and professional development which help to prepare the teachers in guiding, coaching, and mentoring students in their career field. The theme of meaningful relationships relates to the idea of students and adults knowing each other well. Their relationships are characterized by “frequent positive interactions and genuine care and concern on the part of adults for student well-being, intellectual growth, and educational success” (Albert Education, 2009, p. 9). Last, the theme of home and community involvement speaks of the importance of the students’ learning environment being extended and supported by an engaging home environment as well as the business community and postsecondary education partners (Albert Education, 2009).

These themes center on the establishment of high expectations for all students on their preparedness for postsecondary education and/or careers, the integration of rigorous standards-based core academic curricula with career and technical curricula, and the provision of extensive student supports (e.g., mentors, faculty advisors, peer tutors, academic supports, internships, and differentiated instruction). In addition, the themes have identified the need for high school reform to “structure around a small learning community; support teacher professional growth; actively promote meaningful and sustained student-adult relationships; and to nurture home-school-community

alliances (e.g., parents, businesses, community organizations and/or post-secondary institutions are engaged as learning partners)” (Albert Education, 2009, p. 17).

The career academy model stands at the forefront of high school redesign efforts. Harvey and Housman (2004) developed a report that spoke of several change levers for high school reform that include a commitment to K-16, college preparation for all, teacher competence, literacy and language acquisition, tackling the dropout and “pipeline” issues, scale and size, and revisiting standards. Furthermore, the report stressed the need for schools and district leaders to redefine a new set of the “three R’s”—rigor, relevance, and relationships—to help establish a “launching pad from which to attack learning challenges” (Harvey & Housman, 2004, p. 9). The three R’s for reform framework initially promoted by the Bill and Melinda Gates Foundation serve as the foundation for career academies. Rigor focuses on making sure all students have a challenging curriculum that prepares them for college and career. Relevance centers on ensuring that students have courses and projects that clearly relate to their lives and goals. The relationship element ensures that there are a number of adults who know the students, advocate for them, and push them to achieve (Gates, 2005). The belief holds that the implementation of the three R’s works more effectively in smaller high schools, so teachers and staff can create a learning environment for students to achieve at a high level (Gates, 2005, p. 5).

SLCs

SLCs have been a method of school redesign and reform since the 1960s. The division of a high school into an SLC refers to the efforts to “create smaller, more learning-centered units of organization” (National High School Center, 2011, p. 61).

“According to the US Department of Education (2001), the term ‘SLC’ refers to a smaller

sub-unit within a larger school such as an academy, house plan, school-within-a-school, or another structural unit” (Lee & Freidrich, 2007, p. 265). The communities serve a smaller number of students and are organized either by the creation of new limited-size schools or by converting traditional high schools into multiple communities. SLC efforts typically include five common structural approaches. One structural approach involves the idea of small schools breaking large schools into small, multi-grade, autonomous programs housed within a larger building. Schools-within-a-school may be organized around themes. Each has their own culture, program, personnel, students, budget, and school space. The second approach is the organization of career academy curricula around one or more careers or occupations by integrating both academic and occupation-related courses. Third, freshman academies, also called ninth-grade academies, should have a design developed to meet the needs of ninth-grade students as they make the transition from middle school to high school. The next approach involves the “house” plans approach, which assigns students within the school to groups, either across all grades or by grade level; each with its individual disciplinary policy, student activity group, student government, and social events. Last, the structural approach of magnet programs usually has a course focus (e.g., math and science, the arts) and selectively draws students from the entire district (National High School Center, 2011, p. 61).

In addition to the structural approaches, SLC schools often use six strategies that guide the design and support of student achievement. These strategies encompass the concepts of academic teaming, adult advocate systems, teacher advisory systems, alternative scheduling, freshman transition activities, and multi-year groups. The academic teaming refers to interdisciplinary groups of teachers who share the same students rather than the same subject, while the adult advocate systems are designed to

provide at least one caring adult (e.g., teachers, counselor, or volunteer) who can serve as a source of social attachment and personal guidance. The teachers increase their rapport with each student by meeting on a regular basis individually or in groups. The organization of the teacher advisory system allows teachers to personalize the high school experience and support the academic achievement of student participants. Alternative scheduling is when school administrators encourage teachers to “develop a lesson that is more compatible with learning objectives” (Lee & Freidrich, 2007, p. 266) by changing the length of the class period, the school day, and the academic year to enhance student achievement. Additionally, freshman transition activities are designed to support all first-year students who have difficulties adapting to their new academic settings. Finally, the multi-year group strategy is designed for keeping several teachers with a group of students at least for 2 or more years based on the “trust and intimacy between students and teachers” (Lee & Freidrich, 2007, p. 266).

The idea of SLCs is grounded theoretically in social capital theory. Lee and Freidrich (2007) stated, “poor academic performance of students stems from weakened or poor quality social ties” (p. 267). Due to the reduction in student social connections in the large high school structure, many students suffer from social support. Through the SLC, students are provided with social supports that include mentoring, personal guidance, social attachment, adult advisory systems, and social ties that can impact student achievement (Lee & Freidrich, 2007, p. 267).

In addition to social capital theory, SLCs are also based on a conceptual framework. There are three major conceptual groupings of SLCs that include (1) facilitating and inhibiting factors comprising variables hypothesized to influence implementation, (2) intervention strategies and structures comprising the SLC program in

each school, and (3) school-reported student outcomes that are goals of the SLC program (Bernstein, Millsap, Schimmenti, & Page, 2008). Figure 2 presents a summary of the three major conceptual groupings.

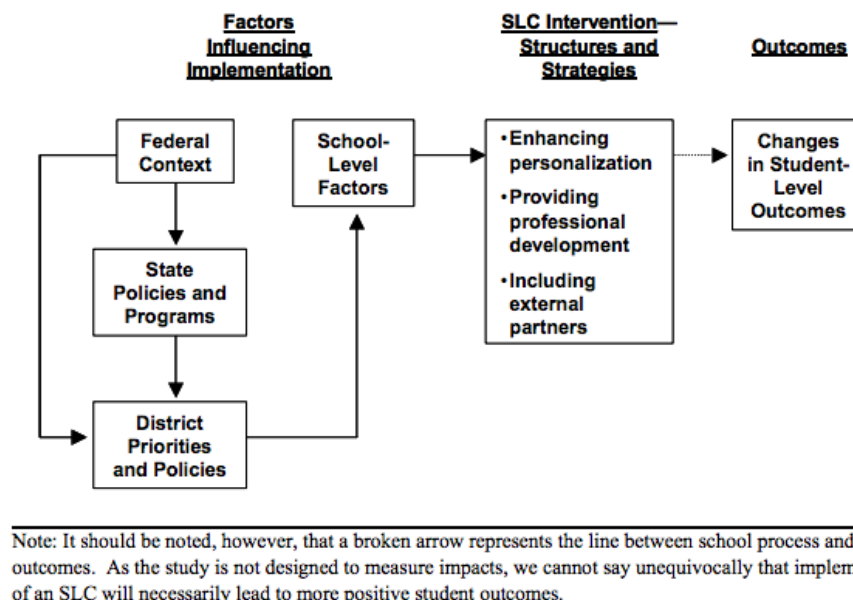


Figure 2. Conceptual Model, Implementation Study of Smaller Learning Communities (Bernstein et al., 2008, p. 20).

Further review of SLC research has identified ground-level strategies that correlate with positive student outcomes. This research draws from best practices of studies that include small schools and career academies, houses, and schools-within-schools organized by curriculum themes (Oxley, 2005). As a result, five interrelated regions of activities have been identified as the roots for positively converting traditional secondary schools into model SLCs. SLCs rely on building- and district-level support; interdisciplinary teaching and learning teams; rigorous, relevant curriculum and instruction; inclusive programs and practice; and continuous program improvement (Oxley, 2005, pp. 46-48). It is critical that all practices of the SLC have the support of building- and district-level structures and policies. “Building and district practices constrain what teachers and students are able to

do” (Oxley, 2005, p. 46). Therefore, it is important that the larger school and district support the SLC with the same principles of organization. Oxley (2005) suggested that the most successful SLCs are the programs that “serve as the building blocks of school organization and the center of school activities, not as add-ons to the existing school organization” (p. 46). The SLC’s use of interdisciplinary teaching and learning teams is the fundamental building block of 21st century schooling. “Small learning communities are most effective when interdisciplinary team members share students and are able to pool their knowledge of students, communicate consistent messages, and create coherent instructional programs” (Oxley, 2005, p. 46). The use of the teacher and learning teams provides the opportunity for teachers to present students with more essential and engaging learning; however, without the versatility and independence of teaching learning teams, it is difficult for teachers to devise student tasks that are both challenging and individually meaningful to students. “Teams can integrate discipline-based content into learning activities to create program coherence, opportunities for learning content in different context, and connections to real-world issues” (Oxley, 2005, p. 46). SLCs also provide a “student-centered approach to reducing the achievement gap that exists among students of different educational, cultural, and socioeconomic backgrounds” (Oxley, 2005, p. 48). Students have the option of selecting an SLC that coincides with their curriculum interests based on their academic level and achievement. Oxley asserted that

SLCs that focus on meeting the needs of a diverse population of students incorporate practices that include student advisement; parent collaboration; and interdisciplinary teams that include special education teachers, English language learners teachers, subject-area teachers, as well as student counseling staff members. (p. 48)

Last, ideal SLCs include the act of professional reflection and continuous program improvement. It is critical that teaching and learning team members examine the effectiveness of their practices and work to establish methods for modifying curriculum and learning activities as the educational needs of students change. “In successful SLCs, teams engage in a continuous cycle of program improvement efforts” (Oxley, 2005, p. 48).

Culture of College and Career Readiness

College and career readiness of all students is essential to the success of individual students, schools, districts, and the county. If schools and districts are not successful preparing students to enter a college or a career, there will be an impact on “our county’s global competitiveness, leading to increased costs for both individual students and taxpayers” (Sambolt & Blumenthal, 2013, p. 3). In 2012, Complete College America identified that more than 50% of students entering 2-year colleges and nearly 20% of those entering 4-year universities required remedial courses. The lack of preparation for these students leads back to their secondary institution and the amount of college and career preparation that was offered to the students as strategic and instructional practices.

The development of career academies combines academic courses with career and college preparation to increase student achievement. Schools that establish career academies are essentially creating a school culture focused on college and career readiness. The development of this culture is critical in preparing students for the 21st century, because “in the current economic environment, high school success has been redefined as not only ensuring that all students graduate high school but that they graduate ready for college and careers” (Sambolt & Blumenthal, 2013, p. 1). Furthermore, “when specifically directed, school cultures have the opportunity to provide programming and policies intended to transform schools into environments characterized by high academic

expectations and optimal college and career readiness” (Totura, 2015, p. 1).

When attempting to establish a culture of career and college readiness, it is important to have an understanding of what signifies a student being college and career ready and what is needed to help them obtain each. Totura (2015) asserted that “a student who is college ready is considered to have obtained a level of preparation that permits them to enroll and succeed, without remediation, in credit-bearing general education courses at a post-secondary institution” (p. 1). Similarly, Totura suggested when considering a student to be career ready, the student should demonstrate that they are “equipped with the skills and attributes they need to successfully seek and obtain gainful employment” (p. 2). Totura identified four key components that can assist in establishing a school’s college- and career-ready culture: “academic knowledge and skills; cognitive strategies; academic behavior; and college knowledge and awareness” (p. 3). The component of academic knowledge and skills seeks to have students recognize that college readiness should be important; and by doing so, they should have “adequate knowledge in specific college preparatory content areas, such as math, science, social studies, and English” (Totura, 2015, p. 3). Furthermore, the component of cognitive strategies addresses the need for students to use strategies that assist in their ability to problem solve, research, analyze data, and communicate their ideas clearly. For student success to occur, Tortura stated that “students must be motivated and engaged in school activities in which they show the ability to set goals, study well, manage time, monitor practice, and make adjustments to performance when needed” (p. 3); these elements are part of the academic behaviors component. Last, the component of college knowledge and awareness include providing students with exposure to the “college content and the norms and values it entails, as well as what it takes to apply, enroll, and matriculate through college programs” (Totura, 2015, p. 3). Figure 3

summarizes the key components that Totura identified as elements of a college-ready culture (p. 3).

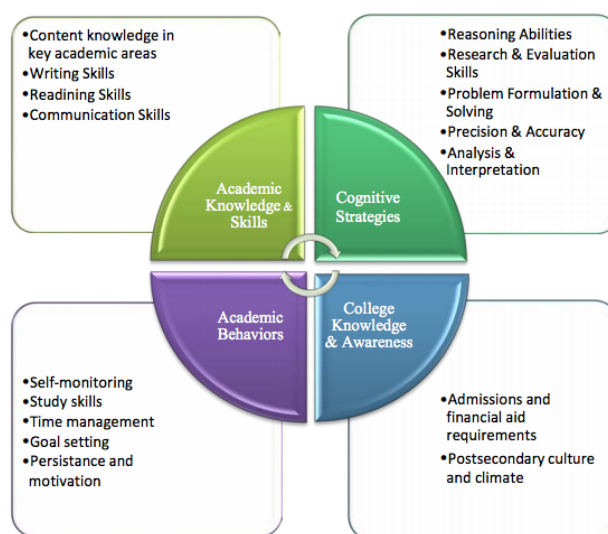


Figure 3. Components of a College-Ready Culture (Totura, 2015, p. 3).

Likewise, Totura (2015) identified four major characteristics of career readiness that assist students in defining what career readiness looks like in a career field: planning, time perspective, exploring, and decision making. The first characteristic is planning: “planning refers to developing a knowledge base and set of actions for achieving a career goal” (Totura, 2015, p. 4). Next is the characteristic of time perspective, which Totura described as “an understanding of where one is in their career readiness process and the time needed to reach goals” (p. 4). The characteristic of exploring advocates that “exposure to a variety of activities and opportunities” can “expand student knowledge bases or career choices and enhance their planning process” (Totura, 2015, pp. 4-5). Last, Totura asserted that the characteristics of decision making “involves considering options, information at hand, and possible alternatives” (p. 5).

When seeking strategies for college and career readiness, career academies are a key to fulfilling the need for preparing students for these tasks. “Career academies are a

time-tested model for improving academic achievement readying students for both college and careers and engaging the world outside of school in the work of reforming them” (Brand, 2009, p. 2). It is important for schools to provide a specialized context in which students can foster their individual personalities, self-confidence, and career development. Totura (2015) attested that the provided specialized context, combined with support, can create a “connection among career self-efficacy, outcome expectations, career goals, and career planning and exploration” (p. 5) for students. In addition, Totura emphasized that schools should “provide specialized context in which student personalities, confidence, and career development can be fostered” (p. 5).

Work-Based Learning

Career academies function not only on academic and career coursework but also on partnerships between the schools and business communities. To commemorate the 40th anniversary of career academies, Betsy Brand (2009), the executive director for American Youth Policy Forum wrote a report titled *High School Career Academies: A 40-year Proven Model for Improving College and Career Readiness*. In the report, Brand asserted that the business community “sees value in the skills and knowledge students learn during their career academy years” (p. 3). Brand continued by stating that

employers from all size companies contribute substantial time and resources to support career academies by serving as curriculum advisors, providing internships and work-based learning opportunities for students, advising and mentoring youth, exposing them to career fields, and encouraging them to pursue postsecondary education. (p. 3)

Work-based learning is a practice that has been around for centuries. The concept offers “project- and problem-focused teaching and learning” (Alfeld, 2015, p. 24) and is a

critical way for “students to learn about whether they are interested in and good at different types of career areas, as well as learning technical, academic and employability skills” (Alfeld, 2015, p. 24). Research shows that the most useful work-based learning experiences are those that connect classroom learning to workplace learning. “It is clear that intentional planning and pedagogical decision-making needs to occur for students to make the connections between school curriculum and workplace learning” (Alfeld, 2015, p. 26). Figure 4 shows a generic conceptual model of how work-based learning experiences should work: a union of academic and career and technical classroom learning, with both connecting to work-based learning.

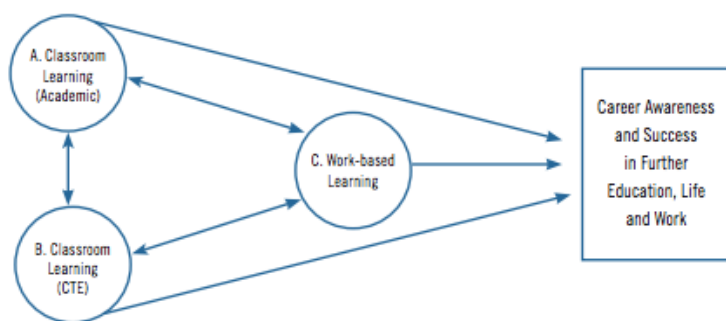


Figure 4. Theoretical Model of Work-based Learning (Alfeld, 2015, p. 26).

Work-based learning experiences prepare students for entrance into the workforce and help to introduce them to varying types of career fields. Rogers-Chapman and Darling-Hammond (2013) asserted, “work-based learning programs provide both social and academic benefits for students” (p. 2). The Stanford University scholars also suggested that work-based learning provides such benefits as “connections between class and real-world learning; high student completion rates; student ownership; and the development of critical skills” (Rogers-Chapman & Darling-Hammond, 2013, p. 2). As a platform for connecting the classroom and real-world learning, “work-based learning

links what students learn in school to skills and knowledge needed for real-world careers” (Rogers-Chapman & Darling-Hammond, 2013, p. 2). This benefit is a fundamental component of the Common Core State Standards. Additionally, Rogers-Chapman and Darling-Hammond indicated that “students in work-based learning programs complete related coursework at high rates and have higher attendance and graduation rates than those not enrolled in such programs” (p. 2). Furthermore, the scholars attested, “work-based learning programs help students identify career interests and skills by providing connections to industry professionals and opportunities to see options first hand” (Rogers-Chapman & Darling-Hammond, 2013, p. 2). Last, Rogers-Chapman and Darling-Hammond asserted that the benefit of the development of critical skills is provided to students because “work-based learning programs provide the opportunity for students to develop the skills that will be highly valued in future careers” (p. 2).

An example of an exemplary work-based learning program in action is that of Kearny Construction Tech Academy (CTA) in San Diego, California. CTA provides three pathways for students that integrate architecture, engineering, and construction into all areas of the curriculum (Rogers-Chapman & Darling-Hammond, 2013). CTA has a strong commitment to work-based learning and, as a result, the program has experienced several positive student outcomes. In 2011, CTA had a graduation rate of 92.4% with 36% of the graduates successfully completing the requirements needed for admission into the University of California and California State University. The program has seen a large majority of its students, 80%, admitted to 2- and 4-year colleges/universities, with the remaining students placed in apprenticeship programs for skilled trades (Rogers-Chapman & Darling-Hammond, 2013, p. 4). Research of CTA in 2012 highlighted a set of successful program strategies that affected student success (Rogers-Chapman &

Darling-Hammond, 2013). The first of these strategies included the assignment of complex student projects connected to the real-world situation in the fields of engineering, architecture, and construction. Furthermore, CTA worked to connect professional development for teachers with curriculum and industry. An additional strategy used was to provide a college- and career-readiness focus in which students take a college-preparatory sequence and full sequence of vocational coursework. Next, CTA worked to design schedules that could accommodate real-world learning with block scheduling; opportunities for concurrent enrollment in college, university, and trade programs for credit; and other flexible scheduling of traditional coursework. The creation of individual learning plans and instruction allowed students to move seamlessly between real-world work experiences and on-site instruction; while CTA's ability to maintain frequent communication between parents and teachers, including bi-monthly reports that track each student's progress, and building strong partnerships with postsecondary programs helped to increase CTA's success (Rogers-Chapman & Darling-Hammond, 2013, pp. 4-5).

Career Academy Successes and Obstacles

Researchers have examined and analyzed the successes and obstacles of career academies for quite some time. The greatest amount of research conducted on career academies is by MDRC, which has been conducting studies on career academies since 1993. In reviewing MDRC's goals in studying high school reform, Quint (2006) asserted that MDRC's career academy evaluation was the "first major investigation of the effects of a prominent high school reform initiative and a logical outgrowth of the organizations' concern with preparing young people for work" (p. 2). "The Career Academies evaluation pioneered the use of an experimental design involving random assignment of

students to a program group and a control group to determine impacts” (Quint, 2006, p. 3). Quint asserted that the research design used to evaluate career academies is “widely accepted as the ‘gold standard’ for assessing program impacts – the control group contributes the counterfactual for the evaluation” (p. 3). Quint’s review of MDRC’s goals in studying high school reform concluded that “in demonstrating the feasibility of conducting a random assignment within an ongoing high school program, the Career Academies study marked a milestone in the field of education research” (p. 3).

Quint (2006) summarized the evaluation findings of MDRC research on the career academy as a comprehensive high school reform initiative. In the report, Quint suggested that “MDRC’s evaluation of the Career Academy approach tests the program’s effects in a diverse group of nine high schools located in medium- and large-sized school districts across the United States” (p. 11). “The participating Career Academies served a cross-section of the student populations in their host schools; approximately 85 percent of the research sample members are Hispanic or African-American” (Quint, 2006, p. 11). Quint stated that the “Academies in the MDRC evaluation were able to implement and sustain the core features of the approach: the school-within-a-school structure, a curriculum combining academic and career courses, and partnerships with local employers” (p. 11). The MDRC Career Academy evaluation used

an unusually rigorous research design involving random assignment of students to the Career Academy group or to a control group to assess the program’s impacts on a wide range of outcomes, measured both while students were in high school and after they had graduated. (Quint, 2006, p. 11)

The study design for the career academies evaluation included the random assignment of eligible and interested students either to the career academy at their school

or the regular high school program. The review period was from 1993-2006, with a planned follow-up period of 12 years. The assessment included nine career academies at high schools in San Jose, Santa Ana, and Watsonville, California; Washington, DC; Miami Beach, Florida; Baltimore, Maryland; Pittsburgh, Pennsylvania; and Socorro, Texas. The characteristics of the students included in the sample were 30% African-American, 56% Hispanic; family receiving welfare or food stamps: 24%; average baseline performance on state assessments: 39% at 24th percentile or lower in math, 35% at 24th percentile or lower in reading (Quint, 2006, p. 12). The evaluation findings identified several principal findings of the career academy approach. One finding stated that “the Academies improved students’ average level of school engagement; they also increased the rates at which students participated in career awareness and work-related learning activities” (Quint, 2006, p. 11). Secondly, “for students who entered the programs at high-risk of dropping out, the Academies increased the likelihood of staying in school through the end of the twelfth-grade year, improved attendance, and increased the number of credits earned toward graduation” (Quint, 2006, p. 15). The next principle finding indicated, “for students least likely to drop out, the Academies increased vocational-course taking without reducing the likelihood of completing a core academic curriculum” (Quint, 2006, p. 15). Last, Quint (2006) identified the principal finding that specified, “the generally positive effects of the Career Academies while students were enrolled in high school did not translate into impacts on high school graduation rates or rates of college enrollment” (p. 15).

A case study on the implementation of career academies in Florida during the 2008-2009 school year helped researchers from the University of South Florida examine the impact of having career academies in all school districts in the state. The Career and

Professional Education (CAPE) Act of 2007 mandated that all schools within the district open at least one career academy by the 2008-2009 school year. The researchers used qualitative research to examine what affect the mandate to open these academies would have on the students. To do so, they “conducted a purposive sample of one school district that was used to generate three case studies examined in this investigation” (Dixon, Cotner, Wilson, & Borman, 2011, p. 207). The study used the Career Academy National Standards of Practice as a basis for the conceptual framework, which identified “ten key elements of successful career academy implementation” (Dixon et al., 2011, p. 208). Figure 5 provides a visual interpretation of the Career Academy National Standards of Practices conceptual framework.

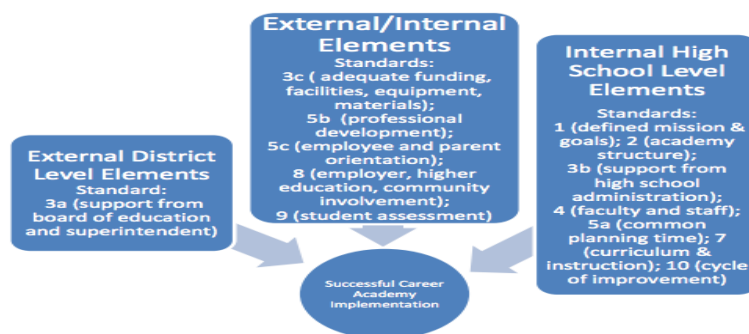


Figure 5. Career Academy National Standards of Practices Conceptual Framework (Dixon et al., 2011).

The conceptual framework incorporates the 10 Career Academy National Standards of Practice and organizes them into three main groups: (1) Standard 3a is the only external element of career academy implementation and involves district administrators and school board members; (2) Standards 2c, 5b, 8, and 9 are internal/external elements of career academy implementation involving multiple stakeholders at the school and community levels; and (3) Standards 1, 2, 3b, 4, 5a, 7, and

10 are internal elements of career academy implementation and involve school-based stakeholders (Dixon et al., 2011, p. 209).

Dixon et al. (2011) defined the purpose of the study as an investigation to “highlight three qualitative case studies from a National Science Foundation (NSF)-funded study of career academies in Florida and to examine implementation in terms of successes and obstacles to success” (p. 212). The selection of cases were part of an in-depth qualitative investigation that was part of a larger mixed-methods research study “focused on the characteristics of student population entering STEM-themed career academies, as well as the academic and career outcomes for those students” (Dixon et al., 2011, p. 212). The research questions that guided the study were (a) what obstacles did these career academies face when attempting to implement the Career Academy National Standards of Practice; and (b) which Career Academy National Standards of Practice were implemented successfully? Dixon et al. indicated that “this study contributed to career academy theory by illuminating both the strengths of the career academy learning communities studied and the structural roadblocks stakeholders had to navigate to facilitate successful implementation” (p. 212).

The purposive sample selected for use in the University of South Florida case study of three of Florida’s career academies from one school district was selected based on (a) the district’s willingness to participate, (b) the specific career academies’ representation of different STEM career fields, and (c) ethnically diverse school populations. The schools that participated offered career academies options in middle schools, high schools, and career centers, with many of the academies being offered in secondary institutions (Dixon et al., 2011, p. 212). The academies included in the study had themes that “focused on high demand, high skill, and high wage career areas while

preparing students for college” (Dixon et al., 2011, p. 212). The career academies selected were the Multimedia Design Academy (MDA), the Fashion Academy (FA), and the Engineering Academy (EA). The MDA was in an “ethnically diverse neighborhood on the outskirts of the city”; the FA was in an “ethnically diverse rural area of the school district where new housing necessitated new school construction”; and the EA was in “a predominantly African American neighborhood in an urban part of the school district” (Dixon et al., 2011, p. 212). The participants in each career academy included the assistant principal of curriculum and instruction, key career academy teachers, and 24 academy students, all of whom were volunteers.

Dixon et al. (2011) noted that there was a “semi-structured personal interview protocol” used for data collection (p. 212).

Semi-structured personal interview protocols (Schensual, Schensual, & LeCompte, 1999) were used with career academy teachers and administrators to elicit information about the structure and organization of the career academy, student access and course of study, and academic support for students. (Dixon et al., 2011, pp. 212-213)

Following the semi-structured personal interview protocol, the researchers used a semi-structured focus group protocol to conduct group interviews of the students enrolled in career academy courses. “Questions on the focus group protocol probed students’ experiences in the career academy, the enrollment process, and perceptions of the academy’s ability to prepare them to meet future goals” (Dixon et al., 2011, p. 213). The interviews and focus group assemblies lasted roughly 45 minutes each and were audio recorded with consent. The researcher enhanced the interviews and focus groups with classroom observations, both formal and informal. Data were collected for 2 weeks at

each school site. The audio recordings were transcribed verbatim to heighten the integrity. “In addition to interviews and focus groups, the research team observed interviewed teachers’ classrooms using low-inference description to enhance the credibility of the data, and when possible, collected relevant documents to triangulate findings” (Dixon et al., 2011, p. 213). The field notes collected from classroom observations assisted in the documentation of instructional practices, lesson content, technology use, and student engagement. The observations and field notes are what helped inform the interview and focus group findings.

The data analysis of the research included the use of a codebook. “To analyze interview and focus group data, research team members created a codebook from constructs identified deductively from the Career Academy National Standards of Practice and inductively from the data” (Dixon et al., 2011, p. 213). To assist in establishing inter-rater agreement, the three researchers applied codes separately to the same interviews and then counted how many times all three of them used the same codes to label the same data. The researchers then divided the number of times coders did not code the data in the same way by the total number of codes to develop a percentage of agreement. “Once the coders reached 80% agreement (i.e., less than 20% disagreement), coders coded interview transcripts individually” (Dixon et al., 2011, p. 213). Upon completion of the transcripts, the researchers used a constant comparative approach to analyze the data.

This analysis approach, as presented by Glaser and Strauss (1967) and Lincoln and Guba (1985) allowed for the development of themes from narrative or open responses by breaking the text into units of information and then categorizing the related units. (Dixon et al., 2011, p. 213)

To ensure credibility, two researchers reviewed each other's analysis based on the themes that were generated. "Throughout the data collection and analysis process, attempts to minimize research bias and optimize data dependability (i.e., reliability) included frequent group discussions of potential biases and recoding of a detailed decision log" (Dixon et al., 2011, p. 213).

In concluding the research, the researchers found both successes and obstacles associated with the implementation of an academy. There were two main areas of success identified by the participants: "real-world application of the Academy curriculum (i.e., relevance) and students' sense of belonging to the Academy" (Dixon et al., 2011, p. 213), while the main obstacles the participants identified included the recruitment of students and scheduling a cohort of students to attend the academy.

In 2008, the North Carolina Department of Public Instruction conducted a study on ninth-grade academies and processed their results in the report titled *Ninth-grade Academies: Easing the Transition to High School*. As part of this study, the researchers looked at the transition of ninth-grade students and the impact ninth-grade academies can have on improving student transition and academic achievement. In doing so, the researchers examined the implementation of Talent Development High Schools, Career Academies, and High Schools that Work (2012) within the North Carolina Public School Systems. The study defined career academies as "schools within schools that connect students with peers, teachers, and community partners in a controlled environment which fosters academic success and improved mental and emotional health" (Cook et al., 2008, p. 2).

The researchers examined 134 ninth-grade academies in 63 counties throughout the state of North Carolina, with 82 qualifying for the study based on their years of

operation. The study used promotion data, student proficiency data, and dropout data for students participating in the qualifying programs (Cook et al., 2008, p. 3). The research design method used for the study was an extensive literature review on ninth-grade academies. Cook et al. (2008) sought to answer questions that entailed “Are ninth-grade academies affecting student performance or non-promotion”; “Are some ninth-grade academies having more affect than others”; “Are some models/programs better than others”; and “What are some other possible impacts?” (p. 3). The measures used for the study included

- (1) a comparison between eighth grade reading scores and ninth-grade English scores;
- (2) a comparison between Ninth-grade Academies to overall state proficiency data; and
- (3) a comparison measuring the change in dropout and non-promotion rates for schools with a Ninth-grade Academy. (Cook et al., 2008, p. 3)

The researchers also developed a comprehensive ninth-grade academy catalogue for North Carolina. To create the catalogue, the researchers developed a survey to assist in determining the ninth-grade academy model type, strategies used by each academy, the length of time the academies had operated, challenges, successes, and other details that the survey respondents elected to provide when completing the survey. The researchers sent the survey out through email to all North Carolina superintendents and the ninth-grade academy contact person for each district. The survey took approximately 15 minutes for the participants to complete.

Upon completion of the survey, the researchers entered the data into “a comprehensive catalogue and used the database to analyze and assess success of Ninth-grade Academies based on student retention (lower non-promotion rates) and student

proficiency levels between 8th and 9th grades for reading and English” (Cook et al., 2008, p. 3).

Because of the study, the researchers were able to identify authentic impacts that the ninth-grade academies had on students within North Carolina schools between the years of 2001 and 2007. One of the main conclusions of the study was that “from 2001-2007, non-promotion rates decreased for schools with Ninth-grade Academies” (Cook et al., 2008, p. 3). At the time of the study, North Carolina ninth-grade academies had a nonpromotion rate of 15% in comparison to the 22% state average. In addition, “the drop rate for the Ninth-grade Academies was 6.6% compared to the state average of 12.5%, almost double that number” (Cook et al., 2008, p. 3). Although there was a significant change in the nonpromotion and dropout rates, the study did not identify a statistically significant relationship between the proficiency growth of eighth-grade reading and ninth-grade English scores. These data revealed that the “End-of-Course (EOCs) scores displayed no positive or negative proficiency growth between Ninth-grade Academies and schools without Ninth-grade Academies” (Cook et al., 2008, p. 3).

Policies and Practice to Support Career Academies

Research and evaluation of career academies have shown the impact that the use of academies can have on high school students. With this success, it is important to consider the implications for education policy and practice. Although there has been a great increase of career academy participation over the years, in 2009, it was estimated that only 5% of public high school students attended career academies nationally (Brand, 2009). These data show that there is a significant need for expansion of this proven model in our educational system; however, for expansion to occur, there must be an increase in efforts to elevate public knowledge of the model’s value in addition to

addressing several policy issues.

The initial policy concern for discussion is the need for recognition of career academies as a fundamental reform strategy for college and career readiness. Although the programs receive funding through the Carl Perkins Act and the Smaller Learning Communities program, they have not been included as in an integral part of the debate on national educational policy. “As Congress considers the reauthorization of the Elementary and Secondary Act, Perkins Act, and other laws that related to secondary and postsecondary education, career academies should be highlighted to ensure that adequate support is provided for their implementation” (Brand, 2009, p. 5). Additionally, it is critical to investigate other avenues of funding to help increase the impact of the program on a recurrent basis. Dedicated funding could allow schools the “flexibility to ensure that their programs are well planned and executed while maintaining their partnerships with employers” (Brand, 2009, p. 6). There is also a need to build the capacity of the system and educators who implement career academies. To do so, these key stakeholders should have a shared understanding of the core elements of the academy model and design a plan for their implementation of a high-quality program. Last, there should be a desire of educational leaders to improve the quality of the career academy model continuously. Again, the “career academies are one of the very few educational models that have developed ‘National Standards of Practice’ to encourage continuous improvement” (Brand, 2009, p. 7). Many existing career academies have adopted these standards as a guide for implementation; however, to ensure greater effectiveness and efficiency, the National Standards of Practice established by the National Career Academy Coalition, should help guide the development of career academy programs and passion for continuous improvement by the program leaders.

Summary

This literature review examined the importance of establishing effective and efficient ninth-grade transition programs, specifically the career academy model to assist students with transitioning to high school and improving their academic dispositions, learning behaviors, and educational self-efficacy. The review identified the importance for educational leaders to recognize the themes that relate to student success in high school as well as consider the importance of school support strategies and activities. Furthermore, the literature review displayed the various case studies on career academies that assessed the program's influence for improving outcomes for students during high school.

Chapter 3: Methodology

The intent of this mixed-method case study was to examine the impact of career academies on high school student academic dispositions, learning behaviors, and educational self-efficacy, as evidenced by research and program evaluation. The researcher sought to examine the career academy programs of three high schools within the coastal plain region of east central North Carolina. The overall goal was to correlate quantitative and qualitative data to help in drawing reasoned conclusions about which features of career academies make the program effective for student achievement in addition to college and career readiness. The questions examined within the case study ranged from the impact career academies can have on all types of students to more narrowed concentrations that involve the influence the academies had on specific student group interaction with education as they participated in the program. The questions designed to focus the study and determine the outcomes were as follows.

RQ1. How do career academies impact the learning behaviors of participating students as the students transition through high school?

RQ2. What is the impact of career academies on student academic dispositions?

RQ3. How do career academies influence the educational self-efficacy of participating students as the students transition through high school?

Research Design

The study was a case study that used a mixed-methods approach. Creswell (2015) asserted that mixed-methods research is

an approach to research in the social, behavioral, and health sciences in which the investigator gathers both quantitative (closed-end) and qualitative (open-ended) data, integrates the two and then draws interpretations based on the combined

strengths of both sets of data to understand research problems. (pp. 1-2)

The core characteristics of mixed-methods research is

(1) collection and analysis of quantitative and qualitative data in response to research questions; (2) use of rigorous qualitative and quantitative methods; and (3) combination or integration of quantitative and qualitative data using a specific type of mixed methods design, and interpretation of this integration. (Creswell, 2015, p. 3)

The researcher triangulated quantitative and qualitative data to get an understanding of whether or not the career academy programs impacted high school student performances between the ninth and twelfth grades. Onwuegbuzie and Leech (2007) emphasized that the triangulation is “a means of improving the rigor of the analysis by assessing the integrity of the inferences that one draws from more than one vantage point” (p. 579).

The use of the explanatory sequential design allowed the researcher to study the impact that career academies had on student academic dispositions, learning behaviors, and educational self-efficacy using qualitative data to assist in explaining the quantitative results in more depth. To conduct this mixed-methods design, in the first phase the researcher collected and analyzed the quantitative data and examined the results of the data to assist in determining which results needed further exploration in the qualitative phase. As a result, the researcher determined which questions to ask participants during the qualitative phase to help validate the quantitative data. In the second phase, the researcher conducted the qualitative data collection and analyzed the results to explain the quantitative analysis. This process assisted the researcher in being able to draw conclusions about how the qualitative results helped to explain the quantitative results. Creswell (2015) stated that “the strength of this design lies in the fact that the two phases

build off each other so that there are distinct, easily recognized stages of conducting the design” (p. 38).

The quantitative method was consistent with the causal-comparative research design. Rumrill and Schenker (2004) asserted that causal-comparative designs “generally involve the use of pre-existing or derived groups to explore differences between or among those groups on outcome or dependent variables” (p. 117). In addition, the causal-comparative design “focuses on two or more categories with the independent variables as compared to the dependent variable” (Williams, 2011). For this study, the retrospective causal-comparative research approach was used, which required the researcher to “begin investigating a particular question when the effects have already occurred and the researcher attempted to determine whether one variable may have influenced another variable” (Area Education Agency 267, 2015, p. 1).

The qualitative method approach consisted of in-depth interviews that included teachers and administrators from the career academies. Onwuegbuzie and Leech (2007) contended that qualitative research is “extremely useful for obtaining insights into regular or problematic experiences and the meaning attached to these experiences of selected individuals and groups, which under certain conditions can achieve understanding” (p. 558). Literature points to the “potential value of interviews as opportunities for self-reflection, appraisal, catharsis, being listened to, responded to emphatically, and to being validated” (Wolgemuth et al., 2015, p. 4). The researcher’s goal was to acquire valuable insight from career academy teachers and administrators about how they felt the career academy at their schools affected student academic dispositions, learning behaviors, and educational self-efficacy.

Quantitative Method Approach

Sampling. Stratified random sampling allowed each participant within the population of schools to have an equal chance to participate in the study. A stratified random sampling is a type of probability sampling technique that allows the researcher to consider a strata or group within the population (Laerd Dissertation, 2012). The teachers and administrators of the three schools were divided into two strata based on their professional position within the academy, with subsamples being randomly selected from each stratum. The researcher defined the population and expressed it as N , by assigning a consecutive number from 1 to NK to each of the participants in each stratum. The use of a sample size calculator on SurveyMonkey® was used to determine the sample size, expressed by n . Once the sample size was determined, the researcher ensured that the number of units selected for each sample from each stratum was proportionate by dividing the desired sample size (n) by the proportion of units in each stratum. Last, the researcher chose the sample size from the two strata based on the calculated proportionate stratification results (Laerd Dissertation, 2012).

Participants. The study included teachers and administrators from the three selected career academies in the coastal plain region of east central North Carolina. The career academies were selected based on the implementation of a program with 4 or more years of establishment. All selected career academies had 4-year programs that are designed with cohorts at each grade level, beginning with the ninth grade. The three high schools that host the career academies range in size from 508 students to 1,207 students. All three of the schools are in rural areas, due to the county they reside in being mostly an agricultural economy. The teachers and administrators selected to participate in the study were directly engaged with the career academy and the students at all three high schools.

Procedures. The researcher first sought permission to collaborate with the career academies and communicate with the teachers and administrators by submitting their request to conduct research through the school system's district office (see Appendix A). Upon approval, the researcher then contacted the teachers and administrators using Adobe Sign to present the Informed Consent Form and requested everyone's participation in the research study. As the Informed Consent Forms were signed and received, the researcher then provided the link to the career academy teachers and administrators at the three schools electronically through a secure survey system, TypeForm. The researcher allowed 5 weeks for survey results to be returned, with reminders sent periodically throughout that time to promote completion.

The survey was designed to measure teacher and administrator perceptions of how their school's career academies impacted their students' academic dispositions, learning behaviors, and educational self-efficacy. Since the researcher used the causal-comparative method and the teachers and administrators were already grouped by professional positions, the researcher did not have to manipulate these groups. Cohen (2009) stated that "the researcher does not take control of and manipulate the independent variable in causal-comparative research but rather observes, measures, and compares performance on the dependent variable or variables of subjects in naturally-occurring groupings based on the independent variable" (pp. 326-327). For this study, the dependent variable was the career academy program at each high school. The independent variables were the teachers and administrators who worked directly with the career academy students. The researcher used the survey data to examine the perceptions of how teachers and administrators felt their career academy programs impacted their students' academic dispositions, learning behaviors, and educational self-efficacy. All

teachers and administrators received an Informed Consent Form that was returned before distribution of the survey instrument. All teachers and administrators were invited to participate in the survey; however, all who chose not to participate had the opportunity to decline the invitation.

Instrument. The survey instrument, a Career Academy Questionnaire (see Appendix B), was developed to measure the career academies' program impact on student academic dispositions, learning behaviors, and educational self-efficacy. The survey was developed using a Likert scale, with Likert items for the participants to make their selection. Capuano et al. (2016) attested that "Likert questions are useful when relying on the participant's report of experiences or assumptions" (p. 33). The participants had five Likert levels represented by flags, ranging from one flag for strongly disagree to five flags for strongly agree. The items of the survey that measured the career academies' impact on student academic dispositions were items 6, 7, 8, and 16. The items on the survey that measured the career academies' impact on student learning behaviors were items 1, 2, 9, 8, 13, and 14. Last, the items on the survey that measured the career academies' impact on student self-efficacy were items 3, 4, 5, 11, 12, and 15.

Data analysis. The data retrieved from the Typeform survey instrument was exported into a Microsoft Excel spreadsheet. The spreadsheet included coding for each school's name and the teachers' and administrators' professional position. Once the data were in Microsoft Excel, the researcher analyzed the causal-comparative data to construct a frequency polygon to help understand the shape of the distributions within the data. To develop the frequency polygon, the researcher started by using each Likert response flag option as a class interval: strongly disagree, disagree, neither agree or disagree, agree, and strongly agree. The researcher then drew an x-axis that represented the values of

each Likert response data. Next, the researcher marked the middle of each class interval with a tick mark and labeled the middle value to represent by the class interval. Next, the researcher drew the y-axis to indicate the frequency of each class interval, while also placing a point in the middle of each class interval at the height corresponding to each frequency. Finally, the researcher connected the points so she could observe the frequency for each Likert response from the teachers and administrators who responded to the survey.

Furthermore, the researcher factored the mean score for each participant's rated academic dispositions, learning behaviors, and educational self-efficacy based on the survey results. With the participant responses on the Career Academy Questionnaire, the researcher conducted a chi-square analysis using Microsoft Excel. The use of the chi-square analysis is a nonparametric data analysis procedure. The chi-square analysis relies on frequency data, thus "its value lays in statistic's ability to answer questions about data that are normal" (Carroll, 2016, p. 1). For this study, the researcher used the chi-square analysis to examine the effect the career academy has on each of the dependent variables (academic dispositions, learning behaviors, and educational self-efficacy) of the academy students. The use of the chi-square analysis allowed the researcher to "answer important questions with variables measured with nominal or ordinal scales" (Carroll, 2016, p. 2). The researcher set the survey results from the three career academies into strata with five variables: (a) academy type, (b) position level, (c) individual mean academic disposition response, (d) individual mean learning behaviors response, and (e) individual mean educational self-efficacy response. The Likert scale item choices of strongly agree, agree, neither agree or disagree, disagree, and strongly disagree had the numerical values of "1" for strongly agree, "2" for agree, "3" for neither agree or disagree, "4" for

disagree, and “5” for strongly disagree in the data set. Next, the researcher used Microsoft Excel to enter the data for each variable based on each participant’s survey results into the five columns of the spreadsheet. Once all data were entered, the researcher performed a chi-square analysis. Once the Microsoft Excel software produced the output results, the researcher then interpreted the data to determine whether the observed outcomes of the participants differed significantly from the expected outcome.

Protection of human subjects. Personal identification labels and numbers were used to protect the confidentiality of the participants in this case study. After the exporting of the survey instrument data to Microsoft Excel, the files were stored in a password protected Microsoft Excel document and placed on an encrypted flash drive. The external data report omitted the teachers’ and administrators’ names and used identification labels instead. The career academy teachers were identified by using “CAT,” and the career academy administrators were identified by using “CAA.” Furthermore, the schools were identified by “School A,” “School B,” and “School C.” The researcher only accessed participant names to conduct a random selection of the participants needed for the qualitative process.

Data reliability and validity. The assurance of reliable and valid data was important. The researcher designed the survey instrument to obtain internal consistency by grouping questions that measured academic dispositions, learning behaviors, and educational self-efficacy. “Internal consistency measures reliability by grouping questions in a questionnaire that measure the same concept” (Colosi, 2016, p. 1). The internal consistency was determined after collecting teacher and administrator responses to the survey and running a correlation between the three question types to determine if the instrument would reliably measure each concept. In conjunction, the researcher

sought internal validity of the survey instrument to determine if there was a relationship between the career academy program and the outcome displayed by the participants. “Internal validity is the approximate truth about inferences regarding cause-effect or casual relationships” (Trochim, 2006, p. 1).

Qualitative Method Approach

Reliability and validity. The reliability and validity of qualitative research data are measured differently from quantitative research data. “Rigor, in qualitative terms, and reliability/validity, in quantitative terms, are ways to establish trust or confidence in the findings or results of a research study” (Thomas & Magilvy, 2011, p. 151). Franklin, Cody, and Ballan (2010) attested that “it is important for qualitative researchers to use rigor in the design of qualitative studies and emulate the scientific method by striving for empirical groundedness, generalizability, and minimization of bias” (p. 355). The researcher used qualitative content analysis to ensure the reliability of the qualitative data. “Qualitative content analysis is a particularly reliable approach to handling data” (Roberts, 2006, p. 43). The researcher developed specific codes to describe the data, such as statements from interview transcripts, and confirmed the content by revisiting previously coded data intermittently to check for constancy over the length of the research project. Additionally, the researcher employed reflexivity as a strategy for ensuring rigor and quality in the qualitative research method. “Reflexivity in research improves transparency in the researcher’s subjective role, both in conducting research and analyzing data, and allows the researcher to apply the necessary changes to ensure the credibility of their findings” (Darawsheh, 2014, p. 561).

Selection process. One of the primary focuses of this research was to examine teacher and administrator perceptions of how the career academies at their schools are

impacting the students who participate. The interviews from the teachers and administrators for each career academy in the study made up the qualitative data.

The teachers and administrators selected to participate in the interview process were selected using purposive sampling. “Purposive sample, one of the most common sampling strategies, groups participants according to preselected criteria relevant to a particular research question” (Mack, Woodsong, MacQueen, Guest, & Namey, 2005, p. 5). The researcher used a purposive sampling technique known as maximum variation sampling to capture a wide range of perspectives from teachers and administrators relating to career academies. Maximum variation sampling is a “search for variation in perspective, ranging from those conditions that are viewed to be typical to those that are more extreme in nature” (Lund Research Ltd., 2012, p. 1). At the conclusion of the survey instrument administration, the researcher sought to select a sample size of five to six teachers and administrators to participate in the interview process. The sample size for the teachers and administrators depended on the number of teachers and administrators at each school who were directly involved with the career academy. The willing participants and the researcher decided on a time and location to conduct the interviews.

Setting. In this study, the researcher studied the perceptions of the career academy teachers and administrators in the coastal plain region of an east central North Carolina school district on how the career academy impacted student academic dispositions, learning behaviors, and educational self-efficacy. The three high schools with career academies that were selected for the study were within a school system that serves over 18,547 students in a county where the population is over 124,456 people. Most of the schools within the district were located within six rural cities that covered

over 553 square miles. The racial composition of School A consisted of 20% African-American, 7% Hispanic, 64% Caucasian, 6% Multi-racial, 2% Asian-American, and less than 1% American-Indian. Nearly 41% of the students were eligible to receive free or reduced lunch. The racial composition for School B consisted of 2% Caucasian, 87% African-American, 5% Hispanic, and 6% Multi-racial. Nearly 86% of the students were eligible to receive free or reduced lunch. The racial composition of School C consisted of 34% Caucasian, 26.8% Hispanic, 33.6% African-American, 0.4% Asian-American, 6.0% Multi-racial, and 0.4% American-Indian. Nearly 71% of the students were eligible to receive free or reduced lunch.

The research for this study was site specific; all academies included in the study have a 4-year cohort model. According to Rossman and Rallis (2012), the ideal site is one where entry is possible; there is a rich mix of the processes, people, programs, interactions, and structures of interest, or all of these; you likely can build strong relations with the participants; and ethical and political considerations are not overwhelming, at least initially (p. 137).

There were several reasons why the three high schools from the selected school district offered a rich mix of processes, people, programs, and structures of interest. There were 11 career academies being implemented in the selected school district. Of those, School A had two career academies within the school and Schools B and C each had three career academies at the schools. The career academies included Microsoft Academy, Project Lead the Way, Fire Academy, Health Sciences Academy, Construction Academy, and Diesel Academy. The academies offered within the district provided several avenues for students in Grades 9-12 to explore each career field, while also piquing student interest in postsecondary education in the selected career area.

As stated previously, the researcher had prior experience as a career and technical education teacher and now currently serves as an administrator, thus ethical and political considerations were examined. It was imperative that the researcher clarified to the district office and each high school principal the purpose of the study prior to requesting approval for access to the schools and staff. The researcher hoped that the data would reveal the impact these specific career academies had on student academic dispositions, learning behaviors, and educational self-efficacy which were critical for evaluation and the improvement of program structures. Nevertheless, no matter the results, the data collected and analyzed would be beneficial to all stakeholders within the school district.

Participants. The participants for the qualitative element of the study consisted of the teachers, academy directors, and the school-based administrators assigned to the career academy. After receiving permission from the school system and the Informed Consent Forms, the researcher contacted the academy directors, teachers, and administrators to schedule a time for the interviews. All participants had the option to select another location for the interview if they were uncomfortable interviewing at the school. To refrain from interrupting instructional time, the researcher scheduled the interviews during non-instructional time frames.

Informed consent and permission procedures. The researcher sought approval to conduct the research from the Gardner-Webb University Institutional Review Board (IRB) (see Appendix C). Enfield and Truwit (2008) stated that IRB “protects investigators from potential conflicts that can rise between the investigators’ concern about the pursuit of knowledge and the welfare of human subjects” (p. 1332). After obtaining IRB approval, the participants were required to give consent to participate in the study. The researcher issued an Informed Consent Form that addressed the central

purpose of the study and the procedures for data collection (see Appendix D). The Informed Consent Form informed all participants of their right to withdraw from the study at any time. In addition, the form identified any known risk associated with their participation in the study. A mention of the expected outcomes and benefits on the form assisted in encouraging participants to contribute to the study. Last, the consent form had a signature and date section for both the participants and researcher.

The study participants received the consent form via Adobe Sign, a secure signature program. All parties had adequate time to read and review the form. Once all participants agreed to participate in the study and signed the Informed Consent Form, the researcher moved forward with the study.

Assurance of confidentiality. To assure privacy, the researcher notified all participants of the confidentiality of the data collected from or about their participation in the career academy. When collecting data, Kaiser (2009) stated that “if data cannot be collected anonymously, researchers must collect, analyze, and report data without compromising the identities of their respondents” (p. 1635). At the time of data collection, the researcher used the Informed Consent Form to address the removal or changing of all identifying characteristics of participants. Furthermore, in the data-cleaning phase, the researcher removed personal identifiers from the data set. The names of the high schools and the teacher and administrator positions were replaced with pseudonyms, and participant names were omitted. The researcher ensured that there was not a link to the participants, their names, or school location when describing the research. The use of pseudonyms while transcribing the interviews and in all written documentation aided in maintaining the confidentiality of all individuals. The assurance of confidentiality was outlined, in detail, in the informed consent procedures

documentation. For this study, the schools had the pseudonyms of School A, School B, and School C; and the school district pseudonym was “a school district in the coastal plain region of east central North Carolina.”

Data collection. The researcher used in-depth interviews to collect data for the qualitative phase of the study. Boyce and Neale (2006) indicated that “in-depth interviews are useful when you want detailed information about a person’s thoughts and behaviors or want to explore new issues in depth” (p. 3). “Interviews are often used to provide context to other data (such as outcome data), offering a more complete picture of what happened in the program and why” (Boyce & Neale, 2006, p. 3). Thus, interviewing the teachers and administrators was an appropriate data collection method for this study because the researcher wanted to view the comprehensive image of the academy and how the academy influenced student academic dispositions, learning behaviors, and educational self-efficacy as perceived by the participants. The interviews and survey data assisted the researcher in having a well-rounded collection of information for data analysis.

To conduct the interviews, the researcher used the responsive interview approach which emphasized flexibility, so the researcher could change questions during the interview in response to what the researcher learned. Rubin and Rubin (2012) asserted that during the responsive interviewing model,

the researcher’s role is to gather narratives, descriptions, and interpretations and put them together in a reasoned way that re-creates the culture or describes a process or set of events in a way that the participants would recognize as real. (p. 9)

The researcher prepared for a semi-structured interview by focusing on the career

academy, preparing a limited number of questions to ask the participants in advance and a plan to ask follow-up questions to seek greater clarification (see Appendix E).

Interview protocol. The researcher interviewed teachers and administrators who worked directly with the career academy program. All of the questions asked of the interview participants were open-ended. Open-ended questions “established the territory to be explored while allowing the participant to take any direction he or she wants” (Seidman, 2013, p. 84).

As the interview progressed, the researcher used follow-up questions to gain more clarification and elaboration from the participants. Rossman and Rallis (2012) indicated follow-up questions take the interview to “a deeper level by asking for more detail” and “are a natural part of any conversation” (p. 182). The follow-up questions were developed as the interview progressed and the researcher learned from the participants. At the conclusion of the interviews, the researcher thanked the participants for their assistance during the study. To ensure accuracy of reporting the interview data, the researcher took field notes and acquired consent from the interviewees to audiotape the interviews. Hitchcock and Hughes (2002) advised, “tape recording of the interview session will produce the most complete record of what was said” (p. 170). Shortly after each interview, the researcher completed the transcription of the interviews for the study.

Data analysis. The first step of the data analysis included the preparation of the interview data so the researcher would have a full and accurate version of the interview questions and participant answers. Rubin and Rubin (2012) stated, “You prepare a transcript of your interviews because reading a transcript is a far quicker way of finding a bit of information than repeatedly listening to the recording” (p. 190). Next, the researcher coded the data by defining, finding, and marking the text where there were

relevant concepts, themes, events, examples, or dates that related to the career academy.

By enabling you to bring together all passages on a similar topic, systematic coding forces you to look not just at what you remember from the interviews but also at the passages that might modify your ideas or indicate when and how your ideas might be true or not true. (Rubin & Rubin, 2012, p. 192)

Once the coding was complete, the researcher then searched for excerpts marked by the same code, categorized them into a distinct data file, and then summarized the contents of each category. The researcher then sorted, resorted, compared each category with selections from different subgroups, and summarized the data again. After the analysis of each data category, the researcher integrated the descriptions from different interviewees to assist in creating a complete picture of the participant perceptions of the career academy. The combined concepts and themes helped the researcher generate her own theory on how the career academies affected student academic dispositions, learning behaviors, and educational self-efficacy by the descriptions the participants presented. During the combining of concepts, the researcher frequently assessed their notions by inspecting them against the interviews to determine if there was adequate, considerable evidence of the drawn conclusions. Last, the researcher used the data results to generalize a theory that suggested when and under what conditions the results applied to other career academies more broadly.

Limitations

The limitations of this study included the researcher's role, the accuracy of the data received from the participants, and the responses to the survey. Due the political climate of the educational field, some teachers or administrators were hesitant to disclose their actual viewpoints about the success of their program to the researcher. Although the

researcher felt that the survey was the best option to obtain responses from the teachers and administrators, she was also aware that it was almost inevitable that there would be some nonresponses; and thus, this hindered her ability to obtain a substantial amount of feedback.

Delimitations

The delimitations of this study included the fact that only three career academies at high schools within the coastal plain region of east central North Carolina were selected. The researcher selected this population because the focus was to identify researched findings and proven data of successful executions that have impacted high school students within the career academy. The researcher recognized that career academies with less implementation experience could have valuable data associated with student academic dispositions, learning behaviors, and educational self-efficacy; however, the researcher estimated that programs with 4 or more years of program existence would provide a better opportunity to obtain and evaluate program trend data and structures. Furthermore, it was the view of the researcher that these programs would offer enlightenment with regard to trends of teacher and administrator perceptions which could assist in the estimation of the effects of student participation in career academies with greater accuracy.

Summary

The researcher used this case study to attempt to clarify the impact career academies have on student academic dispositions, learning behaviors, and educational self-efficacy. A mixed-method approach and triangulation of data assisted the researcher in attaining an in-depth understanding of career academies and their impact. The quantitative data consisted of a Career Academy Questionnaire, analyzed by a frequency

polygon, mean of responses, and a chi-square analysis. The variables included the career academy type and teacher and administrator perceptions, while the qualitative data included interview responses from open-ended questions asked of academy teachers and administrators that helped validate the quantitative data and obtain a complete image of the career academies' impact on students.

Chapter 4: Results

Introduction

The purpose of this case study was to examine the impact of career academy programs on student dispositions, behaviors, and self-efficacy at three rural high schools within the coastal plain region of east central North Carolina. A mixed-method approach was used in this study. The quantitative data consisted of survey data from the career academy teachers and administrators who participated in the study, which specifically measured how they perceived the impact the academies had on student dispositions, behaviors, and self-efficacy. The qualitative data consisted of the career academy teacher and administrator perceptions of how the career academies impacted ninth- through twelfth-grade students.

Chapter 4 is divided into three sections. Section one provides a description of the sample which includes the teacher and administrator participants involved in the study. The second section details the qualitative data which consists of interviews with the participants. This section explains the career academies' structures and implementation. In addition, it provides background knowledge of the programs developed and the schools' participation with industry and postsecondary institutions. Section three presents the teacher and administrator perceptions, coding procedures, and results; the qualitative data and the quantitative results that answer all three research questions; and the summary.

Description of Sample

Teachers. The criteria for the teacher participants were as follows. The teacher must have taught in the career academy for 4 or more years; the teacher must have been currently teaching one or more career academy courses; and the teacher must have been

part of the Career and Technical Education department. Thirteen teachers were eligible and invited to complete the survey and interview for the study; however, only four teachers accepted the invitation and completed the Informed Consent Form. One of those teachers serves as both an instructor and director, so he/she completed the survey as an administrator and the interview from the perspective of both the director and teacher. Additionally, one teacher completed the survey but elected not to participate in the interview. The remaining teachers completed the survey and the interview.

Administrators. The entire administrative team for each school which consisted of the principal, two assistant principals, and the academy director was eligible for the study. Only one principal and director agreed to complete the survey and interview. Both the principal and the director have more than 7 years with their school and the career academy. The principal inherited three career academies at the start of his tenure and has since added an additional career academy for his students. His perceptions of his experience and time overseeing the career academies are valuable for the evaluation of the program.

Data Analysis

Quantitative data results. The survey presented answers to all three of the research questions. A frequency polygon was used to determine the frequency of response for each of the Likert scale reply options. The frequency polygon was used to provide a broad view of the teacher and administrator agreement with the impact the career academies have on student behaviors, dispositions, and self-efficacy. The x-axis of the frequency polygon displays the values of each Likert response, while the y-axis indicates the frequency of each class interval. Figure 6 presents the summary of the Likert scale items frequency.

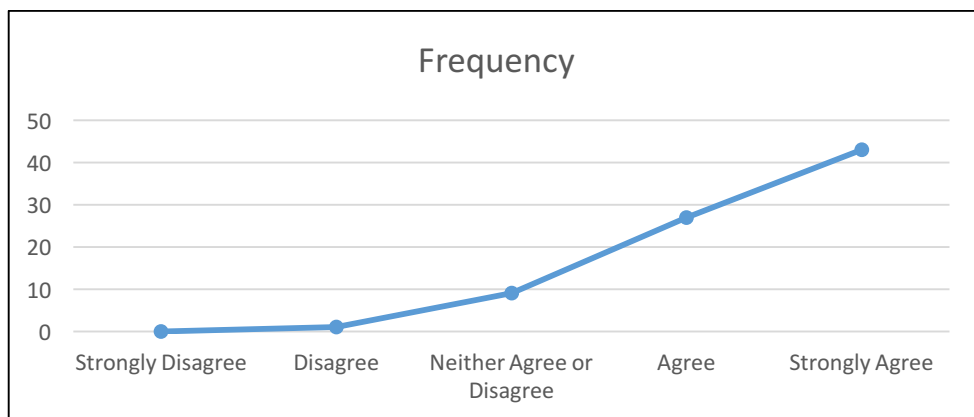


Figure 6. Summary of Likert Scale Items Frequency.

The arithmetic mean was used to determine the probable perception of each survey participant and how they measured the impact of the career academies based on participant responses to the survey questions. The Likert scale ratings for each item were as follows: “1” for strongly agree, “2” for agree, “3” for neither agree or disagree, “4” for disagree, and “5” for strongly disagree in the data set. Higher scores indicate more positive agreeability of the participant and therefore a higher level of perceived impact on student behaviors, dispositions, and self-efficacy. The standard deviation (SD) was calculated on each variable. Table 1 shows the mean (*M*) and SD for each participant.

Table 1

Means for Teachers, Administrators on the Career Academy Questionnaire

Participant	Behaviors		Dispositions		Self-Efficacy	
	<i>M</i>	SD	<i>M</i>	SD	<i>M</i>	SD
CAT1	4.67	0.52	4.00	0.82	3.67	0.82
CAT2	4.67	0.52	4.50	0.58	4.17	0.75
CAT3	4.33	0.82	3.50	1.29	4.00	0.89
CAA1	5.00	0.00	4.50	0.58	4.83	0.41
CAA2	4.67	0.52	4.75	0.50	4.50	0.55

Note. *M* values from Likert scale Items on a 5-point scale (1 = strongly disagree, 5 = strongly agree).

Additionally, the researcher used the arithmetic mean to determine the overall

level of impact the career academies involved in the study had on student learning behaviors, academic dispositions, and educational self-efficacy. SD was calculated on each variable. The higher M associated with student learning behaviors indicates that the career academies impact student learning behaviors more than they do student dispositions and self-efficacy. Table 2 shows the overall M and SD for the three dependent variables.

Table 2

Career Academies Impact on Each Dependent Variable

Dependent Variable	M	SD
Behaviors	4.668	.236
Dispositions	4.250	.500
Self-Efficacy	4.234	.448

Note. M values from Likert scale Items on a 5-point scale (1 = strongly disagree, 5 = strongly agree).

Research questions. The results of the Career Academy Questionnaire show that career academies in the study impact student learning behaviors, academic dispositions, and educational self-efficacy. The chi-square analysis of the Likert scale data provided the researcher with an assessment of the statistical significance of the actual responses received from the career academy teachers and administrators for each survey item in relation to the expected responses of the researcher.

To perform the chi-square analysis, the researcher first combined the Likert scale response categories for each question by combining the agree and strongly agree responses into one category and the disagree and strongly disagree into another category. As a result, the researcher had three categories to consider in the chi-square score for each survey question directly related to learning behaviors, academic dispositions, and educational self-efficacy: agree, disagree, and neither.

A chi-square test of independence was performed to examine the relation between

the career academy and the impact on student learning behaviors, academic dispositions, and educational self-efficacy, as reported by the participants. The relation between these variables was significant, $X^2 (3, N=80) = 1.947, p < 0.05$. Table 3 displays the chi-square p value for each survey item based on the Likert response in the categories of agree, disagree, and neither.

Table 3

Chi-Square p Values for Survey Items, Likert Responses

Survey Question Items	P Value
1	0.027
2	0.027
3	0.148
4	0.493
5	0.148
6	0.027
7	0.448
8	0.148
9	0.027
10	0.148
11	0.148
12	0.027
13	0.027
14	0.027
15	0.007
16	0.027

Note. Likert scale categories combined (Agree= agree and strongly agree, Disagree= disagree and strongly disagree, and Neither= neither agree or disagree) $p < 0.05$.

Qualitative results. The open-ended questions allowed the interviewee to give his or her views on how they felt their career academy impacted student academic dispositions, learning behaviors, and educational self-efficacy. The teachers and

administrators were asked 10 questions. After the interviews were transcribed, the researcher organized the data by looking for themes in text that emerged from each interview question. The researcher then coded the data by hand by finding, defining, and marking the text where there were relevant concepts, themes, events, or examples that related to the career academy.

Program structures. The first interview question asked the teachers and administrators to explain their career academy program structures that focus specifically on student learning behaviors, academic dispositions, and educational self-efficacy. All participants indicated that the career academy curriculum was the largest factor that impacted the structure of the career academies. Three of the four interviewees indicated that their career academy was built around the software, industry technology, or certification and credentials. The teachers felt that the software, such as Excel, PowerPoint, and Word, and the credentials that are associated with the software help design the structure of the career academy. The administrators felt that the career academies are structured to provide opportunities for students to gain more experience in a career field of their choice. One administrator stated, “the idea is to get these students that are highly motivated and kind of know what they want, a chance to experience it at a higher level.”

For question six of the interview questions, the researcher sought for the interviewees to identify the trainings they have had that prepared them to work with career academy students in the areas of learning behaviors, academic dispositions, and educational self-efficacy. There was a consensus among all interview participants that training had not been provided to the career academy staff specifically addressing these areas. There was an agreement from three of the four participants that they had received

training on the individual software or equipment used in their career academy areas; while the administrators recognized the need for training but did state that they have worked to train their staff on how to work with students on “soft skills,” which prepares students for interviews and work ethics but not specifically for the area of learning behaviors, academic dispositions, and educational self-efficacy.

Question seven of the interview questions asked the interviewees how their career academy identifies students who are at risk of not successfully completing the career academy. All the interviewees admitted that their career academy programs did not have a formal process in place to identify at-risk students and what steps to take to help them become successful. The administrator recognized that a more formal process was needed to ensure that all students are being identified; however, at this point, the administrators stressed the importance of relationships and the teachers, “knowing” their students well enough to realize they are struggling and taking the steps to provide the students with the help they need. To further verify the administrator’s view on relationships, one teacher stated, “after you are teaching them for a long while, you recognize the ones who are at-risk.” The teacher continued to explain how they helped the at-risk students pass once they are identified by stating, “we provide extra opportunities, extra tutoring.”

Question eight of the interview questions asked participants to identify how aware they feel the students are of their own learning behaviors, academic dispositions, and self-efficacy as well as how aware the staff are of student needs in these areas. Three of the four participants stated that both the students and staff were not as aware as they should be on the importance of being able to identify student needs in these areas. The administrator stated that they felt the teachers could become better aware of these needs in their students so they can work to reinforce what they learn in class with materials and

concepts that meet student needs, while one of the teacher participants mentioned the use of EVAAS data to help the students understand where they are and how the “data supports their interests and we provide tutoring.” The teacher continued by stating, “we test for learning styles to help students better understand the way they learn, so they can capitalize on it.” Additionally, “in our curriculum we talk about self-motivation and what that looks like for each person and provide skills for the student to develop in these areas.”

For the ninth interview question, the interviewees were asked to explain the measures their programs have in place to measure student growth beyond academics. Again, there was a common response that none of the career academies in the study have a specific procedure for measuring student growth beyond the academic element of the academy; however, one teacher did note that the career academy at their school used project-based learning components that provide the students with “a scenario and they have to innovate and come up with a solution or invention as a product.” The teacher stated that this “creates team work and develops leadership skills, as well as good citizenship as they serve the community.”

Research Question 1. How do career academies impact the learning behaviors of participating students as the students transition through high school?

For the second interview question, participants were asked to discuss the learning behaviors that characterized a successful career academy student. The common themes that emerged from all interviewee responses to these questions included students who were determined, organized, responsible, willing to learn, task orientated, and had progressive problem-solving skills. The theme of being able to complete “hands-on” activities was present through all participant responses. One teacher stated that

“understanding the development of a concept map can help a student who needs kinetics and visual support.” Additionally, one teacher mentioned the importance of the students being interested in “doing” the kinetic exercises, which are an extension of their learning.

In a section of question five of the interview questions, the participants were asked to identify how their career academy works to enhance student learning behaviors. One of the teachers mentioned an “activity based approach” that is used at their career academy that helps the student learn the competencies and themes related to the curriculum. The students are taught this learning format, which includes beginning with an explanation or modeling of the material and then moving into a “bridge to review what was previously learned and evaluate what knowledge was received to determine how much forward movement” the teacher should take. An example of this activity-based approach was spoken of at another career academy as the administrator described how the construction academy on their campus helps contract with the central office for materials but completes the construction of school buildings on the campus. The administrator stated, “it gives them some pride, but it also gives a chance for all of the staff to support them on campus.”

Research Question 2. What is the impact of career academies on student academic dispositions?

For question three of the interview questions, the teachers and administrators were asked to identify the academic dispositions that are demonstrated by the most successful career academy student. Two of the three teachers stressed that importance of their career academy students having academic dispositions that lead to them being teachable and receptive to learning from an expert in the field. One teacher stressed the desire to have students who wanted to complete the task with a resilience to keep trying when the

task becomes difficult. The teacher repeated the motto they use with their students: “If you are comfortable you are not learning.” The teacher continued by stating, “when students understand this, they can gauge where they are.”

Again, a section of question five asked the participants to identify how their career academy works to enhance student academic dispositions. In a response from one of the teachers, the teacher recognized that their students with the best academic dispositions are the ones who “may be someone else’s trouble makers because they are always asking why, and not retreating until they truly understand what is being said.” The teacher continued to support that explanation by identifying the academic dispositions that make these students successful in their class, such as “they may be very vocal and need to move around to collaborate (which can be taught over just conversing) and they may need more hands-on to understand.” Thus, the teacher stated that they responded to these student needs by providing them the appropriate avenue to use these academic dispositions positively.

The academic disposition of enhancing student motivation was a theme mentioned by three of the four interview participants for question five of the interview questions. One teacher identified motivation as an academic disposition that career academy students need to succeed. The teacher stated that many of their students will be the first in their families to graduate from high school, much less go to college. The teacher stated, “so motivation to succeed at the secondary level is very high and will often translate into going to college after this success.” The teacher stated, “the academy provides credentials to ‘Ready to Work’ preparation right out of high school, but also provides the extra incentive to continue.”

Research Question 3. How do career academies influence the educational self-

efficacy of the participating students as the students transition through high school?

Interview question four asked the interviewees to discuss the educational self-efficacy skills that a successful career academy student would require to move on to postsecondary or work-based opportunities. The teacher responses to the question mentioned the credentialing process that career academy students can participate in as they seek to get certified in a software program or technology area. The teachers felt that student success to complete the credentialing process helps to boost their self-esteem and increases student motivation to continue to excel in the career academy, while the administrator identified the apprenticeships and internships as an aide to helping students develop their educational self-efficacy as they allow the students to join the labor force in a “non-threatening” way to obtain work experience in their area of interest. This idea was confirmed by one teacher who stated, “if a student is going to be educationally self-efficient, they need to be allowed to experiment with the information, relate to what they need to understand and why they need to expand that knowledge.”

As part of question five where the interviewees were asked to identify ways their programs enhance educational self-efficacy, one teacher responded, “project-based assignments and competency skill training are two ways that educational self-efficacy is built in students.” The teacher continued to explain their use of one-on-one training and practice for competency: “A student can fail safely and recover with a better understanding of the skill and no recrimination for failing at first.” The teacher continued by identifying that the use of mentors helps guide students so that they can understand the value of practicing a craft. The teacher stated that mentoring is also key, because it helps “ask the questions that might spur inspiration when a student gets stuck.” Last, the teacher set the reminder that teachers are always modeling for their students which helps

to build their self-efficacy. The teacher stated, “sometimes people look at project-based learning as seeing what the student can do, but we can’t expect them to succeed until we model how to do it.”

Conclusions. Question 10 of the interview questions was a wrap-up question that asked all participants how important they felt growth in the areas of student learning behaviors, academic dispositions, and self-efficacy was to the impact the career academy had on student success. All participants identified the importance of growing students in these areas as they work to prepare them for postsecondary and work-based learning opportunities after high school. One teacher explained, “I think it makes them better individuals, and I think it prepares them for the workforce in a few short years.” This notion was confirmed by another teacher who stated, “a lot of times we have kids that are successful, that in our class they learn what their potential is. They learn that you know they can do this if they put their minds towards it.” Likewise, one teacher stated it best with this comment: “Believing that the student can find their own way is like walking in a cave with no light. Sometimes we are not teaching but helping the student discover a new idea or concept.”

When the administrator responded to interview question 10, his/her first statement was “I think it is extremely important.” The administrator felt as an educational system there was a need to work on focusing on student learning behaviors, academic dispositions, and educational self-efficacy all around. The administrator continued by stating, “the future of education is kind of going to be like these career academies. I think they need expanding.” Additionally, the administrator presented data that directly related to the students at their school: “The students we serve at our school, we have probably 20-25% that will go to a 4-year college. A majority of our kids are going to go

to trade school or community college or straight into the workforce.” The administrator summarized this data by stating, “I think we need more of having these academies in place to give them a hand-up, so that they can get their education while in high school and not have to rely on the community college to get that training.”

Summary

In this chapter, the description of the participants and the distribution method for the survey and interview questions for the research study were described. Chapter 4 also presented the three research questions for this study. Based upon the chi-square analysis of the data, the career academies in the study have the probability of having a significant impact on student learning behaviors, academic dispositions, and self-efficacy, $p < 0.05$. When comparing the impact the three career academies/schools had on student learning behaviors, academic dispositions, and educational self-efficacy, there was an overall positive relation between the academy structures, teacher and administrator interactions, and student success after high school in the areas of postsecondary education and work-based opportunities.

Chapter 5: Discussion

Introduction

Chapter 5 is divided into six sections. The first section provides an overview of the study. It also details the purpose, research questions, and methodology used in the study. The second section provides a summary of the research results and the chi-square analysis of the data. Section three provides details of the conclusions drawn from the findings from the quantitative and qualitative data. Additionally, this section incorporates the review of literature as it relates to or refutes the findings of the study. Section four reviews the limitations of the study. Section five features the recommendations for practice and suggestions for further study. The last section includes the conclusion to the career academy study and the research conducted.

Overview of the Study

The purpose of this study was to examine the impact of career academies on student dispositions, behaviors, and self-efficacy at three high schools within the coastal plain region of east central North Carolina. Career academy teachers and administrators from all three high schools were invited to participate in the study as follows: by accepting the request to participate and returning the signed Informed Consent Form through Adobe Sign; completing the Career Academy Questionnaire, with Likert scale rating from one (strongly disagree) to five (strongly agree); and responding to the career academy interview questions as presented by the researcher.

The research design is a case study that used a mixed-methods approach. The independent variables in this study included the career academy, teachers, and administrators. The dependent variables in this study included student learning behaviors, academic dispositions, and educational self-efficacy. Each dependent variable

was analyzed using a chi-square analysis to determine if there was a difference in the researcher's expectations of the career academy's impact on students and the actual impact as outlined through the data results. The frequency polygon was used to identify the frequency in the mean scores on the Likert scale items for each participant to determine the frequency and standard deviation in ratings. Using statistical analysis, the researcher sought to examine the teacher and administrator perceptions of their career academies' level of impact on student learning behaviors, academic dispositions, and educational self-efficacy.

Results

The frequency polygon in this study compared the mean score of each independent variable. Upon completion of the data analysis of this research study, three of the three theories were accepted. There was no difference in the mean scores ($M = 5.0$) of the reported amount of expectations the career academies have for their students in the areas of arriving to the career academy classes on time, prepared, and focused. There was no difference in the mean scores ($M = 5.0$) of the reported amount of positive impact the career academies have on student learning behaviors, academic dispositions, and educational self-efficacy. There was no difference in the mean scores ($M = 5.0$) of the reported amount of overall perception that both the teachers and administrators feel their career academies' staff understands the importance of enhancing student learning behaviors, academic dispositions, and educational self-efficacy and that the staff are implementing the strategies to do so within their career academy classrooms.

There was a significant difference in the mean scores ($M = 3.8$) between what the teachers and administrators rated as overall preparation provided for students for them to develop collaboration skills and work ethic while in group settings. Therefore, the

perception that career academies independently impact the development of student collaboration skills is invalid. These findings suggest that some teachers and administrators rated this area higher than the correlated data analysis indicated.

There was also a significant difference in the mean score ($M = 4.2$) between what the teachers and administrators perceived as the strategies the career academies have in place that assist in inducing career academy student creativity, flexibility, and motivation when interacting with the career academy content. Therefore, some teachers and administrators felt the career academy content stimulated students in these areas, as evidenced by participant responses to the interview questions, while others did not. These findings indicate that there is an inconsistent emphasis in the areas of student creativity, flexibility, and motivation with regard to the career academy content. The lack of inconsistency can lead to the loss of student engagement with the content and opportunities for autonomous academic choices. Creativity and motivation can enable “achievement of a new, higher level of performance” (Small, 2014, p. 2).

The chi-square analysis of the Career Academy Questionnaire provided findings that were consistent with the impact career academies have on student learning behaviors, academic dispositions, and educational self-efficacy. A p value for the survey questions that measured learning behaviors and academic dispositions showed there was a significant probability that the career academies impacted their students in these areas, which directly aligns with interviewee responses that career academy student interaction with teachers and administrators assists in positively impacting student behaviors and dispositions. The interview questions help to establish that the career academy is a platform for students to further explore their behavioral and dispositional needs while refining their prior aptitudes in these areas. Ryan and Deci’s self-determination theory

suggested that “if students can be supported in meeting their basic needs for competency, autonomy and relatedness in learning situations, they are more likely to develop into independent, self-directed and lifelong learners” (McCombs, 2016, p. 1).

Additionally, the chi-square analysis displayed a significant relation between the career academies and student self-efficacies. These findings assist in substantiating the importance of the students successfully interfacing with the career academy program, teachers, and administrators and how that interaction can directly impact student educational self-efficacy. The career academies’ positive expectations for students help to establish the trust the students have in their individual abilities and the career academy organization. Ng and Lucianetti (2016) stated that

when individuals feel increasingly anxious and fearful because they are unsure whether their organization welcomes or values attempts at innovation, they are unlikely to experience growth in self-efficacy beliefs about their innovative capacity. Thus, to remove those aversive emotions that stifle the growth in self-efficacy beliefs, an overall sense of trust in an organization is required. (p. 17)

Again, the interview questions help to validate these findings by the interview participants confirming the impact the structure of the career academy program, the relationships students build with their teachers, and the students’ postsecondary motivation and goals can have on building enlightened self-efficacy in students.

Conclusions

Progressively, high schools have been charged with the responsibility of preparing all students to be college and career ready upon graduation. In the 2009 educational brief by the Association for Career and Technical Education, it was stated that educational leaders are “beginning to realize the need to explore and adopt more

innovative approaches to ensuring all students are prepared for their futures in the 21st century economy” (p. 1). When reviewing current college readiness rates and employability rates for the state of North Carolina, there is a staggering difference in the percentage of students who graduate high school and enter college with the knowledge and skills necessary for them to be successful. The 2017 North Carolina college readiness rate is 18%, compared to the national average of 25% (Alliance for Excellent Education, 2017, p. 1). Additionally, “60% of today’s jobs require some form of education after high school, but, few twenty-five to thirty-four year-olds have an associate’s degree or higher” (Alliance for Excellent Education, 2017, p. 2). The current employability rate for North Carolina stands at 40%, with the national average at 39% (Alliance for Excellent Education, 2017, p. 2). There is a need for high schools to identify student performance indicators and seek solutions to improve those indicators that demonstrate lagging student performance, while also providing a curriculum full of educational relevance. “Distinguishing between leading and lagging indicators has a tremendous effect on both our motivation and performance” (The Learnwell Projects, 2016, p. 1). The leading indicators help to predict future performance, while lagging indicators help to display an “image” of what has happened in the past. “It is imperative that educators and students know how to distinguish between the two in learning environments and how to influence and measure (a more difficult task) leading indicators” (The Learnwell Projects, 2016, p. 2). The interpretation of the data from this research study raises the question of whether career academies are a key solution to aid in increasing the number of students leaving high school understanding postsecondary learning expectations and industry-related skill requirements. “All high school graduates need to be prepared for some postsecondary education and/or training if they are to have

options and opportunities in the job market” (Achieve, Inc., 2009, p. 1).

In the past, educational tracking has provided schools the opportunities to separate students into various curriculum paths based on their perceived abilities to either be successful after high school at a postsecondary institution or transitioning straight into the workforce. However, educational tracking of any form has caused two fundamental dilemmas for the educational system: (a) “If schools try to prepare all students only for four-year colleges and universities, many young people will finish their schooling without any technical knowledge or skill to earn a living” (Visher, 2015, p. 5) and (b)

If high schools provide college preparation education only for students who, around age 14, are deemed likely to succeed in postsecondary education, they will mistakenly shortchange many talented young people, including disproportionate numbers of those from low-income families, racial or linguistic minorities, or recent immigrants – an injustice to those and a loss to the nation. (Visher, 2015, p. 5)

The solution to these dilemmas is for high school to prepare students for both postsecondary education and employment opportunities. The findings from this research study indicated that the career academies participating in this study are working to prepare their students for postsecondary and work-based learning opportunities after high school. The career academy curriculum provides an opportunity for teachers to incorporate math and reading with career-focused skills and training.

To be college- and career-ready, high school graduates must have studied a rigorous and broad curriculum, grounded in these core academic disciplines but also consisting of other subjects that are part of a well-rounded education.

Students must also possess the skills or habits of mind that enable them to apply

their knowledge in a range of environments and situations. (Achieve, Inc., 2009, p. 1)

Career academies were once focused addressing the needs of marginalized youth, but play a much large role in the educational system today. Today, “career academies have expanded to number over 2,500, serve hundreds of thousands of students, and can be found in the country’s highest performing school districts (Association for Career and Technical Education, 2009, p. 3). The National Academy Foundation (2016), which supports 716 academies in over 37 states, estimated that 98% of their career academy students graduate high school, with 92% of those students being college-bound. Career academies continue to integrate academic and occupational-related coursework that focuses on promoting applied learning and college entrance requirements. The academies “establish partnerships with local employers to build sequences of career awareness and work-based learning opportunities for their students” (Kemple & Snipes, 2000, p. 1). Research has found that “through workplace relevance coupled with rigorous academics and relationships with business and industry, career academies change the way that high schools prepare students – influencing both teaching methods and curriculum” (Association for Career and Technical Education, 2009, p. 6). In 2013, the National Association of State Directors of Career Technical Education reported that student participation in career academies has increased academic success, increased student participation in extracurricular activities, increased the number of course credits earned, decreased the need for remedial coursework, and reduced the likelihood of students being arrested (p. 3). These successes demonstrate the resilience and thriving of the career academy students. Ledesma (2014) defined this resilience theory and variables characterize by resilience and thriving as “positive self-esteem, hardiness, strong coping

skills, a sense of coherence, self-efficacy, optimism, strong social resources, adaptability, risk-taking, low fear of failure, determination, perseverance, and a high tolerance of uncertainty” (p. 1). Additionally, students who participate in career academies have been known to be “more motivated and engaged, and more successful on traditional academic indicators” (Association for Career and Technical Education, 2009, p. 6). These positive affirmations of how career academies have impacted students are related to student confidence in their abilities to perform academically (self-efficacy), their desire to maintain positive character traits and mentality while in high school (disposition), and the students being able to learn the appropriate behaviors that can positively impact their lives. The findings from this research indicated that the career academies that participated in the study do not have growth strategies or goals in place to help students advance their learning behaviors, academic dispositions, or educational self-efficacy; however, there should be a focus on growth approaches that can increase student academic development.

Greater attention to academic growth may provide significant achievement and motivation support for a wide range of students: Although many students may not outperform peers, they can outperform their previous efforts; similarly, although many students may demonstrate acceptable comparative achievement, there is often room for further individual growth. (Martin, 2015, p. 133)

Limitations

A possible limitation to this research study could have been the low rate (38%) of participation by the career academy teachers and administrators. Due to the low rate of participation, the researcher was unable to compare the mean scores of a larger group of career academy personnel in the three high schools to assist with the effect size of the

data. Additionally, a higher participation rate may have aided in the validity of the data and the researcher's ability to generalize the findings across other career academies.

Perhaps a contributing factor to the low rate of participation was due to the fact that the researcher completed the research in January, immediately following the scheduled winter break for the school district. Traditionally, school staff use the time after winter break to bring closure to the first semester and to begin moving their focus to the needs of their students for the second semester. It is possible that due to the time of the research and other demands, some participants were not willing to allow time for participation.

Furthermore, the opportunity for the researcher to use more personal contact when requesting the participation of the career academy teachers and administrators, instead of using Adobe Sign, would have been beneficial. Having the opportunity to vocalize the purpose of the study and how their contribution would benefit in an inviting manner would have aided the researcher in being able to provide clarification of comments as needed.

When questioning the participants on how their career academies impacted leaning behaviors, academic dispositions, and educational self-efficacy, the researcher did not initially seek an understanding of these terms from the participants. There was an assumption made that all participations understood the terminology and how it related to career academies. It possibly would have been helpful to confirm an understanding on the Career Academy Questionnaire or doing the interviews.

This research study only examined three high schools with career academies in a rural North Carolina school district. It may have been beneficial to include all of the career academies within the selected district or consider the use of a larger school district.

Implications

The purpose of this research study was to examine the impact career academies had on student dispositions, self-efficacy, and behaviors. The findings reflected a perception by career academy teachers and administrators that there was an indirect impact on students by the career academy staff and curriculum structures in these areas but no definite plan in place to ensure fidelity. This would imply a need for professional development and training on how to prepare teachers to address these areas in their classrooms. Professional learning communities (PLCs) could be the initial step to introduce the need for teachers to focus on these areas and then work to devise strategies to grow students based their needs. In conjunction with PLCs, the use of a book study or other educational materials in the areas of student behaviors, dispositions, and self-efficacy could assist teachers in understanding the importance of these areas for student success during and after high school.

Another resource that could be used to assist the teachers with gathering information and implementing strategies in the classroom is the use of the North Carolina Career and Technical Education Moodle site that all career and technical education teachers can access. The Moodle site is designed and moderated by the North Carolina Department of Public Instruction and provides PLCs, resources, and materials for career and technical education teachers across the state of North Carolina. Furthermore, the site includes curriculum and course information that could be transformed to include a focus on student success in these areas.

This research also found that there was no process or procedure in place for the career academies that participated in the study to identify students who were at risk. Again, the use of PLCs to establish a set of standards for how to identify and address

career academy students who are at risk of being unsuccessful could assist in ensuring that all students are provided the same opportunities to make a positive change and get back on track to complete the academy and eventually high school.

This research also found that none of the career academies that participated in the study have a process in place to measure student growth in the areas of learning behaviors, academic dispositions, or educational self-efficacy. All participants stated that student growth in these areas was important but did not have a concrete process for measuring that growth. It would be beneficial for career academy teachers and administrators to work together to design a tool to establish a benchmark for each student in these areas as they enter into the career academy. The students could be assessed with the tool at varying points throughout their academy career to assess their level of growth, maintenance, or regression in these areas as they continued to participate in the academy. Of course, if there was regression or no growth, there was also a need for a process to be in place to address these students, which reverts back to the process for at-risk students that was mentioned previously.

Although this research study only examined the impact of career academies on student dispositions, self-efficacy, and behaviors with a relatively small sample of career academy teachers and administrators, it would be valuable to examine such an impact with a larger sample of career academy personnel or even a larger school system with more career academy options. It is possible that with more insight from a larger group of participants and different academy structures there would be a more definite measure of the impact on students in these areas.

Conclusion

Throughout this study, the researcher has learned that much of the research

provided in the literature review concerning the career academies' impact on the success of students transitioning through high school and pursuing their postsecondary educational or career opportunities has proven accurate and valid to the study and the conclusions within. "Academies attract and are well suited to serve a broad cross-section of high school students, from those who are high risk of dropping out to those who are on track to enroll in four-year universities" (Altuna, Safran, & Visher, 2013, p. 3). The Career Academy Questionnaire and interview questions that the teachers and administrators responded to for use in this study received honest responses from school personnel who had relationships and a desire for student success, for students they support and their school district.

The findings in this study, further substantiate the research and opinions that accurate development of student learning behaviors, academic dispositions, and educational self-efficacy are direct links to student success. Driscoll and Wells (2012) stated that "dispositions are not knowledge, skills, or abilities – they are qualities that determine how learners use and adapt their knowledge" (p. 1); while Lackey (2014) stated that "motivation, self-efficacy, mindsets, attributions, and learning strategies all play important roles in academic achievement" (p. 1). The research within this study demonstrated the career academy teachers and administrators at the three high schools in the coastal plain region of east central North Carolina have students who benefit from increased dispositions, learning behaviors, and self-efficacy that they can apply in the classroom and career field. The use of business and industry partnerships as well as the district's collaboration with the local community college helps provide a platform for the career academy teachers to use as they prepare students for the requirements of the educational institution and the workforce that surrounds them.

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Appendix A

School District Research Request and Consent

Jessica Perry
 XXXXXXXXX
 Louisburg, NC
 December 5, 2016

Assistant Superintendent for
 Accountability/Information Technology Services
 XXXX County Public Schools
 XXXXXXXXXX
 XXXXX, NC

Dr. XXXX:

Thank you for offering to consider my dissertation research request for XXXX County Public Schools. My dissertation topic is A Mixed-Method Case Study on the Impact of Career Academies on Student Dispositions, Self-Efficacy, and Behaviors. The purpose of this case study is to examine the impact of career academies on student dispositions, behaviors, and self-efficacy through the career academies in your district.

My proposed project starting date is January 2017, with a proposed ending date of February 2017. I obtained IRB approval from Gardner Webb University on October 6, 2016 and will include a copy of the approval with this letter. In addition, I will include a copy of my dissertation proposal approval form with signatures from my committee members and chair, Dr. Douglas Eury.

The proposed plan for conducting my research within XXXX County Public Schools is as follows:

- ☐ I will disseminate a survey to all career academy teachers and administrators who are actively involved in the development and implementation of curriculum, structures, and procedures for career academy students. The survey will be distributed electronically to the staff using Typeform, an on-line and secure platform. I anticipate the distribution and completion of the survey taking approximately two weeks, with the hopes of receiving as many responses possible. The survey questions are enclosed with this letter.
- ☐ Upon completion of the survey, I will then select 5-6 teachers and/or administrators, to complete face-to-face interviews, to get a better understanding of the career academies intentional structures and procedures that directly impact student dispositions, behaviors, and self-efficacy. I will require each participating to sign an Informed Consent Form, which describes the interview process and their ability to withdraw from the interview at any time. The interviews will be scheduled for 45 minutes to 1 hour. I anticipate the interviews being completed within a 1-2 day time frame, based solely on the staff's ability to participate without interrupting instruction. I have enclosed the Informed Consent Form and the interview questions with this letter as well.

It is my desire that this research will help to bring insight into the opportunities career academies provide for students to enhance and/or improve their learning behaviors, academic dispositions, and educational self- efficacy. I think that this research will benefit XXXX County Public Schools, as well as other North Carolina school districts that are using career academies to help prepare our students for post-secondary education and the workforce.

I look forward to receiving your response to my request.

Thank you for your time. Sincerely,

Jessica T. Perry
Ed.D. Educational Leadership Candidate
Gardner-Webb University

Enclosure(s)

Jessica Perry
 Louisburg, NC 27549
 December 5, 2016

Principals of the Career Academies XXXX County Public Schools

Dear XXXX County Public School Career Academy Principals:

I am currently working on my Doctoral Degree in Educational Leadership at Gardner-Webb University. My dissertation topic is A Mixed-Method Case Study on the Impact of Career Academies on Student Dispositions, Self-Efficacy, and Behaviors. The purpose of this case study is to examine the impact of career academies on student learning behaviors, academic dispositions, and educational self-efficacy in your career academy.

The proposed plan for conducting my research within the career academies in XXXX County Public Schools is as follows:

- ☐ I will disseminate a survey to all career academy teachers and administrators who are actively involved in the development and implementation of curriculum, structures, and procedures for career academy students. The survey will be distributed electronically to the staff using Typeform, an on-line and secure platform. I anticipate the distribution and completion of the survey taking approximately two weeks, with the hopes of receiving as many responses possible. The survey questions are enclosed with this letter.
- ☐ Upon completion of the survey, I will then select 5-6 teachers and/or administrators, to complete face-to-face interviews, to get a better understanding of the career academies intentional structures and procedures that directly impact student dispositions, behaviors, and self-efficacy. I will require each participating to sign an Informed Consent Form, which describes the interview process and their ability to withdraw from the interview at any time. The interviews will be scheduled for 45 minutes to 1 hour. I anticipate the interviews being completed within a 1-2 day time frame, based solely on the staff's ability to participate without interrupting instruction. I have enclosed the Informed Consent Form and the interview questions with this letter as well.

If you would agree to allow me access to your Career Academy teachers, and administrators, please initial and sign the statement below. If you have any questions or would like to know more about my study, please feel free to contact me at 919.995.4559 or via email at jerry5@gardner-webb.edu.

I look forward to receiving your response to my request. Thank you for your time.

Sincerely,

Jessica T. Perry
 GWU Doctoral Candidate

Appendix B

Career Academy Questionnaire via Typeform

Career Academy Questionnaire

School Location:

Career Academy Implementation Years

A. 0-3 B. 4-6 C. 7+

Position

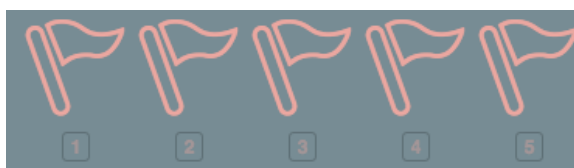
A. Career Academy Teacher B. Career Academy Administrator

Years of Experience with Career Academy

A. 0-3 B. 4-6 C. 7+

We hold all career academy students to the expectation of arriving to their career academy classes on time, prepared, and focused.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



A majority of our career academy students attend school regularly so that they can reap the full benefits of the program.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



Our Career Academy has procedures in place to instruct our students on how to effectively evaluate their work and the work of their peers.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



As a career academy, our students are provided opportunities to develop leadership skills for individual and group activities.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



Career Academy teachers implement process and procedures that require students to check for their own understanding of content, as well as their peers.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



Our career academy is designed to focus on the development of the "whole student" - which includes social interactions, learning behaviors, academic dispositions, and educational self-efficacy.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



Our career academy provides opportunities for all students to develop collaboration skills and work ethic while in group settings.

1 Flag: Strongly Disagree - 5 Flags: Strongly



We have strategies in place that induce student creativity, flexibility, and motivation when interacting with the career academy content.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



All of the career academy teachers have high expectations for all students and hold all students to those expectations.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



We have procedures in place that teach our students how to appropriately ask questions of staff, students, and business partners.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



As a career academy staff, we have implemented structures to assist students that are "at-risk" and require additional support.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



As a career academy staff, we invest time in preparing each student for post-secondary and work-based success.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



A vast majority of our career academy students interact safely with staff, students, and community members.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



While evaluating our career academy program's effectiveness, we consider the teachers and staff's impact on our students learning behaviors, academic dispositions, and educational self-efficacy.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



I feel all the career academy staff understands the importance of enhancing student learning behaviors, academic dispositions, and educational self-efficacy and are implementing strategies to do so within their classrooms.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



Overall, I feel our career academy has a positive impact on student learning behaviors, academic dispositions, and educational self-efficacy.

1 Flag: Strongly Disagree - 5 Flags: Strongly Agree



<https://jperrygwu.typeform.com/to/HkbR0q>

Appendix C

IRB Approval

Expedited IRB approval

Kathi Simpson

Thu 10/6/2016 9:16 AM

Cc:Doug Eury, Barbara Hildreth

Ms. Perry,

Your IRB Application for the Expedited research project titled “A Mixed-Method Case Study on the Impact of Career Academies on Student Dispositions, Self-Efficacy, and Behaviors” has been approved, effective October 6, 2016. It has been assigned an expiration date of October 5, 2017, and an IRB file number of 16100601X.

Please be aware that if you need to continue your study beyond the Expiration Date, you must submit a Request for Continuance (<http://www.gardnerwebb.edu/Assets/gardnerwebb/academics/review-board/irb-request-research-continuance1.pdf>) prior to that date.

Please send us a copy of your superintendent’s approval once you have received it. You may email a scanned copy and send it directly to me; I will ensure that it is added to your IRB. We appreciate your help with this.

Best wishes for a productive investigation!

Kathi Simpson

Secretary, Gayle Bolt Price

School of Graduate Studies

Secretary to the IRB

Gardner-Webb University

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Appendix D
Informed Consent Form

INFORMED CONSENT FORM
GARDNER-WEBB UNIVERSITY

Informed Consent for Participants in Research Projects Involving Human Subjects

Title of Project: A Mixed-Method Case Study on the Impact of
Career Academies on Student Dispositions, Self-
Efficacy, and Behaviors

Researchers: Jessica Perry and Dr. Doug Eury, Committee Chair

I. Purpose of the Research/Project

The purpose of this study is to determine the impact career academies have on student learning behaviors, academic dispositions, and educational self-efficacy in your career academy. I want to know how you feel about the career academy and its impact on your students' high school performance. I will use this information to complete my dissertation.

Career Academy teachers and administrators will participate in the survey and interviews.

II. Procedures

Survey

The survey will be administered to career academy teachers and administrators, electronically through Typeform, and secure on-line platform. The survey should take no longer than 10-15 minutes for each participant to complete.

Interview

The interview will last for approximately 45 minutes to 1 hour. The interview will be audio recorded using a digital audio voice recorder. I will only request that you sit for one interview. The interview will take place in the high school conference room or a location that your principal selects.

I ask that all participants are open and honest about your experiences with the career academy. I will ask specific questions based on whether you are a teacher or an administrator.

After the interview, the researcher will type a transcript of the interview. I will invite you to read the transcript and make comments. I will select a time and place to read the transcript upon completion of the interviews. You may read the transcript in the presence of the researcher.

III. Risks

There are minimal risks associated with this study. All participants are allowed to state that they wish not to answer the survey or a question at any time.

IV. Benefits

Your school and community will benefit from your summarized experience, because it may lead to the development of career academies structures and procedures that are designed to meet the unique needs of students within your school district. No promises or guarantees of benefits have been made to encourage you to participate.

You may contact the researcher later for a summary of the researcher results.

VI. Extent of Anonymity and Confidentiality

The researcher will make every effort to conceal your identity in any written work resulting from this study. Pseudonyms will be used to identify your school in written materials. In addition, the researcher will try to limit the possibility of identifying other people you may mention. In the transcripts you will be identified by a pseudonym (i.e. Teacher A and Administrator A, etc.)

The survey data will be downloaded from Typeform and stored in a password-protected spreadsheet. The digital recordings of the interview will be downloaded from the recording device onto a flash drive and stored in a locked file box at the researcher's office. In protecting confidentiality, recordings will be destroyed after transcription. The researcher is the only individual who will have access to the recordings and the survey data. Copies of the survey results and transcripts may be viewed by the researcher and other members of the dissertation committee.

VII. Freedom to Withdraw

You are free to withdraw from the study at any time.

If there are circumstances that arise during the interview and it is determined that you should not continue as a subject, the interview will end.

VIII. Subject's Responsibilities

I voluntarily agree to participate in this study. I have the following responsibilities:

☐ Initial_____I agree to answer survey and interview questions honestly.

- ☐ Initial_____ I agree to allow the researcher to record the interview, if I'm selected.

IX. Subject's Permission

I have read the Informed Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

Subject Name (printed)

Subject Signature

Date

Should I have any pertinent questions about this research or its content, my rights as a research subject, and who to contact in the event of a research-related injury to the subject, I may contact:

Jessica Perry, Researcher, **919-995-4559/jperry5@gardner-webb.edu**

Dr. Doug Eury, Committee Chair/Dean of the School of Education,
704-406-4408/aeury@gardner-webb.edu

Appendix E

Participant Interview Questions

Interview Questions for Career Academy Teachers

1. Explain the program structures of your career academy that focus specifically on student learning behaviors, academic dispositions, and educational self-efficacy.
2. Discuss the learning behaviors that characterize a successful career academy student.
3. What academic dispositions are demonstrated by the most successful career academy students? How do you categorize those dispositions?
4. Discuss the educational self-efficacy skills a successful career academy student would require to move onto post-secondary or work-based opportunities.
5. How does your career academy program work to enhance educational self-efficacy, learning behaviors, and academic dispositions for students enrolled in the academy?
6. What career academy trainings have you received that prepares you to work with students specifically in the areas of increasing their learning behaviors, academic dispositions, and educational self-efficacy. Explain.
7. How does your career academy identify students who are at-risk of not successfully completing the career academy program and what procedures are in place to address these students' needs? Are any of these procedures related to the students' behaviors, dispositions, or self-efficacy? If yes or no, explain.
8. Discuss your thoughts on your students' awareness of their own learning behaviors, academic dispositions, and educational self-efficacy?
9. What measures are in place to measure student growth beyond academics? Explain the measures used to determine student growth in the areas of learning behaviors, academic dispositions, and educational self-efficacy.
10. How important do you think these areas of student growth are to the impact your career academy has on student success? Explain.

Interview Questions for Career Academy Administrators

1. Explain the program structures of your career academy that focus specifically on student learning behaviors, academic dispositions, and educational self-efficacy.

2. Discuss the learning behaviors that characterize a successful career academy student.
3. What academic dispositions are demonstrated by the most successful career academy students? How do you categorize those dispositions?
4. Discuss the educational self-efficacy skills a successful career academy student would require to move onto post-secondary or work-based opportunities.
5. How does your career academy staff work to enhance educational self-efficacy, learning behaviors, and academic dispositions for students enrolled in the academy?
6. What career academy trainings have you provided for the teachers that prepare them to work with students specifically in the areas of increasing their learning behaviors, academic dispositions, and educational self-efficacy? If none, what could you provide? Explain.
7. How does your career academy staff identify students who are at-risk of not successfully completing the career academy program and what procedures are in place to address these students' needs? Are any of these procedures related to the students' behaviors, dispositions, or self-efficacy? If yes or no, explain.
8. Discuss your thoughts on your staffs' awareness of their students' learning behaviors, academic dispositions, and educational self-efficacy? What are some structures they could use to become more aware of these areas?
9. What measures are in place to measure student growth beyond academics? Explain the measures used to determine student growth in the areas of learning behaviors, academic dispositions, and educational self-efficacy.
10. How important do you think these areas of student growth are to the impact your career academy has on student success? Explain.