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**STUDENTS' PERCEPTIONS OF CAREER DEVELOPMENT
EXPERIENCES IN BERMUDA AND PENNSYLVANIA HIGH SCHOOLS:
PREPARATIONS FOR POSTSECONDARY ASPIRATIONS**

A Dissertation in

Workforce Education and Development

and

Comparative and International Education

By

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ABSTRACT

The purpose of this research study was three-fold: first, to conduct a comparative study of freshman college students in Bermuda and Pennsylvania, looking specifically at their perceptions of their preparedness to make informed decisions about their postsecondary aspirations based on their career development experiences in high school, utilizing the Hope Centered Career Development Competencies instrument. The second was to determine the effects of school engagement on academic performance and career identity, and examine the mediating role of hope-centered career competencies in relationships. Finally, the research also determined whether there were differences between the two institutions participating in the research study.

The data were analyzed using descriptive and inferential statistics, including one-way analysis of variance (ANOVA) and the t-test. SPSS 21 was used to analyze data collected to answer research question 1. Information collected to answer research questions 2 and 3 was analyzed using a structural equation model (SEM); analyses were conducted using LISREL 8.80. On all research questions the two institutions revealed similar findings on all competencies with the exception of one—*hope*. When examining differences between the two institutions, findings indicated that there were more similarities than differences. Hope Centered Career Inventory competencies had a statistically significant effect on career identity but no statistically significant impact on student Grade Point Average. The results also suggested that school engagement without the mediator HCCI did not impact career identity or GPA.

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Chapter 1

Introduction

Historical Perspectives

In a highly competitive global economy, it is essential that educational institutions in places as different as Bermuda and Pennsylvania prepare students to ultimately compete for sustainable jobs and be productive citizens within their society. Symonds, Schwartz, and Ferguson (2011) suggested that each society commit to preparing its youth to lead productive and successful lives as adults. They stressed the importance of preparing all young people with a solid foundation of “literacy, numeracy, and thinking skills for responsible citizenship, career development, and lifelong learning” (p. 1). In guaranteeing that young people have the ability to make informed decisions about their future aspirations, they need the necessary knowledge and skills to meet the demands of the 21st century. It is not only an economically shrewd decision but also an ethically compelling cause to ensure that every child has access to the resources needed to attain their dreams (Noguera, 2003). Since preparing students is a complex process, it is important to acknowledge the influences of each student’s aspirations as an important part of their motivation to succeed (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001).

With regard to Bermuda’s and Pennsylvania’s students’ career development experiences, there has been limited research in comparative and international education on this topic. For many years there has been a tendency to ‘borrow’ educational policies and practices from one national setting where they may be effective and attempt to transplant them into another. In many cases little regard has been given to the potential significance of the cultural context into which they are being imported. Thus international

comparisons have been used to legitimate claims about the condition of national systems of education and to justify radical changes in educational policy (Alexander, 2000).

Research in comparative and international education can potentially enlighten a researcher, as well as the audience, to the similarities and differences between cultures and fuel educational policies and practices for the future.

Education systems have a great responsibility to develop the human capital that is required to sustain any society; for this and related reasons, it is imperative that in an ever-changing global economy, international and comparative studies in education be conducted. Such studies provide educational leaders and policy makers with a better understanding of their education system and allow them to improve policies and practices by setting realistic standards. One of the leading reasons for conducting such a study is to allow educational leaders in international contexts, such as Bermuda and Pennsylvania, to gain knowledge needed to evaluate the success of their educational systems. This study focused on career development and its importance to academic success and equipping students to make informed decisions on their postsecondary aspirations.

Although there may be some differences in the characteristics of schools in the United States and Bermuda, they are not radically different. A careful comparative international study may expose the factors that promote educational success and those that have little impact, if any.

Due to its complexity, comparative and international research requires a great deal of planning and careful delineation of results before conclusions can be reached. When comparing any two phenomena, the objects of comparison must be examined side by side only after a system or scale has been devised to evaluate differences in complementing

characteristics (Raiva, 1985). The researcher must either choose two phenomena that already have comparable characteristics, or devise a sliding scale that will allow for a fair comparison. To ensure that research is comparable, Raiva suggested asking the following questions: (1) do the concepts under comparison correspond (relating to the location of the concepts on a general-specific continuum, the definitions of the concepts, and how easy the concepts are to identify); (2) how is the correspondence of measurements to be assessed; and (3) can the problem of how concepts are linguistically expressed be resolved? One concern is how to identify a body of material suitable for comparison that is independent of the collector and the interpreter (p. 269) in relation to the formation of concepts and the basic mental operations of recognition, comparison and classification.

With an alarming number of students not being adequately prepared for postsecondary experiences as well as the increasing number of students dropping out of schools each year, the success of educational institutions has been called into question worldwide. Boser and Burd (2009) stated that secondary schools bear much of the responsibility for not preparing students for the rigors of higher education. The Pennsylvania Department of Education (PDE, 2010) reported that 12,662 high school students dropped out of school in academic year 2009–2010 (1.50% of the enrolled population), while the Bermuda Ministry of Education (MOE, 2011) reported 6 high school dropouts (2.33% of the enrolled population). With the current standards-based educational reform, attention has been focused mainly on the educational achievement of high school graduates while a look at the 25% to 30% of high school dropouts has been lost over the past quarter-century (Barton, 2002) has not occurred. Barton also stated that many students, both graduates and dropouts, are deficient in career and college planning

skills as they enter the labor market or transition to postsecondary education.

Although career development strategies potentially play an important role in every aspect of life, it is especially important during the early years of the school experience of students. Such information aids students in making the connection between what they are learning and how it can influence their future aspirations. Effective educational career planning that occurs in schools assists students in becoming intentional in their educational and career development (Trusty, Niles, & Carney, 2005), empowering them to make informed, knowledgeable decisions about their future aspirations. According to Whittaker (2011), Bermuda's Premier, the Honorable Paula Cox, has stated that the Bermuda Ministry of Education recognizes the need to facilitate the type of workforce development required to better serve Bermuda's most treasured resource—its youth. Acknowledging the need to better serve youth is a step in the right direction; ensuring employment of the correct strategies also requires careful consideration.

The American School Counselors Association (ASCA, 2005) clearly stated that career development should be a part of each school's comprehensive counseling program. Due to its fundamental role in career counseling for all individuals, it should be an essential component of a young person's educational journey. Armed with this information, students may create meaningful experiences between what they learn in school and how these may influence their career choices, as well as their future beyond high school. According to Trusty, Niles and Carney (2005), efficient education career planning in middle schools allows students to take an active role in their educational and career development.

The need for effective career development strategies is not just limited to Bermuda and Pennsylvania. Bloxom et al. (2008) discussed strategies within Canada's schools for implementing a comprehensive career development system (CCDS). The CCDS recommended that school systems and their schools create a developmental, synchronized, systematic approach to assisting all students in making career plans as well as a successful transition from high school into post-secondary programs, regardless of whether these were educational or career-based programs (Alberta Learning, 2000).

The Problem

In today's knowledge-driven economy, many societies often have equated educational success with the completion of a four-year college program. In saying this, the question arises: are our educational institutions providing youth with comprehensive career development strategies that prepare them to make informed decisions for their futures? Bloxom et al. (2008) suggested that high schools are challenged to provide graduates with the knowledge and skills needed to pursue individual academic and career goals within this rapidly changing and demanding economic global economy. This fact points to the importance of ensuring that all students have a high-quality education that includes career development so that they may achieve educational and career goals. Although many school systems acknowledge the importance of career development as an essential component of a school's comprehensive counseling program, it is an aspect of the daily responsibilities of a counselor that are not adequately being met (Foster, Young, & Hermann, 2005; Osborne & Baggerly, 2004). The purpose of this study was to examine the perceptions of freshman college students in Bermuda and Pennsylvania of their preparedness to make informed decisions about their postsecondary aspirations,

based upon their career development experiences in high school, utilizing the Hope Centered Career Development Competencies (Niles & Hyung, 2012). As an unacceptable number of students continue to drop out of school each year and make unrealistic decisions about their future goals, this study's findings may contribute to the wealth of knowledge currently present within the discipline.

A society that places great emphasis on a high-quality education must address and remedy the issue of school drop-out rates. According to the America's Career Resource Network (2006), the number one reason for student drop-out may be the lack of career focus. In a job market where the fastest growing careers that pay well require at least some postsecondary education (Carnevale & Desrochers, 2003), it is no surprise that the "one way to win" mentality has given rise to more students entering four-year colleges. And while higher education is vital, a four-year college degree is not the only way in which youth may achieve success. Gray and Herr (2006) pointed to the scarcity of jobs for those who complete college programs. In fact, twice as many graduates as job openings require this level of education. Encouraging all high school graduates to attend a four-year college creates a multitude of issues for any society. Some potential problems include: (a) the continued rise in college dropout rates, contributing to growth in student loan debts, (b) increased numbers of students being qualified jobs that are not available, (c) lack of students prepared to fulfill high-wage, high-skill jobs, and (d) the focus of this study—high school students making uninformed, unrealistic educational and career choices that result in failure and exert a negative impact on society as a whole.

In an effort to address some of the current challenges in our school systems, school curricula must provide a comprehensive career development strategy for all

students. Rumberger and Rotermund (2012) concurred that current directives concentrating on academic achievement have strained counseling resources and limited the career counseling that takes place in schools. Scheel and Gonzalez (2007) suggested that school counselors facilitate activities that promote awareness of future career and educational choices—choices that may be important contributors to academic motivation and educational success. These authors also stated that career interventions are essential to a student's school experience. Their study indicated that a career was an important domain of school counseling in fostering the learning process. Career development connects school to the future, thus developing students' academic motivation by providing them with a sense of connection between what they are doing and what they hope to achieve. Rumberger and Rotermund (2012) stressed the crucial need to restore career development counseling to remedy the problem. In doing so, all students are afforded the opportunity to identify, explore, and gain knowledge, skills and experience needed to make informed decisions about their future.

Comprehensive strategies also recognize that students rely on other significant resources when making decisions about future plans beyond high school. To best meet the needs of students, collaboration should occur among all stakeholders involved in each student's future education-career planning (Trusty, Niles, & Carney, 2005). The need for this collaboration has been validated in research conducted by Amatea, Daniels, Bringman, and Vandiver (2004), who suggested that comprehensive career development systems within schools that include parents, teachers, and counselors have merit in assisting students in making realistic education-career plans.

In the effective delivery of a school's comprehensive career development

strategy, the school counselor plays a pivotal role, assisted by all other stakeholders in the student's life. For this reason it is essential that students are aware that counselors are a valuable resource in the achievement of their future aspirations. Bloxom et al. (2008) reported that 13.5% of high school students indicated that they would approach school counselors for assistance. Although the numbers have increased from previous studies, the staggering reality is that this represents only a small percentage of students who believe school counselors are helpful in career planning. School counselors acknowledge that a number of barriers prevent both students and counselors from being more effective in career planning, including: lack of time, support, resources, and inadequate training (Witko, Bernes, Magnusson, & Bardick, 2005). If counselors are to address the needs of students, appropriate training must be available to them, as well as improved access to effective career planning resources and a paradigm shift in the role of the school counselor within the school setting.

Ensuring that counselors are adequately prepared to deliver an effective, comprehensive career development strategy involves the collaborative involvement of all stakeholders. Doing so will increase the probability of students being more engaged in their education and able to make informed decisions on behalf of their postsecondary aspirations. Students will have the skills needed to set realistic goals and plan for their future based on a complete and accurate assessment of their hope, needs, interest, and ability. Acknowledging that many factors contribute to student decision making on behalf of their career aspirations and plans beyond high school, it is imperative that they have access to pertinent information in order to make these decisions. Lent (2005) stressed the importance of ensuring that students receive accurate career information, as inaccurate

information can lead to idealistic expectations that may compel students to make decisions and/or take actions that can impede positive career outcomes.

Career development is fundamental to students' academic and social personal development, but more importantly, it has the potential to assist them in making connections between their educational experiences and postsecondary aspirations. Gray (2004) stated that current educational institutions are inattentive in addressing adolescents' need to recognize the relationship between current learning and their future aspirations. Rivera and Schaefer (2009) mentioned that efforts to meet students' career development needs often are lacking, or there is no consistency in the way career development strategies are implemented within schools. Failure to meet these needs causes great disparity for students, preventing them from making intentional and knowledgeable decisions regarding their options for postsecondary aspirations. Trusty, Niles, and Carney (2005) indicated that students who set unrealistic goals, through misinformation or lack thereof, may suffer from tunnel vision and not explore realistic educational and occupation options more in line with their success in their present education and the future. According to these researchers, one way that this issue may be addressed is to have an effective education career plan, stressing its importance as a vital component in a comprehensive career development school strategy.

Significance of the Study

Implementing comprehensive career development strategies is an important component of a high-quality educational experience, one that assists students in being successful in school and beyond. Such strategies have an impact on all aspects of an individual's life. Career education, exploration and development, according to the

American School Counselor Association (ASCA, 2005), should be an essential component of every school counseling curriculum. Implementation of such a program will ensure that students are able to make informed decisions about their career choices beyond high school as well as possibly decreasing student dropout rates while increasing student GPA. Hoyt (2005) argued that students who can make the link between what they are learning, career, and work opportunities beyond their high school experience are more likely to be engaged in their class work and build a positive rational image of the future. Delivering such strategies can change the fact that a number of the students who graduate from high school do not have the knowledge and skills required to be successful at the postsecondary level, or even in work training programs (Boser & Burd, 2009; National Center for Public Policy and Higher Education, 2008; Strong American Schools, 2008).

Illuminating its significance for adolescents and potentially positive outcomes as an intervention, career development not only directly benefits the individual but also society as a whole. The primary significance of this study was its contributions to the expanding body of literature pertinent to career development strategies for adolescents in schools. The consideration of career development strategies must take into consideration the importance of providing students as early as middle school, but certainly in high school, with the necessary tools to make informed decisions about their postsecondary aspirations through empirical research. Pyne, Bernes, Magnusson, and Poulsen (2002), in their study of Canadian high school juniors and seniors, indicated that decisions about choices of future career plans were important to the lives of adolescents. They suggested that students as early as 11 years old genuinely consider their future career aspirations. Bardick, Bernes, Magnusson, and Witko (2006), in their study, pointed to the need for

career planning programs to begin prior to or at least at the junior high level, since junior high students have indicated that they have strong career goals. Junior high students have demonstrated their ability to think about their future career aspirations—thus, by involving them in the process of career planning, they are ensured that their voices are being heard. Furthermore, early career education would also ensure that students' career planning needs are effectively being met. Junior high students themselves have suggested that they have a positive outlook on gaining employment in their desired occupation in the global workplace. Students' positive attitude may be enriched and sustained by listening to them, including them in the program planning process, and attempting to meet their career and college aspirations (Bardick, Bernes, Magnusson, & Witko, 2004).

In addition, the results of this study have practical implications for education policy, educators, and the school counseling profession with regard to establishing or modifying policies and strategies that ensure the appropriate implementation of a more effective career development strategy within each school system. This in turn also prepares and inspires students to be more engaged in their own educational experience, improve academic achievement, reduce the gaps contributing to school dropout rates, as well as offering the opportunity to become more knowledgeable about planning and reaching their postsecondary aspirations.

The results of this study also strengthen the practical value of the Hope-Centered Career Development theory and the Hope Centered Career Inventory-Revised (HCCI-R); and contribute to the advancement of career counseling, career education, and career development for youth in Bermuda and Pennsylvania. Finally, this study substantiated the importance of having educational institutions acknowledge their role in guaranteeing that

all students are afforded the opportunity to gain the necessary knowledge and skills attained through career development, to make informed and realistic decisions for their future aspirations (Gray, 2009).

Research Questions

The research questions for this study were as follows:

RQ1. What are the differences between Bermuda and Pennsylvania freshman college students' perceptions of their career development experiences in preparing them for making informed decisions about postsecondary aspirations?

RQ2. What are the effects of school engagement competencies on academic performance, career identity and the mediating role of hope-centered career competencies in the relationships?

RQ3. How does the relationship of hope, academic performance, vocational identity, and school engagement differ between Bermuda and Pennsylvania freshman college students?

Limitations

Limitations are based on this study's focus on specific areas and a specific population in Bermuda and Pennsylvania. Student responses to the questionnaire are self-reported and a measure of their perceptions of their preparedness to make informed decisions about postsecondary aspirations rather than measuring their preparedness directly. Second, the study explored two different educational systems—British and American school systems—posing possible challenges of equivalence. Third, the sample size for the Pennsylvania population considered only one school district so the results may not be generalized to the larger population. The researcher also acknowledges that

there are limitations to the study based on the fact it did not examine to any extent the role of external influences and barriers that may impact on the decision-making and the career development process for individual students. Finally, the Hope Centered Career Development Model (HCMCD; Niles, Amundson, & Neault 2010) is a newly developed scale—as a result, there are limited validity studies and evidence to support the model’s concept, particularly with the adolescent audience.

Definition of Terms

The following terms were important for this study:

Postsecondary Aspirations: are the academic and occupational dreams of students about their future or a combination of an individual's motivations (the ability to look ahead and invest in the future) and his or her inspirations (the ability to invest the required time, vigor, and effort; (Sirin, Diemer, Jackson, Gonsalves, & Howell, 2004).

Hope Centered Career Development Model: measures seven important competencies for effective career self-management. These competencies are: 1) hope, 2) self-reflection, 3) self clarity, 4) visioning, 5) goal setting and planning, 6) implementing and 7) adapting; (Niles, Amundson, & Neault, 2011).

Hope Centered Career Inventory: measures essential competencies for coping with career flow challenges effectively. Career flow refers to the wide range of positive and negative experiences that we encounter at work on a daily basis. The competencies in the HCCI are based on the Hope Centered Model of Career Development (HCMCD; S. Niles, N. Amundson, & R. Neault (2010).

Career Development: is the total collection of psychological, sociological, educational, physical, and economic factors that combine to influence the nature and significance of

work in the total lifespan of any given individual (National Career Development Association, 2008).

Career Counseling: the process of assisting individuals in the development of a life-career with focus on the definition of the worker role and how that role interacts with other life roles (National Career Development Association, 2008).

Career Development Strategies: activities that assist people in increasing self-awareness, expanding career awareness, learning decision-making skills, and obtaining skills for job search. These activities may include individual career counseling, group career counseling, and career development programs (Niles & Harris-Bowlsbey, 2009).

Career Education: a systematic method of influencing career development of students through various educational strategies, which involves giving occupational information, incorporating career-related concepts into the existing academic curriculum, offering various occupational experience, and providing career planning courses (Isaacson & Brown, 2000).

Vocational Identity: Holland, Daiger, and Power (1980b) defined vocational identify (VI) as “the degree to which a person possesses a clear and stable picture of his or her goals, interests, and talents” (p. 1). VI was assessed using the Career Identity Scale from My Vocational Situation (Holland et al., 1980a).

Assumptions

In our ever-changing global economy it is imperative that educational systems prepare students to enter the global job market. Although career development should be an essential component of an individual’s educational experience, many of our students are not afforded the opportunity to identify and explore their interests, and acquire the necessary knowledge and skills to successfully enter the job market or colleges, due to

the lack of comprehensive career development strategies in our schools. In 2003, career development was in fewer high schools in the United States than in 1984 (Parsad, Alexander, Farris, & Hudson 2003). Willis and Mack (2009) reported inconsistencies in the implementation of career counseling in school throughout the United States. Students continue to make uninformed decisions about their postsecondary aspirations, regardless of whether they pursue a college education or the job market. Many of today's high school graduates will make decisions that will affect how they achieve their postsecondary aspirations. Decision elements include speculations, parental and societal expectations, and misinformation on what it will take for them to be successful in school and beyond. Moreover, Fouad (2007) stated that children's career aspirations are often formed by a number of influencing factors, their parents' economic status, their school experience, and their access to opportunities.

Although some form of career education and career development may be available to some of the students within our school systems, as stated earlier, the research suggests that there are inconsistencies in how strategies are implemented as well as ensuring that all students are afforded the same career development experience throughout the educational system. If every student enrolled in school received adequate career education and career development, the decisions that students make for their postsecondary aspirations will be well-informed and realistic decisions, allowing the students to have a voice in promoting the goals and aspirations of each individual for their future.

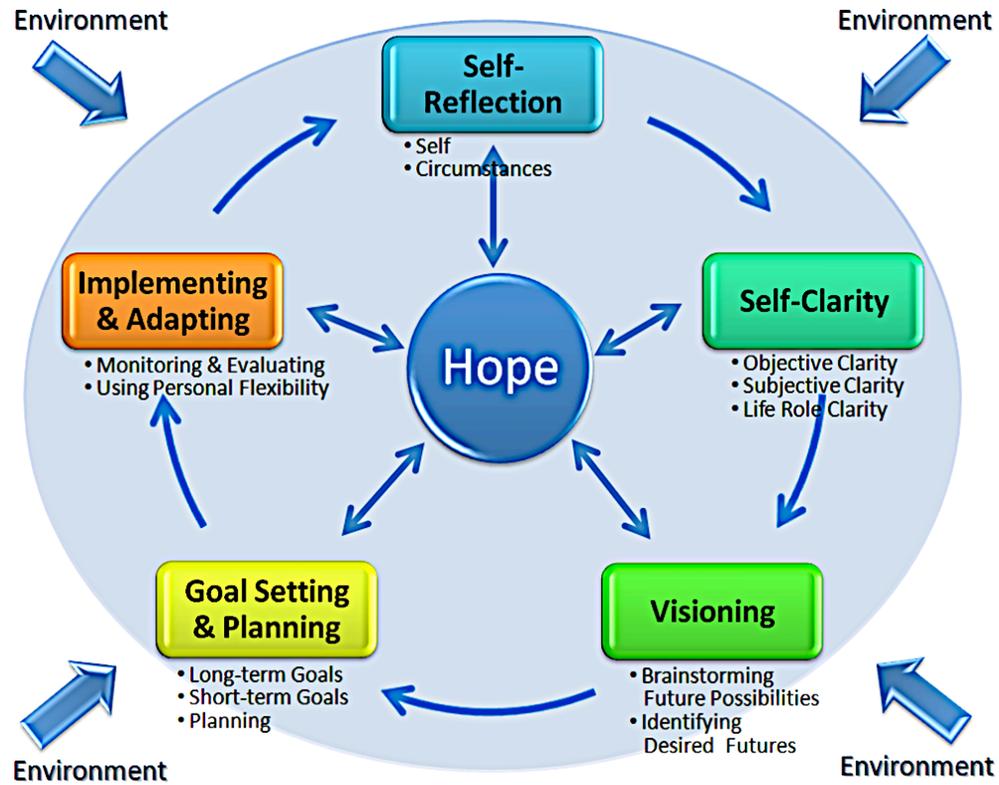
The Hope Centered Model Career Development (HCMCD) focuses on the aspect of hope as a central role in one's career development while also including the human

agency factor for making decisions. Utilizing this conceptual framework for the current study, the researcher intended to make students' hope of postsecondary aspirations the central component of the model. Students' hope for the future is a key component in fostering the connection between school engagement and future career activities.

Adapting the HCMCD to fit this study, the following hope-centered competencies included: hope for postsecondary aspirations, self-reflection, self-clarity, visioning, goal setting and planning, implementing, and adapting. The underlying concept of this model considered each competency fundamental to career self-management, realistic career development, and informed decision making related to postsecondary career aspirations. The HCMCD is a useful model for educational leaders and policy makers in Bermuda to utilize to ensure that all students in the public school system are given the opportunity to develop the skills and knowledge needed to make informed decisions for their future.

Conceptual Framework

The conceptual framework that guided this study was the Hope-Centered Career Competencies: Hope Centered Model Career Development (see Figure 1.1). A comprehensive career development program, which incorporates hope-centered career competencies, equips students with the knowledge and skills required to make informed decisions about their postsecondary aspirations. This model measures seven important competencies for effective career self-management. These competencies are: 1) hope, 2) self-reflection, 3) self clarity, 4) visioning, 5) goal setting and planning, 6) implementing and 7) adapting; (Niles, Amundson, & Neault, 2011).



*Figure 1.1. Hope-Centered Career Competencies. Adapted from S. Niles, N. Amundson, & R. Neault (2010), Hope centered model career development, *Career flow: A hope-centered approach to career development*. Columbus, OH: Pearson.*

Chapter 2

Review of Related Literature

This chapter provides a more detailed review of the literature along with a conceptual framework related to the Hope Centered Career Development Competencies integral to this study; career development strategies; and an examination of students' ability to make informed decisions for postsecondary aspirations. The first section focuses on the gaps within educational institutions that serve to prevent all students from being prepared to make informed decisions about their postsecondary aspirations. The second section contains an explanation of the concepts and rationale for employing the conceptual framework of the Career Flow and Hope Centered Model of Career Development (HCMCD). The final section highlights the role of comprehensive career development strategies in education and their impact on academic performance, school engagement, and student preparation to make informed decisions about postsecondary/career aspirations. Emphasis is placed on the importance of career development in assisting students to take ownership of their educational experiences, and enhance connections between their current educational circumstances and postsecondary aspirations, while considering external influences on their decisions making process.

Gaps in Career Development Strategies

Over the past few decades the importance of career development for students has been a topic of interest for school counselors as well as educational leaders. In light of consistent school dropout rates in Bermuda and Pennsylvania, there is a need to find strategies that encourage students to be more involved in their education and begin to

plan for their future. Symonds, Schwartz, and Ferguson (2011) cited a number of reasons for student drop out from high school and college, with one major contributing factor being that too many cannot grasp a clear connection between their program of study and tangible opportunities for the future. According to Scheel, Madabhushi, and Backhaus (2009), it is not surprising that students who drop out are typically not academically motivated. In searching for a way to improve school engagement and increase academic achievement, it is imperative that educators assist students in understanding the connection between what they are learning in school and their future aspirations, encouraging them to be more engaged in their own educational experience. Research findings have shown that career development is an essential, continuous process in which students need to be actively involved as early as possible to enhance their chances of present and future success (Hartung, Porfeli, & Vondracek, 2005).

In a response to the school reform movement, the school counseling profession has undergone a major transformation (Stone & Dahir, 2006). According to Gray (2004), all teens aspire to go to college so the focus for high schools should be on teaching English, math, and science. Although these are core subjects in which every student should gain knowledge, they are not enough to ensure students success in achieving their postsecondary aspirations. Besides having the task of strengthening our democracy, public education is charged with promoting individual opportunity and economic growth. The fact that most middle and high school students express both academic and career aspirations that require postsecondary education points to an inevitable disparity, as they often lack the necessary knowledge and skills to prepare them to achieve this outcome (Feller, 2003; Wimberly & Noeth, 2005). In most cases this can be attributed to poor

educational planning and a lack of career development. Gray and Herr (2006) agreed that career development is pertinent, but careful consideration must also be given to the career maturity of the students in making career choices. Career development should be considered an important component in school missions, if the school is truly committed to leaving no child behind.

School counselors' transformation has included the development of National Standards for School Counseling Programs (NSSCP; Campbell & Dahir, 1997) and recommendations from the American School Counseling Association (ASCA, 2005) communicated in the form of a National Model. Research has identified essential components of comprehensive, curriculum-based, collaborative, and developmentally appropriate career development interventions (ASCA, 2005; Brown & Trusty, 2005; Gysbers & Henderson, 2006; Lapan, 2004; Stone & Dahir, 2006). Further, the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV P.L. 109-270) provides a definition of the role of the counselor that includes providing access and information to students regarding career awareness and planning for academics and career options for high school students and post-secondary education. To prepare students for a smooth transition to achieve their postsecondary endeavors, it is imperative that schools equip them with the necessary knowledge and skills to move from high school into post-secondary education and possible careers (Threton, 2007).

With the introduction of strategies and models to guide school counseling practices, it is difficult to comprehend the continuing void in the delivery of comprehensive and developmentally appropriate career development strategies. It is not enough to have guidelines and a model for school counselors to follow—programs must

be implemented and evaluated on their effectiveness to ensure that they are meeting the needs of the population served by them. Both the National Standards and the National Model emphasize academic development, career development, and personal-social development as areas of student competency that must be addressed by school counselors. However, many school programs neglect to address these competencies. Herbert, Lorenz, and Trusty (2010) stated **that** high school is a transitional period for all students and there is little consistency in career assessment and interventions designed to assist students in making decisions about post-secondary endeavors and career goals. The authors stated that career assessment is an essential component in developing a transition plan but they also stressed that, typically, career assessment involves using a career interest inventory and not situational assessments or commercial work sample. Although conducting a career interest inventory can be useful, it is not the most effective form of career assessment. Despite the recognition of career development as an important part of a comprehensive counseling program, it is not an area that is strongly identified in the day-to-day roles and responsibilities of school counselors (Baggerly, 2004; Foster, Young, & Hermann, 2005; Osborne & Baggerley, 2008).

The National Board for Certified Counselors (NBCC) further emphasized the inconsistencies that exist within the delivery method of a comprehensive career development strategy. Foster et al. (2005), upon examination of national survey data on school counselors' work activities, revealed discrepancies in the implementation of comprehensive counseling programs within schools. A panel of subject matter experts rated the importance of academic, career, and personal/social development in assisting student success. For the career development content area, 20 work activities were

identified and rated as highly important, but in the study only three areas were rated as very important and frequently performed. School counselors rated 16 work activities as moderately important, 12 of which were rated as being performed occasionally.

These findings indicate that it is not enough to just have guidelines for career development strategies. Even with the guidelines clearly defined, programs fall short in delivering all content areas that can prepare students to make informed decisions about postsecondary aspirations. Rivera and Schaefer (2009) suggested that since career development is a significant component of the school counselor's responsibilities, it requires greater commitment to ensure that students receive the services they need to be adequately prepared for their future.

Schenck, Anctil, Smith and Dahir (2012) stated that current state and national directives on academic achievement have drawn vital counseling resources away from career development. They emphasized a need to return to school counseling's origins as rooted in career guidance to meet the radically changing world of work and uncertain economic situations. They stressed the need to comprehend the interconnectedness of career guidance and counseling with educational reform when considering meeting the needs of students.

Career Flow and Hope Centered Model of Career Development

Counselors may consider many career development strategies; however, this study utilized career flow and the Hope Centered Model of Career Development (HCMCD) developed by Niles, Amundson, and Neault (2010) to assist students in learning the skills needed to explore and implement their career plans. Learning these skills will allow students to be active participants in their current and future career

development. Niles et al. (2010) used the career flow metaphor to explain each experience a student may encounter during their career development process, comparing it to a river flowing from its rapid waters to its calm and peaceful state. Whitewater represents high demand times, still water low demand times, and optimal is an engaging and stimulating challenge level. At each stage, specific skills and knowledge are needed to assist the student in navigating their course in life while learning to deal with the various emergent challenges in the most effective way.

The Hope Centered Model of Career Development

The concepts of the Hope Centered Model of Career Development (HCMCD) model require some description as well as a rationale for its use in this research study. Niles et al. (2010) introduced the HCMCD model, integrating six essential competencies: (1) hope, (2) self-reflection, (3) self-clarity, (4) visioning, (5) goal setting and planning, and (6) implementing and adapting. Hope is the focal point and drives all phases of career development. Integrated with the human agency competencies, the HCMCD creates a foundation and highlights the essential components of comprehensive career development.

Many students have the misconception that career planning is something that begins when they have entered college or sometime during that experience. Research suggests career planning is a process that begins as early as elementary school with age-appropriate career development, and should continue into the college years. Career planning is an ongoing process that allows an individual to rethink and reevaluate his/herself and their career options; it also takes into consideration experiences at different times of their life, as they mature.

According to Hartung, Porfeli, and Vondracek (2005), childhood is a vital period of career development incorporating exploration and learning, beginning in the middle to late childhood stages and continuing into adolescence and beyond. The HCMCD model emphasizes the importance of understanding that career development is a process and not merely steps in a point in time to be taken to get from one stage to another. Gottfredson (2002) stated children acquire their career aspirations through processes of circumscription and compromise starting as early as three years old. During the adolescent years, students begin to associate their aspirations to their internal, unique self and therefore start to form a self-reflective vocational identity. This model is cyclical in design, allowing the individual to go back and revisit any component as circumstances and situations change. Thus allowing them to adapt their plans to ensure they are making effective decisions to reach their academic and career goals.

Importance of Hope

Hope is more than wishful thinking, it is the belief that deliberate thought leads to purposeful action. Hope is defined as “a positive motivational state that is based on an interactively derived sense of success (a) agency (goal-directed energy) and (b) pathways (planning to meet goals)” (Synder, Irving, & Anderson, 1991, p. 287). In an effort to meet the needs of students and assist them in reaching their postsecondary aspirations, it is important to consider the role of hope and how it impacts their motivation to succeed. Diemer and Blustein (2007) suggested even with the challenges many students face, they are able to remain focused and connected to their future aspirations due to their level of hope. Flom and Hansen (2006) in their study with youth in crisis emphasized the importance of counselors honing in on the individual hope of students. Despite

considerable obstacles, the youth held clear hopes for educational and career aspirations.

Through career development programs, counselors can enrich the hope of students. According to ASCA (2005), this assists students' improvement in the areas of personal/social, academic and career development. Inversely, Worrell and Hale (2001) reported that a lack of hope is associated with school dropout rates during the adolescent years. Therefore, by instilling hope in students during this crucial time, counselors may play a vital role in diminishing school dropout rates. Recent research indicates that an individual's higher hopes enhanced goal-directed thinking and were closely related to having greater perceived determination in life. Hopeful thinking potentially addresses the issue of efficacy and accessibility, and can inspire a lifetime of learning (Feldman & Snyder, 2005; Marques, Lopez, & Pais-Ribeiro 2009). Bloxom et al. (2008) further added that a student's level of hopefulness is an indication that the student views his/her career and college aspirations as accessible and achievable, increasing their motivation to be successful.

Human Agency

In education and psychology, the terms human agency and self-efficacy have been used interchangeably. Although they are relatively similar, there is a difference in that human agency refers to one's ability to accomplish a specific task whereas self-efficacy is one's belief about a specific task. Human agency refers to "the human capacity to exercise control over the nature and quality of one's life" (Bandura, 2001, p.1). Bandura (2006) further explained that people are not merely products of their environment or their circumstance—they have the ability to intentionally influence their functioning and life circumstances.

Four core components of human agency were proposed by Bandura (2004):

- Intentionality—the commitment to act on future aspirations;
- Forethought—considering a course action and its consequences for future goals;
- Self-reactiveness—performing a plan of action and assessing its progress; and
- Self-reflectiveness—contemplation of one’s purpose, significance and results of one’s actions.

It is important that careful consideration be given to the four concepts of human agency. These may be included when implementing career development strategies in schools, as they play a vital role in the individuals’ ability for: (1) adaptation, (2) self-development, (3) self-renewal throughout time (Bandura, 2001).

Career development interventions that apply the four core components of human agency in their delivery method increase the opportunity and likelihood that students will be able to make a connection between their present education and their future plans. If students can understand why they are performing specific tasks in their classrooms and make the connection to their future goals, they may become more engaged in their school experience, monitoring their progress, and putting their plans into action to reach the end result, graduation, and their postsecondary aspiration. Magnuson and Starr (2000) indicated that students who have learned the art of planning and practice it on a regular basis throughout their young life, will have the ability to maximize expected and unexpected decision-making at every point in their life-long career development.

Hope Centered Model of Career Development Competencies

Utilizing these components of human agency within the HCMCD model, Niles et al. (2010) proposed educating students in the following concepts to ensure optimal career

development: (a) self-reflection, (b) self-clarity, (c) visioning, (c) goal setting and planning, and (d) and implementing and adapting. Each component has a specific purpose; the authors emphasize that teaching a student these competencies will assist them beyond their high school experience and throughout their lifetime (see Table 2.1.). The Hope Centered Career Inventory (HCCI) was developed to measure each component to assess a student's degree of hope and career development competencies. The original inventory was developed for an adult target population, 18 years or older. Niles et al. tested the instrument with college undergraduate and graduate students and found that the instrument has excellent reliability and validity evidence. They reported that the HCCI Cronbach's Alpha for the total scale was .924, while the individual scales' coefficients ranged from .743 to .859. This study utilized the Hope Centered Career Inventory Revised (HCCI-R), a newly developed instrument for measuring adolescent hope that uses the same components of the adult version validated through research.

Each competency plays a vital role in the student's ability to make clear, realistic decisions about postsecondary aspirations regarding career and educational options. Self-reflection is the foundation, as it involves looking at one's values, beliefs, interests, and abilities and is an ongoing cyclical process of career development (Hall & Chandler, 2005). Each student must undertake the process of self-reflection to allow them to move onto the other competencies with a realistic and accurate view of themselves and their abilities. According to Gross (2004), it is by engaging in self-reflection that students are able to understand the dynamic components of their career development process and create meaning for themselves within the context of their social and cultural worlds. Failure to self-reflect potentially limits ability to accurately make meaningful decisions

about themselves and their future,; thus, this competency is an essential component of a comprehensive career development strategy. Although it is the starting point it can be revisited throughout the process.

Considerations for Comprehensive Career Development Strategies

School Engagement and Academic Achievement.

The challenge to better serve the needs of students and equip them with the skills needed to promote ownership of their educational experiences and prepare them to make informed decisions about their postsecondary aspirations is not a new phenomenon. However, it is imperative that educational institutions assist students in making the connection between what they are learning in school and what they want to achieve in the future, especially if policy makers are serious about lowering school dropout rates. For decades, high school and college dropout rates have persisted and students continue to formulate postsecondary aspirations with limited knowledge and skills. Rivera and Schaefer (2009) suggested that many students consider college the only option, as they are not aware of other possible choices. A four-year college experience is not the best fit for many students so they simply drop out rather than fail. In light of both individual and socially adverse effects of dropout, schools have been charged with developing strategies that assist students in making a connection between their education and future aspirations.

Hooley, Marriott, and Sampson (2011) suggested that career development interventions play an important role in engaging students in their education and diminishing student dropout rates.

Table 2.1

Purpose of Hope Centered Model Career Development Competencies

Competencies	Purpose of HCMCD Competencies
Self-Reflection	<ul style="list-style-type: none"> Individuals are encouraged to “examine their thoughts, beliefs, behaviors, and circumstances” (Niles, Amundson, & Neault, 2010, p. 17). A process that allows an individual to develop self-clarity.
Self-Clarity	<ul style="list-style-type: none"> Individuals develop a clear image of who they are as individuals. Self-clarity evolves from self-reflection and helps the individual identify patterns and resources that they have used to work through challenging times.
Visioning	<ul style="list-style-type: none"> Individuals brainstorm the various options and possibilities for their career and future outcomes. Having self-clarity allows an individual to consider possible career options. This process allows the individual to begin to realize their hopes can be achieved.
Goal-setting	<ul style="list-style-type: none"> Having goals that are specific – know what they want to achieve, measureable – how will they know when they achieve that goal, achievable – must be realistic and attainable, relevant – must be within the interest and ability of the individual, and have a time limit – state the time frame in which they wish to accomplish their goal, (SMART). This can assist to nurture hope in individuals.
Action planning	<ul style="list-style-type: none"> The importance of thinking about what actions to take to reach ones’ goals especially in challenging times. Having options to diminish the influence that various obstacles could have on achieving ones’ goals.
Implementing	<ul style="list-style-type: none"> Putting ones’ action into play to reach identified career goals, monitoring and evaluating the progress throughout the process.
Adapting	<ul style="list-style-type: none"> Encouraging students to take new information gained in the process and determine if it validates their goal or if they need to return to the self-reflection and self-clarity stages to adjust their plans. Preparing the student to maintain hope and prepare them for the unexpected, to be able to adapt and look at their options for achieving their goals.

They also emphasize that career development cannot be administered at the last moment to prevent at-risk students from dropping out. Rather, effective career development strategies should be a part of an integrated approach that developed throughout the students' academic experience to increase academic achievement as well as provide an opportunity to gain an understanding of the world of work. Perry, Lui and Pabian (2010) discussed the importance of school engagement and its contributing factors in academic performance, stressing the need for comprehensive career development in all stages of school. Comprehensive career development strategies for all students, as the research suggests, has the potential to increase students' engagement in their own educational experience as they embark on their quest to identify and make decisions about their future aspirations.

School engagement includes positive attitudes toward school, teachers, classmates, and academic learning. On the other hand, school disengagement encompasses student perceptions of school as being boring, unfriendly, alienating, and largely irrelevant. These perceptions may raise the probability of school dropout (Fredericks, Blumenfeld, & Paris, 2004). Students who develop positive relationships with school are more likely to become lifelong learners and more open to experiencing further education and training as needed. When students are able to make connections they are more likely to remain in school and graduate, regardless of their achievement level (Marks, Fleming, Long, & McMillan, 2000). DiFabio and Blustein, (2010) explained the importance of facilitating the development of students' future orientation prior to entering high school—doing so may increase their academic achievement, career exploration, and career planning. This is particularly true for young male students.

In light of a large body of research indicating that career development for school-aged students can have a positive impact on their academic achievement in high school and beyond (Carey & Harrington, 2010; Dahir & Stone, 2003; Poynton, Carlson, Hooper, & Carney, 2006), it is imperative that educational institutions provide students with the opportunity to systematically explore their options in order to make knowledgeable decisions about their postsecondary aspirations. When institutions take the necessary steps to ensure that all students are afforded this opportunity, we can then claim that we are meeting the needs of students and developing young people who will be productive citizens in their respective communities. Failure to meet student needs will lead them to continue to make uninformed decisions about their future aspirations and place additional strain on the community and people who live in them.

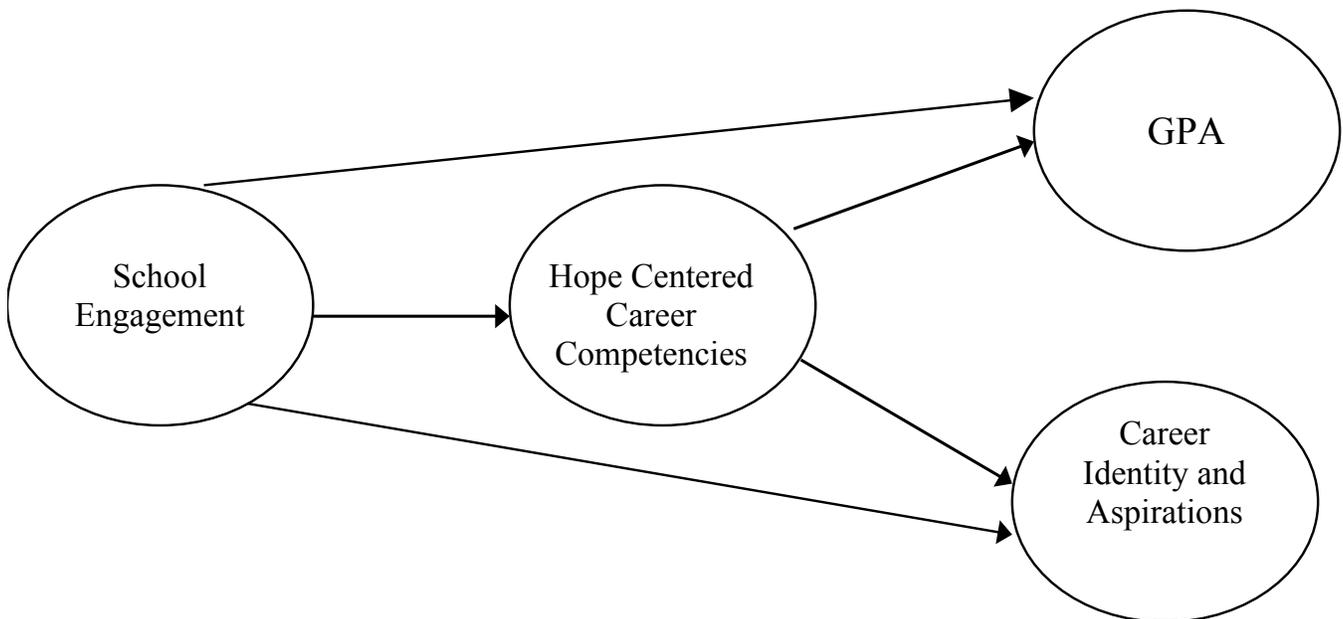


Figure 2.1. Conceptual model of the impact of Hope Centered Career Development on students' educational and career outcomes

Early Intervention

Many career development strategies are available to schools for integration into their curriculum, but there are also important aspects to consider when implementing the most effective strategy. A body of research evidence supports the notion that career development should begin as early as possible for students. The American School Counselors Association (ASCA, 2005) has provided guidelines for career development strategies beginning as early as elementary school. These strategies stress the knowledge and skills that students learn in the areas of academic, career and personal/social development during the elementary years as being a foundation for future success. A systematic process that will enable children to develop sound educational and career plans targeted at elementary school-aged students includes exploration of how one's self fits with specific careers (McIntosh, 2000). To adequately prepare students to make sound decisions, career development must continue throughout their educational journey.

In the Turkish education system, Serap (2007) concurred that career education programs should start in the primary school years. He further recommended that teachers and counselors promote experiences that support students' career development. A systemic career development process is most effective when it begins during elementary school, preparing students to make decisions when faced with choices about academic and vocational courses. With early interventions, students obtain the knowledge and skills needed to make informed decisions and act on them (Koivisto, Vinokur, & Vuori, 2011; Magnuson, & Starr, 2000).

Career development interventions during the middle school years are effective with all students, particularly those students at risk. At-risk students engaged in career

exploration and activities are more likely to develop a program plan of study for high school, assisting them in becoming more aware of their options and what is available to them, and thus preparing them for their future career aspirations (Legum & Hoare, 2004). It is not enough to have students develop a career interest inventory on which to base their future aspirations. The career information students receive allows them to have an understanding of their interest, values, beliefs, and future aspirations (Lent, 2005).

This information should also be appropriate and accurate, limiting the likelihood of unrealistic expectations in goal setting and taking actions that may have an adverse influence on career outcomes, leading to failure (Gray, 2009). Adolescents are expected to display developmentally appropriate career indecision, however, Akos, Konold, and Niles (2004) stressed that while early adolescents may be undecided about careers, they should be engaged in the career exploration process by developing an initial understanding of how their maturing identity relates to future career options. Middle school students who are undecided, and not engaged systematically in the career development process, are at risk for facing academic and career decisions for which they are not prepared. Such decisions include making appropriate curriculum choices, identifying postsecondary plans that will assist them in reaching their career goals, and developing employability knowledge and skills.

The literature supports the perception that career development is a process that should occur throughout a lifetime and not just a moment in time. Kenny, Blustein, Haase, Jackson, and Perry (2006) reported that expectations and life career development theories validate a relationship between career development and school engagement over time (Lapan, 2004), and that higher levels of career planfulness and expectations are

associated with school engagement.

Over the course of a student's educational experience, their academic and career identity develops and becomes defined as they mature. Gottfredson (2002) discussed the development of occupational aspirations as a process of circumscription and compromise in which an individual may change his or her original career choices to those perceived as more appropriate or accessible. It is important to acknowledge the impact of career aspiration in the life of students and their journey to find success. According to Marjoribanks (2004), students' academic and career aspirations significantly contribute to their educational and occupational achievement and academic self-concept. Furthermore, career aspirations have a significant positive relationship with students' achievement (Hill et al., 2004); higher expectations lead to higher educational and occupational attainment (Trusty & Niles, 2004). Research has suggested that the educational aspirations of students can be influenced by the expectations of school counselors, parents, close relatives, teachers, and peers (McDonough, 2005; Trusty, 2002).

To determine students' career identity, the study utilized the career identity (VI) scale of the My Vocational Situation (MVS; Holland, Daiger, & Power, 1980). The VI scale has 18 true-false items. Sample items are shown below (Holland et al., 1980):

- I need reassurance that I have made the right choice of occupation.
- I am concerned that my present interests may change over the years.
- I am uncertain about the occupations I could perform well.
- I don't know what my major strengths and weaknesses are.
- The jobs I can do may not pay enough to live the kind of life I want.

The test-retest reliability coefficient of the VI scale ranged from .51 to .93, depending on time interval (from seven days to one year) and gender. With a short time

interval of two to three weeks, the coefficient ranged from .63 (7 days, $N = 48$) to .93 (two weeks, $N = 161$). Considering the number of participants, the VI scale was found to be moderately or sufficiently reliable.

A response of “No” to these questions indicated a higher vocational identity, a well-developed sense of identity, hopefulness, positive beliefs about career decision-making, and being less susceptible to barriers (Holland et al., 1993). According to Holland et al. (1993), “the evidence about the Identity scale implies that it is a general measure of psychological health, although it was developed to assess only vocational decision-making difficulties and related problems” (p. 8).

The VI scale is one of the most widely used outcome measures in career development research. It has been used with students from diverse backgrounds as well as various educational levels. According to Holland et al. (year), students who possess a well-rounded VI should be able to make career decisions that are more satisfying compared to students with lower VI. Saunders, Peterson, Sampson, and Reardon (2000) stated that students with higher levels of VI should be more successful in making decisions about their future careers. Laflin (2005) studied a comprehensive counseling program with 9th-grade students using MVS (Holland et al., year) as a pretest/posttest measure, and revealed a significant increase in VI in all students as a result of participation in this program. With career identity being an indicator of sound career decision-making among youth, Diemer and Blustein (2007) identified the development of career identity in adolescents as an important component of career development.

Collaborative Efforts in Students’ Achievement of Postsecondary Aspirations

When implementing career development strategies, it is important for counselors

to consider academic and career aspirations of each student individually and how they have developed them. Academic and career aspirations are influenced by multiple intrapersonal and systemic factors (Gottfredson, 2002). Some specific factors related to students' aspirations include their level of social skills, independence, self-discipline, self-concept, and maturity (Marjoribanks, 2002; Sirin, Diemer, Jackson, Gonsalves, & Howell, 2004). Students may perceive a specific career path to be more accessible than another based on factual information they have gathered, but the values and beliefs of others, including peers, parents, and teachers, can shape students' occupational aspirations over time (Akos, Lambie, Milsom, & Gilbert, 2007).

Systemic variables include socioeconomic status (SES), familial engagement in their education, ethnicity, race, familial aspirations, as well as the education level of parents (Hill et al., 2004). The correlations between race and educational aspirations is significant according to Mahoney and Merritt (1993), emphasized a disparity exists between Black seniors who desired to attend college and those who were enrolled in a curriculum track preparing them for college. Bigler, Averhart, and Liben (2003) found Black children, by the age of 6, have “developed racial schema that incorporate beliefs about occupations and that these schemas affect their perceptions of job and occupational aspirations in significant ways” (p. 578).

When implementing career development strategies in schools, counselors must be cognizant of the intrapersonal and systemic variables that influence the decisions that students make. Examining early career decisions and factors that relate to choices can provide insight for school counselors who seek to promote the academic and career development of all students (Akos, Lambie, Milsom, & Gilbert, 2007). Strategies should

incorporate a collaborative component that includes students, parents, teachers and community leaders in the educational planning and career development process. This will ensure they are meeting the needs of the students they serve.

Involving parents in the career development of students has been identified as an important role in college advising and planning (Trusty & Niles, 2003), and respectful relationships must exist between parents and education personnel. It is typical for parents to be the major information resource for high school students, particularly as they embark on their high school experience.

Considering that students rank their parents as being the person they feel most comfortable approaching for assistance with career planning, with counselors being the next person they would approach, Bloxom et al. (2008) emphasized the importance of parental involvement in students' career planning. Thus, counselors must strive to provide information and develop relationships with parents that would enable parents to be more supportive of their child's career planning (Bardick, Bernes, Magnusson, & Witko, 2004). It may also be beneficial for counselors to offer training to parents that keeps them up to date on high school career development resources so that they may take an active and informed role in their children's career education (Bloxom et al., 2008).

Developing strategies that assist both parents and youth in exploring a wide range of occupational options may allow students to consider and engage in the exploration of career choices they may not have contemplated otherwise. Comprehensive career development strategies that expose students to working experiences provide them with the confidence they need to feel that the reality of the world of work will match their career ideals. Exposure to actual working environments, along with career counseling,

helps students explore their ideas and is most beneficial to students in making informed decisions for postsecondary aspiration.

The positive impact of well-organized career development strategies holds the potential to influence all aspects of students' academic and career development by assisting them in learning about themselves and their future aspirations. Hoyt (2005) argued that students who can make the connection between what they are learning in school and career opportunities beyond high school are more likely to attend to their class work and build a positive mental image of their future. A comprehensive and systemic career development program allows school counselors to address students' career development needs while also attending to their academic and personal/social development. Within the context of career development, students have an opportunity to make connections between the learning that is taking place in their classes and their future educational and career aspirations (Rivera, & Schaefer, 2009). Students can make realistic career goals based on how they are progressing in school rather than making uninformed and unrealistic decisions that could be detrimental.

Another positive impact of a comprehensive career development strategy is that the knowledge and skills that students acquire assist them beyond high school. Lapan, Aoyagi and Kayson (2007) conducted a three-year longitudinal study in which 87 adults were followed as they transitioned from school to the workforce. They found that career development during participants' high school years was significantly connected to more successful transitions into adult roles as worker and learner as well as greater satisfaction with one's life. Career development has also been found to increase the likelihood of college enrollment and college graduation (Maxwell & Rubin, 2001).

Research supports the notion that comprehensive career development increases students' motivation to continue learning after high school, and increases retention rates and academic success in high school, and even reduces poverty and unemployment rates (Bell & Bezanson, 2006). With accurate and realistic career information, students can assess their values, interests, self-efficacy, beliefs, and career aspirations as they relate to potential occupations and careers (Lent, 2005). Armed with this information, students are less likely to embark on unrealistic career goals that can lead to failure in completing college or obtaining a rewarding career (Gray, 2009).

Given the possible benefits of career development interventions to overall student performance in school, and given the inherent value in preparing young people for postsecondary transitions, career development interventions within the school curriculum should be a priority for school counselors and other educators. According to Bloxom et al. (2008), when states and school districts require systematic career planning for all students, creating a school-wide policy, this ensures that all students have the opportunity to take part in a comprehensive career development program throughout their educational experience, preparing them for a rewarding academic and career journey.

Chapter Summary

This chapter presented a review of the literature related to the implementation of comprehensive career development strategies and its impact on assisting students in making informed decisions for postsecondary aspirations. The conceptual framework of the Hope Centered Model of Career Development (HCMCD) was presented to explain the impact of each of its components emphasizing hope and human agency as essential concepts in assisting students with their educational and career experiences. Constructs

such as human agency and hope were discussed as they relate to the development of a comprehensive career development strategy.

The consideration of human agency components is essential to a comprehensive career development strategy that allows the individual to clarify who they are as an individual and identify their interests based on their values, beliefs, and abilities. Human agency is important; so too is one's hope for their future. Hope is the foundation on which dreams are built; enhancing a student's level of hope enables them to begin to understand what it takes to reach their future goals and realize that their future aspirations can be achieved.

The essential components of implementable, comprehensive career development strategies for all students were discussed, emphasizing how a comprehensive career development program can assist students in making the connection between what they are learning in school and their postsecondary aspirations. Many of our educational institutions fail to deliver comprehensive career development, as mentioned by Meijers (2008), who stated that educational leaders have limited vision regarding career guidance and counseling; they continue to employ the same practices that tend to be ineffective career guidance activities. If students are able to make those connections, they are more likely to actively engage in their academic experience and consider future academic and career options rather than drop out of school. Along with providing students with comprehensive career development, it is also important to determine when and what students should receive at each stage of their career development.

The literature supports career development beginning as early as elementary school in grades K–8 but also indicates that appropriate career development must also

contemplate a student career maturity to be most effective. The development of skills related to career awareness, career exploration, and skill development can be magnified through the early development of the skills needed for this career awareness (Magnuson & Starr, 2012). Finally, since many factors can contribute to the decisions that an individual makes for their future, the literature stresses the importance of schools collaborating with students, parents, and community leaders to ensure that all students are given the opportunity to make the best decisions for their future.

Chapter 3

Methodology

The purpose of this study was to examine freshman college students' perceptions of their preparedness to make informed decisions about their postsecondary aspirations based on their career development experiences in high school, utilizing the Hope Centered Career Development Competencies (Niles & Hyung, 2012). The study focused on college freshman students at specific community colleges in in Bermuda and Pennsylvania who had recently graduated from high school. The participants were asked to reflect upon their high school career development experience when completing the questionnaire.

The Problem

Due to the lack of information on career development strategies implemented in Bermuda and Pennsylvania high schools, this study examined college students' perceptions of their readiness to make informed decisions about their postsecondary aspirations based on their career development experiences throughout high school. Each year, an unacceptable number of students drop out of school, while many of those who do graduate from high school are not being adequately prepared to make informed decisions about their postsecondary aspirations.

With increasing demands for a knowledge-driven economy, it is necessary for all students to have a high-quality education, which includes career development and access to knowledge and skills that prepare them for the global job market. Bloxom et al. (2008) suggested that high schools are challenged to provide graduates with the knowledge and skills needed to pursue individual academic and career goals within this rapidly changing

and demanding economic global economy. Although many school systems have acknowledged the importance of career development as an essential component of a school's comprehensive counseling program, it is an aspect of the counselor's daily responsibilities that is not adequately being met (Foster, Young, & Hermann, 2005; Osborne & Baggerly, 2004).

Failure to give students the opportunity to engage in comprehensive career development can have ill effects for the individual and society at large. Some potential problems are: (a) college dropout rates continue to rise, which contributes to increases in student loan debts, (b) students have qualifications for jobs that are not available, (c) too few students are prepared to fulfill high-wage, high-skill jobs, and (d) the focus of this study, high school students make uninformed, unrealistic educational and career choices, leading to failure and exerting a negative impact on society as a whole. Inadequate career development programs may negatively impact the potential quality of students' lives, the costs of school drop out rates imposed on society will be higher, and the potential of students' contributions to society will go unrealized. This is disturbing for any society and could potentially lead to a national decline (Symonds, Schwartz, & Ferguson, 2011).

Why do a Comparative and International Study?

It is important to conduct comparative and international education research because the resulting findings provided information to educational systems that aids in their development and growth. Such a study promotes:

- the monitoring educational systems and their success;
- a better understanding of an individual's education system as well as an international system; and

- identification and appreciation of similarities and differences between cultures, fueling the improvement of educational policies and practices for the future by setting realistic standards.

Research in comparative and international education allows claims about the condition of national systems of education to be legitimized and justifies radical changes in educational policy (Alexander, 2000).

As an educator from Bermuda, the researcher conducted a comparative study of Bermuda's and Pennsylvania's career development programs because she had firsthand insights into the inadequacy of Bermuda's career development programs in preparing students for their future. Since Bermuda often adopts many of its policies from the United States, a comparative study between the countries was warranted. Bermuda and Pennsylvania have different educational systems but the similarities between the two populations must be taken into consideration. Although Bermuda is a British colony; it is located only 700 miles off the coast of the Carolinas. Bermuda imports most of its food and commodities from the United States. Finally, many youngsters from Bermuda's public schools enter the U.S. school system as early as prep school to further their education outside of Bermuda. For these reasons a comparative study between Bermuda and Pennsylvania was considered.

With career development being an essential part of a student's educational experience beginning in elementary school (American School Counselors Association, 2005), this research focused on students in their freshman year of college and their perception of how their high school career development experience prepared them to make informed decisions about their postsecondary aspirations.

The rationale for selecting this population was to assess the current state of career development strategies in Bermuda and Pennsylvania for those students who had recently graduated from their respective high school systems. This population of students consisted of individuals at a point in their educational life where these critical decisions bear the most weight. A high school's comprehensive career development program should expose all students, grades 9–12, to a broad range of careers and career-related activities in a consistent manner. Doing so empowers students to make informed choices about careers prior to selecting postsecondary options as well as prepares students for success beyond high school. In addition, having this knowledge may promote students' engagement in their own educational plans to ensure that the appropriate academic courses are taken to meet their desires and needs. ASCA (2005) asserted that a student's high school years are full of growth, promise, excitement, frustration, disappointment and hope. It is the time when students begin to discover what the future holds for them.

When conducting comparative research, it is essential that equivalence and comparability of the participating countries be established for the research to have reliability and validity. Raivola (1985) presented five types of relations in theoretical research, which rely on concepts of equivalence: (a) contextual equivalence, (b) correlation equivalence, (c) genetic equivalence, (d) cultural equivalence, and (e) functional equivalence. These must be addressed to ensure that different phenomena are comparable (see Table 3.1).

Table 3.1

Concept of Equivalence

Equivalence	Definition of Term
Contextual Equivalence	The objects of comparison (people or institutions) are part of a higher level of systems that have earlier been defined as equivalents.
Correlative Equivalence	Phenomena correlate empirically in the same way with the criterion variable.
Genetic Equivalence	The phenomena under comparison derive from the same source, namely the same conceptual class.
Cultural Equivalence	Cultural norms, beliefs, values and expectations observed are the same for different populations
Functional Equivalence	The objects have the same role in the functioning system

Equivalency in the following concepts was taken into consideration for this study:

Equivalence of Measurement

Dujykes and Rokkan (1954) suggested that one effective method in equivalence is in the study design and should involve a collaborative effort between knowledgeable members of the participating cultures. For the purpose of this study, the research design and instruments of measurement were collaboratively designed by subject matter experts in both Bermuda and Pennsylvania to counter for any cultural biases that could occur.

Linguistic Equivalence

It is important to contemplate the linguistic challenges a researcher may face when conducting any study, particularly when using a questionnaire in two different countries, as occurred here. It is important to ensure that the words and grammar used in

the questionnaire have the same meaning in both cultures. The fact that Bermuda and Pennsylvania both have English as their first language helped to lessen this potential problem. The fact that in both settings some participants may not speak English as their first language points to one potential influence on the responses of some respondents. According to Peña (2007), direct translation usually satisfies the standard for ensuring linguistic equivalence.

Cultural Equivalence

The concept of cultural equivalence is related to that of functional equivalence (Arnold & Matus, 2000). Cultural interpretations may affect the ways individuals respond to instructions and research instruments, including standardized and nonstandardized tests (Hendrickson, 2003). Although many have the tendency to consider Bermuda one of the Caribbean islands, Bermuda is actually in close proximity to the United States, approximately 700 miles off the coast of North Carolina. There are cultural similarities between the two countries. To limit cultural differences in the design of the study and its instruments, consultation with experts from both countries was sought to ensure a better understanding of any possible issues that could arise during the study. The formation of questions was vetted in each country to ensure that they would not be misunderstood by participants involved in this project.

Functional Equivalence

The role of a comprehensive career development strategy was important to this study and therefore equivalence was defined by the provision of a career development program within respective institutional settings. Although there may be differences in the delivery methods as well as the student age at which the programs begin, the fact that

both countries offer a career development program within their institutions makes the schools comparable on this variable.

Research Questions

In order to accomplish the purpose of this study, three research questions were addressed:

1. What are the differences between Bermuda and Pennsylvania freshman college students' perceptions of their career development experiences in preparing them for making informed decisions about postsecondary aspirations?
2. What are the effects of school engagement competencies on academic performance, career identity and the mediating role of hope-centered career competencies in the relationships?
3. How does the relationship of hope, academic performance, vocational identity, and school engagement differ between Bermuda and Pennsylvania freshman college students?

Target Population

The target population for this study included the freshman students at the Bermuda College and the Pennsylvania College of Technology. This study aimed to include a sample size that would be sufficient to allow statistical analysis. Van Dalen (1979) cited three factors that determine the size of an adequate sample: (a) the nature of the population, (b) the type of investigation, and (c) the degree of precision desired. Purposeful sample size is based predominantly on the number needed for proper statistical analysis for the particular method of study.

The participants ranged in age from 16–58 years old in their freshman year of

college. The responses of participants aged 22 year or older ($n = 16$) were exempted from the study, as the participants had not attended high school for a number of years. The Bermuda College freshman-year group was composed of 211 students; responses were analyzed for 126 participants. The Pennsylvania College of Technology freshman-year group was composed of 738 students; responses were analyzed for 97 students.

The process required solicitation of the assistance of college administrators at each of the campuses to identify participants in the sample group. Freshman students were the focus of the research since the literature review had pointed to the fact that students need to be actively involved in the career development process as early as possible to enhance their chances of present and future success (Hartung, Porfeli, & Vondracek, 2005).

In order to determine the perceptions of freshman college students in Bermuda and Pennsylvania regarding their preparedness to make informed decisions about their postsecondary aspirations, based on their career development experiences in high school, the target population was purposefully composed of college students. Although a large percentage of the study group self-identified as either White or Black, the sample population also had representation from a diverse number of other populations. Of the 223 participants, 52.5% were male ($n = 117$) and 47.5% were female ($n = 106$). The ethnic breakdown was: (44.8%) White, (40.8%) Black, (6.7%) Portuguese, (4.5%) other, (1.3%) Asian, (1.3%) Hispanic, and (0.4%) Pacific Islander.

The strategy for selecting the sample was done by stratified purposeful sampling. The purposeful group was the freshman students with subsets Bermuda College and Pennsylvania College of Technology. The sample size for this research project was based

on the size of the target population with a margin of error of 5%, confidence level of 95%. Bartlett, Kotrlik, Chadwick, and Higgins (2001) suggested that an unsuitable, insufficient, or disproportionate sample size will influence the quality and accuracy of the research. Sample size is one of the features of a study design that can influence the detection of significant differences, relationships, or interactions (Peers, 1996). Hofstede (1980) stipulated that to obtain statistically reliable scores, groups having fewer than 20 respondents should not be computed. He stressed that groups of respondents should not be less than 50, yet acceptable reliability of scores may still be obtained for groups consisting of between 20 and 50 respondents.

Recruitment and Data Collection Procedure

Students at the freshman college level in Bermuda and Pennsylvania were recruited for this study. Several steps were taken prior to the participants being contacted and the study conducted. The researcher obtained approval from the Institutional Review Board (IRB) at the Pennsylvania State University to conduct the study. The respective colleges were contacted to seek permission to have their students participate in the study and written approval from each institution was obtained.

An incentive involving the possibility of winning a \$150 gift voucher to the student's cell phone provider was offered to potential Bermuda participants; a Kindle Fire was the incentive offered to Pennsylvania participants in a random drawing, to motivate student participation in the research study. The participating students also were able to receive study results via e-mail upon completion of the questionnaire. The responses were anonymous and could not be traced back to the individual, as the drawing entries were separate from the questionnaire itself.

A web-based questionnaire was distributed to administrators at both institutions to later distribute to the identified students. The Bermuda sub-set were also given a paper-and-pencil questionnaire, while in Pennsylvania only a web-based questionnaire was utilized. The rationale for using web-based and pencil-and-paper questionnaires for Bermuda participants was to increase responses there—the researcher monitored the responses after a week and found an initially low response rate of 12. This led the researcher to request permission to enter classes of freshman students to encourage their participation. The researcher had the ability to visit the college on two occasions and briefed participants about the purpose and importance of the research as well as data collected for this study. After providing a description, students were informed that their participation was voluntary, their responses would be kept anonymous, and they were free to withdraw from the study at any time.

Arrangements were made to enter three English lectures, which gave the researcher exposure to the majority of freshman students as only a few were exempted from the course. Arrangements were made with professors teaching those classes and a paper-and-pencil questionnaire was provided during the first 20 minutes of the lecture. After 20 minutes all questionnaires were collected and the researcher thanked the participants in person for their cooperation and time.

Although the response rate from the Pennsylvania College of Technology was also low, the same option could not be conducted with participants in Pennsylvania. The challenge was the distance between the researcher and the institution, along with the financial cost associated with making a personal appeal for participation in this study.

Stratified Purposive Proportionate Sampling Method

Stratified purposive sampling was utilized to identify the participants for this

research study. The researcher's decision to choose freshman students from the two college campuses to participate in this study was based on individuals who would be most likely to contribute appropriate data in terms of relevance to the research questions. A stratified purposeful method, according to Patton (2002), is a mixed approach in which the focus is to select groups that display variations on a particular phenomenon but each of which is fairly homogenous, so that a comparative analysis can be conducted between different groups.

The current study utilized data from Bermuda and Pennsylvania to answer the research questions. In purposive sampling, the selection of participants, settings, or other sampling units is criterion-based or purposive (Mason, 2002; Patton, 2002). Fowler (2008) stated that stratification increases the accuracy of estimations of variables to which the stratification variables are related. The sample units are chosen because they have particular features or characteristics that the researcher wishes to study. Furthermore, a review of the literature indicated that nonprobability sampling is used in most international studies (e.g., Albaum & Peterson, 1984; Samiee & Jeong, 1994; Sin et al., 1999).

Variables

A variable is a type of category that a researcher is trying to measure; it may be an object, event, idea, feeling, or time period. There are two types of variables—*independent* and *dependent*. The independent variables were the specific colleges and college level of the students. An independent variable is a variable that stands alone and is not changed by variables being measured. Although all students as they progress through their high school education should be receiving some degree of career development, it is anticipated

that as students progress to the next level, they should be prepared to make informed decisions about their postsecondary and career aspirations. College level and degree of career development will have an impact on the identified dependent variables of the study.

The dependent variables in this study were: (a) student's academic achievement, (b) vocational, and (c) students' school engagement and d) hope-centered competencies. A dependent variable, according to Gall, Gall and Borg (2007), is the variable that the researcher thinks occurs due to the influence of an independent variable and is what the researcher wants to measure. A student's perception of the effectiveness of their career development experience will impact their perception of their preparation for making future plans. Career development strategies also have the potential to impact students' hope and their school engagement in their educational experience. By giving students the opportunity to make connections between what they are doing in school and their future aspirations as well as believing their goals are achievable, career development strategies will impact their level of school engagement, academic achievement, and vocational identity.

Instrumentation

This study was quantitative in design since a 100-item questionnaire was utilized to answer the research questions. Data were collected by means of a self-completion web-based as well as pencil-and-paper questionnaire administered to respondents. The complete questionnaire consisted of four different instruments: (1) HCCI; (2) VI scale of MVS, (3) Barriers, and (4) National Survey of School Engagement (NSSE, 2000). In total, the questionnaire consisted of 100 items, but only 76 items were relevant to this

particular study and thus analyzed (SE: 20, HCCI: 28, VI: 22, and demographic information: 6). While the questionnaire consisted of 100 questions, which may appear to be too many questions for an individual to answer, responding was a fairly quick procedure.

The selected sample was homogeneous in terms of academic discipline as well as academic level, which was a factor considered important in controlling any potential impact of other factors on study outcomes. Calder, Phillips, and Tybout (1982) suggested that homogenous samples may be desired for two specific reasons: a) sample homogeneity helps to reduce error variance that can be attributed to non-theoretical constructs and therefore reduces the likelihood of making a Type II error, and b) their use allows for more precise theoretical predictions than use of a heterogeneous group.

Research question 1: What are the differences between Bermuda and Pennsylvania freshman college students' perceptions of their career development experiences in preparing them for making informed decisions about postsecondary aspirations? My Vocational Situation (Holland et al., 1980) was adapted to address this research question. The questionnaire consisted of an 18-item measure that assesses the perception of students of their career identity (e.g., "I need to find out what kind of career I should follow"). Participants indicate how accurately each of the items applies to them by responding true or false. Responses to the 18 items were summed into one variable coding, "False" to "1" and "True" to "0." Participants who answered "False" to the questions suggest they have a clearer VI; thus, achieving higher scores on the unified variable is better.

To measure the Career identity (VI) of the participants, My Vocational Situation

(Holland et al., 1980) was used. The MVS, an 18-item instrument, was originally developed to assist school counselors in assessing three possible areas of difficulty that students may face in making career decisions: concerns regarding vocational identity, lack of information and knowledge pertaining to occupations, and barriers posed to achieving occupational goals. The intent was to measure the extent to which respondents have a well-defined concept of their goals, strengths, and interests. Each area was assessed using a separate scale: VI utilizes an 18-item, true-false scale to emphasize the degree to which a student may have a well-defined insight into his/her goals, interests, and abilities (Holland et al., 1980b, p. 1).

To assess the need for occupational information a 4-item, true-false Occupational Information Scale was utilized. Specifically, its purpose was to determine the extent to which an individual needs additional career information to make an informed decision about their future aspirations. The final component of the MVS utilized a 4-item yes-no Barriers Scale to assess the degree to which an individual may believe that external barriers are impeding their career decision-making. This component of the original questionnaire was not utilized in the final instrument for this research study. The fact that none of the research questions focused on barriers justified the decision to exempt them from this study's instrument. Assessing the reliability for MVS, Holland et al. (1980b) reported a Kuder-Richardson 20 (KR 20) internal consistency coefficient of .86 for the VI scale. Holland et al. (1980) reported test-retest reliability estimates ranging from .52 to .84 for intervals of one week to seven weeks. Lucas, Gysbers, Buescher, and Heppner (1988) reported a test-retest coefficient of .64 for the VIS during a 3- to 5-month period.

Research question 2: What are the effects of school engagement competencies on academic performance, career identity and the mediating role of hope-centered career competencies in the relationship. The Hope-Centered Career Inventory (HCCI; Niles, Amundson, & Neault, 2010) measures a student's level of hope with regard to academic achievement, school engagement, and career identity. HCCI has 28 items guided by seven constructs: hope; self-reflection; self-clarity; visioning; goal setting and planning; implementing; and adapting. The participants responded to each question based on a 4-point Likert scale (1 = definitely false to 4 = definitely true).

According to Niles et al. (2010), the HCCI has excellent reliability and validity based on results from a study involving a sample of 380 undergraduate and graduate students at a large public university in the United States. Cronbach's Alpha for total scale was .924, and individual scales' coefficients were .827 (hope); .743 (self-reflection); .822 (self-clarity); .859 (visioning); .799 (goal setting and planning); .850 (implementing); and .814 (adapting), with overall ranges from .743 to .859.

The NSSE survey was developed in 2000 and updated in 2013. It assesses the extent to which students engage in educational practices associated with high levels of learning and development. Kuh et al. (2001) stated that the NSSE was designed to assess the extent to which students are engaged in educationally purposeful activities that contribute to their learning and educational success.

This research utilized questions from the original questionnaire. Ten items were selected to elicit information pertaining to time focused on preparing for classes, the time spent on reading and writing, and expectations for academic performance. Five items focused on class participation, working with others and discussion of ideas with others,

and the final five items explored students' interactions with educators. Cronbach's Alpha for NSSE on the three components is .68, .64, and .72, respectively. Individual items were measured using a four-point Likert scale (1 = never, to 4 = very often).

Reliability

Reliability refers to the extent to which a measuring instrument is consistent and that researchers, regardless of who they are, will arrive at similar results if they perform the same study with another population using the same procedures as the previous researcher (M. Gall, Gall, & Borg, 2007). Reliability measures accuracy on two properties of the instrument: stability and consistency. The Hope Centered Career Inventory has excellent reliability and validity evidence with a sample of 382 undergraduate and graduate students at a large public university in the United States (Niles et al., 2010). Further research utilizing the Hope Centered Career Inventory (HCCI) has been conducted in Bermuda and Canada—internal consistency is good overall: .914, with sub-scales: .606 ~ .812 (Niles, Yoon, & Amundson, 2010). The research being conducted in various countries has engaged students as young as middle school in Bermuda to college students in all three countries, with results consistent across all participants.

Validity

It is essential that the instruments being utilized in research have validity. Validity refers to the degree to which “evidence and theory support the interpretations of test scores entailed by proposed uses of test” (American Educational Research Association [AERA] et al., 1999, p. 9). According to Ormond and Leedy (2005), validity refers to the extent an instrument measures what it intends to measure. When modifying the various

instruments for this research study, the researcher had to ensure that they all had validity in order to correctly interpret the data collected and claim that findings truly represented the study sample. The HCCI results for Bermuda College and Pennsylvania College of Technology were validated as findings were in line with results from previous research conducted with students at the undergraduate and graduate levels. HCCI has excellent validity, Cronbach's Alpha for the total scale was .924, and individual scales' coefficients were .827 (hope); .743 (self-reflection); .822 (self-clarity); .859 (visioning); .799 (goal setting and planning); .850 (implementing); and .814 (adapting)—with overall ranges from .743 to .859. The fit indices using confirmatory factor analysis (CFA) turned out to be near perfect: RMSEA = .0; RMR = .045; NNFI = 1.00; CFI = 1.00; and GFI = .98. Therefore, the 7-factor model of HCCI was valid in terms of internal consistency validity.

Data Analysis

The data were analyzed applying descriptive statistics as well as inferential statistics, including the one-way analysis of variance (ANOVA) and the t-test. SPSS 21 was used as the data analysis program. M. Gall, Gall and Borg (2007) described ANOVA as a statistical technique that compares variation between groups and variation within groups by analyzing their variances. Assumptions associated with the ANOVA technique must also be kept in mind. According to Creswell (2009), the method assumes that: (a) the individual evaluations are independent of each other; (b) scores given to each item come from populations of scores that have a common variance; and (c) data follow a normal distribution. In using ANOVA to analyze these data, the researcher hoped to be able to determine whether there was a significant difference between the two countries under investigation as well as within the individual school systems themselves. The

researcher was aware that by using ANOVA, no assumption could be made about the nature of the relationship and results might not be generalized beyond the population under investigation.

Research question 1: What are the differences between Bermuda and Pennsylvania freshman college students' perceptions of their career development experiences in preparing them for making informed decisions about postsecondary aspirations? To

determine whether there were differences and the nature of those differences between students in Bermuda and Pennsylvania pertaining to their perceptions of their career development experiences and their ability to make informed decisions about their postsecondary aspirations, descriptive statistics was used. An independent t-test using SPSS 21.0 was conducted for each institution as well as for combined data sets to test the homogeneity of variance and t-test. The six competencies of the Hope Centered Career Inventory (HCCI) were explored; results for each institution on each competency are presented in Table 4.2.

Research question 2: What are the effects of school engagement competencies on academic performance, career identity and the mediating role of hope-centered career competencies in the relationship? To confirm the relationship among HCCI, school

engagement, academic, performance, and career identity (VI), structural equation modeling (SEM) was used. Regression coefficients between hope-centered competencies and other variables were explored using LISREL 8.80 to determine to what extent HCCI predicts school engagement, and in turn academic performance and career aspirations/vocational identity. SEM techniques were utilized since they have a strong theoretical foundation and empirical support, which permit the examination of competing

models and/or modification of an a priori model to fit the data. Hooper, Coughlan, and Mullen (2008) recommended that when reporting SEM analyses it was essential to consider the most common fit indexes, which include: the chi-square statistic; Steiger-Lind root mean square error of approximation (RMSEA; Steiger, 1990) with a 90% confidence interval; comparative fit index (CFI; Bentler, 1990); and the non-normed fit index (NNFI; Bentler & Bonett, 1980).

To test the structural equations, LISREL-8.80 with covariance matrices and maximum likelihood procedures was employed. Jöreskog and Sörbom (2001) developed the statistical program LISREL-8.80 to enable testing of priori models and provide various goodness-of-fit index values. The researcher analyzed covariance matrices due to the fact that correlation matrix analysis has been known to have the potential for problems, such as producing incorrect goodness-of-fit measures and standard errors (Byrne, 1998; Jöreskog & Sörbom, 2001). As mentioned previously, a number of goodness-of-fit index values were calculated using LISREL; however, this study reported the CFI, the RMSEA, and the NNFI. CFI and NNFI values close to .95 and an RMSEA value between .05 with upper levels of .07 are normally considered to indicate good model fit (Byrne, 1998).

Research question 3: How does the relationship of hope, academic performance, vocational identity, and school engagement differ between Bermuda and Pennsylvania freshman college students? Structural equation model (SEM) was also utilized to answer this research question along with analyses using LISREL 8.80 to determine the differences between Bermuda and Pennsylvania college students with regard to the relationship among hope, academic performance, school engagement and career identity.

LISREL 8.80 was also used to determine the extent to which hope impacts academic performance, school engagement, and career identity. Students with higher hope tend to be more engaged in their educational experience and in turn tend to be more successful academically and have a better grasp on their career aspirations. Research in academic settings has generally supported the theory of higher hope as a predictor of better academic performance among high school and college students, even when innate abilities have been controlled (Ciarrochi, Heaven, & Davis 2007).

Chapter 4

Findings

In this chapter the results of the data analysis undertaken using methods described in chapter 3 are presented. The purpose of this study was to examine the perceptions of freshman college students in Bermuda and Pennsylvania regarding their perceptions of preparedness to make informed decisions about their postsecondary aspirations, based on their career development experiences in high school, utilizing the Hope Centered Career Development Competencies (Niles & Hyung, 2012). The following research questions were answered by this research.

Research Questions

1. What are the differences between Bermuda and Pennsylvania freshman college students' perceptions of their career development experiences in preparing them for making informed decisions about postsecondary aspirations?
2. What are the effects of school engagement competencies on academic performance, career identity and the mediating role of hope-centered career competencies in the relationships?
3. How does the relationship of hope, academic performance, vocational identity, and school engagement differ between Bermuda and Pennsylvania freshman college students?

Analysis of Respondents

The results of this study are based on survey data from 223 participants from two different institutions, Bermuda College ($n = 126$), and Pennsylvania College of

Technology ($n = 97$). There were no missing values from respondents but six questionnaires from Bermuda and eight from Pennsylvania were not included in the analysis after data cleaning had removed obvious anomalies, such as participants who gave all competencies exactly the same rating at either end of the scale (i.e., all competencies rated either with strongly agree “1” or a score of “5”).

Table 4.1 shows descriptive statistics for the demographic information for survey respondents. These data included gender, age, and ethnicity. The research data consisted of 117 males (52.5%) and 106 females (47.5%). Of the 223 participants, 52.5% were male ($n = 117$) and 47.5% were female ($n = 106$). The ethnic breakdown was: (44.8%) White, (40.8%) Black, (6.7%) Portuguese, (4.5%) other, (1.3%) Asian, (1.3%) Hispanic, and (0.4%) Pacific Islander.

Table 4.1

Results of the Descriptive Analyses for Research Participants ($n = 223$)

	BC ($n=126$)		PC ($n=97$)		Total ($n =223$)	
	n	%	n	%	n	%
Gender						
Male	58	46.0	59	60.8	117	52.5
Female	68	54.0	38	39.2	106	47.5
Age						
18-19	124	98.4	72	74.2	196	87.8
20-21	2	1.6	9	9.3	11	4.9
22	-	-	16	16.5	16	7.3
Ethnicity						
Asian	2	1.7	1	1.0	3	1.3
Black	89	70.6	2	2.2	91	40.8
Hispanic	2	1.7	1	1.0	3	1.3
Pacific Islander	1	.8	-	-	1	0.4
Portuguese	15	11.8	-	-	15	6.7
White	8	6.3	92	94.8	100	44.8
Other	9	7.1	1	1.0	10	4.7

Research Question One

What are the differences between Bermuda and Pennsylvania freshman college students' perceptions of their career development experiences in preparing them for making informed decisions about postsecondary aspirations? When examining differences between Bermuda and Pennsylvania college freshman students' perceptions of their career development experiences in high school, data analysis revealed no significant difference between the two college groups. The results of the t-test are represented in Table 4.2, which shows Bermuda College freshman students' perceptions of their career development experiences, utilizing the Hope Centered Career Development competencies, with those of Pennsylvania College of Technology freshman students. The mean scores for the Bermuda College group and Pennsylvania College of Technology group were similar on all competencies with the exception of one, differing significantly on hope. The students at the Pennsylvania College of Technology differed from students at The Bermuda College regarding their perceptions on the hope competency for their postsecondary aspirations only. Pennsylvania students scored higher than Bermuda students. For the purpose of this study, postsecondary aspirations refer to a student either pursuing a college experience that in turn will lead to a college degree or an individual joining the world of work immediately upon graduating from their high school.

Table 4.2

Results of T-Tests between Bermuda College and Pennsylvania College of Technology

Competency	Levene's Statistic		Bermuda College (n = 126)		Pennsylvania College of Technology (n = 97)		t
	F	Sig.	M	SD	M	SD	
Hope Centered Career Inventory	.083	.774	3.27	.356	3.41	.348	-3.09*
Hope	4.743*	.030	3.53	.397	3.49	.513	.523
Self-Reflection	1.872	.173	3.20	.485	3.40	.444	-3.19*
Self-Clarity	.045	.833	3.39	.493	3.44	.463	-.799*
Visioning	.662	.417	3.41	.485	3.55	.446	-2.19*
Goal Setting and Planning	.196	.658	2.89	.584	3.17	.561	-3.59*
Implementation	.194	.660	3.13	.441	3.30	.490	-2.86*
Adapting	.000	.985	3.33	.437	3.54	.410	-3.73*

Note. * $p \leq .05$.

Research Question Two

What are the effects of school engagement competencies on academic performance, career identity and the mediating role of hope-centered career competencies in the relationships?

One-Group Model

To determine whether a relationship existed between the hope-centered career competencies and academic performance, as well as career identity, a one-group model was explored. The one-group model was also used to examine the mediating role of school engagement on academic performance and career identity.

Goodness of fit. The goodness-of-fit indices for the one group ($N = 223$)

mediation model are shown in Table 4.3. The chi-square and fit are χ^2 (df=67) = 127.52. The chi-square estimate was statistically significant at .001, which is an indication of an inappropriate fit between the proposed measurement model and the collected data set. Although these results indicate limited reliability of the model fit, the chi-square test of the model for the present study may not be appropriate, as chi-square is often very sensitive to sample size. When a small sample is present, the chi-square statistic lacks power and for this reason may not differentiate between good fitting models and poor fitting models (Hooper, Coughlan, & Mullen, 2008; Kenny & McCoach, 2003).

Due to the limitations of considering RMSEA, NNFI and CFI are applicable. The fit indices were: RMSEA = .063, NNFI = .95, and CFI = .97. According to Steiger (2007), a cut-off value close to .05 or a rigorous upper limit of .07 appears to be the general consensus among authorities in this area. The model is deemed to be a good-fitting model given the overall tendency of fit indices.

Table 4.3

Goodness-of-Fit Indices of the Mediation Model

Model	χ^2	df	NNFI	CFI	RMSEA
M0	127.52*	67	.95	.97	.063

Analysis results of the regression weights and total effects of the mediation model are shown in Table 4.4. The total effects of hope-centered career competencies on VI were statistically significant; with the regression coefficients of both HCCI (b = .273, SE = .083) while school engagement (b = .184, SE = .081) was not statistically significant on VI.

Table 4.4

Regression Weights and Total Effects for Mediation Model with One Group

 Total Effects of ETA on ETA

	se	hcci
HCCI	.412	--
	(0.078)	--
	5.286*	--
GPA	.130	.078
	(0.075)	(0.078)
	1.716	0.994
VI	.184	.273
	(0.081)	(0.083)
	2.267	3.290 *

LISREL Estimates (Maximum Likelihood)

BETA

	se	hcci
HCCI	.382*	--
	(0.080)	
	5.285	
GPA	.080	.069
	(0.080)	(0.080)
	1.165	0.994
VI	.067	.274*
	(0.090)	(0.080)
	0.823	3.290

Note. *p < .05.

This indicates the unique effect of student engagement on career identity when the mediator, HCCI, is not considered in the model. The independent variable also had significant effects on the HCCI mediator school engagement: ($b = .382$, $SE = .080$). These findings confirm that the effect of school engagement on career identity was mediated significantly by HCCI, employing the joint significant test of MacKinnon et al. (2002).

The residual direct effects of student engagement on predicting VI when the mediator (HCCI) was included in the model were not statistically significant: ($b = .067$, $SE = .090$). Figure 4.1 shows the regression weights and residual direct effects of variables in the model.

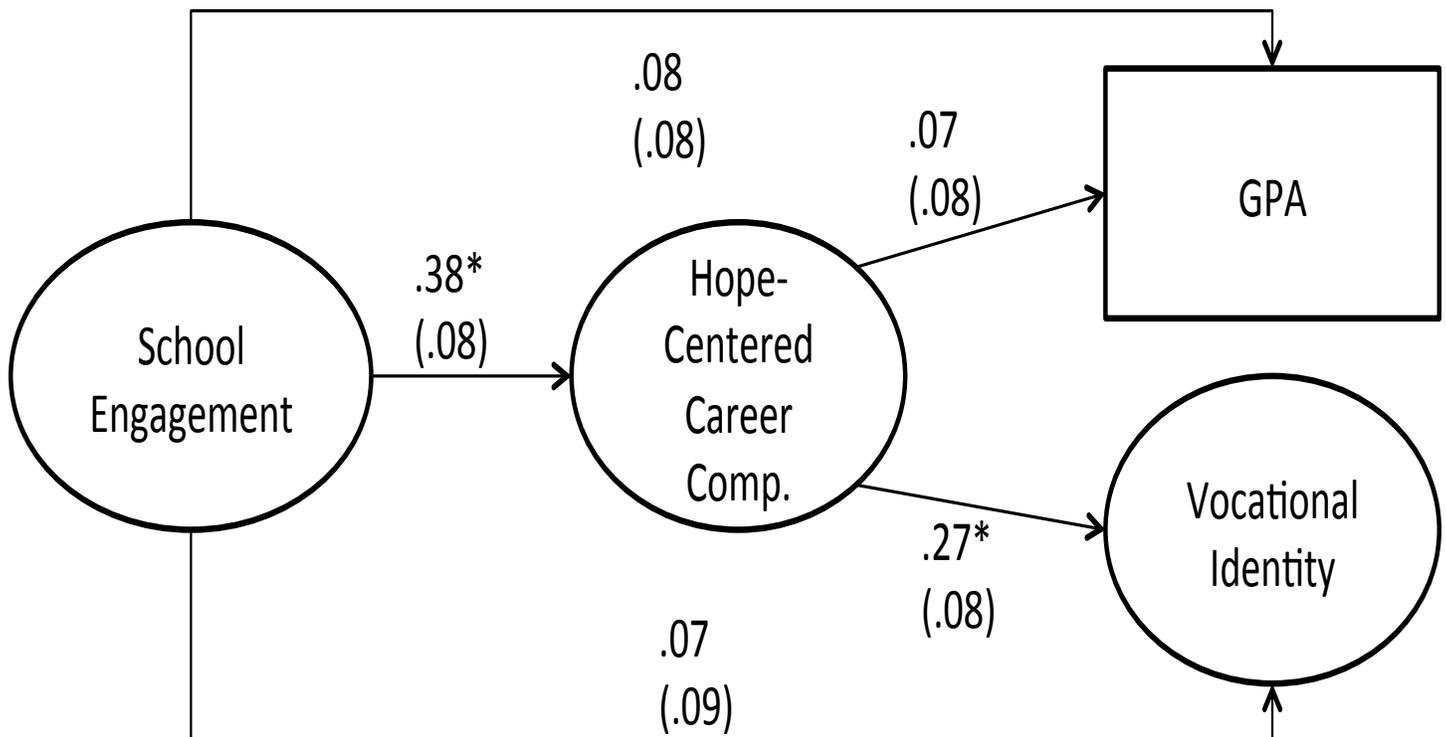


Figure 4.1. One-group mediation model
 Note. * $p < .05$.

Research question 3

How does the relationship of hope, academic performance, vocational identity, and school engagement differ between Bermuda and Pennsylvania freshman college students?

Goodness of fit. The goodness-of-fit indices of the two-group mediation model are shown in Table 4.5. To identify the general tendency of the relationships among the variables the data was separated into two groups. The data for each institution were analyzed twice, first without controlling for demographic variable (race, age, gender, and parents educational level) for each institution and then controlling for demographic variables to identify any differences in the relationship of hope, academic performance, vocational identity, and school engagement between the institutions as well as the countries. Group 1: Bermuda College without controlling for demographic variable, 1A: Bermuda College with controlling for demographic variables, and Group 2: Pennsylvania College of Technology without controlling for demographic variables, 2A: Pennsylvania College of Technology with controlling for demographic variables.

The chi-square and fit indices for Group 1 χ^2 (df=39) = 70.209, Group 1A χ^2 (df=67) = 90.449, Group 2 χ^2 (df = 39) = 44.995*, and Group 2A χ^2 (df=67) = 101.195. The chi-square estimate for Groups 1, 1A and 2A was not statistically significant at .05; while these results suggest partial soundness of the model fit, the chi-square test of the model for the present study may not be applicable. The chi-square for group 2 was statistically significant at .05, which indicates the inappropriate fit between the proposed measurement model and the collected data set. Due to the fact that chi-square is often

very sensitive to sample size, it is appropriate to consider RMSEA, NNFI, and CFI for the model.

The fit indices of the groups were: RMSEA = .059, NNFI = .95, and CFI = .97 (Group 1); RMSEA = .053, NNFI = .96, and CFI = .97 (Group 1A), RMSEA = .041, NNFI = .99, and CFI = .99 (Group 2); and RMSEA = .059, NNFI = .95, and CFI = .97 (Group 2A). Although the RMSEA for Group 2 is below .05, according to Hu and Bentler (1999), the model is regarded as being a good fitting model given the entire tendency of fit indices.

Table 4.5

Goodness-of-Fit Indices of the Mediation Model with Two Groups

Model	χ^2	df	NNFI	CFI	RMSEA
Group 1	70.209	39	.94	.96	.077
Group 1A	90.449	67	.96	.97	.053
Group 2	44.995*	39	.99	.99	.041
Group 2A	101.195	67	.95	.97	.059

Bermuda College Model 1: Without controlling for demographic variables

Analysis results of the regression weights and total effects of the mediation model are shown in Table 4.6. In the Bermuda College Model 1: the total effects of hope-centered career competencies on VI were statistically significant; with the regression coefficients of HCCI (b = .298, SE = .150) while school engagement (b = .145, SE = .103) was not statistically significant on VI. This indicates the reduced effect of student engagement on career identity when the mediator, HCCI, is not considered in the model.

The independent variable also had significant effects on the HCCI mediator school engagement: ($b = .229$, $SE = .070$). These findings confirm that the effect of school engagement on career identity was mediated significantly by HCCI by employing the joint significance test of MacKinnon et al. (2002). The total effects of hope-centered career competencies and school engagement on GPA in the model indicate were not statistically significant.

The residual direct effects of student engagement on predicting VI and GPA when the mediator (HCCI) was included in the model were not statistically significant (school engagement: ($b = .080$, $SE = .110$), ($b = .090$, $SE = .130$), respectively. Figure 4.2 represents the regression weights and residual direct effects of variables in the model.

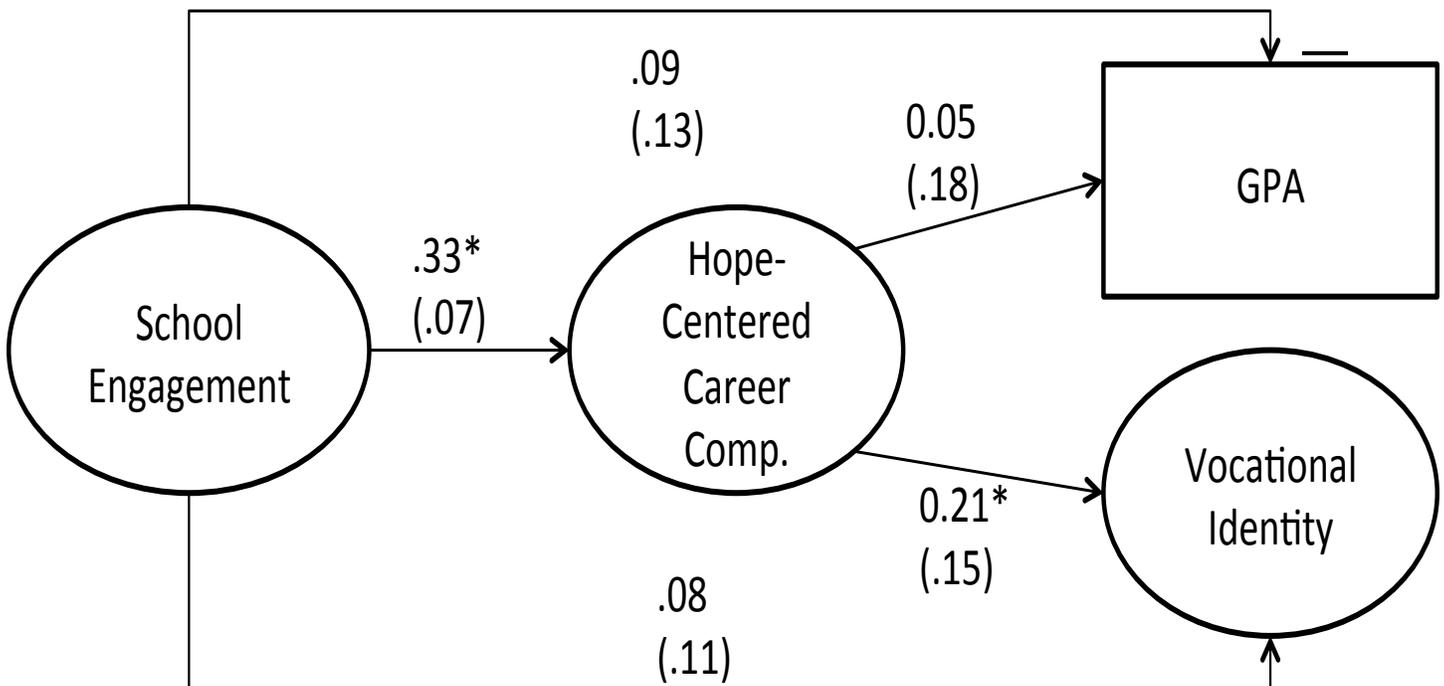


Figure 4.2. BCC model without controlling for demographic variables
 Note. $*p < .05$.

Table 4.6

Regression Weights and Total Effects for Mediation Model, BCC Model 1, Without Controlling for Demographic Variables

Total Effects of ETA on ETA				
	SE	HCCI	GPA	VI
HCCI	.229 (0.070) 3.267*	--	--	--
GPA	.139 (0.123) 1.126	.085 (0.182) 0.470	--	--
VI	.145 (0.103) 1.408	.298 (0.150) 1.983*	--	--

LISREL Estimates (Maximum Likelihood)				
<u>BETA</u>				
	SE	HCCI		
HCCI	.325* (0.070) 3.267	--		
GPA	.093 (0.132) 0.906	.047 (0.182) 0.470		
VI	.078 (0.107) 0.712	.213* (0.150) 1.983		

Note. *p < .05.

Bermuda College Model 1A: With controlling for demographic variables (race, age gender, parent educational level)

Analysis results of the regression weights and total effects of the mediation model, controlling for demographic variables, are shown in Table 4.7. The BCC Model 1A: the total effects of hope-centered career competencies on VI revealed similar results as in Model 1. The results were statistically significant, with the regression coefficients of HCCI ($b = .220$, $SE = .106$) while school engagement ($b = .154$, $SE = .108$) was not statistically significant on VI. This indicates the limited effect of student engagement on career identity when the mediator, HCCI, is not considered in the model. The independent variable also had significant effects on the HCCI mediator of school engagement: $b = .307$, $SE = .104$). These findings confirm that the effect of school engagement on career identity was mediated significantly by HCCI. This model also indicated no statistically significant effect of school engagement or HCCI on students' GPA. Controlling for demographic variables—race, age, gender, and parent education level, the total effects of gender and parent education level on GPA were statistically significant; with regression coefficients of gender ($b = -0.290$, $SE = .074$) and parent education level ($b = .504$, $SE = .074$), respectively. Age and gender also were statistically significant on the mediator HCCI.

The residual direct effects of student engagement on predicting VI and GPA when the mediator (HCCI) was included in the model were not statistically significant for school engagement: ($b = -.003$, $SE = .170$), ($b = .031$, $SE = .240$), respectively. Figure 4.3 illustrates the regression weights and residual direct effects of the variables in Model 1A.

Table 4.7.

Regression Weights and Total Effects for Mediation Model, BCC Model 1A: With Controlling for Demographic Variables (race, age, gender, parent education level)

Total Effects of ETA on ETA

	Race	Age	Gender	Par_Ed	SE	HCCI
SE	.054 (.080) .676	.092 (.079) 1.157	-.098 (.079) -1.239	.043 (.079) .546	-- -- --	-- -- --
HCCI	.048 (.080) .597	.128 (.080) 1.957*	-.180 (.080) -2.244*	-.045 (.080) .559	.307 (.104) 2.966*	-- -- --
GPA	.061 (.074) .825	.107 (.073) 1.460	-.290 (.074) -3.943*	.504 (.074) 6.858*	.052 (.096) .543	-.037 (.096) -.383
VI	-.054 (.083) -.292	-.084 (.083) -1.018	-.146 (.083) -1.756	-.059 (.083) -.716	.154 (.108) 1.420	.220 (.106) 2.071*

LISREL Estimates (Maximum Likelihood)

<u>BETA</u>	Race	Age	Gender	Par_Ed	SE	HCCI
SE	.065 (.080) .676	.110 (.079) 1.157	-.118 (.079) -1.239	.052 (.079) .546	-- -- --	-- -- --
HCCI	.036 (.078) .404	.114 (.078) 1.281	.171 (.078) -1.921	.036 (.077) .406	.292 (.104) 2.966*	-- -- --
GPA	.059 (.074) .801	.106 (.074) 1.426	-.290 (.075) -3.855*	.503 (.074) 6.838*	.053 (.102) .624	-.032 (.096) -.383
VI	-.046 (.082) -.486	-.139 (.082) -1.467	-.113 (.083) -1.182	-.084 (.081) -.900	.083 (.112) .770	.222 (.106) 2.071*

Note. *p < .05.

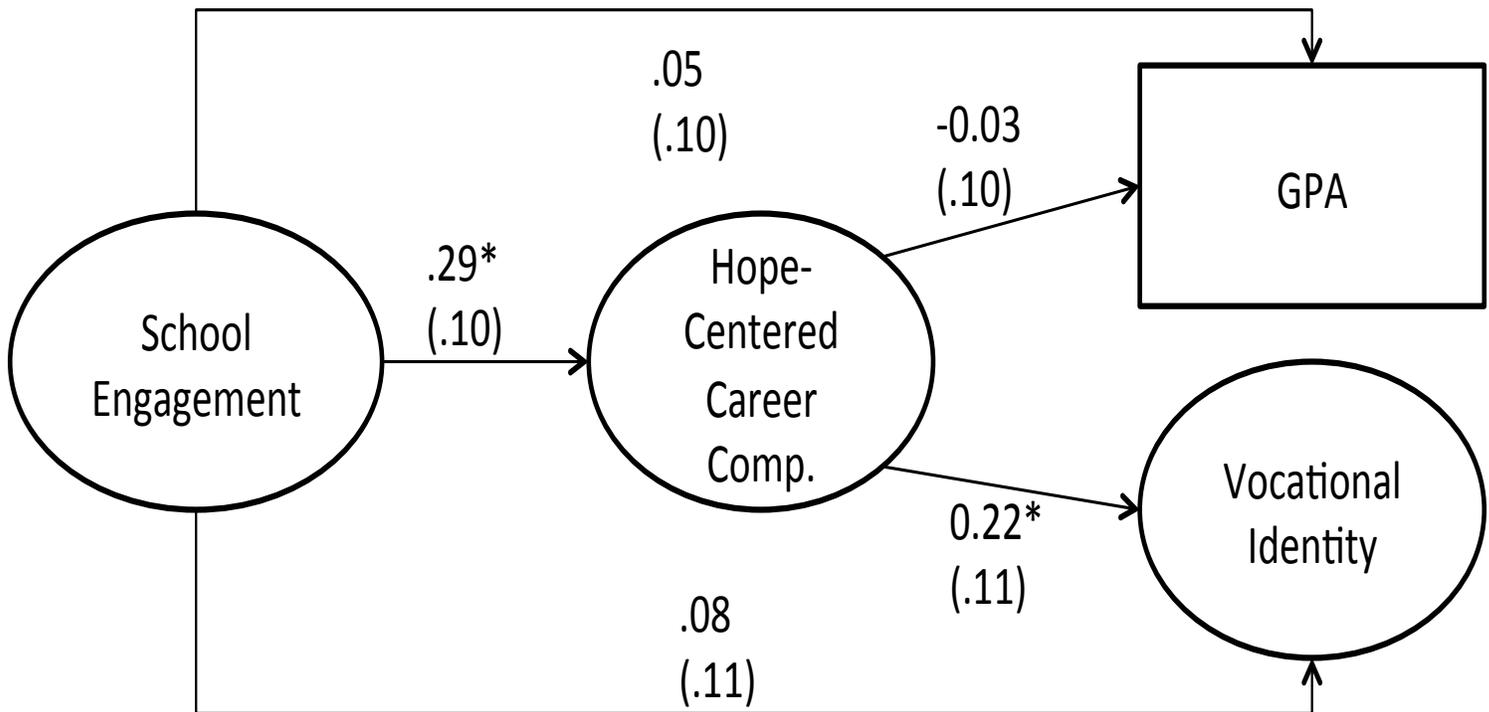


Figure 4.3. BCC model with controlling for demographic variables (race, age, gender parent education level).

Note. * $p < .05$

Pennsylvania College of Technology Model 2: Without controlling for demographic variables

Analysis results of the regression weights and total effects of the mediation model with two groups are shown in Table 4.7. The Pennsylvania College of Technology Model 2: the total effects of hope-centered career competencies on VI were statistically significant, with the regression coefficients of both HCCI ($b = .602$, $SE = .184$) while school engagement ($b = .308$, $SE = .144$) was not statistically significant on VI. This indicates the unique effect of student engagement on career identity when the mediator, HCCI, is not considered in the model. The independent variable also had significant effects on the HCCI mediator, school engagement: ($b = .517$, $SE = .099$). These findings confirm that the effect of school engagement on career identity was mediated significantly by HCCI. These results also indicate no statistical significance on GPA

when considering the effect of school engagement and HCCI.

The residual direct effects of student engagement on predicting VI and GPA when the mediator (HCCI) was included in the model were not statistically significant for school engagement: ($b = -.003$, $SE = .170$), ($b = .031$, $SE = .240$), respectively. Figure 4.4 illustrates the regression weights and the residual direct effects of variables in the model.

Table 4.8

Regression Weights and Total Effects for Mediation Model, PCT Model 2: Without Controlling for Demographic Variables

Total Effects of ETA on ETA		
	SE	HCCI
HCCI	.517 (0.099)	-- --
	5.197*	--
GPA	.260 (0.192)	.397 (0.256)
	1.354	1.553
VI	.308 (0.144)	.602 (0.184)
	2.141	3.279*

LISREL Estimates (Maximum Likelihood)		
<u>BETA</u>	SE	HCCI
HCCI	.569* (0.099)	-- --
	5.197	--
GPA	.031 (0.240)	.206 (0.256)
	0.228	1.553
VI	-.003 (0.170)	.433* (0.184)
	-0.021	3.279

Note. * $p < .05$.

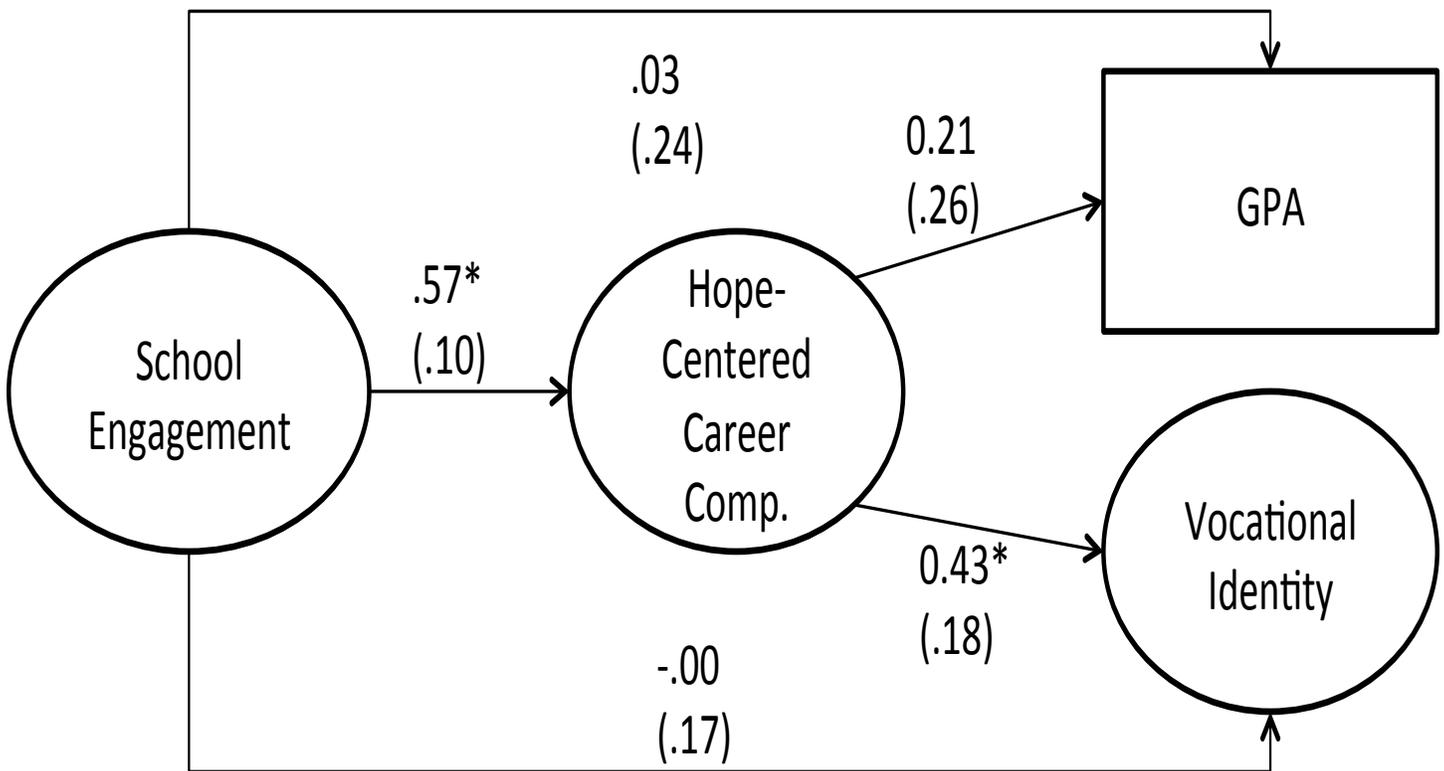


Figure 4.4. PCT model without controlling for demographic variables
 Note. * $p < .05$.

Pennsylvania College of Technology Model 2A: With controlling for demographic variables (race, age gender, parent education level)

The results of the regression weights and total effects of the mediation model are shown in Table 4.9. Pennsylvania College of Technology Model 2: total effects of hope-centered career competencies on VI were statistically significant, which is consistent with the other models in this research. The results reveal the regression coefficients of HCCI ($b = .583$, $SE = .193$) while school engagement ($b = .270$, $SE = .150$) was not statistically significant on VI. Once again the results indicate the limited effect of student engagement on career identity when the mediator, HCCI, is not considered in the model. The independent variable also had significant effects on the HCCI mediator, school engagement: ($b = .481$, $SE = .099$). These findings confirm that the effect of school

engagement on career identity was mediated significantly by HCCI. This model also reveals no statistical significance on GPA when considering the effect of school engagement and HCCI. When controlling for demographic variables the results reveal a statistically significant effect of parent's education level on GPA ($b = .264$, $SE = .053$) along with age and gender on HCCI.

The residual direct effects of student engagement on predicting VI and GPA when the mediator (HCCI) was included in the model were not statistically significant for school engagement: ($b = -.008$, $SE = .175$), ($b = .103$, $SE = .230$), respectively. The regression weights and residual direct effects of variables in the model are shown in Figure 4.5.

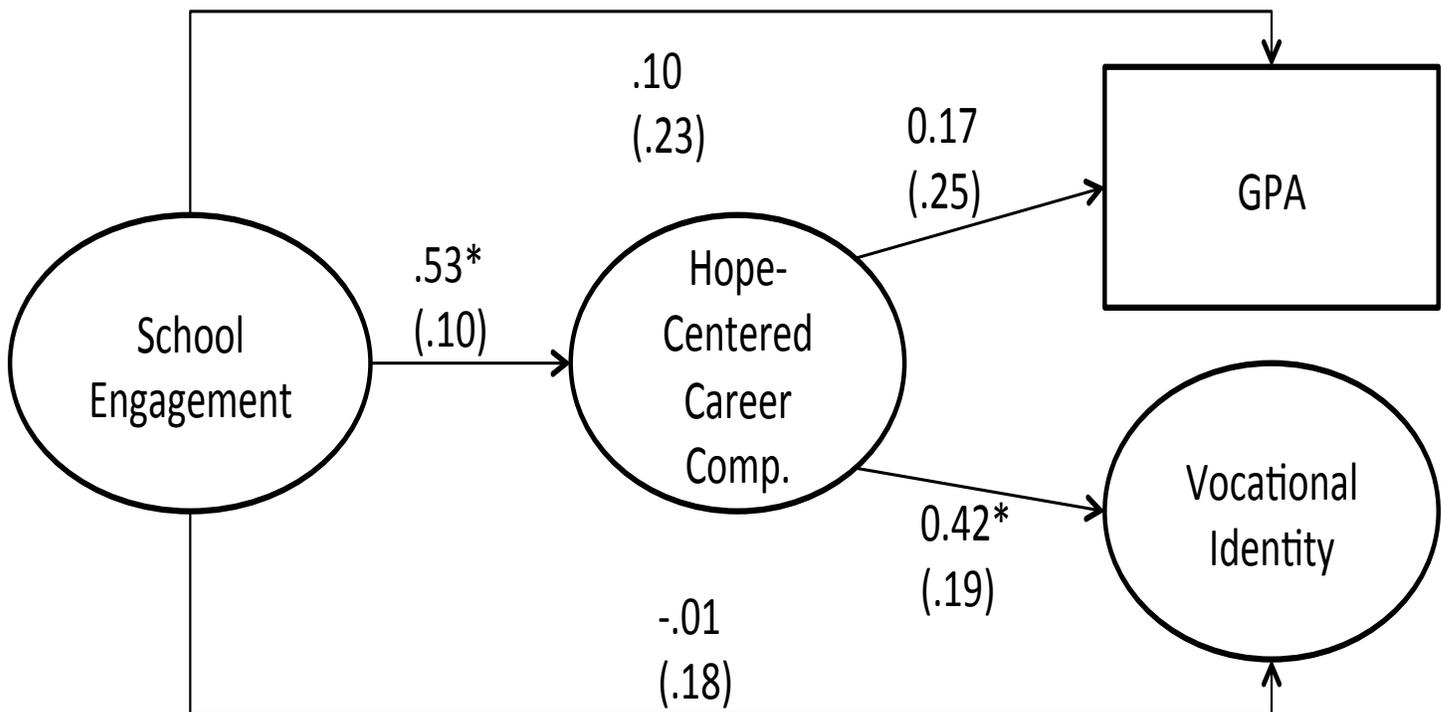


Figure 4.5. PCT model, controlling for demographic variables
 Note. $*p < .05$.

Table 4.9

Regression Weights and Total Effects for Mediation Model, PCT Model 2A: With controlling for demographic variables (race, age, gender, parent education level)

Total Effects of ETA on ETA						
	Race	Age	Gender	Par_Ed	SE	HCCI
SE	-.246 (.204) -1.205	.011 (.008) 1.318	-.143 (.093) -1.543	.004 (.034) .110	-- -- --	-- -- --
HCCI	.051 (.174) .292	.015 (.007) 2.063*	-.207 (.079) -2.606*	.028 (.030) .948	.481 (.099) 4.846*	-- -- --
GPA	.574 (.322) 1.783	-.003 (.013) -.244	-.150 (.146) -1.030	.155 (.055) 2.837*	.337 (.188) 1.789	.323 (.250) 1.295
VI	.033 (.256) .128	.012 (.010) 1.156	-.139 (.116) -1.199	.016 (.043) .363	.270 (.150) 1.805	.583 (.193) 3.022*

LISREL Estimates (Maximum Likelihood)						
<u>BETA</u>	Race	Age	Gender	Par_Ed	SE	HCCI
SE	-.131 (.204) -1.205	.151 (.008) 1.318	-.168 (.093) -1.543	.012 (.034) .110	-- -- --	-- -- --
HCCI	.098 (.156) 1.087	.142 (.006) 1.482	-.177 (.071) -1.942	.092 (.026) 1.004	.525 (.099) 4.846*	-- -- --
GPA	.182 (.320) 1.884	-.078 (.013) -.760	-.038 (.148) -.388	.264 (.053) 2.713*	.103 (.230) .790	.168 (.250) 1.295
VI	.000 (.244) .003	.039 (.010) .359	-.018 (.112) -.176	-.001 (.041) -.014	-.008 (.175) -.056	.419 (.193) 3.022*

Note. *p < .05

Chapter Summary

This chapter presented the results of analyses based on the three research questions in this study. Multiple confirmatory factor analyses were conducted to confirm that the 4-factor structure concept is consistent with the nature of that construct. In addition, the practical fit indices further confirmed that the 4-factor model is a good fit for this study. A structural equation modeling (SEM) model with one independent variable (school engagement), one mediator (HCCI), and two outcome variables [(VI) and (GPA)] was confirmed to be valid. The three research questions were addressed and answered.

The results revealed consistency in the analyses between the two groups, The Bermuda College and The Pennsylvania College of Technology. Results for both groups indicated that the impact of hope-centered career competencies on career identity were statistically significant. Students who scored high in the six career competencies of the HCCI have a sound knowledge of their vocational identity. The results also suggest no statistical significance between HCCI and students' GPA. There was one component on which the students in Bermuda and Pennsylvania differed: *hope*. Pennsylvania College of Technology students scored higher than Bermuda College students with regard to students' perceptions of hope for their postsecondary aspirations.

When considering school engagement's impact on career identity and students' GPA, this study's results did not confirm those in Seelman, Walls, Hazel, and Wisneski (2012). Their study revealed that student school engagement is a significant predictor of GPA; this study did not offer this finding. School engagement in this study had limited impact on career identity without the mediator hope centered career competencies. Furthermore, with and without the mediator there was limited impact on GPA.

When controlling for demographic variables the results of this model were consistent with those for previous models pertaining to school engagement and HCCI impact on career identity and GPA. This model further revealed a statistically significant effect of parent's education level on GPA. Higher parents' educational level exerted a positive influence on student GPA. There was also a significant impact of age and gender on HCCI. The older the student, the higher they scored in all six competencies of the HCCI. Gender also revealed some differences, with females in Bermuda scoring higher on the *hope* competency than male students in the same institution.

Chapter 5

Summary, Conclusions, and Recommendations

This dissertation set out to examine the perceptions of freshman students in Bermuda and Pennsylvania regarding their career development experiences in preparing for their postsecondary aspirations. Chapters contained an introduction to the problem, detailed the purpose of the research, stated the research questions, reviewed the related research, described the research methodology, and presented and summarized the research data and findings. In this final chapter, research contributions as well as directions for future research are presented. This chapter restates the purpose of the study, summarizes the research findings and conclusions related to each research question, offers general conclusions, and suggests recommendations for future research and educational practices.

Purpose of Study

The purpose of this study was to examine, in Bermuda and Pennsylvania, freshman students' perceptions of their preparedness to make informed decisions about their postsecondary aspirations, based upon their career development experiences in high school, utilizing the Hope Centered Career Development Competencies (Niles & Hyung, 2012)

Summary Findings and Conclusions Related to Research Question 1

When examining differences between the two colleges' freshman students and their perceptions of their career development experiences in high school in preparing to make informed decisions about postsecondary aspirations, data revealed .no significant

difference between the two college groups based on the Hope-Centered Career Competencies: *self-reflection, self-clarity, visioning, goal setting and planning, implementation and adapting*. The only competency for which there was a statistically significant difference was *hope*. When examining students' perceptions of the hope competency for their postsecondary aspirations, the Pennsylvania students scored higher than the Bermuda students.

As stated in chapter 1, providing career development strategies is fundamental to a student's academic and social personal development—more importantly, it assists them in making a connection among their education, vocational identity, and career aspirations. A comprehensive career development program that incorporates the hope-centered career competencies will equip students with the knowledge and skills to make informed decisions about their postsecondary aspirations. Implementing the hope-centered career competencies earlier in the educational experience of youth will allow them to develop a clear vision of their vocational identity and assist them in making knowledgeable decisions throughout their educational experience to clarify, adapt, set goals and implement them as they gain more knowledge and maturity.

The importance of involving students in strategies that promote career development is supported by the discussion in chapter 2. Career development is not just a point in time but should begin as early as elementary school and continue into the college years. According to Hartung, Porfeli, and Vondracek (2005), childhood is a vital period of career development incorporating exploration and learning, beginning in the middle to late childhood stages and continuing into adolescence and beyond. When considering meeting the needs of students with regard to their career and college aspirations, Flom

and Hansen (2006) suggested that it is essential to tap into the hope that students have for their future. Flom and Hansen's statement is noteworthy considering that this study revealed a statistically significant difference between Pennsylvania and Bermuda students on the hope competency. Students who tend to drop out of school during adolescence experience low levels of hope. When hope can be instilled in students during this crucial period, counselors may play a vital role in assisting with lowering school dropout rates. Current research indicates that higher hope in an individual enhanced goal-directed thinking and is closely related to having greater perceived determination in life. Hopeful thinking potentially addresses the issue of efficacy and accessibility, and can inspire a lifetime of learning (Feldman & Snyder, 2005; Marques, Lopez, & Pais-Ribeiro, 2009). Bloxom et al. (2008) added that a student's level of hopefulness is an indication that the student views his/her career and college aspirations as accessible and achievable, increasing their motivation to be successful.

Summary Findings and Conclusions Related to Research Question 2

To confirm the relationship among HCCI, school engagement, academic, performance, and career identity, (VI) structural equation modeling (SEM) was used. Regression coefficients between hope-centered competencies and other variables were explored using LISREL 8.80 to determine the extent to which HCCI predicts school engagement, and in turn academic performance and career aspirations/vocational identity. The proposed model was confirmed to be a good fit and the results were consistent between the study institutions. The results revealed that total effects of hope-centered career competencies on VI were statistically significant while the impact of HCCI was not statistically significant on the GPA of the students. There was also consistency

between school engagement and its impact on HCCI, which was found to be statistically significant between both groups. The HCCI competencies presented in the study were positively associated with students having a keen sense of knowledge regarding their career identity but had no significant impact on student GPA. The fact that school engagement does not directly impact upon the career identity of a student suggests that a comprehensive career development program should be implemented in schools. Such a program would ensure that each student has the opportunity to identify their academic and career aspirations, and strive to reach their goals.

Summary Findings and Conclusions Related to Research Question 3

The responses to research question 3 indicated few differences between the two institutions. When the model was used without controlling for demographic variables, the same results were found for both groups. As in research question 2 there was statistically significant effect of HCCI on VI as well as school engagement while there was no statistically significant effect of HCCI on student GPA. Although the purpose of this question was to determine the differences between the two groups, the data clearly show greater similarities between the two groups than differences.

When the data were analyzed controlling for demographic variables (such as participants' race, age, gender, and parent education level), the results revealed that the variables had a significant impact on the GPA outcome. In both institutions the effect of age and parent level of education was statistically significant on students' GPA. There was also a statistically significant effect of age and gender on HCCI.

General Conclusions

These results have implications for educators and counselors working with career

education students at all year levels. First, they highlight the importance of HCCI competencies as a component of career development in assisting students to identify their vocational identity. The findings suggest that career counselors and educators should assist students in pursuing their interests, skills and abilities by engaging and developing their skills with the HCCI competencies of *self-reflection, self-clarity, visioning, goal setting and planning, and implementation and adapting*. The results revealed a direct relationship between HCCI competencies and students' vocational identity. Although there is a relationship between HCCI and school engagement, the results also revealed that it is not enough for a student to merely be engaged in school to develop a clear vocational identity. Thus, HCCI competencies are a vital component of career development in assisting students to develop a clear vision for their future aspirations. The results also show that school engagement and career development do not have an impact on student GPA. The sample was small so further research is needed to determine whether or not school engagement and/or HCCI competencies can improve student GPA.

Limitations

Given the limits of the existing research related to career development in Bermuda, and the small sample in this study, there are a number of important limitations, and the results must be interpreted with caution. First, because the sample was only from two institutions and the response rate was low, care must be taken in drawing inferences to other populations of students within or between both countries. Second, this study did not address factors such as social support or barriers, which may play a crucial role in the career development of this population and affect these students' career development even more significantly than the variables discussed. A further limitation is that there is no

way to ensure that the study participants were actually educated in high schools in Pennsylvania or Bermuda. In conducting a further study, the researcher could address this limitation by adding a question to verify the educational background of participants.

Recommendations

As noted in chapter 1, the results from this study may be vital information for education policy makers, administrators, school counselors and students themselves. The results support the notion that it is essential for those who have the power to make decisions to ensure that students are given the necessary tools and opportunities to make informed decisions about their postsecondary aspirations.

Recommendations for Further Research

This study focused on the need to ensure that all students have access to comprehensive career development throughout their educational experience to assist them in making informed decisions about their postsecondary aspirations. The study's findings are limited to the sample because the study adopted a stratified purposive proportionate sampling that focused on freshman students at the Bermuda College as well as students at The Pennsylvania College of Technology. The findings cannot represent a particular group in general nor set a norm score. Further, it is desirable to diversify the populations in order to validate the model so that it may be generalized across different countries, cultures, and educational levels.

One recommendation for future research would be collect more data to confirm the model in each country as well as other countries. Another recommendation would be to use the procedures and methodology in other countries as well as various educational institutions that range from the elementary level to postsecondary institutions to further

confirm the value of HCCI as a vital component of a comprehensive career development strategy.

Another opportunity for future researchers would be to conduct a longitudinal study to gain a better understanding of HCCI competencies and how they assist students in making decisions about their career identity and career aspirations. Doing so will allow the researcher to follow the participant throughout their educational experience from middle school to postsecondary education. The researcher will be able to study the participants as they go through various developmental stages and be able to determine the value of HCCI competencies through the process. With information gathered from such a study, one may be able to determine if there are specific competencies that play a more vital role at the various developmental stage forming ones career identity in search of their career aspirations. As the results indicated, there is a statistically significant difference between the two institutions on the competency *hope*. Being able to determine if this is due to age or gender would assist counselors in nurturing the hope of students when it is most vital in their development. The information is also essential in assisting school counselors in developing career development strategies that are age appropriate for the maturity level of their students. Finally, the information may also be used to assess the accuracy of decisions made by students based on their career identity and how these assist them in reaching their career aspirations, exploring their success and satisfaction in the world of work.

Recommendations for Educators and Counselors

Education administrators as well as school counselors in the two countries covered by this research may use the findings to develop a comprehensive career

development program that includes the HHCI competencies and ensure that it is implemented into each institution. Making comprehensive career development a part of the school curriculum will improve institutions' ability to assure each student a sound foundation and the knowledge to make informed decisions about their postsecondary aspirations. Supporting students in developing a clear vision of vocational identity will allow all stakeholders to assist each student through each developmental stage to reach their ultimate career goals. A student with a strong career identity has a clear awareness of his or her goals, ability, interests, skills, and appropriate occupational choices, and the self-confidence to make career decisions.

Although HCCI did not reveal any impact on GPA, this information is important as educators and counselors work with students to build an educational plan that will be most beneficial to them and their career goals. School counselors could use study results to assess the competencies of students, develop an individual career and educational plan, and modify it to focus on specific competencies needed by students. On this basis, counselors could implement interventions that challenge students so that they gain the necessary knowledge and skills to engage in decision-making.

Educational leaders who successfully integrate a comprehensive career development strategy into their school curriculum may produce students who have the necessary knowledge and skills to achieve their occupational goals.

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Appendix A
IRB Approval



Vice President for Research
Office for Research Protections

The Pennsylvania State University
The 330 Building, Suite 205

Phone : (814) 865-1775
Fax: (814) 863-8699
Email : orprotections@psu.edu
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Date: October 17, 2012

From: The Office for Research Protections - FWA#: FWA00001534
Stephanie L. Krout, Compliance Coordinator

To: Stacey I. DeShield

Re: Determination of Exemption

IRB Protocol ID: 41279

Follow-up Date: October 16, 2017

Title of Protocol: Examining Students' Perception of Career Development Strategies in Bermuda and Pennsylvania High School in Preparing Them for Postsecondary Aspirations.

The Office for Research Protections (ORP) has received and reviewed the above referenced eSubmission application. It has been determined that your research is exempt from IRB initial and ongoing review, as currently described in the application. You may begin your research. The category within the federal regulations under which your research is exempt is:

45 CFR 46.101(b)(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Given that the IRB is not involved in the initial and ongoing review of this research, it is the investigator's responsibility to review [IRB Policy III "Exempt Review Process and Determination"](#) which outlines:

- What it means to be exempt and how determinations are made
- What changes to the research protocol are and are not required to be reported to the ORP.

- Ongoing actions post-exemption determination including addressing problems and complaints, reporting closed research to the ORP and research audits
- What occurs at the time of follow-up

Please do not hesitate to contact the Office for Research Protections (ORP) if you have any questions or concerns. Thank you for your continued efforts in protecting human participants in research.

This correspondence should be maintained with your research records.

Appendix B
Survey Instrument

College Career Development Survey

Section I

These questions are about you and your background.

1. How old are you? (years old)

2. Are you:

- Female
- Male

3. Year in school (As of April 2012)

- Freshman
- Sophomore
- Junior
- Senior
- Other (Please Specify)

4. Which best describe you?

- Black
- Pacific Islander
- Portuguese
- White
- Other

5. My grades up to now at this institution have been ...

- Mostly Ds or lower
- Mostly Cs
- Mostly Bs
- Mostly As

6. What is the highest level of education that your parent(s) completed?

	Did not finish high school	Graduated from high school	Attended college but did not complete degree	Completed an associate's degree (A.A., A.S., etc.)	Completed a bachelor's degree (B.A., B.S., etc.)	Completed a graduate degree (M.A., M.S., J.D., M.D., Ph.D., etc.)
Father	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Mother	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Section II

For each item, rate how true each of the statements is for you using the response scale shown below. (CHECK ONE, ANSWER ALL ITEMS)

	Definitely False	Somewhat False	Somewhat True	Definitely True
7. I am hopeful when I think about my future.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
8. I take time to think about my thoughts and feelings.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
9. I can describe who I am.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
10. I often dream about my future.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
11. I set deadlines to complete my goals.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
12. I keep myself focused so that I can complete my plans.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
13. I am willing to try new experiences that might help me to achieve my goals.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
14. I believe my dreams will come true.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

For each item, rate how true each of the statements is for you using the response scale shown below. (CHECK ONE, ANSWER ALL ITEMS)

	Definitely False	Somewhat False	Somewhat True	Definitely True
15. I think about	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

	Definitely False	Somewhat False	Somewhat True	Definitely True
what is the common theme among the things I like.				
16. I can list at least five things that I am good at.	<input type="radio"/> <input checked="" type="radio"/>			
17. I often vision my future 2, 5, or 10 years from now.	<input type="radio"/> <input checked="" type="radio"/>			
18. I often list things that I need to do to reach my goals.	<input type="radio"/> <input checked="" type="radio"/>			
19. I work hard to meet my goals even when there are distractions.	<input type="radio"/> <input checked="" type="radio"/>			
20. I change my plans when needed in order to reach my goals.	<input type="radio"/> <input checked="" type="radio"/>			
21. I think positively about my future.	<input type="radio"/> <input checked="" type="radio"/>			
22. I think about things that have happened to me.	<input type="radio"/> <input checked="" type="radio"/>			
23. I understand what is expected of me in my life role (e.g., as a student, a son/daughter, a parent, a worker, etc.).	<input type="radio"/> <input checked="" type="radio"/>			
24. I often imagine possible future events in my life.	<input type="radio"/> <input checked="" type="radio"/>			

For each item, rate how true each of the statements is for you using the response scale shown below. (CHECK ONE, ANSWER ALL ITEMS)

	Definitely False	Somewhat False	Somewhat True	Definitely True
25. I make a list of things that I want to complete.	<input type="radio"/> <input checked="" type="radio"/>			
26. I take the next steps to meet my goals.	<input type="radio"/> <input checked="" type="radio"/>			
27. I am open to change that might improve my chance to reach my goals.	<input type="radio"/> <input checked="" type="radio"/>			
28. I try to stay hopeful even when I face difficulties in my life.	<input type="radio"/> <input checked="" type="radio"/>			
29. I often think about how my situation affects me.	<input type="radio"/> <input checked="" type="radio"/>			
30. I can clearly describe my strengths.	<input type="radio"/> <input checked="" type="radio"/>			
31. I spend time thinking about what will happen in my future.	<input type="radio"/> <input checked="" type="radio"/>			
32. I make a plan before taking action.	<input type="radio"/> <input checked="" type="radio"/>			
33. I take action once I have clear goals.	<input type="radio"/> <input checked="" type="radio"/>			
34. I am open to making changes to my plans when necessary.	<input type="radio"/> <input checked="" type="radio"/>			

Section III.

In your experiences at this college during the current school year, about how often have you done each of the following?

	Never	Sometimes	Often	Very often
35. Asked questions in class or contributed to class discussions.	<input type="radio"/> <input type="radio"/>			
36. Made a class presentation.	<input type="radio"/> <input checked="" type="radio"/>			
37. Prepared two or more drafts of a paper or assignment before turn it in.	<input type="radio"/> <input type="radio"/>			
38. Worked on a paper or project that required integrating ideas or information from various sources.	<input type="radio"/> <input checked="" type="radio"/>			
39. Come to class without completing readings or assignments.	<input type="radio"/> <input type="radio"/>			
40. Worked with other students on projects during class.	<input type="radio"/> <input checked="" type="radio"/>			
41. Worked with classmates outside of class to prepare class assignments.	<input type="radio"/> <input type="radio"/>			
42. Tutored or taught other students (paid or voluntary)	<input type="radio"/> <input checked="" type="radio"/>			
43. Participated in a community-based project as a part of a regular course.	<input type="radio"/> <input type="radio"/>			

In your experiences at this college during the current school year, about how often have you done each of the following?

	Never	Sometimes	Often	Very often
45. Discussed grades or assignments with an instructor.	<input type="radio"/> <input checked="" type="radio"/>			
46. Talked about career plans with an instructor or advisor.	<input type="radio"/> <input checked="" type="radio"/>			
47. Discussed ideas from your readings or classes with instructors outside of class.	<input type="radio"/> <input checked="" type="radio"/>			
48. Received prompt feedback (written or oral) from instructors on your performance.	<input type="radio"/> <input checked="" type="radio"/>			
49. Worked harder than you thought you could to meet an instructor's standards or expectations.	<input type="radio"/> <input checked="" type="radio"/>			
50. Worked with instructors on activities other than coursework.	<input type="radio"/> <input checked="" type="radio"/>			
51. Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)	<input type="radio"/> <input checked="" type="radio"/>			
52. Had serious conversations with students of a different race or ethnicity other than your own.	<input type="radio"/> <input checked="" type="radio"/>			
53. Had serious conversations with students who differ from you in terms of their religious beliefs, political	<input type="radio"/> <input checked="" type="radio"/>			

Never Sometimes Often Very often

opinions, or personal values.

54. Skipped class.	<input type="radio"/>	<input checked="" type="radio"/>						
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Section IV.

Please indicate how much you desire to achieve the following in the future.

With regard to my career, I desire to...

	Very Low	Low	Fifty-fifty	High	Very high
55. have a job that pays well.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
56. have a career that I enjoy doing.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
57. finish whatever education or training is necessary to get a job that I want.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
58. have a job that allows me to live the lifestyle that I want.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
59. have a career that is meaningful to me.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
60. do what I am passionate about at work.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Very Low Low Fifty-fifty High Very high

61. have a job that I can do exceptionally well.

Section V.

For each item below, finish the sentence with: "... **currently a barrier to my educational/career aspirations.**" For example, Item 62 would read: "Money problems are currently a barrier to my educational aspirations."

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
62. Money problems are ...	<input type="radio"/> <input checked="" type="radio"/>				
63. Family problems are ...	<input type="radio"/> <input checked="" type="radio"/>				
64. Not being smart enough is ...	<input type="radio"/> <input checked="" type="radio"/>				
65. Negative family attitudes about college are ...	<input type="radio"/> <input checked="" type="radio"/>				
66. Not fitting in at school is...	<input type="radio"/> <input checked="" type="radio"/>				
67. Lack of support from	<input type="radio"/> <input checked="" type="radio"/>				

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
teachers is...					
68. Not being prepared enough is...	<input type="radio"/> <input checked="" type="radio"/>				
69. Not knowing how to study well is ...	<input type="radio"/> <input checked="" type="radio"/>				
70. Not having enough confidence is...	<input type="radio"/> <input checked="" type="radio"/>				
71. Lack of support from friends to pursue my educational aspirations is...	<input type="radio"/> <input checked="" type="radio"/>				
72. My gender is...	<input type="radio"/> <input checked="" type="radio"/>				

... currently a barrier to my educational/career aspirations.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
73. People's attitudes about my gender are ...	<input type="radio"/> <input checked="" type="radio"/>				
74. My ethnic background is...	<input type="radio"/> <input checked="" type="radio"/>				
75. People's	<input type="radio"/> <input checked="" type="radio"/>				

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
attitudes about my ethnic background are ...	<input type="radio"/>				
76. Childcare concerns are ...	<input type="radio"/>				
77. Lack of support from my "significant other" to pursue education is...	<input type="radio"/>				
78. My desire to have children is...	<input type="radio"/>				
79. Relationship concerns are...	<input type="radio"/>				
80. Having to work while I go to school is...	<input type="radio"/>				
81. Lack of role models or mentors is...	<input type="radio"/>				
82. Lack of financial support is...	<input type="radio"/>				

Section VI.

Try to answer all the following statements as mostly TRUE or mostly FALSE.
Click the answer that best represents your present opinion.

In thinking about your present job or in planning for an occupation or career

	True	False
83. I need reassurance that I have made the right choice of occupation.	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/>
84. I am concerned that my present interests may change over the years.	<input type="radio"/> <input checked="" type="radio"/>	<input type="radio"/> <input checked="" type="radio"/>
85. I am uncertain about the occupations I could perform well.	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/>
86. I don't know what my major strengths and weaknesses are.	<input type="radio"/> <input checked="" type="radio"/>	<input type="radio"/> <input checked="" type="radio"/>
87. The jobs I can do may not pay enough to live the kind of life I want.	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/>
88. If I had to make an occupational choice right now, I am afraid I would make a bad choice.	<input type="radio"/> <input checked="" type="radio"/>	<input type="radio"/> <input checked="" type="radio"/>
89. I need to find out what kind of career I should follow.	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/>
90. Making up my mind about a career has been a long and difficult problem for me.	<input type="radio"/> <input checked="" type="radio"/>	<input type="radio"/> <input checked="" type="radio"/>
91. I am confused about the whole problem of deciding on a career.	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/>

In thinking about your present job or in planning for an occupation or career

	True	False
92. I am not sure that my present occupational choice or job is right for me.	<input type="radio"/> <input checked="" type="radio"/>	<input type="radio"/> <input checked="" type="radio"/>
93. I don't know enough about what workers do in various occupations.	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/>
94. No single occupation appeals strongly to me.	<input type="radio"/> <input checked="" type="radio"/>	<input type="radio"/> <input checked="" type="radio"/>
95. I am uncertain about which occupation I would enjoy.	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/>
96. I would like to increase the number of occupations I could consider.	<input type="radio"/> <input checked="" type="radio"/>	<input type="radio"/> <input checked="" type="radio"/>
97. My estimates of my abilities and talents vary a lot from year to year.	<input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/>

	True	False
98. I am not sure of myself in many areas of life.	<input type="radio"/> <input checked="" type="radio"/>	<input type="radio"/> <input checked="" type="radio"/>
99. I have known what occupation I want to follow for less than one year.	<input type="radio"/> <input checked="" type="radio"/>	<input type="radio"/> <input checked="" type="radio"/>
100. I can't understand how some people can be so set about what they want to do.	<input type="radio"/> <input checked="" type="radio"/>	<input type="radio"/> <input checked="" type="radio"/>

Email Address for Drawing and Survey Results

If you want to be considered for a drawing and want to see your results, please let us know your email address:

Vita

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EDUCATION

Pennsylvania State University, University Park, PA

- **Ph.D.** Workforce Education and Development, Comparative and international Education, 2014
 - Emphasis: Secondary Career and Technical Education Leadership

Arcadia University, Glenside, PA

- **Master of Arts** in Counseling Psychology, 2009

Miami University of Ohio, Oxford, Ohio

- **Master of Education** in Leadership and Supervision, 2000

Springfield College, Springfield, MA

- **Bachelors of Science** in Health Education, 1997

REPRESENTATIVE WORK EXPERIENCE

Assistant Principal, Whitney Institute Middle School, Bermuda

Senior Teacher/Educator, History, Physical Education, Theory of Knowledge, Warwick Academy, Bermuda

Educator, Health Educations, Cedarbridge Academy, Bermuda

AWARDS

Edwin Herr and Edgar Farmer Research Enhancement Fund, Awarded by College of Education, The Pennsylvania State University (July 2011).

PUBLICATIONS

Niles, S.G., In, H., Chen, F., Su, N., deShield, S., & Yoon, J., (In Press). Evaluating hope in career development theory and practice. *Career Development Quarterly*.

Yoon, H. J., deShield, S., & Zaballero, A. (2010). *Directions for NCDA career development facilitator curriculum revision: Qualitative analysis of the needs assessment survey results*. Still Water, OK: National Career Development Association.