ABSTRACT

WILLIAMS, REGINA GAVIN. The Effects of Customized Individual Counseling Interventions on the Career and College Readiness of Adolescents in the Foster Care System (Under the direction of Stanley B. Baker.)

The purpose of the study was to examine the effects of customized individual counseling interventions on the career and college readiness of adolescents within foster care. An intervention program, consisting of customized individual interventions, entitled Students That Are Reaching Success (S.T.A.R.S.) was created by the counselor/investigator. The three female participants were adolescents in foster care custody by a department of social services in a southeastern county and attended different high schools. The conceptual frameworks for the S.T.A.R.S program were: the Ecological Model for Human Development, Social Cognitive Career Theory (SCCT), Cognitive Information Processing Approach (CIP), and the American School Counselor Association’s National Model. They were used as a foundation for creating individualized counseling interventions for each participant. An N=1/ A-B-A single-subject experimental design was replicated three times to enhance generalization of the findings and offset possible attrition of participations. After baseline (Phase A1) data were collected over a two-week period, participants met with the counselor/investigator individually for one hour, once per week, for six weeks during the treatment intervention program (Phase B). Outcome data were collected throughout Phase B. Following the six-week intervention, there was a two-week hiatus from the treatment when outcome data were collected again (Phase A2 repeated-withdrawal). The Career and College Readiness Self-Efficacy Inventory (CCRSI) was the measure from which the dependent variables were derived. The customized individual career and college readiness counseling
intervention was the independent variable, and the four CCRSI career and college readiness self-efficacy factors were the dependent variables. The four CCRSI factors were: (a) college knowledge, (b) positive personal characteristics, (c) academic competence, and (d) potential to achieve future goals. Data from the baseline (A1), treatment (B), and withdrawal (A2) phases were analyzed via an R software package used for analyzing single-subject data. Descriptive data were presented. Autocorrelations were also calculated for each phase of each factor of the intervention for each participant. A regression analysis was used to determine if there was significant trend in any phase for each factor of the intervention. The Robust Conservative Dual-Criteria (RCDC) method was then used as a statistical analysis tool, and the G-index statistic was used to calculate effect size. A visual analysis was conducted in the form of line graphs and regression plot graphs. Furthermore, the fidelity of treatment was recorded in the counselor/investigator’s field notes, and unforeseen participant and setting changes were both documented and discussed. Overall, the customized career and college readiness intervention program was most effective for increasing academic competence self-efficacy across all three participants. Very little change was shown for the potential to achieve future goals factor due to the high level of self-efficacy each participant presented initially as indicated by the high, consistent baseline scores. The intervention program was also most effective for increasing college knowledge self-efficacy in participants 2 and 3 and positive personal characteristics self-efficacy in participant 2. The Attitude Toward Treatment (ATT) social validity measure revealed there was a significant treatment effect across all three participants who all scored within the high range for attitudes toward treatment. Limitations related to methodology and recommendations for counseling practice and future research were shared. Recommendations for practice included the need
for school counselors to create customized counseling interventions to meet the individualized career and college readiness needs of foster care youth, the need for counselors to establish bidirectional relationships between themselves and other members of the foster youths’ support networks, and the need for college counselors to create support groups for transition-aged foster care youth within the post-secondary educational environment. Recommendations for future research included replication of the current study to increase generalizability to adolescents in foster care, research on the impact support networks have on the career and college readiness of adolescents in foster care, and additional research on the role school counselors can play in the career and college readiness of foster care youth.
The Effects of Customized Individual Counseling Interventions on the Career and College Readiness of Adolescents in the Foster Care System

by

Regina Gavin Williams

A dissertation submitted to the Graduate Faculty of North Carolina State University in partial fulfillment of the requirements for the degree of Doctor of Philosophy

Counseling and Counselor Education

Raleigh, North Carolina
2016

APPROVED BY:

_______________________________
Dr. Stanley B. Baker
Committee Chair

_______________________________
Dr. Marc A. Grimmett

_______________________________
Dr. Audrey J. Jaeger

_______________________________
Dr. Sylvia C. Nassar-McMillan
DEDICATION

First and foremost I would like to thank God for guiding my steps and giving me the ability to achieve goals beyond my wildest imagination. I dedicate this dissertation to my husband and life partner, Ronald Williams II. I am so proud that we share the same passion for servitude and a belief that we, too, can change the fate of humanity for the better one day. Thank you for sharing my lens. I dedicate this dissertation to my parents, Reginald and Sharon Gavin, who set the foundation for me to learn what it truly means to be compassionate, humble, and to always love and treat others with respect. You gave me the courage to be the best me. Third, to my sister and brother, Shakira Gavin and Darian Gavin, you are my role models and I feel so grateful to have you both as positive examples to follow. This is also dedicated to the rest of the Gavin and Williams families who contributed greatly to my village of support during the process of writing this dissertation.

This is dedicated to all of the young people who are trying to navigate their way through systems that weren’t designed for them to succeed. To those counselors, educators, social workers, parents/guardians, and other support systems who are there to make a significant difference in the lives of these young people, know that you are moving mountains.
BIOGRAPHY

Regina Gavin Williams received a bachelor’s degree in psychology with a minor in women’s studies from the University of Georgia, and a master’s degree in school counseling from Valdosta State University. She is a National Certified Counselor and a Licensed Professional Counselor in North Carolina. Regina is also a National Board of Certified Counselors-2016 Minority Fellowship Program (NBCC-MFP) doctoral fellow and the president of the North Carolina Association for Multicultural Counseling and Development (NCAMCD), a division of the North Carolina Counseling Association (NCCA).

Regina has professional experiences in the areas of college access, outpatient therapy, higher education, and transitional living. Within these areas, she has worked as a counselor, higher education/student affairs professional, community advocate, and educator for children, adolescents, adults, and their families from various backgrounds. Within these roles, Regina has strived to provide fair and equitable access to education and mental health services to individuals and families. She currently serves at the Director of Student Engagement and Diversity Coordinator for the College of Education at North Carolina State University where she educates, provides resources and support, and works to enhance the cross cultural skills of undergraduate students who will enter the K-12 teaching profession.

Throughout her career, Regina has formed collaborations with several organizations and agencies to include public schools, department of social services, local foster care agencies, non-profit organizations, and group homes. Through these connections, Regina has been able to train college students to help youth in communities, and provide support,
counseling services, and resources to foster care youth, and additional training to foster
caregivers. She is the creator of Students That Are Reaching Success (S.T.A.R.S.), a skill-
building and primary prevention program for adolescents aging out of the foster care system.
The program works in partnership with a local department of social services. Regina has
engaged in research on the role of school counselors in the career and college readiness of
foster care youth from an ecological systems theory approach from which she has produced a
journal article. She also participated in the development and execution of a primary
prevention career and college readiness intervention program with ninth grade students at a
magnet high school in a southeastern city.

Regina has been involved in various professional organizations which have provided
her with extensive leadership roles to include the North Carolina Association of Multicultural
Counseling and Development (NCAMCD)- president; North Carolina Counseling
Association; North Carolina Career Development Association (NCCDA)- 2015 Best
Practices Grant recipient; The North Carolina School Counselor Association-Government
Relations Committee and State Board of Education/North Carolina Department of Public
Instruction sub-committee chair; and the Nu Sigma Chi Chapter of Chi Sigma Iota
Counseling and Professional Honor Society International- secretary and advocacy chair.

Regina’s personal philosophy is to live a fulfilling life beyond monetary value. She
came to recognize the importance of this philosophy through her ties to her family. It was in
her family where she first discovered what it meant to have unconditional love for someone,
the importance of establishing trust, and encouragement to reach personal and educational
goals. She was told that she can be whoever she wanted to be in life. These personal experiences are what motivate her and give her daily affirmations. In this regard, she would like to encourage young people to think about what they find fulfillment in and whether this fulfillment would last throughout a lifetime. She takes great pride in assisting adolescents and young adults to not only achieve adult self-sufficiency, but also discover their own personal fulfillment if it is not easily recognizable, while also developing the support systems necessary to help them to achieve their goals. She is motivated by providing a therapeutic and positive counseling experience for individuals to grow academically, personal/socially, and in their future career endeavors. She emphasizes to them that success comes from a higher self-efficacy, access to resources, and a village of individuals to support them along the way.

Regina lives in Raleigh, NC with her husband, Ronald Williams, II. She is a writer, a lover of music and outdoor concerts, a mentor, and a believer of faith, love, and hope for humanity. She hopes to one day have enough influence to sit at the table and provide a voice for young people who are marginalized and underrepresented in higher education.
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To my chair, Dr. Stanley Baker, thank you for guiding me through this dissertation process and throughout my doctoral studies. Your support, wisdom, guidance, and feedback has pushed me to work hard, challenged me to produce my best work, and allowed me to achieve the unimaginable during this Ph.D. journey. Thank you for providing the most amazing support a doctoral advisee could ask for.

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To Dr. Anona Smith Williams, words can’t even begin to express how much you have changed my life for the better. From the time I stepped foot in to the college, you took me under your wing, allowed me to grow under your tutelage, and turned me into a polished diamond. You believed in my potential when I was unsure of it myself. You always supported me, stood in my corner, and placed me in spaces where you felt I belonged. Thank you for being an amazing mentor; you let me know that women who look like me can achieve anything they set their minds to. I will never forget all that you have done for me. I am eternally thankful.

To my dear doctoral sisters, La Vera, Taheera, Allison, LaTonya, Tabitha, Katrina, and Atalaysha, I am so grateful that I had you all to lean on for support, to share a laugh with, to write with, and to collaborate on projects with, and I appreciate you all for giving me the encouragement to finish strong! We are going to change the world, but the real question is, is the world ready? To my statistician, Clarlynda Devane, simply put, you are amazing. Thank you for sharing your expertise, for your guidance, and for showing me that Black girls can do quantitative research! You are truly gifted, and I appreciate you greatly. To the members of the North Carolina Association for Multicultural Counseling and Development (NCAMCD), it was has been a wonderful three years working with you all. Thank you for sharing my passion for advocacy work and the desire to strengthen our communities through the work that we do in solidarity.

To my close friends and to my sorority sisters, you all have been with me throughout this crazy ride. Thank you for support and for helping me to engage in some much needed
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CHAPTER 1: INTRODUCTION

Access to post-secondary education is a goal many adolescents strive to obtain. Appropriate assistance is essential for successful navigation of the challenging post-secondary education preparation process and is, therefore, vital in achieving access to higher education (Pecora, Williams, et al., 2006). Unfortunately, some youth suffer great disparity when it comes to educational attainment. The College Board (2006) emphasizes this statement for “low achievers, middle-to-low income levels, underrepresented minorities, disabled youth, and families where no one has attended college before.” (p. 2). Within this population lies an often overlooked sub-population of students who succumb to contextual factors that prevent them from gaining access to post-secondary education. This particular sub-population is comprised of youth in the foster care system.

Foster care youth have been removed from their families by the court system. These youth may be placed with relatives (i.e., kinship foster care), in foster homes, or in group homes (Kirk, Lewis, Nilsen, & Colvin, 2013). Longer-term placement options include adoption or allowing them to age out of the foster care system. According to the Adoption and Foster Care Analysis and Reporting System (AFCARS, 2013), there are approximately 402,378 youth in foster care with 47% residing in non-relative foster homes. Additionally, they, on average, spend 20 months in care in multiple placement settings (AFCARS, 2013). As a result, they succumb to multiple barriers, including those related to their educational attainment.

According to Kirk, Lewis, Nilsen, and Colvin (2013) only about 10% of youth who were formerly in foster care enrolled in college, and only 4% of them obtained a bachelor’s
degree. Moreover, foster care youth are more likely to drop out of high school, be suspended or expelled, or repeat a grade (Unrau, Font, & Rawls, 2012). With minimal support, Pecora, Kessler et al. (2006) estimated that only one-third of foster care youth who have aged out had a driver’s license, basic necessities, or cash upon leaving the system. Moreover, little is known about foster care youth’s readiness to engage in college, their developmental needs during their college transition, and ways higher education professionals and the child welfare system can offer assistance (Unrau et al., 2012). Day, Riebschleger, Dworsky, Damashek, and Fogarty (2012) also noted that few studies document the voices of youth who are experiencing or about to experience the transition from high school to college.

Hudson (2013) indicated that youth in foster care want and need mentoring as they merge into adulthood and out of the foster care system. However, few studies have focused on the characteristics foster care youth would like in a mentor prior to the mentoring relationship or that engage youth in foster care as partners in the mentoring process. Moreover, little is known about individuals who do emerge from foster care and become successful in adulthood (Hudson, 2013). Lemon, Hines, and Merdinger (2004) also recognized that few studies have examined factors that are affiliated with foster care youths’ readiness to successfully transition out of foster care and live independently. Consequently, it is imperative that the career and college readiness of youth in the foster care system be examined. This dissertation study focused on examining the effects of customized individual counseling interventions on the career and college readiness of adolescents in the foster care system. A single-subject experimental design was used.
Foci of Recent Work

Though the importance of career and college readiness of foster care youth has been documented in the literature, there is still a need to examine gaps in the body of knowledge related to their educational aspirations and how they contrast with their educational expectations. Several studies indicate that many foster care youth aspire to pursue a post-secondary education (Kirk et al., 2011). However, they succumb to multiple academic, familial, and social environment disruptions that impede their educational expectations. This leads to questions regarding the long-term quality of life of these youth (Kirk et al., 2011). Thus, successful interventions that enhance the educational attainment of foster care youth must be further examined.

In this regard, the most common question to be answered is what are the specific types of interventions investigators credit as being influential in enhancing the educational outcomes of foster care youth, and how do they contribute to their career and college readiness. Moreover, it is important to examine the specific strategies used (e.g., group versus individually). Thus, notable interventions utilized for the educational enhancement of foster care youth will be explored in the following section.

In a study conducted by Kirk and Day (2011), the School of Social Work at Michigan State University led a small-scale collaborative intervention to help foster care youth achieve their goals to obtain higher education. The program, the Michigan Educational Opportunities for Youth in Care (MEOYIC), consisted of a three-day residential camp experience where participants were exposed to the campus life and learning environment. Utilizing the developmental needs outlined in the National Research Council and Institute of Medicine
(NRCIM; 2002), the program was designed to provide supportive counselors and staff members and “opportunities to belong and develop self-efficacy, build skills, and promote positive social norms” (p. 1174). A mixed method, short-term longitudinal evaluation design was used in which a sample of 38 participants, ages 15-19, were given a pre-post questionnaire that was developed by the National Service Learning Commission. The questionnaire was designed to collect information regarding one’s higher education aspirations and attitudinal changes towards education. The study also included a semi-structured interview with the camp coordinators and focus groups with camp participants. Results from the intervention indicated that a college campus experiential learning program designed for youth aging out of foster care can enhance their developmental and educational outcomes by increasing participants’ knowledge about college admission steps and campus life (Kirk & Day, 2011). The built-in support of peers and adults also empowered participants and provided them with a sense of purpose (Kirk & Day, 2011).

In another study by Geroski and Knauss (2000), the authors highlighted the important leadership role school counselors have in collaborative networks that provide intervention strategies to facilitate the needs of foster care youth. In regard to individual counseling, the authors advised that there should be coordination of intervention strategies between mental health and school counselors due to the need to address the pre-placement trauma concerns of these youth. Moreover, the authors recommended that individual counseling with foster care youth should include familiarizing them with the schools and communicating with them on a regular basis to ensure that they adjust to the environment. They also suggested that interventions be time-limited like supportive counseling to reduce school avoidance and to
respond to crises (Geroski & Knauss, 2000). Furthermore, the authors proposed that school counselors conduct counseling groups where foster care youth can work with their peers who have experienced similar issues, particularly trauma experiences.

Kaplan, Skolnik, and Turnbull (2009) reviewed empirical research focused on youth empowerment in multiple child welfare programmatic areas. They found that there were minimal studies related to the empowerment of foster care youth. The research reviewed indicated that post-high school education attainment services including career-focused services must be introduced in early adolescence to enhance motivation. The authors also highlighted the Casey National Alumni Study (2003) that surveyed 1,609 foster care alumni. They found that graduation rates were higher among those participants who received tutoring, independent living training, and employment experiences. Regarding employment preparation services, Kaplan, et al. (2009) identified career counseling in high school; internships, job fairs, and job shadowing both during and after high school; and assistance with vocational and technical training programs as effective ways to optimize the social and economic outcomes of foster care youth.

In a study that explored the role of independent living programs (ILPs) for foster care youth, Lemon et al. (2004) used data from the Pathways to College for Former Foster Youth study. The study was a multi-method/multi-phase approach consisting of surveys mailed to former foster care youth from 11 universities and to two comparison groups (former foster care youth not attending college and students from low-income backgrounds attending college) and an ethnographic study of the nine counties where the universities were located. The survey, a self-administered questionnaire (SAQ), consisted of the following areas: (a)
educational history; (b) employment history and financial support; (c) health status; (d) social support; (e) history of homelessness, substance abuse, and criminal activity; (f) history in the foster care system; (g) skills training; (h) and personal adjustment and current life satisfaction (Lemon et al. 2004). Survey respondents were compared by an ILP sample group of 81 participants and a non-ILP sample group of 113 participants.

Results from the survey indicated that the ILP group was more likely to have been educated on concrete skills, such as finding employment, budget management, attaining housing, and opening a bank account (Lemon et al., 2004). Moreover, the ILP group learned psycho-emotional/social skills such as goal setting and how to achieve goals, and discovering opportunities for achieving training and education more frequently. Results of the ethnographic study indicated that ILP services normally use an instructional model that aims to teach concrete and discrete skills that are linked to self-sufficiency (Lemon et al., 2004).

The aforementioned studies identified a variety of interventions that can be or were utilized to enhance the educational outcomes of adolescents who were in foster care. Furthermore, the researchers used a variety of methodological approaches used to obtain and analyze data. However, there were deficits that appeared following this review of related literature regarding career and college readiness interventions used with youth in foster care. These deficits are reviewed in the following section.

**Statement of the Problem**

After reviewing the literature on youth in foster care, there were few studies that examined the effects of career and college readiness interventions on foster care youth. Moreover, suggestions offered for the educational enhancement of foster care youth have
been mostly conceptual in nature. Investigators were also more likely to utilize either a qualitative methodological approach or quantitative survey design to assess the perspectives of participants. However, from a quantitative, experimental design approach, investigators could have more opportunities to both directly serve as advocates of foster care youth career and college readiness by teaching them specific transitional and independent living skills and examining if their interventions were effective. Given the unique needs of each youth in foster care, there were no studies that examined the effects of interventions on individual participants. However, as presented in the literature, individual interventions can be useful in the educational enhancement of foster care youth. This was demonstrated in the literature involving academic services in high school, post-high school education attainment services, and employment preparation services for these youth (Kaplan et al., 2009).

There is also a need to further examine the implications of career and college readiness interventions on foster care youth as it pertains to the counseling profession. The most recent study was by Geroski and Knauss (2000) that provided information about how school counselors can address the needs of foster care youth in their schools. On the other hand, authors of publications in other professional fields have offered recommendations about the role counselors may play to enhance the educational development of foster care youth. For example, Rios and Rocco (2014) recommended that professionals, such as school counselors, should have training on both the internal barriers and successful assets that advance the educational achievement of foster care youth. These calls to action for counselors identify a need for substantive recommendations regarding the career and college readiness of foster care youth within the counseling literature. Also, further showcasing the
importance of this topic in the counseling literature would be particularly helpful to those counselors working with youth in foster care and counselors-in-training who may potentially serve these clients either in their internship or practicum experiences.

Regarding related theoretical frameworks, according to Drapela (1990), “Theories help counselors understand the dynamics of human behavior and choose therapeutic approaches appropriate to specific clients and situations” (p. 19). However, these studies, along with other literature analyzing the educational needs of adolescents in foster care, failed to explicitly mention the theoretical framework(s) that served as the foundation of why specific interventions and methodologies were chosen. Identifying a theoretical model can not only help investigators identify and use appropriate skills, interventions, and activities with the subject of study, but it can also allow readers to gain a deeper understanding of the subject matter. The following section will briefly identify the theoretical frameworks chosen for this study and the rationale behind their usage. These theoretical model(s) will be further outlined and discussed in Chapter Two.

Conceptual Frameworks

Four conceptual frameworks, the Ecological Model of Human Development, Social Cognitive Career Theory, the Cognitive Information Processing (CIP) Approach, and the American School Counselor Association Model, were identified as applicable frameworks for this dissertation study based on tenets that are relevant to influences associated with the career and college readiness of foster care youth. Although these theories are not specific to foster care youth, they describe the multiple contextual factors that an individual is exposed to and thus influence one’s developmental outcomes and perceived ability and beliefs with a
particular emphasis on their application to diverse populations. In essence, these frameworks provide a critical lens for examining the skills and environmental influences of individuals who are historically underserved and its implications on their developmental outcomes and perceived personal competency.

**Ecological Model of Human Development.** Urie Bronfenbrenner’s (1979) Ecological Model of Human Development was selected for this dissertation study because it provides a valuable framework for examining the development of children in foster care, the environments in which they dwell, and the interactions that occur between entities within these environments. In this regard, the theory serves as a useful framework for exploring the role of support networks in the career and college readiness of youth in foster care and the use of counseling practices to assist them in their post-secondary education attainment.

Tudge, Mokrova, Hatfield, and Karnik (2009) observed that Bronfenbrenner’s complete theory in its mature form, stemming from the mid-1990s and later called the Bioecological Model of Human Development, involved the interactive relationships among four key constructs: *Process, Person, Context, and Time*. The construct, *Context*, is what Bronfenbrenner conceptualizes as a model of a developing person at the center of concentric circles that depict their various environments, each contained within the next, interconnected to form an ecological system. In this regard, the person with his or her particular characteristics (e.g., genes, age, and gender) interacts with the contexts within each of the nested system levels, subsequently having an impact on development. The layers that encompass these circles are the microsystems, mesosystems, exosystems, macrosystems and chronosystems (Bronfenbrenner, 1977). By studying the interrelations among these systems,
one can gain a better understanding of the entities that affect a child’s developmental outcomes and socialization. This dissertation study focused on the systems of foster care youth and the impact that the contexts of these systems have on their career and college readiness.

**Social Cognitive Career Theory.** Robert W. Lent, Steven D. Brown, and Gail Hackett’s Social Cognitive Career Theory (SCCT; 1994), was selected for this study because it provides a critical lens for examining the outcome expectations and the self-efficacy of individuals who are affected by background and proximal contextual influences. The theory provides a useful framework to explore the perceived barriers that impact the career and college readiness of youth in foster care and the use of counseling practices to help these students overcome barriers to career pursuit or success.

SCCT consists of three central building blocks to career development: (a) self-efficacy, (b) outcome expectations, and (c) personal goals (Lent, Brown, & Hackett, 1994). These building blocks interplay with one another in the self-regulation of behavior. In this regard, career interests and engagement in career-related activities are regulated by an individual’s perceived personal competency. This can then reinforce one’s belief in performing a specific behavior. Utilizing SCCT as a theoretical model in this study aided in the exploration of the position that contextual factors and perceived barriers had on the career and college readiness self-efficacy of youth in foster care.

**Cognitive Information Processing Approach.** “Give people a fish and they eat for a day, but teach them how to fish and they eat for a lifetime” (Peterson, Sampson, Lenz, & Reardon, 1992, p. 312). This is the major concept surrounding the Cognitive Information
Processing Approach to Career Problem Solving and Decision Making (CIP) developed by Peterson et al. (1992). This approach is supposed to help individuals understand the content and process of career decision-making and problem solving. In this regard, the authors were concerned with helping individuals enhance their career problem-solving and decision-making skills that will persist throughout their lifetime.

The two core constructs of the CIP approach serve as the building blocks of the theory. They are: (a) the Pyramid of Information Processing Domains which involve the content of career problem-solving and decision-making represented by the knowledge domains, decision-making skills domain, and executive processing domain; and (b) the CASVE Cycle of Information Processing Skills Used in Career Decision Making which involves the process of career problem-solving and decision-making and consists of the process of communication, analysis, synthesis, valuing, and execution (Peterson et al., 2002). Based on these constructs, several resources and strategies have been developed and utilized for service delivery and have been used in a variety of settings. Key elements of the CIP approach were used in the present study to identify and provide appropriate career services and resources to each participant based on their individual needs. Given the varied experiences and educational barriers that foster care youth succumb to, providing individualized counseling services to these youth is essential. Key elements of CIP are outlined in chapter two of this study.

The American School Counselor Association National Model. The American School Counselor Association National Model: A Framework for School Counseling Programs (ASCA, 2012) was the final conceptual framework used in this study in an effort
to help participants obtain college knowledge and enhance their career and college readiness. First published in 2003, the ASCA National Model is a framework designed to support professional school counselors in becoming significant contributors to the mission of their respective schools. The framework was created for school counselors to deliver comprehensive, developmental school counseling programs designed to facilitate the academic, personal/social, and career developmental needs of all students.

Although the ASCA National Model is designed specifically for the work of school counselors, the components of the model can prove to be impactful for counselors both within the community and in higher education settings who work to enhance the career and college readiness of the clients they serve. One of the major components of the ASCA (2012) National Model is individual student planning. This component was essential to the present study because customized individual counseling interventions were conducted with adolescents in foster care. According to the ASCA model, individual student planning is one of the direct student services of the school counseling program that “consists of ongoing systemic activities designed to help students establish personal goals and develop future plans” (p. 85). This component of the ASCA model can provide professionals working with foster care youth with a reputable framework to develop evidenced-based career and college readiness interventions while aligning their efforts to those of school counselors. The ASCA model was utilized in this study to provide appropriate, direct services to foster care youth through identified interventions that could be given in the school setting yet also be useful in an alternate environment.
The four conceptual frameworks used for this study helped to generate an understanding of the dynamics of the experiences of foster care youth and justified the appropriateness of strategies and resources used in service delivery. Providing an appropriate conceptual framework, though not specific to a particular sub-population such as foster care youth, served as a foundation when the intended purpose and expected outcomes of the study were described.

**Rationale for the Study**

With the lack of information on the career and college readiness of foster care youth in the counseling literature, it is imperative that the counseling field give more attention to this subject. With several studies from non-counseling literature having noted the educational needs of foster care youth, useful strategies for their educational enhancement, and the integral role counselors have in providing support for these youth are needed. Examining the effects of career and college readiness interventions on foster care youth will give counselors in school, community, and higher education settings useful knowledge. Finkelstein, Wamsley, and Miranda (2002) stated that school personnel may provide the strongest connection between foster youth and their formal education; however, they sometimes have little awareness of a youth’s foster care status and the barriers they face in their home environment and familial background. In this regard, school counselors as key members of a school community must be knowledgeable of the multiple barriers foster care youth face, their educational needs, and specific interventions that can meet their career and college readiness needs. Unrau, Font and Rawls (2012) stated that little is known about the ways that higher education professionals can offer assistance to foster care youth during their college
transition. Consequently, this necessary knowledge must be provided to counseling practitioners within both schools and communities, while also providing applicable resources and strategies that can aid in their service delivery.

With no experimental design studies being offered in the current literature on the career and college readiness of foster care youth, researchers are challenged to utilize experimental design methods to both engage in the direct advocacy of the career and college readiness of foster care youth and to examine whether their interventions impact educational needs, sharing these findings with counseling practitioners. This study will serve as an applicable framework for counseling researchers to replicate and further add to the counseling literature on this particular subject.

With the numerous barriers that foster care youth face, such as lack of transportation, multiple foster care placements in various counties, time constraints, and low educational expectations, conducting an experimental study with foster care youth can prove to be challenging. To avoid these aforementioned challenges and to reach several participants at one given time, the methodological approach of this study included conducting customized individual counseling interventions with foster care youth involved in a department of social services-sponsored program.

Given the lack of applicable conceptual frameworks explicitly recognized as the foundation of research related to the career and college readiness of foster care youth, SCCT and the Ecological Model of Human Development were used in the present study to describe the multiple contextual factors that youth in foster care are exposed to and which influence their developmental outcomes and perceived ability and beliefs. CIP and SCCT concepts
were used to provide valuable frameworks for both instilling in youth the knowledge to engage in career decision-making and problem-solving throughout the lifespan and to utilize applicable counseling practices that help foster care youth overcome barriers to career success.

**Purpose of the Study**

The purpose of the study was to examine the effects of customized individual counseling interventions on the career and college readiness of adolescents within foster care. The adolescents were in foster care custody by a department of social services in a southeastern county and attended various high schools in the county. Given the lack of attention toward the career and college readiness of foster care youth, particularly adolescents aging out of the foster care system, a goal of the present study was to eventually provide effective career and college readiness interventions to individuals in this population and encourage them to be both proactive and self-sufficient in their educational development process. Furthermore, a second goal was to expand the body of knowledge on the career and college readiness self-efficacy of foster care youth in the counseling literature. A third goal was to enhance the educational development of foster care youth by utilizing applicable conceptual frameworks as viable foundations for both understanding the contexts of and providing appropriate proactive educational services to these youth. These conceptual frameworks were used as the foundation for creating individualized counseling interventions with the desired outcome of enhancing the career and college readiness self-efficacy of adolescents in foster care. In this regard, a fourth goal was to promote the post-secondary
educational attainment and to enhance the post-secondary educational expectations of these youth.

**Research Method, Variables, and Questions**

In the dissertation study, an N=1/ A-B-A single-subject experimental design was used. This design was replicated three times to enhance generalization of the findings and offset possible attrition of participations. After base-line (Phase A) data were collected over a two-week period, participants met with the investigator individually for one hour, once per week over the course of six weeks (Phase B [treatment]). Following the six-week intervention, there was a two-week hiatus from the treatment when outcome data were collected over a two-week period (Phase A repeated). The overall experiment was delivered over a ten-week time frame.

The Career and College Readiness Self-Efficacy Inventory (CCRSI; Baker & Parikh Foxx, 2012) was the measure from which the dependent variables were derived. Exploratory and confirmatory factor analyses identified four factors across 14 items in the CCRSI (Baker, Parikh Foxx, Ackan-Aydin, Gavin Williams, Ashraf & Martinez, 2016). The four factors provided the specific dependent measures used in the present study. They are: (a) college-knowledge (cf. Hooker & Brand, 2010), (b) positive personal characteristics, (c) academic competence, and (d) potential to achieve future goals. Participants were asked to complete a randomized, 14-item CCRSI electronically using Qualtrics survey software twice each week, and the scores were used to assess the effects of the intervention across the three phases.

The customized individual career and college readiness counseling intervention was the independent variable, and career and college readiness self-efficacy factors were the
dependent variables. The research questions were based on the purpose of this study, which was to examine the effects of customized individual counseling interventions on the career and college readiness of adolescents within foster care. The research questions were as follows:

- What is the effect of the customized individual counseling intervention on the college-knowledge self-efficacy of participants across the treatment and withdrawal phases?
- What is the effect of the customized individual counseling intervention on the positive personal characteristics self-efficacy of the participants across the treatment and withdrawal phases?
- What is the effect of the customized individual counseling intervention on the academic competence self-efficacy of the participants across the treatment and withdrawal phases?
- What is the effect of the customized individual counseling intervention on the potential to achieve future goals self-efficacy of the participants across the treatment and withdrawal phases?

**Definition of Terms**

1. **Foster care system** - According to the National Adoption Center (n.d.) the foster care system is a temporary arrangement where an adult takes the primary care of a youth when the biological parent(s) is unable to presume adequate care of the youth. Foster care can be arranged either through a social service agency or through the court system. These youth may be placed with relatives, in foster homes, or in group
homes. The primary goal is reunification with their families; however, adoption is another option if in the best interest of the youth.

2. **Career and college readiness self-efficacy**- This is measure of respondents’ strength of belief in their readiness to begin studies in a career pathway and preparedness for success in entry-level post-secondary education settings. Regarding validity estimates, an exploratory factor analysis identified four factors that accounted for 51% of the variance, and a confirmatory factor analysis suggested support for a four-factor model measuring career and college readiness (Baker et al., 2016). These four factors are: (a) meeting procedural and financial challenges associated with post-secondary education and future careers, (b) possessing positive personal characteristics that will enhance readiness, (c) believing that one possesses the competencies needed to be successful in the future, and (d) believing that one has the potential to set and achieve future goals.

3. **Customized interventions**- Customized interventions in the context of this study are specific counseling practices that have the potential effect of modifying a client’s behavior and cognitions. These interventions are built and/or modified to meet the specific needs of the individual. An N=1/ A-B-A single-subject experimental design was used in the study to investigate the effect of career and college readiness interventions for each participant, individually, according to their assessed need(s) on the four factors of the Career and College Readiness Inventory (CCRSI).
Organization of the Study

There are five chapters in this dissertation study. In this chapter, an introduction of the subject matter, foci of recent work, statement of the problem, rationale for and purpose of the study, the research method, question, variables, and term definitions were outlined. Chapter Two provides a review of literature focused on career and college readiness and its relation to the educational outcomes of underserved youth, with a focus on the educational disparities of youth in the foster care system. This chapter will also further detail the three conceptual frameworks utilized in this study: The Ecological Model of Human Development, Social Cognitive Career Theory, and the Cognitive Information Processing Approach. Chapter Three presents the methodology utilized in the study with details about the research design, participants, instrumentation, and data collection and analysis procedures. Chapter Four focuses on the results of the customized career and college readiness interventions. The final chapter, Chapter Five, presents a discussion of the results of the study and recommendations for counseling practice and research.
CHAPTER 2: LITERATURE REVIEW

This review of literature was designed in part to present factors that affect the post-secondary education and career attainment for students who have been historically underrepresented in higher education and the influence these barriers have on them. More specifically, the purpose of the literature review was to present factors that impact the career and college readiness of foster care youth. The goal of the present study was to examine the effects of customized individual counseling interventions on career and college readiness factors for adolescents in foster care. The literature review contains reflections on practitioner models, environmental factors, related career developmental theories, and implications for future research to improve the challenging circumstances facing foster care youth. The literature review will be presented in the following order: (a) an introduction to career and college readiness and the American School Counselor Association National Model; (b) environmental factors experienced by individuals from disadvantaged backgrounds; (c) information about foster care youth, the environmental disruptions they experience, and their education needs, (d) selected theoretical frameworks, (Ecological Human Development, Social Cognitive Career Theory, and Cognitive Information Processing Approach); and (e) a summary of these presented.

Career and College Readiness

High school is an essential time for students to engage in post-secondary education and career planning. This study focused on the career and college readiness of adolescents aging out of the foster care system. However, varying ideas exist about what readiness means in the context of defining career and college readiness. For example, the ACT College
Readiness Assessment (ACT, 2010) focuses on readiness for college by using objectively scored questions about English, mathematics, reading, science, and writing competence in their assessment instruments. Conley (2010) presents career and college readiness broadly as a continuum from narrow to broad and from unidimensional to multidimensional. In this regard, he pointed out that the narrower definition is easier to measure and may be useful as a gross indicator of readiness at state levels. Conley (2010) emphasized that a more expansive definition is required at the individual student and school levels and provides more actionable information. *Career ready* was defined as possessing the content knowledge and key learning skills and techniques sufficient to begin studies in a career pathway, and *college ready* was defined as being prepared in the key learning skills necessary to succeed in entry-level general education courses.

Achieve, Inc. (n.d.) described the term *college ready* as being prepared for post-secondary educational training experiences that lead to obtaining post-secondary education credentials such as a bachelor’s or associate’s degree, license, or certificate. Furthermore, they described college readiness as high school graduates possessing the skills and knowledge needed to successfully complete entry-level college courses without having to engage in remedial coursework. They defined the term *career ready* as high school graduates being able to acquire the skills and knowledge necessary to qualify and be successful in their post-secondary education/training for their careers (Achieve, Inc., n.d.). To this end, Conley (2010) stated that the commonalities between college and career readiness are sufficient for developing simultaneous measures. College and career readiness appears to be an umbrella under which several education and workforce policies, programs, and initiatives are thriving.
Advocates for high-quality early education, strong foundational standards in elementary education, rigorous career and technical education programs, and college completion goals are included under this umbrella (Achieve, Inc. n.d.).

**College Knowledge**

Extending the definition of career and college readiness is the concept of college knowledge. Hooker and Brand (2010) described the need for college knowledge to ensure that students are able to gain access to post-secondary education. They described college knowledge as students understanding (a) the admission selections process, (b) ways to financially afford post-secondary education, (c) academic requirements for work on the college level, and (d) cultural differences as they transition from secondary to post-secondary education. They further stated that developing college knowledge requires having effective programs in place that influence students’ educational pathways. These programs provide “a rigorous curriculum and ensure that instructional staff members are prepared to support students who participate in more demanding classes” (Hooker & Brand, 2010, p. 78). They must also expose program participants to college campuses by providing opportunities for high school students to earn college credits, conduct campus visits, and attend programs on college campuses. Additionally, programs that develop college knowledge must include supportive adults who can answer students’ questions about college, assist them with the admissions process, and help them discover ways to finance their post-secondary education (Hooker & Brand, 2010).

For students who are underserved, attending a post-secondary institution may not be a natural next step after high school. The College Board (2006) recognizes these students as
those who come from middle-to-low income families, low achievers, youth who are disabled, first-generation college students, and underrepresented minorities. As noted by Bell, Rowan-Kenyon, and Perna (2009), research findings indicate a lack of college knowledge society, particularly among Black and Latino students and parents, low-income parents, parents who had no direct exposure to the college, and students who desire to attend a two or four-year institution. More specifically, there appears to be a lack of knowledge about the financial aid process. The research findings indicated that students with less information about college, especially regarding financial information, are less likely to be expected to attend college or enroll in and apply for college (Bell, Rowan-Kenyon, & Perna, 2009).

In a study of the acquisition of college-related knowledge during the 9th through 11th grade years, Bell et al. (2009) found that sophomores were not active in gathering information about college, nor were cost of college and financial aid a concern. However, 11th grade students were actively collecting information about college, costs, and financial aid; therefore, a shift must have occurred before 11th grade. In another study comparing focus group and survey data across six states, 11th grade students were more engaged in college-related preparation activities as compared to 9th grade students (Bell et al., 2009).

In a study conducted by Batshe et al. (2012) the investigators targeted youth aging out of foster care whom they recognized were less likely to have college knowledge. Based on the KnowHow2Go campaign that was designed to assist first-generation college students obtain college knowledge, 27 foster care youth who were involved in a post-secondary program were interviewed. The interview data revealed four topics that participants deemed important to obtain college knowledge: (a) finding someone to help with navigating the post-
secondary education process, (b) pushing themselves to prepare for college while in high school, (c) finding the right post-secondary education fit, and (d) finding ways to pay for post-secondary education. These topics relate to the current study by highlighting the role supportive adults, finances, skill-building in high school, and self-efficacy play in the career and college readiness of adolescents aging out of foster care.

The information presented above highlights the importance of students obtaining college knowledge during early adolescence. Furthermore, the research indicated that students who are underserved, such as first-generation college students, students with disabilities, students from low-SES backgrounds, and underrepresented minorities, need additional support to obtain college knowledge. Unfortunately, foster care youth fall within this category; thus, this information was essential to the present study. The support these groups need include assistance from adults, such as school counselors and higher education professionals, who are knowledgeable about college and the admission process and how to secure finances for post-secondary education (Hooker & Brand, 2010).

The American School Counselor Association National Model

One model that promotes helping all students obtain college knowledge and enhancing their career and college readiness is the American School Counselor Association National Model: A Framework for School Counseling Programs (ASCA, 2012). First published in 2003, the ASCA National Model is a framework designed to help professional school counselors become significant contributors to the mission of their respective schools. The framework was created for school counselors to deliver comprehensive, developmental school counseling programs designed to facilitate the academic, personal/social, and career
developmental needs of all students. The model offers uniformity for school counseling programs across the nation while giving school counselors the flexibility to customize their respective local programs. The model also helped to re-emphasize school counseling as a pertinent component to students’ educational successes.

The ASCA National Model addresses the need for school counselors to deliver direct services to students through a school counseling core curriculum, individual student planning, and responsive services. In the school counseling core curriculum, the school counselor delivers structured lessons or activities designed to enhance students’ knowledge and skills. School counselors utilize individual student planning as a method to help students plan, manage, and monitor their learning, develop future plans, and establish personal goals (ASCA, 2012). Response services are designed to meet the immediate needs and concerns of students. For example, a school counselor may provide individual counseling sessions to a student for overcoming barriers to academic success. As indicated by these components of the ASCA National Model, school counselors can significantly contribute to the career and college readiness of the students they serve. In this regard, the ASCA Model can serve as a foundation for school counselors to meet the educational needs of those students involved in foster care and serves as an integral component of this dissertation study.

Although the ASCA National Model is designed specifically for the work of school counselors, the components of the model can prove to be impactful for counselors both within the community and in higher education settings who are working to enhance the career and college readiness of the clients they serve. The ASCA model can provide these professionals with a reputable framework to develop evidenced-based career and college
readiness interventions while aligning their efforts to those of school counselors. The ASCA Model was utilized in this study in order to provide appropriate, direct services to foster care youth through identified interventions that could be given in the school setting yet also be useful in an alternate environment.

Hartline and Cobia (2012) described one intervention for school counselors who received training on the ASCA (2012) model. This four-day training was designed to help 300 school counseling teams close the achievement gap that exists for students from marginalized populations. After the training, counselors were charged with analyzing data to identifying inequities, develop interventions and programs addressing these injustices, and measure and share the results of their programs and interventions on an annual basis. During training, teams were able to establish “program goals, discussed the use of calendars in the management of programs, were introduced to data concepts, and examined their own school data to determine critical areas of need” (Hartline & Cobia, 2012, p. 72). Of the 100 submitted reports, 88 indicated that school counselors created interventions to close achievement gaps; 48 indicated usage and reporting of data to identify student groups where a gap existed; and 35 showed that school counselors were able to develop and execute a suitable intervention to close an achievement gap. This research provided evidence that school counselors can create interventions that improve the academic success of all students.

Given the structured and widely-influential components of the ASCA National Model, counselors outside of the school system can also utilize the model to assist their clients with achieving career and college readiness. In this regard, counselors, such as those working in the fields of transitional living or college access, can use the ASCA model as a
framework for structuring their efforts to provide appropriate programing for foster care youth, utilizing standards that align with their educational needs. The ASCA model was used within this dissertation as a framework for those counselors who assist adolescents aging out of the foster care system by helping these students successfully transition into post-secondary education and future careers.

One of the major components of the ASCA (2012) National Model is individual student planning. This component was essential to the present study because customized individual counseling interventions were conducted with adolescents in foster care. According to the ASCA (2012) National Model, individual student planning is one of the direct student services of the school counseling program that “consists of ongoing systemic activities designed to help students establish personal goals and develop future plans” (p. 85). In this regard, school counselors can help students establish and evaluate their career, academic, and personal goals. School counselors can also help students develop individual learning plans and graduation plans and assist with their transitions through K-12 education to careers and/or post-secondary education. Student support networks, such as parents/guardians and other school personnel, are also included in the individual student planning process. Utilizing appraisal and advisement strategies, school counselors can enhance their students’ career and college readiness by working with them to evaluate their own interests, skills, and abilities and by helping them to make informed decisions about their future (ASCA, 2012). Individual student planning was utilized as a method in the present study and is further discussed in chapter three.
**ASCA National Standards for Students**

In addition to the ASCA National Model, ASCA published the National Standards for Students (2004) to assist with the delivery of school counseling programs. Standards within the model’s three categories, academic, career, and personal/social development, speak to the career and college readiness goals established by entities such as ACT, Inc. For instance, the ASCA career development standard B states, “Students will employ strategies to achieve future career goals with success and satisfaction (para. 2).” The academic development standard B states, “Students will complete school with the academic preparation essential to choose from a wide range of substantial post-secondary options, including college (para. 2).” These standards suggest that school counselors can effectively contribute to the career and college readiness of all students.

**Mindsets and Behaviors for Student Success: K-12 College- and Career-Readiness Standards for Every Student**

In 2014, ASCA published *Mindsets and Behaviors for Student Success: K-12 College- and Career-Readiness Standards for Every Student* as the next generation of national standards for students. The publication includes 35 mindset and behavior standards that identify the skills, knowledge, and attitudes student needed to achieve college and career readiness, academic success, and social/emotional development. (ASCA, 2014). The emphasis on enhancing academic achievement and promoting the college and career readiness of all students is made more evident within this latest update of ASCA’s student standards. These standards were derived from a review of career and college readiness documents created by several organizations that have established strategies for improving
students’ academic performance and achievement (ASCA, 2014). They are arranged within categories and sub-categories based on the framework of non-cognitive factors found in the literature review “Teaching Adolescents to Become Learners” (Farrington et al., 2012).

Mindset standards two and four in the document relate to the present study and emphasize that need for school counselors to encourage every student to understand “that postsecondary education and life-long learning are necessary for long-term career success” and students must have “self-confidence in [the] ability to succeed” (ASCA, 2014). Behavior standards that were related to the study suggest that students must “use time-management, organizational and study skills; demonstrate [the] ability to overcome barriers to learning; and demonstrate [the] perseverance to achieve long- and short-term goals” (ASCA, 2014). These standards incorporate the non-cognitive factors that are necessary for student achievement such as self-efficacy, motivation, study skills, homework completion, and learning strategies (ASCA, 2014). An attempt to enhance these factors in foster care youth through customized individual counseling interventions was examined in the present study.

**Environmental Factors**

Exploring the environmental factors that impact students from underserved backgrounds is important to select appropriate career and college readiness interventions such as those needed for foster care youth in the present study. Research related to post-secondary education access has identified the environmental factors students from disadvantaged backgrounds encounter that prevent them from successfully navigating the higher education preparation process. For example, Bragg, Kim, and Barnett (2006) described college access as linking “a number of different issues: how low-and middle
income families pay for college costs, how students traditionally underrepresented in higher education overcome discrimination and social disadvantage, and how well high school graduates are prepared for college level work” (p.5). Walpole (2007) stated that “Low SES students disproportionately attend high schools that do not focus on preparing students for college and have few counseling resources” (p. 30). These students also have less access to more rigorous academic courses and are guided away from advanced level courses more often than students from families with high income and high socio-economic status (SES). Low SES students are more likely to be encouraged to engage in vocational programs rather than college preparatory curricula.

Students from Low SES working families and first-generation students receive less access to resources (Walpole, 2007). They know less about the admission process and the distinctions among types of colleges. Furthermore, research findings indicated that students from low SES families seek employment as a more comfortable option and do not see college as a realistic option compared to their peers. Low-income students were less likely to enter college regardless of whether they were enrolled in rigorous academic programs, completed advanced course work, and achieved high test scores, or had taken algebra I in the eighth grade (Walpole, 2007).

According to the Association for the Study of Higher Education (2007), economic and educationally challenged students are “less likely to attend college and more likely to attend a less selective institution when they do enroll in college than are more advantaged students” (p. 29). As a result, they attend schools with lower graduation rates and attendance than more selective colleges. Additionally, a 30% gap exists between students from low
socioeconomic backgrounds who attend college as compared to students from high socioeconomic backgrounds, further contributing to the lack of underserved students in higher education. These differences in college access and attainment begin well before the time to apply for and attend college. These early influencing factors include prior educational experiences, socioeconomic status, parental income, parental education, and parental occupation.

First-generation, low-SES, and working class students more often have access to fewer resources and less knowledge about how to apply for college or the differences among different types of colleges (Association for the Study of Higher Education, 2007). Additionally, low-SES students are more likely to attend high schools with fewer counseling resources and less focus on preparing students to attend college. They also see employment as a more viable option than attending college. Parents who have low-SES are less likely to see graduating from high school as the norm for their children as compared to high-SES parents who consider obtaining a bachelor’s or higher level degree as being the norm in their households (Association for the Study of Higher Education, 2007). Additionally, Bell et al. (2009) explained that the increase in electronic information is insufficient because many students and parents do not have the instrumental knowledge to navigate websites efficiently to find information about the financial aid process.

**Foster Care Youth**

One group that is significantly impacted by environmental factors is foster care youth who were the focus of this study. When aging out of foster care, these youths find themselves susceptible to maladies such as homelessness, mental health concerns, and unemployment
(Kirk, Lewis, Nilsen, & Colvin, 2013). Transitioning out of foster care can lead to losing several of the support networks that assisted in their transition to independence (Hudson, 2013). Furthermore, Pecora, Williams, et al. (2006) estimated that only one-third of foster care youth who have aged out had a driver’s license, basic necessities, or cash upon leaving the system.

Regardless of these barriers, many foster care youth aspire to pursue a post-secondary school education (Kirk et al., 2013). Unfortunately, there are numerous academic, familial, social, and environment challenges that can impede their potential for achieving these educational aspirations. Kirk et al. (2013) stated that the differences between educational aspirations and expectations are prevalent among marginalized groups where educational expectations are often lower than education aspirations. Proactive efforts to provide support networks that can assist individuals aging out of foster care to access post-secondary education can, in turn, lead to better opportunities for employment or jobs that offer higher pay (Pecora, Kessler, et al., 2006).

Environmental Disruptions of Foster Care Youth

Foster care youth endure multiple academic, familial, and social environment disruptions that impede their educational expectations. Bronfenbrenner (1979) posited that the family is a crucial component of the microsystem and dominant in infancy and early childhood. However, many foster care youth experience disorganized/disoriented relationships with their biological parents (e.g., abuse and neglect, absence). Jantz., Geen, Bess, Andrews and Russell. (2002) stated that children who are separated from their biological parents regularly deal with emotional trauma whether they were abused or not.
Batsche et al. (2012) found that behavioral and emotional problems resulting from trauma, neglect, and abuse in the home environment contribute to poor educational outcomes of foster care youth.

There are numerous circumstances that may cause youth to be placed in foster care. These can include physical and/or sexual abuse by a parent; neglect of the child’s needs (e.g. food, clean living environment, emotional needs); incarceration of the parent and no family to care for the child during the incarceration period; abandonment; death of a parent(s); or the child is voluntarily placed in foster care due to a parent’s health concerns or lack of confidence to adequately provide for the needs of the child (Craft, n.d.). Moreover, quite often individuals believe that it is solely the parent’s actions that can place youth within a foster care situation. However, sometimes the youth’s actions can be the cause of entering foster care. For instance, when the court system has ruled a youth a juvenile offender after multiple law enforcement issues, he or she may be placed in foster care if a parent cannot adequately manage the child’s behavior within the home (Craft, n.d.). Moreover, if there are truancy concerns where the child is constantly skipping school or a youth is engaging in dangerous runaway behavior that the parents cannot manage, youth may also be placed in foster care under these circumstances (Craft, n.d.).

Smithgall, Gladden, Howard, George, and Courtney (2004) explained that youth aging out of foster care are more likely to attend under-funded, high poverty, and low-performing schools that do not prepare them for college work. Kirk and Day (2011) reported that youth in foster care experience school instability, numerous foster care placements, low academic preparation, and lack of support networks which negatively impact their
educational expectations despite their potential aspiration to achieve a post-secondary education. In this regard, there appears to be a disconnect between foster care youth entering a post-secondary education institution and what it takes for them to get there. In recognizing the environmental disruptions of foster care youth, more needs to be done to help them overcome these barriers so that their educational needs can be met.

**Educational Needs of Foster Care Youth**

Receiving a post-secondary education can pose several benefits to degree recipients and to society as a whole. However, receiving a post-secondary education is difficult to obtain for youth who are emerging from the foster care system. McMillen, Auslander, Elze, White, & Thompson (2003) acknowledged that decision makers must understand both the educational experiences and aspirations of foster care youth to appropriately choose options for improving their education outcomes. Kirk et al. (2013) stated that differences between educational aspirations and expectations is prevalent among marginalized groups where educational expectations are often lower than education aspirations. To this end, approximately 10% of youth who have emerged out of foster care enroll in college while only 4% obtain a bachelor’s degree.

Unfortunately, foster care youth are overrepresented in special education programs and experience school instability (Kirk & Day, 2011). Unrau et al. (2012) indicated that little is known about foster care youth’s readiness to engage in college, their developmental needs during their college transition, and ways higher education professionals and the child welfare system can offer assistance. According to Day et al. (2012) few studies document the voices of youth who are experiencing or about to experience the transition from high school to
college. Furthermore, many youth in foster care do not have support when applying for and putting together resources for college.

Several studies emphasized the educational needs of foster care youth. Reviewing such studies provides information about how professionals can provide valuable educationally related services and support to these youths. In a regression design study by Kirk et al. (2013), the investigators explored the differences in the educational aspirations and expectations among youth in foster care and non-foster care youth and key predictors of the differences between the groups. Student survey and school transcript data were obtained from 1,377 participants of the Kansas Kids @ GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs) to explore their academic self-perception, future educational goals, and level of social support for education. The results indicated that youth in foster care reported both lower educational aspirations and expectations compared to non-foster care youth, where parental support for education and academic self-perception emerged as the key factors.

In an exploratory cross-sectional survey design study by Unrau, Font, and Rawls (2012), the investigators sought to compare the readiness for college engagement of foster care youth entering college to the readiness for college engagement among the national freshman population. The sample for this study was 81 former foster care youth who were enrolled as freshman at Western Michigan University who were compared to 6,517 non-foster care first-time-in-any-college (FTIAC) students. The Noel-Levitz College Student Inventory (CSI), Form A was utilized to measure readiness for college engagement. The results revealed that although youth in foster care have high aspirations for their college
performance, they are less prepared academically when they enter college compared to FTIAC students, resulting in a performance gap within their first semester of college.

In a qualitative study by Hudson (2013), the researcher explored foster care youth’s perspectives on mentoring, including their definition of mentoring and specific features of mentoring that are important to them. Hudson (2013) used focus group methodology to interview 27 youth in foster care who were between the ages of 14 and 17. The groups were conducted using a semi-structured interview guide and comprised of six to eight foster care youth per group. The results revealed that youth in foster care do not have many opportunities to engage in career mentoring which they desire to do. Participants also knew about mentoring programs for at-risk youth and the negative outcomes experienced by foster care youth. Three themes were also identified from the data: needing and finding authority figures, hooking up with a career mentor, and deserving the good life (Hudson, 2013).

In an exploratory study by Day et al. (2012), the investigators examined the barriers of transitioning from high school to college as experienced by current and former foster care youth. The study consisted of 43 high school and college students who attended two Kidspeak public forums in Michigan and spoke to policymakers about their barriers to college access and high school completion and communicating ideas on what could help students similar to themselves overcome these barriers. Transcripts from these forums were analyzed, and eight barriers to completing high school and gaining access to college were established: (a) need for permanent relationships with caring adults outside of school, (b) need for connections with teachers and other adults at school who understand the unique challenges faced by youth in foster care (c) need for teachers to be sensitive to individual
student learning needs, (d) lack of resources to address basic school-related needs, (e) lack of access to extracurricular activities, (f) unsafe schools, (g) untreated mental health issues, and (h) lack of preparation and support for independent living (Day et al., 2013).

Youth in foster care need permanent relationships with adults and support networks to sustain in adulthood. Hudson (2013) stated that youth in foster care want and need mentoring as they merge into adulthood and out of the foster care system. However, few studies have focused on the characteristics foster care youth would like in a mentor prior to the mentoring relationship or that engage youth in foster care as partners in the mentoring process. Dunst, Trivette, and Deal (1998) described social support as “the emotional, psychological, physical, informational, instrumental and material assistance provided by others to either maintain well-being or promote adaptations to difficult life events” (p. 3). Support networks can assist individuals aging out foster care with post-secondary education access which, in turn, will lead to better opportunities for employment or jobs that offer higher pay (Pecora, Kessler, et al., 2006). Counselors play an essential part of the support network of youth in foster care. Bryan and Henry (2012) described the critical need for school-family-community partnerships to decrease achievement gaps. In this regard, these partnerships are described as collaborative relationships and initiatives among school personnel, family members, and representatives of community organizations.

**Unpublished Pilot Studies**

Two unpublished pilot studies are presented in this review of literature. The first study showed the need to create and present a primary prevention career and college readiness intervention unit that is useful with all secondary students regardless of their
educational placement. This is notable for the present study because it highlights the importance of presenting appropriate career and college interventions to students, such as foster care youth, who may not have equitable access to educational resources. The second pilot study relates to the current study by highlighting the importance of foster care youth being connected to supportive adults to become self-sufficient in adulthood.

**Unpublished Pilot Study- Primary Prevention Career and College Readiness Intervention Program**

An unpublished pilot study was conducted by the researcher, two professors, and a doctoral student. The purpose was to evaluate the effectiveness of a primary prevention career and college readiness intervention program on the career and college readiness self-efficacy of ninth grade students across a broad range of academic classification levels. The proactive, primary prevention large group guidance career and college readiness lessons were developed and evaluated according to whether there was significant difference between pre- and post-test assessments of career and college readiness self-efficacy scores. The goal identified for the intervention program was to increase the career and college readiness self-efficacy of all students regardless of their socio-economic backgrounds.

The primary prevention career and college readiness intervention program was designed to (a) help students determine how they can be successful in the ninth grade, (b) to connect what students are doing presently to their future aspirations (i.e., taking classes, making good grades, etc.), (c) help students think about their future plans (i.e., college, technical/vocational schools, etc.), (d) identify paths during high school that will help
students reach their post-secondary goals, and (e) provide basic information about financial aid and post-secondary education entrance requirements and procedures.

The first phase of the study consisted of organizing masters students in a counselor education program at a southeastern land grant university enrolled in their counseling practicum course during the Fall of 2012. They participated as presenters of four large group guidance activities focused on career and college readiness. Students were enrolled in school, college, and clinical mental health counseling tracks. These classroom guidance activities served as the basis of the primary prevention career and college readiness program.

According to the American School Counselor Association (ASCA, 2012) National Model, classroom guidance is a part of the school counseling core curriculum that is designed to help students attain desired competencies and provide students with attitudes, knowledge, and skills at the appropriate developmental level. Classroom guidance lessons are presented by school counselors in the K-12 classroom and in group activities. The second phase of this study included collecting and scoring pre and post-evaluation data from each class that was then statistically analyzed.

**Research questions.** The specific research questions of this study were as follows:

**Research question 1.** Is there a significant difference between pre and posttest career and college readiness self-efficacy scores for the entire sample of ninth grade students involved in the primary career and college readiness intervention program?

**Research question 2.** Is there a significant difference between pre and post-test career and college readiness self-efficacy scores for Honors/Academically Gifted ninth grade English students involved in the primary readiness intervention program?
Research question 3. Is there a significant difference between pre and post-test career and college readiness self-efficacy scores for Standard Level ninth grade English students involved in the primary readiness intervention program?

Participants and setting. The primary prevention career and college readiness intervention program was delivered by 12 dyads consisting of 24 counselor education masters students at a southeastern land grant university to 367 ninth grade students from an urban magnet high school in a southeastern city. The sample was ninth grade students who were enrolled in the magnet high school. Approximately half of the students attending the school had been accepted to the magnet program from across the county by way of a competitive selection process. The remaining student population resided in the neighborhood in which the high school was located. The socio-economic status of the surrounding neighborhood was low. The total enrollment of the school was approximately 2,700 students. Regarding racial/ethnic demographic information, 51% of the students were White, 35% African American, 12% Asian, and 2% were Hispanic. The portion of students who were eligible for free and reduced lunch was 34.6%; 3.2% were included in the Limited English Proficiency category, and 1.6% were classified as English as a Second Language status.

The students were enrolled in 17 English classes that were taught by seven different teachers. Selection of classes was based on teachers volunteering their classes to be involved in the program. The English classes at the high school were grouped into five categories: Honors, Honors and Academically Gifted/CNC, Academically Gifted/CNC, Standard Level, and ESL. The single ESL class of 15 students was not included in the analysis. Two groups were created for a data comparison in this study. One group, the Honors/Academically Gifted
category, was designated high academic achieving students in the subject. Other students were included in the Standard Level category. There were eight classes included in the Honors/Academically Gifted category (approximately 217 students), and nine classes were included in the Standard Level category (approximately 150 students). Two counselor education doctoral students who were enrolled in clinical internships worked as liaisons with two counselor education faculty members and the high school’s dean of students to ensure the program logistics were carried out effectively. With the exception of additional counselor training and post-secondary education resources, neither master’s students nor the high school students involved in this study received compensation or incentives to participate.

**Trainers.** The master’s degree students were enrolled in their practicum course in the Fall of 2012 and were required to serve as presenters of the program. They consisted of 22 women and 2 men and represented various racial/ethnic backgrounds. These students were in their 2nd or 3rd year of educational preparation to enter the field of school counseling, clinical mental health, or college counseling.

**Data analysis.** The principal investigators and doctoral student partners scored a pre and post Career and College Readiness Self-Efficacy Inventory (CCRSI) (Baker & Parikh Foxx, 2012) that was given to each individual participant with overall scores ranging from 20 (lowest) to 100 (highest) points. After determining useable completed career and college readiness self-efficacy pre- and post-test data, a matched pairs statistical data analyses was run. Using a paired $t$-test, a matched pair statistical data analysis was used when comparing means between two or more correlated variables and assessing their differences. In this instance, a matched pair statistical data analysis was used to find a difference between overall
pre- and post-test data. It was then used to find the statistical difference between the pre-to post-test scores for Honors and Academically Gifted students, as well as the statistical difference between pre-to posttest scores for Standard Level students.

**Findings for the total group of participants (research question 1).** The sample of high school students who received the intervention described in the study was 367 who were enrolled in 17 ninth grade classes. Useable completed career planning self-efficacy pre-test data from the CCRSI were acquired for 367 students, and useable post-test data were acquired for 339 students. To run a matched pair statistical data analysis, the mean score for the posttest group \(M = 82\) was employed for the 28 missing data points. The findings from the data analysis were as follows:

**Descriptive data:**

Pre-test mean = 78.16; standard deviation = 10.81

Posttest mean = 80.44; standard deviation = 13.37

**Summary of matched pairs data analysis:**

\[ t(346) = 2.52, p = .01, d = 0.17, 95\% \text{ CI}[0.50, 4.06] \]

The findings indicated that there was a statistically significant difference between the pre and post-test CCRSI scores. There was a small (i.e. \(d = 0.17\)) effect size. The actual difference between the pre- and posttest means was 2.28 on a 100-point scale. Consequently, although the findings were promising they also did not demonstrate a dramatic change across the entire group of participants. One explanation for the statistical significance of the findings might be attributed to the large sample size. Statistical comparison analyses tend to become more likely to produce significant results as the sample size increases.
Findings for subgroups of participants (research questions 2 and 3). The ninth grade English classes at the high school were grouped into five categories: Honors, Honors and Academically Gifted/CNC, Academically Gifted/CNC, Standard Level, and ESL. Two groups were designated for this particular comparison. One group consisted of the honors, honors and academically gifted, and academically gifted classes because they all seemed to be upper-level students academically. The second group consisted of the standard level courses. Useable completed career and college readiness self-efficacy pre-test data were acquired for 217 Honors and Academically Gifted students and 150 Standard Level students, and useable post-test data were acquired for 207 Honors and Academically Gifted students and 132 Standard Level students. Nine classes were included in the Honors and Academically Gifted Category, and eight classes were in the Standard Level category. A matched pair statistical data analysis was run on both the advanced class level data and the standard level class data for statistical comparison. The findings were as follows:

**Honors and Academically Gifted:**

- Pre-test mean = 79.34; standard deviation = 10.19
- Posttest mean = 82.34; standard deviation = 12.89

**Summary of matched pairs data analysis:**

\[ t(217) = 2.94, \ p = .002, \ d = 0.30, \ 95\% \ CI[0.98, \ 5.01] \]

**Standard level:**

- Pre-test mean = 77.63; standard deviation = 11.32
- Posttest mean = 79.12; standard deviation = 14.62

Summary of matched pairs data analysis:
\[ t(157) = 1.06, p = .15, d = 0.10, 95\% \text{ CI}[-1.30, 4.28] \]

The findings indicated that there was no statistical difference between the pre-to-post-test scores for the Standard Level students on the 95% confidence level (pre-test mean = 77.63, posttest mean = 79.12). This means that the statistical pre-to post-test differences discovered in the analysis of the total sample above appeared to be completely due to changes in the scores of the Honors and Academically Gifted students (pre-test mean = 77.63, posttest mean = 82.34).

**Unpublished Pilot Study - Career and College Readiness of Youth in Foster Care**

An unpublished pilot study was conducted by the researcher that focused on the impact of support networks on the career and college readiness of youth in foster care. The following primary research question was developed: How does the role of support networks impact the career and college readiness of youth in foster care? Four sub-questions were then developed and were as follows: (a) What is the foster parent’s perception of youth’s educational aspirations? (b) What are the major influences in the lives of foster youth? (c) What role do foster parents play in the transition of youth who are emerging out of foster care? (d) How does adversity and resiliency impact the educational aspirations of youth in foster care?

**Participants and setting.** The researcher conducted a mini-focus group with four foster parents and one case study with a student currently in foster care who lived in a southeastern city. The foster parents have provided therapeutic care for more than 20 years. According to Youthlaw.org (2006) therapeutic foster care is an intensive, individualized mental health service in which intensively supervised and specially trained foster parents
implement the treatment plan of the youth they care for and serve as an important member of the child’s treatment team. All participants self-identified as Black/African American (non-Hispanic) females. Two of the participants identified as being between the ages of 55-64 years-old, and two participants identified as being between the ages of 65-74 years-old. The student participant identified as a 20-year-old African American female. She was enrolled in a certified nursing assistant program at a health care institute in a southeastern city.

**Data analysis and results.** Data from the interviews and observations were initially coded using Microsoft Word software and then refined to reveal nine codes. Seven themes were established by looking for frequent ideas that were consistent throughout the codes. These themes that emerged were as follows: (a) support, love, and genuine care; (b) feeling of family; (c) spirituality; (d) overcoming adversity/resiliency; (e) educational aspirations vs. educational expectations; (f) need for support networks; and (g) biological parent influence (Gavin, 2014).

The themes suggested that support networks have a positive impact on the career and college readiness of foster care youth. The participants felt that many youth in foster care would like to pursue a post-secondary education but did not necessarily know or understand how much work it was going to take to actually achieve access to post-secondary education. Furthermore, they described influential support networks that were able to fulfill the emotional and educational needs of the youth they cared for. Participants felt support networks provided the genuine love and care foster youth needed.
Conceptual Frameworks

Ecological Model of Human Development

In Bronfenbrenner’s (1979) Ecological Model of Human Development, one of the theoretical frameworks of this study, he sought to examine developing persons, their environment, and the interaction that occurs between the two. In particular, the model views the developing person at the center of concentric circles that depict their various environments, each contained within the next, interconnecting to form an ecological system. The layers that encompass these concentric circles are the microsystems, mesosystems, exosystems, macrosystems and chronosystems (Bronfenbrenner, 1979). By studying the interrelations among these systems, one can gain a better understanding of the entities that affect a child’s development and socialization. Thus the model helped the counselor/investigator explore how ecological systems impact the career and college readiness of youth in foster care.

Model constructs and assumptions. The Ecological Model of Human Development consists of several major constructs and assumptions that have spanned across four decades of theoretical model revisions since its inception in the 1970s. Thus, Tudge et al. (2009) observed that the complete theory in its mature form, which stemmed from the mid-1990s and was later called the Bioecological Model of Human Development, involved the interactive relationships among four key constructs: Process, Person, Context, and Time. Understanding these constructs helps one understand how this theoretical model aligned with this dissertation study.
**Process.** Process is a central assumption of the model and incorporates forms of interactions between an organism and the environment called *Proximal Processes.* Proposition 1 purports that *Proximal Processes* are interactions that occur on a somewhat regular basis over periods of time and are posited as powerful primary predictors of human developmental outcomes (Bronfenbrenner & Morris, 2006). Bronfenbrenner felt that such interactive processes occur over time and will produce the aptitude, knowledge, purpose, and skill for individuals to engage in these activities on their own and with other persons. For instance, through interactions with their parents, children may become self-agents in their development (Bronfenbrenner & Morris, 2006).

Proposition 2 assumes that the power, form, content, and direction of a *Proximal Process* varies systematically as a combined function of the person’s characteristics, environmental context in which the process takes place, the nature of the developmental outcomes that are being considered, and the changes over a period of time that the individuals lived (Bronfenbrenner & Morris, 2006). This proposition suggests that for developmental competence outcomes such as academic achievement and social skills, proximal processes have a bigger impact in more stable, privileged environments. This assumption emphasizes that most children raised by their birth parents have lifelong, built-in support networks, stable care, and strong parenting, all of which is not guaranteed to youth in foster care, thus having potential for an adverse impact on their well-being and ability to cope with stressful events (Kirk & Day, 2011). The research design that permits the investigation of both propositions is known as the *Process-Person-Context-Time (PCCT) model.*
**Person.** In the second construct, *person*, Bronfenbrenner acknowledged the biological and personal characteristics of a person. Regarding the latter, he designated *resource* (e.g., intelligence, past experiences, access to social and material resources), *demand* (e.g., gender, physical appearance, skin color) and *force* (i.e., differences of motivation, temperance, persistence, etc.) as the three characteristics a person brings with them in a social situation (Bronfenbrenner & Morris, 2006). Based on Bronfenbrenner’s assumption, two children (e.g., foster care youth) could have equal resource characteristics (e.g., lack of educational opportunities), but have different developmental trajectories if one of the youth persists in tasks and is motivated to succeed and the other is not (e.g., high versus low educational expectations) (Tudge, Mokrova, Hatfield, & Karnik, 2009). Bronfenbrenner further assumed that a person’s role in changing his or her context can range from passive, to more active, to most active.

**Context.** Within the *context* construct Bronfenbrenner (1979) conceptualizes the ecological systems model. In the model, the developing person with particular characteristics (e.g., genes, age, and gender) interacts with the contexts within each of the nested system levels, subsequently having an impact on one’s development. The first level, the *microsystem*, is any environment in which the child spends a great deal of time interacting with or engaging in activities, such as family, home, school, peers, and neighborhood, and has the most direct influence on a child’s development. He further recognizes the relationships within this system as *bi-directional*. In particular, Bronfenbrenner posited that the family is a crucial component of this system and dominant in infancy and early childhood.
The second level of Bronfenbrenner’s model, the *mesosystem*, involves the relationships among various settings in the Microsystems, such as the connection between a child’s home and school environment or the home and social services environment. In this system, the level of influence on the child is dependent upon the interactions between the two settings and occurs indirectly (Bronfenbrenner, 1979). Siegler, DeLoache, and Eisenberg (2006) indicated that non-supportive networks in the mesosystem are likely to result in negative outcomes. The third level, the *exosystem*, interacts with Microsystems and indicates a setting such as social welfare services, workplaces, extended family, and community health systems that a child is not directly involved in but which may still have an influence on his or her development. For example, a parent who is irritable from happenings at work may return home and respond aggressively to his or her child, making the workplace an indirect influence on the child.

The outer level of the model, the *macrosystem*, is comprised of values, beliefs, customs, ideologies and laws of any group (i.e., culture, sub-culture, social class) in the larger society and influences the activities and structures in the aforementioned systems. An example is policies within kinship foster care placement that affect caregiver-child relationships. Finally, Bronfenbrenner’s model incorporates a temporal dimension called the *chronosystem* that includes changes (e.g., economic and historical events and life course changes) over time in a person’s characteristics and environment, both of which may have consequences on a child’s development. This system was included in later model revisions.

**Time.** *Time* is a defining property that occurs throughout Bronfenbrenner’s entire model. Specifically, he described time in terms of the system levels where *micro-time* occurs
during a specific interaction or activity, *meso-time* occurs when interactions and activities are consistent, and *macro-time*, or otherwise described as the *chronosystem*, includes changes over time (Bronfenbrenner & Morris, 2006).

**Usefulness and testability.** The Ecological Model of Human Development has been widely used by many researchers in several different disciplines worldwide and has been deemed as groundbreaking work. Neal and Neal (2013) stated that *The Ecology of Human Development* (Bronfenbrenner, 1979) has been cited nearly 15,000 times as of September 2012. Moreover, Bronfenbrenner’s theory was a significant influence on the creation of the Head Start program. There are also several researchers who have integrated Bronfenbrenner’s model into their frameworks which exhibit its strong influence and usefulness. For instance, Howard and Solberg (2006) integrated Bronfenbrenner’s model with comparable theoretical frameworks to design the Ecological Developmental Cognitive Framework, contending that it will help school counselors develop and implement interventions that improve the educational success of all students, particularly those from low-income and diverse backgrounds.

Findings from several studies have supported the use of Bronfenbrenner’s theoretical model in relation to counseling, child welfare, and career and college readiness. For example, Hong, Algood, Chiu, and Lee (2011) contended that the most revised version of the model is a suitable framework for practice and policy implications associated with kinship foster care issues in the United States. Curry and Milsom (2013) indicated that the model is useful in recognizing the significance of students’ environment as it relates to their college and career preparation. Moreover, Lau and Ng (2014) indicated ecological systems theory will help
counseling trainees and counselor educators understand the systemic nature of training environments in counselor preparation programs.

Tudge et al. (2009) stated that the major challenge of scholars who have utilized the model in their studies is they indicated that they used Bronfenbrenner’s Ecological Theory or Bronfenbrenner’s Bioecological Model but then used earlier or partial versions of the theory, resulting in conceptual incoherence. Specifically, the researchers examined 25 empirical studies published since 2001 that were said to have used Bronfenbrenner’s theory and found that all but four of the studies relied on outdated versions of the theory. This resulted in both inadequate testing of the theory and conceptual confusion. However, the authors noted these inadequacies may be avoided if scholars who desire to use an earlier version of Bronfenbrenner’s model, or only some of the major constructs of the developed model, explicitly state their intention to do so in their studies. The authors also conveyed that Bronfenbrenner never implied that every facet of his theory had to be included within a study (Tudge et al., 2009).

**Implications for counselors.** The Ecological Model of Human Development appears to be an adequate framework for exploring how one’s interactions with various contexts shape his or her development. Thus, Bronfenbrenner supported the importance of utilizing interventions that involve individuals with whom one can interact as well as interventions that take an individual’s developmental level into consideration. Bruyere and Garbarino (2010) stated that for support networks to be effective on the mesosystem level, bi-directional relationships must be created between the support service, the child, and the family. In this regard, counselors play a key role in the development of youth, providing support through
direct interaction with clients and through indirect interaction in their relationships with a variety of stakeholders in the clients’ contexts, such as family, community agencies, and schools. This is particularly important in the career and college readiness of youth in foster care because Kirk et al. (2013) suggested that these youth need interventions that focus on increasing their access to post-secondary education. They further stated that “the development of educational aspirations and expectations occurs in a variety of interrelated contexts” (Kirk et al., 2013, p. 309). This statement emphasizes the importance of strengthening bi-directional relationships in the ecological system to improve the educational expectations of foster care youth.

Both researchers and counselors can customize the Ecological Model of Human Development to examine particular phenomena and address the implications that arise from these examinations. For instance, Hong, Algood, and Chiu (2011) proposed that on the microsystem and mesosystems levels there is a need for clinical therapeutic intervention and case coordination to tackle problems kinship foster care youth and caregivers experience such as attachment issues and caregiver-child relationships. Curry and Milsom (2013) used the theoretical framework to conceptualize how school counselors may include multiple stakeholders in their attempts to address students’ career and college readiness.

**Social Cognitive Career Theory (SCCT)**

Social Cognitive Career Theory (SCCT) is another theoretical framework that was utilized in this dissertation study. Developed by Lent et al. (1994), SCCT focuses on the connection of outcome expectations, perceived barriers to success, self-efficacy, and goals that influence an individual’s career choice. Grounded in Bandura’s (1986) Social Cognitive
Theory (SCT), SCCT attempts to address perceived barriers related to contextual factors and individual characteristics that may influence one’s learning experiences and self-efficacy. SCCT consists of three central building blocks to career development that interplay with one another in the self-regulation of behavior: (a) self-efficacy, (b) outcome expectations, and (c) personal goals (Lent et al., 1994). In this regard, career interests and engagement in career-related activities are regulated by an individual’s perceived personal competency. This, in turn, can reinforce one’s belief in performing a specific behavior. SCCT assists in exploring the role that contextual factors and perceived barriers play in the career and college readiness self-efficacy of foster care youth.

**Theoretical constructs and assumptions.** SCCT consists of several underlying constructs and assumptions that extend from Social Cognitive Theory. One assumption of SCCT involves the nature of person-environment (P-E) interaction which posits that the role of behavior is a co-determinant of the person-environment interaction. In this regard, SCCT adopted Bandura’s (1986) triadic-reciprocal model of causality which purports that personal attributes, external environmental factors, and overt actions are interactive variables that influence one another (Lent, Brown, & Hackett, 1994). This model assumes the fully bidirectional position on causality which recognizes people as “both products and producers of their environment” (Wood & Bandura, 1989, p.362). Based on this assumption, the SCCT framework contends that the triadic-reciprocal approach leads to career-related outcomes and recognizes an individual’s capacity to develop, change, and self-regulate.

Within the triadic-reciprocal system, SCCT incorporates three linked, central variables that are derived from Social Cognitive Theory: (a) self-efficacy, (b) outcome
expectations, and (c) personal goals. These three variables are considered the basic building blocks of SCCT and exemplify the key structures by which an individual is to exercise personal agency (Lent, Brown, & Hackett, 2002).

**Self-efficacy.** The term self-efficacy refers to an individual’s personal beliefs about his or her ability to perform a behavior or accomplish a particular goal. Self-efficacy beliefs are dynamic and specific to particular performance domains. They are assumed to be acquired and modified from four primary performance domains: (a) personal performance accomplishment, (b) vicarious learning, (c) social persuasion, and (d) physiological and affective states (Bandura, 1997). Of the building blocks, self-efficacy has received the most attention in the career literature and has been examined in relation to other theoretically-related outcomes. There is strong support for the role of self-efficacy as a predictor of career decision-making behaviors, intentions, and academic performance (Lent et al., 1994).

**Self-efficacy and career development in adolescence.** Gushue, Scanlan, Pantzer and Clarke (2006) stated that career theories “highlight adolescence as a pivotal developmental period in the exploration and formation of potential career objectives” (p. 20). In particular, high school students must make crucial decisions regarding these objectives such as completing high school and whether to pursue a post-secondary education or seek employment. In adolescence there is also a gradual clarification of vocational identity that is an important part of the identity development during this stage. Vocational identity in this instance is defined as “the realization of an increasingly stable conceptualization of one’s own vocational interests, talent, and goals” (Gushue et al., 2006, p. 20). This means that it is
vital for adolescents to be able to engage in career decision-making and exploration during this time period.

Several contextual factors such as family, school, and peer environment, could affect adolescents’ self-efficacy (Pajares & Urden, 2006). Adolescents gain an abundant amount of their self-efficacy information from families. Families can help to build competence when they provide an environment that encourages, offers some challenges, has positive role models, sets realistic and high expectations, and teaches strategies for dealing with problems. Furthermore, research findings indicate that those families having more capital are able to provide richer experiences that help to increase a child’s self-efficacy; whereas, families with less income and parental education are not able to provide much capital that would help to incite cognitive development (Pajares & Urden, 2006). Research findings also imply that family income levels “are positively associated with parents’ expectations for their child’s immediate and long-term educational success” (Schunk & Meece, 2006, p. 84). This means that children from lower income households are more likely to have learning problems during early years in school which could cause lower self-efficacy and lower socioeconomic status (SES) to be key predictors of premature school dropout rates.

An adolescent’s school experiences help shape self-efficacy attitudes (Pajares & Urden, 2006). In this regard, adolescents tend to compare their performance and beliefs of competence with others to find a place among their peer group. When adolescents realize that they are not performing as well as their peers, it can have a negative impact, especially when performance is valued. Periods of school transition such as changes in school environment,
different peer groups, grading criteria, and relationships with teachers can also have an impact on self-efficacy and competence.

Peers have a strong influence on one another during adolescence. When adolescents observe peers performing a task, they can feel as if they can perform the task as well, and when peers are unsuccessful at the task, adolescents may believe they also cannot perform the task (Pajares & Urden, 2006). Furthermore, peers and friends are major social influences on adolescents’ self-efficacy, and they choose peer groups and friends based on similarities (Parjares & Urden, 2006). This, in turn, will enhance the influence on peer modeling. Overall, self-efficacy and career development in adolescence is a critical period that could be influenced by family, school, and peers in a positive or negative manner.

**Outcome expectations.** The term outcome expectations refers to personal beliefs about the outcomes or consequences of performing particular behaviors. The three types of outcome expectations that may influence an individual’s vocational behavior are physical (e.g., tangible reward), societal (e.g., social approval or acceptance), and self-evaluative (e.g., self-approval or pride). Outcome expectations provide the assumption that people are more likely to engage in an activity if they perceive their involvement leading to valuable and positive outcomes. According to SCCT, a person’s engagement, effort, persistence put into activities, and one’s success in doing so is partly established by outcome expectations and self-efficacy beliefs (Lent et al., 1994).

**Goals.** Goals refer to the determination to engage in a particular activity or to accomplish a particular level of performance (i.e., choice goals and performance goals). Social Cognitive Theory posits that goals are tied to both self-efficacy and outcome
expectations in that people usually set goals that are consistent with how they view their personal capabilities and the outcomes they expect to achieve (Lent, Brown, & Hackett, 2002). Goals play an important role in all career choice theories.

In addition to the three building blocks of career development, the SCCT framework organizes career interest, choice, and performance into three models known as the *Interest Development Model, Choice Model, and Performance Model*.

**Interest development model.** In the Interest Development Model component of SCCT, individuals form interests in activities they feel competent in and those that will produce valuable outcomes and are unlikely to develop interests in activities about which they have low self-efficacy beliefs and think will receive negative outcomes (Lent, Brown, & Hackett, 2002). SCCT assumes that aptitudes inform self-efficacy beliefs, which then influence interests and outcome expectations. Furthermore, person and contextual influences are assumed to impact career interests.

**Choice model.** The Choice Model emphasizes the diverse contextual, learning, and personal influences on behavior. SCCT posits that interests are an effective predictor of the types of choices an individual makes under supportive conditions (e.g., emotional and family support) as opposed to under restrictive environmental conditions (e.g., inadequate levels of educations, minimal finances) (Lent, Brown, & Hackett, 2002).

**Performance model.** The Performance Model is related to the quality of a person’s educational and occupational pursuits and persistence in these pursuits in the face of barriers. Therefore, ability is believed to impact performance and persistence and involves motivation. Lent, Brown, and Hackett (2002 explained that students with higher self-efficacy and
positive outcome expectations are more like to set high performance goals, effectively organize their skills, and effectively handle setbacks.

**Usefulness and testability.** The usefulness and testability of SCCT is supported by both qualitative and quantitative research methods. Research on or relevant to SCCT has received an impressive amount of respect and has expanded at a notable rate since its inception. For instance, Rogers, Creed, and Searle (2009) noted SCCT as “one of the most influential new approaches in career development” (p. 325) because it acknowledges personal, contextual, and behavioral variables as essential components in the development of career interests, goals, abilities, and choice. Of the model’s constructs, self-efficacy, has received the most attention in the career literature and has been examined in relation to other theoretically-related outcomes. For example, Gushue and Whitson (2006) examined the relationship among support, ethnic identity, career decision self-efficacy, and outcome expectations in African American high school students, and Metheny and McWhirter (2013) studied the contributions of social status and family support to college students’ career decision self-efficacy and outcome expectations.

Furthermore, traditional qualitative reviews of research related to career self-efficacy support the following general conclusions: (a) domain-specific measures are predictive of career-related interests, choice, achievement, persistence, indecision, and career exploratory behavior; (b) intervention, experimental, and path analysis support certain hypothesized causal relations between measures of self-efficacy, performance, and interests; and (c) gender differences in academic and self-efficacy help to explain male-female differences in occupational consideration (Lent, Brown, & Hackett, 2002).
There are several SCCT-derived interventions that have been both designed and tested in educational and career settings. Recent studies have explored contextual barriers and supports, goals, and outcome expectations. For example, Flores, Navarro, and DeWitz (2008) used a multivariate multiple regression analysis to predict the post-secondary educational goals of Mexican American high school students based on SCCT. Their findings suggested that Anglo-oriented acculturation was significantly related to educational goal aspirations and expectations.

With several constructs that extend from Social Cognitive Theory, SCCT has been associated with numerous scales that measure self-efficacy, outcome expectations, interests, and goals to predict career choice. Lent and Brown (2006) indicated that “there is no single format to be used in assessing social cognitive career constructs” (p. 27). Unlike trait-oriented career theories that can be tested with global, all-purpose measures, researchers of SCCT often must design new measures which depend on the characteristics of the behavioral domain that is of interest and the degree of detail at which they desire to study it. This could pose a challenge to researchers new to utilizing social cognitive theoretical perspectives. However, the researchers offer promising SCCT-derived standardized measures such as the Expanded Skills Confidence Inventory (Betz, Borgen, & Harmon, 2002) and note that their utility depends on what one wishes to study and to what extent.

**Implications for counselors.** SCCT has proven to be a valuable framework for explaining academic and career interests, choice making, and performance (Lent & Brown, 2006). It serves as a popular model for creating or organizing academic and career-related interventions and has explored the influence of sociocultural contexts in career development.
Regarding foster care youth, counselors assisting underrepresented groups must be aware that the expectation is that these individuals experience external constraints (Kirk & Day, 2011). Duffy and Dik (2009) recommend that counselors help these clients express any frustration that may occur as a result of abandoning their personal aspirations to meet their external needs.

Furthermore, studies performed utilizing an SCCT perspective suggest counselors should help clients identify career barriers and social supports that are relevant to their experiences, help them prepare barrier-coping strategies and cultivate supports to maintain their career choice options (Wright, Perrone-McGovern, Boo, & White, 2014). They must also examine those factors that are beyond their client’s control that may hinder their preferred career paths (Duffy & Dik, 2009).

Regarding youth in foster care and their career and college readiness, counselors should spend time learning their personal stories, challenges they’ve faced as a result of being in the foster care system, and identifying support networks that will assist them in post-secondary attainment. Counselors must also help clients strengthen and expand their career interests in important aptitude areas by linking their education to work through career exploration (Duffy & Dik, 2009). This may include helping adolescents in foster care gain job shadowing or internship experiences related to their career interests. Thus, counselors may use SCCT as a framework to design and explore academic and career-related interventions that will help foster care youth meet their educational expectations.
Cognitive Information Processing Approach (CIP)

The Cognitive Information Processing Approach to Career Problem Solving and Decision Making (CIP Approach) is a third conceptual framework utilized in this study. The CIP was developed by Peterson, Sampson, Lenz, and Reardon (2002) from the Florida State University Career Center for the Study of Technology in Counseling and Career Development. These researchers created the CIP Approach to help individuals understand the content and process of career decision-making and problem solving. They were concerned with helping individuals enhance their career problem-solving and decision-making skills that will persist throughout their lifetime.

Conceptual constructs and assumptions. The CIP approach contains several constructs and assumptions that explain career problem solving from a cognitive conceptual perspective. The conceptual framework consists of the following four key assumptions: (a) career problem solving and decision making involve the interaction of both affective and cognitive processes, (b) the capability for career problem solving depends on the availability of cognitive operations and knowledge, (c) career development involves continual growth and change in knowledge structures, and (d) the goal of career counseling is the enhancement of information processing skills (Peterson, Sampson, Lenz, & Reardon as cited in Brown & Associates, 2002).

The CIP consists of two core constructs that serve as the building blocks. These constructs are: (a) the Pyramid of Information Processing Domains and (b) the CASVE Cycle of Information Processing Skills used in Career Decision Making. The Pyramid of Information Processing Domains involves the content of career problem solving and
decision-making represented by the knowledge domains (i.e., self-knowledge and occupational knowledge), decision-making skills domain (i.e., generic information-processing skills), and executive processing domain (i.e., metacognitions).

Within the decision-making skills domain lies the CASVE Cycle that involves the process of career problem solving and decision-making and consists of the process of communication, analysis, synthesis, valuing, and execution (Peterson et al., 2002). Through the CASVE Cycle, an individual identifies a decision he or she needs to make or the gap between where one is and where one wants to be in the decision-making process (communication). The individual then identifies what he or she wants from a career or values as a current employee (analysis). Next, one identifies the occupational options available based on self-knowledge (synthesis). One then uses his or her top choices to complete a cost-benefit analysis of the options and then ranks these options (valuing). Last, the individual uses the knowledge gained to put his or her decision that was made throughout the process into action (execution). Within the executive processing domain, the final part of the pyramid, three principal metacognitive skills are learned to assist individuals with problem-solving and decision-making. These metacognitions include self-talk, self-awareness, and monitoring and controlling and are believed to have a strong influence on career problem-solving (Reardon, Lenz, Sampson, Peterson, 2000). In this dissertation study, the participants’ level of decision-making and problem-solving will be assessed through the pyramid, and they will be taken through the steps of the CASVE Cycle.

Two fundamental learning processes lie within the two core constructs represented in the CIP Approach. These processes consist of (a) the development of self-knowledge and
occupational knowledge structures that form the contents and undergirding for career problem solving and decision making and (b) the development of the information transformation skills that take one from the recognition of career problem (a gap) to the implementation of a decision to reduce or eliminate it (Peterson, Sampson, Lenz, & Reardon as cited in Brown & Associates, 2002).

**Usefulness and testability.** Several components of the CIP Approach have contributed to the positive career outcomes of clients such as providing homework assignments, offering resources, and encouraging clients to complete self-research (Osborne, 2014). In this regard, interventions for CIP can be given in either self-help, brief staff-assisted, or individual case-managed methods through a seven-step service delivery sequence. Through these steps, clients develop and execute an Individual Learning Plan (ILP). With the ILP, the counseling practitioner works alongside the client to brainstorm and identify various activities and resources, then select and sequence the resources and activities that were deemed the most promising. Developing and executing the ILP allows the client to monitor and achieve his or her goals for career problem-solving and decision-making (Peterson et al., 2002) Participants involved in this dissertation study had the opportunity to develop and execute their own ILP under the direction of the counselor/investigator.

Since its inception, the CIP has been utilized in and applied to a variety of settings to include but not limited to middle and post-secondary schools, higher education, communities, and career centers. Therefore, several CIP-derived interventions and strategies for service delivery have been utilized in these settings. Some of these strategies include career assessments, counseling, staff training, intervention planning, program development and
evaluation, and employment problem-solving and decision-making (Peterson et al., 2002). For instance, McLennon and Arthur (1999) utilized CIP to address barriers and to provide suggestions for career counseling with women. In another study, Clemens and Milsom (2008) used the CIP theory to help enlisted military service personnel transition into the civilian workforce. Furthermore, Hornyak (2007) utilized the CIP theory to assess the effectiveness of using the DISCOVER career guidance systems on college students who were unsure of their career paths.

**Implications for counselors.** The CIP approach has proven to be a valuable framework for counseling practitioners who want to help their clients become life-long career decision makers. When clients are allowed to take more of an active role in the career decision-making process, they develop skills that will help them to make more well-informed career decisions. Services can be offered through self-help, brief staff-assisted, or individual case-managed methods to fit each client’s individual needs. This has valuable implications for providing counseling for foster care youth who each have unique and individual needs that should be met, especially as it pertains to the educational barriers they may face related to their status in the foster care system. Using the CIP approach would allow counselors to educate foster care youth on how to make well-informed career decisions that they will be able to use regardless of where they are placed and, most importantly, as they age out of the foster care system and need to make important career and post-secondary educational decisions for their future.
Summary

In this review of literature, career and college readiness and the importance of obtaining college knowledge for students from underserved backgrounds was examined from several perspectives. Research findings indicated that these students lack opportunities to both prepare, attend, and apply for post-secondary education institutions. Several factors that have a significant impact on the educational advancement of these individuals were explored. These include socioeconomic status, educational experiences, parental income, parental occupation, and parental education. These students need supportive and knowledgeable adults to guide them through the post-secondary education attainment process.

The literature review focused on foster care youth and the factors impeding their career and college readiness. The American School Counselor Association (ASCA) National Model (2003) and the ASCA National Standards for Students (2004, 2014) were recognized as a viable framework for professional school counselors to deliver direct services to all students, including foster care youth, through a school counseling core curriculum, individual student planning, and responsive services. The ACSCA model was further proposed as a useful framework that can be used by counselors in community and higher education settings given a deficit in applicable frameworks in their counseling fields. Thus, the educational needs of these youth can be met through the leadership of all counselors who are working to enhance the career and college readiness of foster care youth. The present study focused on the use of individual planning for the career and college readiness of adolescents aging out of foster care.
Professional literature regarding foster care youth indicated the educational disparities they experience such as attending schools that do not prepare them for college, school instability, low academic preparation, and lack of support networks. Moreover, little is known about foster care youth’s readiness to engage in college, their developmental needs during their college transition, and ways higher education professionals and the child welfare system can offer assistance. These factors were taken into account when customized individual career and college readiness interventions for foster care youth were created. Related to these findings, this review included two unpublished pilot studies that showed the importance of creating and implementing primary prevention career and college readiness interventions that are useful with all students and the need for knowledgeable adults to administer these interventions.

The Ecological Model of Human Development, Social Cognitive Career Theory (SCCT), and the Cognitive Information Processing Approach (CIP) were presented as the theoretical frameworks of this dissertation study. Counselors can offer foster care youth support in their efforts to develop vocational identities while also understanding and involving the various contexts of their environments examining and possibly using these conceptual frameworks. Career development enhancing interventions developed from both SCCT and the CIP Approach were utilized with the participants of this study and further explained in the method chapter.
CHAPTER 3: METHOD

Research Design

An N=1/ A-B-A single-subject experimental design was used for the present study. Kirk and Day (2011) reported that youth in foster care experience school instability, numerous foster care placements, low academic preparation, and lack of support networks which negatively impact educational expectations despite their aspiration to achieve a post-secondary education. Given these circumstances, foster care youth may experience barriers to learning at varying times, receive little individual educational assistance, and may not be able to commit to activities that require an extensive amount of time. However, Hudson (2013) stated that foster care youth want and need mentoring as they age out of the foster care system. The single-subject experimental design method was used in anticipation of the possibility of a high attrition rate of participants and to provide an individualized one-on-one focus for each participant, given the unique needs of each youth in foster care. The N=1/single-subject experimental design and methods are presented in the following section.

N=1/single-subject experimental design. An N=1/ A-B-A single-subject experimental design was used for this study (Heppner, Wampold, & Kivlighan, 2008). Although single-subject experimental designs are not commonly utilized in counseling research, more opportunities to evaluate issues that occur with clients and counseling practitioners have been made possible due to the availability of advanced statistical software that can be used to evaluate single-subject data (Heppner et al., 2008). This approach provides the potential to understand various topics that are deemed important to the counseling profession that are pertinent in today’s counseling research. For instance, a
special issue of the *Journal of Counseling and Development* (Lenz, 2015) was dedicated to showcasing single-case research designs (SCRDs), which are synonymous with single-subject experimental designs. An article by Lenz (2015) described the benefits and rationale for the use of SCRDs as a practical alternative for counselors, stating that implementing such a design is a “scientifically rigorous, yet flexible approach for estimating the benefit of interventions that can be evaluated across counseling settings” (p. 389). This flexibility would prove to be beneficial for investigators who are conducting studies with foster care youth given the aforementioned barriers these students face on a daily basis.

The single-subject experimental design is used to collect information on a single subject. Each single-subject experimental design consists of a baseline period (A) and a treatment phase (B) (Heppner, et al., 2008). Multiple observations or measurements are normally taken during each of the phases, which is called a time-series format. The participant then serves as his or her own comparison or control. In the present study, volunteer participants engaged in weekly self-monitoring of their career and college readiness self-efficacy. Single-subject experimental designs can also examine the relationship that occurs between two or more variables (Heppner et al., 2008). To assess whether or not any changes occurred as a result of interventions used within single-subject experimental research, the raw data are collected and then plotted on graphs for visual inspections, and inferences are made (Heppner, et al., 2008). Ray (2015) indicated that if a client shows either a decline or no improvement during the A phase but then shows some improvement during the B phase, there is reason to believe that the intervention can be the cause of the improvement.
Common features of the single-subject experimental design are as follows: (a) specification of the treatment goal, (b) repeated measurement of the dependent variable over time, (c) treatment phases, and (d) stability of the baseline data (Heppner et al. 2008). Treatment goals can contain cognitions, affective reactions, physiological responses, behaviors, or personality characteristics (Heppner et al., 2008). These target behaviors serve as the dependent variables of the interventions. Repeated measurement of the dependent variable over time starts at the baseline prior to the initiation of treatment and continues throughout the intervention (e.g., weekly or daily basis). The independent variable is typically the treatment intervention (Heppner et al., 2008). Treatment phases include a different experimental condition for each phase. This often includes a baseline phase (A) and a treatment phase (B) in which the baseline is collected prior to treatment and used as a way to make predictions about performance and to describe one’s current functional state.

Another method used to define time periods is random assignment of the various treatments to different time periods that can be accomplished in days or sessions (Heppner et al., 2008). The final common feature is creating a stable baseline. Without stable baseline data, change will go undetected after the onset of the intervention. Therefore, the investigator must attain a stable and accurate assessment of the dependent variable prior to the start of the intervention (Heppner et al., 2008).

With the common features of the single-subject experimental design in mind, there are different types. These types include: (a) the A-B design (the basic design), (b) the A-B-A design, and (c) the A-B-A-B design (Engel & Schutt, 2013; Heppner et al., 2008). In the present study, the A-B-A design was used. This design consists of a baseline (A), an
intervention (B), and withdrawal of treatment with another baseline (A). The withdrawal phase serves to examine the effect of the intervention after the treatment has been conducted. Multiple observations or measurements are normally taken in a time-series format, and the participant also serves as his or her own comparison or control condition.

In an N=1/A-B-A single-subject design, the baseline is established (A), then the intervention (B) is administered by the investigator who collects measures or observations of the target behaviors multiple times. Then, the treatment is withdrawn while data collection continues (Engel & Schutt, 2013). Next, the investigator plots the raw data on a graph and inferences are made on whether or not any changes occurred as a result of the intervention based on visual, parametric, and non-parametric data (Heppner, et al., 2008). According to Engel and Schutt (2013), the A-B-A design provides more support for the effectiveness of an intervention than the A-B design through both the replication and aggregation of the findings. Furthermore, Ray, Barrio Minton, Schottelkorb, and Garofano Brown (2010) encouraged the use of A-B-A single-subject experimental designs for counseling interventions because of the opportunity to examine one intervention while being able to avoid the residual effects of employing multiple treatments.

Though the minimum sample size of a single-subject experiment design is one participant, most investigators include at least three people to combat against attrition (Lenz, 2015). The strategy for the present study was to gain three participants for the purpose of attrition and to gain a more diverse sample to better assess which particular intervention(s) worked for which participant(s) and enhance generalizability of the findings.
Lenz (2015) explained that this process is important for counselors who may only receive a few referrals at any given time or must provide justification of their work to stakeholders. Participation in activities of foster care youth can be sporadic given common barriers that these individuals face which include a lack of transportation, inconsistent caregiver support, home instability, and/or frequent change in foster homes. Researchers engaging in interventions with foster care youth must take these circumstances into account; therefore, the single-subject experimental design can prove to be an effective method given its focus on individuals and the fact that referrals from social workers occur at varying times.

Lenz (2015) further explained that SCRDs can be used across counseling settings because interventions may be evaluated with unique or diverse populations that may be difficult to contact due to minimal access to these clients. Foster care youth are a high-risk population that are difficult to assess due to social services regulations. Therefore, the flexibility and adaptability of single-subject designs can allow investigators to have access to this population while also being able to respond to individual client needs through tailored interventions.

**Research Questions**

The A-B-A single subject experimental design described above was used in the present study to examine the following research questions:

- What is the effect of the customized individual counseling intervention on the college-knowledge self-efficacy of the participants across the treatment and withdrawal phases?
What is the effect of the customized individual counseling intervention on the positive personal characteristics self-efficacy of the participants across the treatment and withdrawal phases?

What is the effect of the customized individual counseling intervention on the academic competence self-efficacy of the participants across the treatment and withdrawal phases?

What is the effect of the customized individual counseling intervention on the potential to achieve future goals self-efficacy of the participants across the treatment and withdrawal phases?

**Participants**

**Population.** The adolescent participants were recruited from the population residing in a southeastern metropolitan county where the department of social services is located and attended various high schools therein. According to statistics for the county, there were 269 youth served in foster care during April 2014 through March 2015. During this time only 55 out of 217 youth had foster care placement moves toward permanency (fosteringcourtimprovement.org). The total number of youth in care in March 31, 2015 was 191. During April 2014 through March 2015, a majority of the youth in this county were removed from their home to foster care due to neglect with a total of 116 out of 126 youth in care which was at a county rate of 92% and a state rate of 81%. Within this time period, only one youth was reported to have been involved an independent living program (ILP) on the last day in care.
The participants were part of a population that attended a voluntary, state-funded, county-administered program offered through the department of social services. The program provides services for foster care youth, ages 13 to 18, who have aged out of foster care at age 18, and for youth who are voluntarily in foster care between the ages of 18 to 21. The county program provides a life-skills development program designed to help participants transition into adulthood by experiencing success in education, health care, sustainable housing, money management, career development, and overall well-being. Participants were introduced to the life skills program by their social worker and could choose to attend monthly program meetings and/or meet with the program coordinator on an as-needed basis. The program coordinator serves as the youth’s secondary social worker and can provide these youths with numerous resources and contacts that help them to successfully age-out of foster care. There were approximately 50 youth currently in the program, though only about 6-12 youth attend the monthly meetings at any given time.

The demographic breakdown of the county according to Census.gov (2014) indicated that the race/ethnicity of the county is predominantly White, non-Hispanic or Latino (42.2%) and Black or African American (38.6%). The median household income from 2009-2013 was $51,853, and the per capita money income was $29,347. Though the number of persons per household was 2.36, 18.5% of residents in the county live below the poverty line, and there is an unemployment rate of 5.9%. The county is comprised of a female majority population (52.1%), and 22% of persons are under 18 years of age.

According to the state’s department of public instruction, data from the county in which participants live indicate that 296 students in grades 7-13 dropped out of school during
the 2013-2014 school year; 183 students were male, 113 female, 173 Black/African
American, 86 Hispanic, 25 White, and less than 10 students were American Indian, Asian,
Pacific Islander, or Multicultural individuals. Additionally, according to the county’s
department of social services annual report for 2014, 72% of the clients they served were
Black/African American, 15% were White, 3% Hispanic, and 10% were classified as Other.
The report also indicated that 34% of their clients were between the ages of 0-17, and 17%
were between the ages of 18-29.

These data reveal several key points regarding these individuals since youth in foster
care are susceptible to increasingly high dropout rates nationally. The school data also
indicated that the students who identified as Black/African Americans could potentially be a
targeted group for dropout prevention intervention given their majority status within the
county’s drop-out data. Since a majority of Black/African American clients receive services
from the county, the fact that the participants in the present study were not representative
across all racial/ethnic backgrounds was not a surprise.

Sample. Due to time constraints, financial restrictions, and restrictions to accessing
youth in foster care, recruiting a random sample was not possible. A non-random sampling
strategy was used in the present study. The counselor/investigator started the study with four
adolescents who were placed in foster care custody by a department of social services in a
southeastern county. However, after the second individual counseling session, one participant
left the study to move to a neighboring city and subsequently left the foster care system, as
well. Since the participant was 18-years-old, she was legally able to leave without the
consent of a guardian. Participants in the study completed demographic information during
the first intervention session. Participant demographic data are reported in Table 1. To protect their identities, participants were assigned a number of either 1, 2, or 3 when collecting any data.

Table 1

**Demographic Information for Participants**

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<th>Participants</th>
<th>Age</th>
<th>Gender</th>
<th>Race</th>
<th>Grade</th>
<th>Ward of the State?</th>
<th>Grade Point Average</th>
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<tr>
<td>3</td>
<td>17</td>
<td>Female</td>
<td>African American</td>
<td>12</td>
<td>Yes</td>
<td>3.4</td>
</tr>
</tbody>
</table>

**Instrumentation**

**Career and college readiness self-efficacy.** The Career and College Readiness Self-Efficacy Inventory (CCRSI; Baker & Parikh Foxx, 2012) was completed by all participants across the phases of the study. A copy of the CCRSI is found in Appendix B. Career and college readiness was the dependent variable of interest in the present study, and it is defined by the four factors that are presented below. The item content and scoring system of the CCRSI reflect the self-efficacy concept foundations established by Bandura (1997). The inventory is a measure of respondents’ strength of belief in their readiness to begin studies in a career pathway and preparedness for success in entry-level post-secondary education.
settings. The inventory consists of 14 statements, and respondents are directed to choose one of five responses ranging from strongly agree to strongly disagree.

The items in the instrument elicit beliefs about how confident respondents are on a set of behaviors deemed to be important for college and career readiness. Some items represent broad contextual goals (e.g., “I have confidence in being able to live a good life 10 years from now; I believe I have the potential to succeed in the right post-high school education situation”). Other items represent the specific content (e.g., “I know about the various ways to pay for a post-high school education; I know I understand the post-high school education application process”). Each of the responses has a numerical weight ranging from 5=strongly agree to 1= strongly disagree. Individual item scores are added together to acquire a total score. The range of possible scores on the scale is 14 (low) to 70 (high).

Regarding validity estimates, an exploratory factor analysis of the CCRSI identified four factors that accounted for 51% of the variance (Baker et al. 2014). A confirmatory factor analysis suggested support for a four-factor model measuring career and college readiness self-efficacy (Martinez, Baker, & Young, 2016). These four factors are: (a) meeting procedural and financial challenges associated with post-secondary education and future careers, (b) possessing positive personal characteristics that will enhance readiness, (c) believing that one possesses the competencies needed to be successful in the future, and (d) believing that one has the potential to set and achieve future goals. The dependent measures used in the present study were the four CCRSI factors, that is, (a) college knowledge (5 items; scores ranging from 5 to 25), (b) positive personal characteristics (4 items; scores ranging from 4 to 20), (c) academic competence (3 items; scores ranging from 3 to 15), and
(d) potential to achieve future goals (2 items; scores ranging from 2 to 10). Sample items for each of the four factors are as follows: (a) college knowledge (“I know and understand the post-high school education application process”), (b) possessing positive personal characteristics (“There are important influential persons in my life who believe in me”), (c) academic competence (“I know how to prepare for a test successfully”), and (d) potential to set and achieve goals (“I know how post-high school education can help me achieve my life and career goals”). The fourteen items of the CCRSI is located in Appendix C.

Two sets of coefficient alpha internal consistencies reliability analyses were conducted on the CCRSI. One was conducted in the fall 2012 and the second in the fall of 2013. The reliability coefficient for the total instrument from the 2012 sample was $r = .857$, and from the 2013 sample, it was $r = .870$. According to Lee and Lim (2008), coefficient alphas above .70 may be considered as acceptable evidence of internal consistencies reliability. Consequently, the estimates for the total scale appear to be above the acceptable criterion presented by Lee and Lim (2008). Alpha reliability coefficients for the four factors across the two analyses introduced above were as follows: (a) college knowledge (.80 and .76), (b) positive personal characteristics (.69 and .70), (c) academic competence (.75 and .75), and (d) potential to set and achieve future goals (.51 and .46). Except for the fourth factor, the factor coefficients are above or near the cutoff cited by Lee and Lim (2008).

The findings suggested that the CCRSI is potentially a useful assessment instrument for evaluating the effects of customized programmatic interventions designed to influence attitudes of young adolescents toward being constructively focused on careers and post-secondary education beyond high school. Furthermore, the CCRSI may be a useful
assessment tool for counselors engaging in individual and small group career counseling and individual planning with adolescents.

**Social validity measure.** Social validity refers to the social significance of the intervention (Wolf, 1978). According to Hott, Limberg, Ohrt, and Schmit (2015), there are different levels of social validity: (a) relevance of interest to clients and society, (b) feasibility and social importance for the clients, and (c) client satisfaction with the intervention. A synonym for social validity might be clinical significance (Thompson, 2002). Evidence of social validity serves as a quality indicator in single case research designs and needs to be presented clearly in the results section of related studies (Hott et al., 2015).

In the present study, participants completed a self-report measure designed to assess their attitudes about the value of the intervention when it was completed. The Attitude Toward Treatment (ATT; Baker, n.d.) has been used in previous research studies for the same purpose. For instance, the ATT was used in a dissertation study that examined the effects of self-advocacy training within a brief psychoeducational group on the academic motivation of black adolescents (Dowden, 2010). The purpose of the ATT is to assess how confident the participants were about the treatment program at the close of the intervention. The ATT consists of the fourteen 7-point Likert type items with the wording presented in the past tense to assess post-treatment attitudes. The ATT scale ranges from a low of 14 to a high score of 98 (See Appendix D). The ATT provides a measure of the clients’ subjective experiences, and this is considered a common method of measuring social validity (Hott et al., 2015). In addition, the ATT meets the recommendation for assessing social validity via simple questionnaires or objectively scored instruments (Hott et al., 2015).
Customized Individual Career and College Readiness Counseling Intervention Program

In the present study, customized individual counseling interventions were designed to address the participants’ career and college readiness self-efficacy. These customized individual career and college readiness counseling interventions served as the independent variable in the study. The counseling interventions were delivered during a ten-week program that the counselor/investigator developed and named Students That Are Reaching Success (S.T.A.R.S.). S.T.A.R.S. was described to participants as an individualized career and college readiness intervention program that was designed to help adolescents aging out of foster care become self-sufficient adults by recognizing and working toward access to post-secondary education. Previous research studies have described career and post-secondary educational interventions that have enhanced the career decision-making self-efficacy of secondary school students. According to Ali, Yang, Button, and McCoy (2012) career interventions have proven to be effective in aiding adolescents with concerns regarding their career-related decisions.

Hooker and Brand (2010) described the need for college knowledge to ensure that students are able to gain access to post-secondary education. They described college knowledge as students understanding (a) the admission selections process, (b) ways to financially afford post-secondary education, (c) academic requirements for work on the college level, and (d) cultural differences in the respective post-secondary education settings. They further stated that developing college knowledge requires having effective programs in place that influence the educational pathways of students. Additionally, programs that develop college knowledge must include supportive adults who can answer students’
questions about college, assist them with the admissions process, and help them discover ways to finance their post-secondary education.

According to Brown and Ryan Krane (2000) five essential components of a career intervention program effectively enhance career development and exploration for both adolescents and young adults. These components include written exercises, individualized interpretation and feedback of career inventories, information on the world of work, modeling, and attention to building support. Participants in the present study were to gain college knowledge through customized individual career and college readiness counseling interventions administered by a counselor who is knowledgeable about how to successfully achieve access to post-secondary education. The five essential components of a career intervention were utilized when creating and administering the customized counseling interventions for the S.T.A.R.S. program.

The core interventions that were conducted with individual participants also reflected the content of the CCRSI items representing the four factors, including: (a) meeting procedural and financial challenges associated with post-secondary education and future careers (i.e., college knowledge), (b) possessing positive personal characteristics that will enhance readiness, (c) believing that one possesses the competencies needed to be successful in the future, and (d) believing that one has the potential to set and achieve future goals.

Additionally, Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994) was utilized in both the development and evaluation of the customized individual counseling interventions. The SCCT constructs take into account individual internal and environmental factors in the career development process, and the theory posits that support for overcoming
obstacles or barriers to pursue post-secondary educational or vocational plans can be significant predictors of an individual’s career choice behavior. The external factors that many students encounter can have a direct influence on their career self-efficacy beliefs and outcome expectations. Utilizing the SCCT in the development of customized individual counseling interventions was therefore beneficial in helping students develop positive post-secondary aspirations. Moreover, the career resources and handouts that have derived from the Cognitive Information Processing Approach to Career Problem Solving (CIP; Peterson et al. 2002) were also utilized in the customized interventions with individual participants involved in the study. The CIP is designed to help individuals understand the content and process of career decision-making and problem solving, helping individuals enhance their career problem-solving and decision-making skills that will persist throughout their lifetime.

Specifically, the Individual Learning Plan (ILP) component of the CIP was used during the initial individual meeting with each participant to create at least three goals and a set plan of action steps that were mutually agreed upon during individual treatment with the counselor/investigator and followed by the participant. See Appendix E for detailed ILP data. Goals listed on the ILP aligned with the ASCA National Standards for Students where participants created goals that encompassed the model’s three categories, academic, career, and personal/social development. As outlined in the ASCA Model, the counselor/investigator was able to utilize individual student planning as a method to help participants plan, manage, and monitor their learning, develop future plans, and establish personal goals (ASCA, 2012).

Activities listed on the ILP reflected the participants’ post-secondary education and career-related needs based on their CCRSI pre-test scores given the week prior to the
individual meeting. The counselor and participants worked together to identify the purpose of the activities and the desired outcomes from completing them, the estimated time commitment needed to complete the activities, which goal(s) each activity reflected, and the priority order of each activity. The ILPs were reviewed with the participants on a weekly-basis to check their progress toward completing the activities and identifying barriers to accomplishing their established goals.

The Ecological Model of Human Development (Bronfenbrenner, 1979) was used to explore how ecological systems impact the career and college readiness of adolescents in foster care. By examining the interrelations among the microsystems, mesosystems, exosystems, macrosystems, and chronosystems, the investigator was able to gain a better understanding of the entities that have impacted the participant’s opportunities to effectively prepare for life after aging out of the foster care system. Knowing this information helped the counselor/investigator customize useful individual career and college readiness interventions that took each participant’s personal experiences and barriers into account. Furthermore, the systems of each participant were examined to identify support networks that can continue to help participants make appropriate post-secondary and career-related decisions beyond the interventions. If the participant lacked a strong support network, the counselor/investigator then helped the participant develop an impactful support network during treatment.

Customized individual career and college readiness counseling interventions were created by the investigator by utilizing the specific ways to develop college knowledge, the five essential components of a career intervention program, the four factors of the CCRSI, key constructs of SCCT, and resources derived from the CIP. With the Ecological Model of
Human Development in mind, each intervention focused on the individual needs of the participant and was designed to respond to individual deficit areas related to career and college readiness self-efficacy as reflected in participants’ CCRSI pre-test scores collected prior to individual treatments and based on continued assessments during the treatment phase. Using the four factors of the CCRSI, the major components were covered during these customized interventions. Furthermore, the six individual lesson plans that were created based on each participant’s CCRSI pre-assessment score, career and college readiness needs and implemented during the treatment phase are presented in Appendix F. For example, results for participant 2 revealed that she needed the most assistance with college knowledge and enhancing her academic competence self-efficacy. Therefore, the counselor/investigator and participant 2 spent a majority of the six lessons focused on these two factors by engaging in post-secondary school and academic major exploration, exploring the college application process, exploring ways to pay for post-secondary education, and reviewing effective time management and study skills strategies.

Explicating the foundations of the customized intervention program enhances the fidelity of the treatment (Hott, Limburg, Ohrt, & Schmit, 2015). The information presented above provided specifics about the content of the customized intervention, offered an operationalized definition, and identified the independent variable clearly. An additional step toward achieving fidelity was to assess treatment integrity during the intervention itself. This topic will be covered in the data collection section of the chapter.
Counselor

The counselor was a 30-year-old African American woman enrolled in a counseling and counselor education doctoral program at a southeastern university. She was the principal investigator, developed and presented the intervention, and collected and analyzed the data. The counselor/investigator holds a Bachelor of Science degree in Psychology with a minor in Women’s Studies and a Master of Education degree in School Counseling. She is Licensed Professional Counselor, a National Certified Counselor, and a National Board for Certified Counselors (NBCC) Minority Fellowship Program (MFP) Doctoral Fellow who has professional experiences in the areas of college access, outpatient therapy, higher education, and transitional living. Within these areas, the counselor/investigator has worked with children and adolescents predominantly from underserved backgrounds with a significant number of these clients being in the foster care system.

The counselor/investigator has engaged in a literature search on the role of school counselors in the career and college readiness of foster care youth from an ecological systems theory approach from which she produced an in-press conceptual journal article. She was also involved in the development and execution of a primary prevention career and college readiness intervention program with 9th grade students at a magnet high school in a southeastern city. Furthermore, the counselor/investigator assisted in the development of the CCRSI, which was utilized in the aforementioned program. Therefore, she was in agreement with the constructs represented in the independent and dependent variables for the current study because they are modeled after the four factors of the CCRSI. The
counselor/investigator solicited the assistance of the program coordinator of the state-funded, county-administered program offered through the department of social services to gain participants, communicate with the participants’ legal guardians, and to establish the meeting spaces where the experiment took place.

Procedure

**Recruiting participants.** The counselor/investigator began by hosting a recruitment session to obtain student participants for the study (week one). The session was held during the regular monthly meeting time of the DSS-sponsored program that the investigator partnered with. During the session, the purpose of the study, what participants will gain from the study, general topics that will be covered during individual counseling sessions, expectations of participants, and the length of the experiment were shared. Participants were informed that they would be offered a small incentive if they participated throughout the entire duration of the experiment (nine weeks).

The counselor/investigator disseminated copies of the participant consent form to the students and gave copies of the guardian consent form to the program coordinator who then disseminated the form to the students’ social workers (See Appendix A). All students who were interested in participating signed and returned the participant consent form, and their social workers signed and returned the guardian consent form. The investigator worked with the program coordinator to successfully accomplish this goal which also included contacting the foster parent(s) to discuss the purpose of the study and their involvement (i.e., agreeing for the student to participate and supporting their transportation needs).
The investigator then disseminated a sign-up sheet with potential meeting dates so interested participants could choose the time they preferred to meet with the counselor for their initial individual session. By the end of the week, the investigator collected the consent forms that were turned in to the program coordinator by the social workers.

**Data collection.** An N=1/A-B-A single subject experimental design was used for this study. For those students who had both the participant and guardian consent forms returned, the investigator had each participant take the CCRSI as a pre-test measure prior to the initial session that served as the first baseline (week 1, baseline A1). Participants took the CCRSI via Qualtrics software through which an electronic link to the inventory was sent to participants by the counselor/investigator. Completing this measure helped the counselor/investigator create an initial plan that focused on the participant’s career and college readiness self-efficacy prior to the treatment intervention. The counselor/investigator developed a self-monitoring guide for each participant consisting of the dates for completing the CCRSI and instructed the participants to complete the CCRSI on those dates during the week preceding the first intervention session (week 2, baseline A1). The purpose of this request was to collect sufficient data for the baseline phase during a reasonable period of time for the participants to be engaged in self-monitoring while not engaged in the intervention. A similar self-monitoring guide was developed for the two-week withdrawal phase. A copy of the self-monitoring guide is found in Appendix F.

The following week, the investigator met with each participant individually during the treatment phase (weeks three-eight, treatment phase B). During the first session, the investigator and the participant got acquainted with one another, and the participants were
asked to complete a demographic survey. The investigator reviewed the participant’s results on the pre-CCRSI. Following the review of CCRSI results, the investigator introduced the Individual Learning Plan (ILP) to the participants and explained its purpose. After assessing the areas of need related to the CCRSI data, the investigator and participants worked together to create goals and action steps for enhancing the participant’s career and college readiness self-efficacy. This information was written on the ILPs and reviewed during each session of the treatment phase. At the end of the sessions, the participants completed the CCRSI as the first data point in the treatment phase. All CCRSI factor scores were plotted on a line graph weekly for each individual participant throughout the study. The dependent variables (i.e., CCRSI factors) were plotted on the ordinate or y-axis, and the temporal variables were plotted on the abscissa or x-axis of the graphs.

During the treatment phase, the counselor met with each participant for up to one-hour weekly. Customized individual counseling interventions were used to enhance participants’ career and college readiness self-efficacy using the goals on the ILP as a guide to treatment. Each intervention was designed to facilitate the individual needs of the participants while also incorporating the four factors of the CCRSI. At the end of each session during the treatment phase, the participants took the CCRSI electronically via Qualtrics. Participants then completed the CCRSI once electronically on their own personally selected days of the week after each weekly session of the treatment phase.

Following the treatment phase, the investigator conducted a two-week follow-up to treatment (weeks 9-10, withdrawal phase A2). During this time, participants completed the CCRSI four times over the course of two weeks to monitor possible changes in scores after
the treatment had been withdrawn. The CCRSI data were collected by the investigator via a Qualtrics survey, and the scores were once again plotted as data points on the participant’s graph. To end the experiment, the investigator thanked participants for being involved in the study and presented all those who participated throughout the entire experiment with a dinner, a certificate of completion, and a gift card.

Figure 1. Schedule of data collection

**Data analysis.** Visual and non-parametric data analyses were used in the present study. Visual analysis is the traditional method, using graphic data for each experiment and for the set of experiments (Hott et al., 2015). Non-parametric data provided information about the degree of intervention effects (Hott et al., 2015).
**Visual analysis.** As indicated above, the time series data were plotted graphically on y (dependent variable) and x (temporal variable) axes for each individual on each of the four CCRSI factors. Autocorrelation and trend were addressed in the visual analysis across the baseline and intervention phases. Descriptive statistics were calculated for the four factors for each of participants during each phase.

The Robust Conservative Dual-Criteria (RCDC) method was used as a statistical analysis tool (Borckardt, 2008). In cases of a significant trend and autocorrelation, Conservative Dual-Criteria (CDC) is used (Fisher, Kelley, & Lomas, 2003; Swoboda, Kratochwill, & Levin, 2010). However, in the present study, the additional complexity of outliers required the use of the RCDC instead. With RCDC, a significance threshold is determined based on the mean and regression lines of the comparison phase and the number of observations in the comparison phase. The goal is to determine if there is a significant increase in the behavior. A significant result occurs when the actual account is equal to or greater than the threshold.

**Assessing intervention effects.** Effect size (ES) is a “quantitative index that estimates the meaningfulness of change associated with the intervention” (Vannest & Ninci, 2015, p. 403). Providing effect sizes in addition to visual analyses enhances the credibility, reliability, and defensibility of the findings (Vannest & Ninci, 2015). Since the ABA design controlled for threats to internal validity, and validity and reliability for the dependent measure had been established, calculating the effect size was acceptable in the present study.

A perusal of several single-case design studies published in the October 2015 issue of the *Journal of Counseling & Development* indicated that several different methods for
estimating effect sizes are available, and all of the studies were published. However, the G-index was utilized in the current study due to the autocorrelation in the baseline phase and the significant trend in the treatment phase of the intervention (Cohen, 1988). The G-index utilizes the regression, mean, and median from the baseline. Due to the trend identified in the treatment phase, the regression method was used. The G-index is calculated using the proportion of scores in the desired zone above the regression line. The desired zone is above the regression line due to an expected increase in score from the baseline to treatment phase. The baseline average is then subtracted from the intervention average. A positive value indicates an improvement in score. Conversely, a negative value indicates a decrease in improvement.

Most of the effect sizes result in a common standardized metric that is similar to effect sizes used in parametric data analyses. Challenges that need to be addressed when determining effect sizes include short baseline phases, ability to discriminate between differences in high and low ranges (ceiling effect), outlier scores, adequately addressing trends, and lack of sensitivity to treatment effect (Vannest & Ninci, 2015). Suggested criteria for interpreting effect sizes are provided in the professional literature. For G-index, the effect sizes can be interpreted as small (0.1-0.3), medium (0.31-0.50), or large (>0.51).

Effect sizes are metrics that need to be considered in conjunction with other factors such as previous effect sizes related to the interventions of interest or to the population of interest and reasonable expectations related to conditions associated with the setting, population, and other conditions. For example, foster care youth are considered high risk for a number of reasons, and motivating them to accept the goals of the present study, participate
regularly, and provide the self-monitoring data was a little challenging. Consequently, a small effect may turn out to be significant.

*Establishing credibility.* The counselor/investigator documented all unforeseen changes in the participant’s circumstances and behaviors that may have influenced the findings and all changes in the setting where the interventions were occurring that may have also influenced the findings. Doing so enhanced the control of threats to the internal validity of the study (Hott et al., 2015). These findings will be incorporated into the discussion of the findings.

**Summary**

The methodology of the study was presented in this chapter. The research design, participants, research questions, instrumentation, customized intervention, and data collection and analysis procedures were explicated. Specific customized interventions that were conducted with each participant during the treatment phase are included in the Appendix F.
CHAPTER 4: RESULTS

The purpose of this study was to examine the effects of customized individual counseling interventions on the career and college readiness of adolescents within foster care. An individual career and college readiness counseling intervention program was created entitled, *Students That Are Reaching Success (S.T.A.R.S.)*. The three adolescents who participated in S.T.A.R.S. were in foster care custody by a department of social services in a southeastern county. An N=1/ A-B-A single-subject experimental design was used for the present study. The Career and College Readiness Self-Efficacy Inventory (CCRSI) was given to all participants throughout the intervention as a method for data collection. Data from the baseline (A1), treatment (B), and withdrawal (A2) phases were analyzed via an R software package used for analyzing single-subject data (Auerbach & Zeitlin, 2014). Descriptive data were presented. Autocorrelations were also calculated for each phase of each factor of the intervention for each participant. A regression analysis was used to determine if there was significant trend in any phase for each factor of the intervention. Furthermore, the Robust Conservative Dual-Criteria (RCDC) method was used as a statistical analysis tool (Borckardt, 2008). The G-index statistic was used to calculate effect size (Cohen, 1988).

A visual analysis was conducted from the data for the three participants in the form of line graphs and regression plot graphs. A summary table was also included to summarize the data results of each participant. The results of the Attitude Toward Treatment (ATT) social validity measure that was given to each of the three participants at the conclusion of the treatment phase were presented. Furthermore, the fidelity of treatment was discussed, and unforeseen participant and setting changes were both documented and discussed.
Total CCRSI Scores

Total scores for the pre- and post-Career and College Readiness Self-Efficacy Inventory (CCRSI; Baker & Parikh Foxx, 2012) scores were recorded based on the first and last electronic CCRSI that participants were asked to take. Scores on the CCRSI ranged from a lowest score of 14 to a highest score of 70. On the Pre-CCRSI, participant 1 scored a 67, participant 2 scored a 52, and participant 3 scored a 50, which indicated that participant 3 began with the lowest baseline score. On the Post-CCRSI, participants 1 and 2 scored a 70 (the highest possible score), while participant 3 scored a 64. Table 2 shows the results of the Pre- and Post- CCRSI for all three participants.

Table 2

Pre- and Post-CCRSI Scores

<table>
<thead>
<tr>
<th>Participant</th>
<th>Pre-CCRSI Total Score</th>
<th>Post-CCRSI Total Score</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>67</td>
<td>70</td>
</tr>
<tr>
<td>2</td>
<td>52</td>
<td>70</td>
</tr>
<tr>
<td>3</td>
<td>50</td>
<td>64</td>
</tr>
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</table>

Descriptive Statistics

Descriptive statistics of central tendency and spread were computed for each of the participants. As shown in Tables 2 and 3, participant 1 had very little variation within each phase for each of the 4 factors. There were consistent means and medians across all phases of the study. The standard deviation measures were very close to 0, indicating a lack of variation. The lack of variation was further confirmed by the small range and interquartile
range for each factor in each phase. As shown in Tables 4 and 5, there was a great deal of variation within each phase for each factor for participant 2. There were also four outlier responses for participant 2. The outliers contribute to a large difference between the mean and medians of each phase for each factor as well as the large standard deviations. As shown in Tables 6 and 7 for participant 3, the variability within each phase across the four factors was unremarkable. There were no clear outliers as indicated by the close proximity of the means and medians of the scores within each phase for each factor.

Table 3

**Descriptive Statistics for Participant 1**

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<tbody>
<tr>
<td>College Knowledge</td>
<td>4</td>
<td>12</td>
<td>4</td>
<td>24.75</td>
<td>15.00</td>
<td>25.00</td>
<td>25.00</td>
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</tr>
<tr>
<td>Positive Personal Characteristics</td>
<td>4</td>
<td>12</td>
<td>4</td>
<td>20.000</td>
<td>19.917</td>
<td>20.000</td>
<td>20.000</td>
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<tr>
<td>Academic Competence Potential Achieve Future Goals</td>
<td>4</td>
<td>12</td>
<td>4</td>
<td>13.0</td>
<td>14.5</td>
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<td>0.000</td>
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<tr>
<td>All Factors</td>
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<td>67.750</td>
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</table>

**Note.** Descriptive Statistics include number of observations in phase, mean, 10% trim mean (for use in the case of outliers), median, standard deviation, and coefficient of variation. Shows a lack of variability in all phases and factors.
Table 4

Descriptive Statistics for Participant 1 Continued

<table>
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<tr>
<th></th>
<th>Range (min, max)</th>
<th>IQR</th>
<th>Quartiles 0%</th>
<th>Quartiles 25%</th>
<th>Quartiles 50%</th>
<th>Quartiles 75%</th>
<th>Quartiles 100%</th>
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</thead>
<tbody>
<tr>
<td>College Knowledge</td>
<td>(24.25, 25.25)</td>
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<td>0.00</td>
<td>24.25</td>
<td>25.25</td>
<td>25.25</td>
<td>25.25</td>
</tr>
<tr>
<td>Positive Personal Characteristics</td>
<td>(13.13, 15.13)</td>
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<td>13</td>
<td>13</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>(10.10, 10.10)</td>
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<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
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<tr>
<td>Potential to Achieve Future Goals</td>
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<td>0.25</td>
<td>57</td>
<td>68</td>
<td>70</td>
<td>67.75</td>
<td>69.00</td>
</tr>
<tr>
<td>A, B, AB Factors</td>
<td>(57.50, 57.70)</td>
<td>0.25</td>
<td>57</td>
<td>68</td>
<td>70</td>
<td>67.75</td>
<td>69.00</td>
</tr>
</tbody>
</table>

Note. Additional measures of spread are included. The Interquartile Range (IQR) was 1 or less for each of the factors. No significant change is expected for participant 1 based on the descriptive statistics.

Table 5

Descriptive Statistics for Participant 2

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>IQR</th>
<th>Trim Mean</th>
<th>Median</th>
<th>SD</th>
<th>CV</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Knowledge</td>
<td>4</td>
<td>12</td>
<td>13.40</td>
<td>17.167</td>
<td>17.6</td>
<td>25.0</td>
<td>17.6</td>
</tr>
<tr>
<td>Positive Personal</td>
<td>4</td>
<td>12</td>
<td>15.41</td>
<td>15.25</td>
<td>15.10</td>
<td>20.00</td>
<td>15.10</td>
</tr>
<tr>
<td>Characteristics</td>
<td>4</td>
<td>12</td>
<td>14.00</td>
<td>9.75</td>
<td>9.75</td>
<td>10.00</td>
<td>9.75</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>4</td>
<td>12</td>
<td>12.00</td>
<td>8.00</td>
<td>8.75</td>
<td>10.00</td>
<td>8.75</td>
</tr>
<tr>
<td>Potential to Achieve</td>
<td>4</td>
<td>12</td>
<td>12.00</td>
<td>14.25</td>
<td>14.25</td>
<td>15.00</td>
<td>14.25</td>
</tr>
<tr>
<td>Future Goals</td>
<td>4</td>
<td>12</td>
<td>12.00</td>
<td>9.75</td>
<td>9.75</td>
<td>10.00</td>
<td>9.75</td>
</tr>
<tr>
<td>A, B, AB Factors</td>
<td>4</td>
<td>12</td>
<td>13.40</td>
<td>17.167</td>
<td>17.6</td>
<td>25.0</td>
<td>17.6</td>
</tr>
</tbody>
</table>

Note. Descriptive Statistics include number of observations in phase, mean, 10% trim mean (for use in the case of outliers), median, standard deviation, and coefficient of variation. As shown in the visual analysis, there is a great deal of variation within each of the phases for each of the factors. The visual analysis shows four outlier responses for Participant 2 that were consistent throughout the survey. These outliers contribute to a large difference between the mean and medians of each phase for each factor as well as the large standard deviations.
Table 6

Descriptive Statistics for Participant 2 Continued

<table>
<thead>
<tr>
<th></th>
<th>Range (min, max)</th>
<th>IQR</th>
<th>Quantiles: 0%</th>
<th>Quantiles: 25%</th>
<th>Quantiles: 50%</th>
<th>Quantiles: 75%</th>
<th>Quantiles: 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Knowledge</td>
<td>A1 (11,17)</td>
<td>5</td>
<td>15</td>
<td>11</td>
<td>11.75</td>
<td>12.30</td>
<td>13.15</td>
</tr>
<tr>
<td>Positive Personal Characteristics</td>
<td>A2 (25,25)</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15.75</td>
<td>16.00</td>
<td>16.00</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>A1 (15,17)</td>
<td>5</td>
<td>15</td>
<td>15</td>
<td>15.75</td>
<td>16.00</td>
<td>16.00</td>
</tr>
<tr>
<td>Potential to Achieve Future Goals</td>
<td>A2 (25,25)</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15.75</td>
<td>16.00</td>
<td>16.00</td>
</tr>
<tr>
<td>All Factors</td>
<td>A1 (15,17)</td>
<td>5</td>
<td>15</td>
<td>15</td>
<td>15.75</td>
<td>16.00</td>
<td>16.00</td>
</tr>
</tbody>
</table>

Note. Additional measures of spread are included. As shown in the visual analysis, there is a great deal of variation within each of the phases for each of the factors. The large range in the treatment phase is indicative of the outliers in the treatment phase for Participant 2.

Table 7

Descriptive Statistics for Participant 3

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>10% Trim Mean</th>
<th>Median</th>
<th>SD</th>
<th>CV</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Knowledge</td>
<td>4</td>
<td>12</td>
<td>17.00</td>
<td>21.333</td>
<td>23.750</td>
<td>17.00</td>
</tr>
<tr>
<td>Positive Personal Characteristics</td>
<td>4</td>
<td>12</td>
<td>14.50</td>
<td>17.83</td>
<td>18.25</td>
<td>14.50</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>4</td>
<td>12</td>
<td>9.25</td>
<td>9.583</td>
<td>10.00</td>
<td>9.25</td>
</tr>
<tr>
<td>Potential to Achieve Future Goals</td>
<td>4</td>
<td>12</td>
<td>51.000</td>
<td>61.833</td>
<td>65.500</td>
<td>51.0</td>
</tr>
<tr>
<td>All Factors</td>
<td>4</td>
<td>12</td>
<td>51.000</td>
<td>61.833</td>
<td>65.500</td>
<td>51.0</td>
</tr>
</tbody>
</table>

Note. Descriptive statistics include number of observations in phase, mean, 10% trim mean (for use in the case of outliers), median, standard deviation, and coefficient of variation. The visual analysis indicated some variability in the responses of Participant 3; however, the variation was not indicative of outliers as the means and medians are similar.
Table 8

Descriptive Statistics for Participant 3 Continued

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>14.19</td>
<td>18.04</td>
<td>14.02</td>
<td>15.50</td>
<td>12.75</td>
<td>14.00</td>
<td>14.00</td>
<td>14.00</td>
<td>14.00</td>
<td>14.00</td>
<td>14.00</td>
<td>14.00</td>
<td>14.00</td>
<td>14.00</td>
<td>14.00</td>
<td>14.00</td>
<td>14.00</td>
<td>14.00</td>
</tr>
<tr>
<td>A2</td>
<td>3.6</td>
<td>4.2</td>
<td>2.0</td>
<td>4.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Note. Additional measures of spread are included. The responses of participant 3 were relatively normally distributed for each factor in each phase.

**Autocorrelations**

Autocorrelations were calculated for each phase of each factor of the intervention for each participant. Autocorrelation is important in determining if each observation within each phase and factor of the study is independent, a key assumption for parametric analysis methods. It is important that data observations are not correlated or predicted based on each other (Bloom, Fischer, & Orme, 2006). Autocorrelation in combination with variability in the baseline phase can contribute to increased Type I error rates. This was of particular concern for participant 2 where there was significant variation. Tables 8, 9, and 10 show the autocorrelation results for each participant within each phase across the four factors. Several N/As are indicative of the lack of variation for participant 1 and throughout the withdrawal phase for the three participants.
There was significant autocorrelation in the treatment phase of participant 3. There was also significant autocorrelation for academic competence for participant 1 in the treatment phase and participant 3 in the withdrawal phase. However, no transformations were performed to correct for the autocorrelation as other factors dictated the use of nonparametric analysis methods. It is important to note that due to the small number of observations in this study, to obtain statistical significance, all values less than 0.20 were considered as significant as opposed to the standard 0.05 (Bloom, Fischer, & Orme, 2006).

Table 9

Autocorrelation Table for Participant 1

<table>
<thead>
<tr>
<th></th>
<th>Baseline (A1)</th>
<th>Treatment (B)</th>
<th>Withdrawal (A2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R²</td>
<td>Significance</td>
<td>Auto correlated?</td>
</tr>
<tr>
<td>College Knowledge</td>
<td>0.889</td>
<td>0.45</td>
<td>No</td>
</tr>
<tr>
<td>Positive Personal</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Characteristics</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Potential to</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Achieve Future Goals</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Note. No transformations were completed due to the lack of significant autocorrelation in the baseline (A1) phase. However, nonparametric statistical analysis was performed. Autocorrelation in the treatment phase was overcome by the use of nonparametric statistical analysis.
Table 10

**Autocorrelation Table for Participant 2**

<table>
<thead>
<tr>
<th></th>
<th>Baseline (A1)</th>
<th>Treatment (B)</th>
<th>Withdrawal (A2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R²</td>
<td>Significance</td>
<td>Auto</td>
</tr>
<tr>
<td>College Knowledge</td>
<td>0.424</td>
<td>0.727</td>
<td>NO</td>
</tr>
<tr>
<td>Positive Personal</td>
<td>-</td>
<td>0.45</td>
<td>NO</td>
</tr>
<tr>
<td>Characteristics</td>
<td>0.889</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Competence</td>
<td>-</td>
<td>0.45</td>
<td>NO</td>
</tr>
<tr>
<td>Potential to Achieve</td>
<td>0.889</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future Goals</td>
<td>-</td>
<td>0.68</td>
<td>NO</td>
</tr>
<tr>
<td>All Factors</td>
<td>-</td>
<td>0.499</td>
<td></td>
</tr>
</tbody>
</table>

**Note.** Values less than 0.20 were considered significant due to the small number of observations in the treatment (B) phase. No transformations were completed due to the lack of significant autocorrelation in the baseline phase. However, nonparametric statistical analysis was performed.

Table 11

**Autocorrelation Table for Participant 3**

<table>
<thead>
<tr>
<th></th>
<th>Baseline (A1)</th>
<th>Treatment (B)</th>
<th>Withdrawal (A2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R²</td>
<td>Significance</td>
<td>Auto</td>
</tr>
<tr>
<td>College Knowledge</td>
<td>0.519</td>
<td>0.668</td>
<td>NO</td>
</tr>
<tr>
<td>Positive Personal</td>
<td>0</td>
<td>1</td>
<td>NO</td>
</tr>
<tr>
<td>Characteristics</td>
<td>0.242</td>
<td>0.843</td>
<td>NO</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>0.242</td>
<td>0.843</td>
<td>NO</td>
</tr>
<tr>
<td>Potential to Achieve</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future Goals</td>
<td>1.13</td>
<td>0</td>
<td>YES</td>
</tr>
</tbody>
</table>

**Note.** Values less than 0.20 were considered significant due to the small number of observations in the treatment phase. No transformations were completed due to the lack of significant autocorrelation in the baseline (A1) phase. However, nonparametric statistical analysis was performed. While there was significant autocorrelation in the treatment (B) phase, the conditions of a nonparametric statistical analysis were still met.

**Regression Results**

A regression analysis was used to determine if there was significant trend in any phase for each factor of the study. If there is a significant trend in any phase, measures of central tendency lack the ability to accurately assess the typical response. Therefore, if a
significant trend is present, standard parametric methods cannot be used. Tables 11, 12, and 13 display the results of regression analysis within each phase across the four factors. A desirable significant trend indicates that there is a significant increase in score in the desired direction (i.e. increasing slope). An undesirable significant trend indicates a significant slope but in an undesirable direction (i.e. decreasing slope). In this regard, there was a significant trend within the treatment phase of participants 1, 2, and 3 as indicated by the significant regression values. Though there was a significant slope indicating an increase or improvement in scores, the significant trend requires the use of non-traditional analysis methods. As noted in the summary table for participant 2, there was an undesirable significant trend. This was due to the outliers that were present within the data for participant 2. If the outliers were to be removed from the data set, there would be a desirable significant trend because the values would increase.

Table 12

Regression Results for Participant 1

<table>
<thead>
<tr>
<th></th>
<th>Baseline (A1)</th>
<th>Treatment (B)</th>
<th>Withdrawal (A2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R²</td>
<td>Slope</td>
<td>p-value</td>
</tr>
<tr>
<td>College Knowledge</td>
<td>0.6</td>
<td>0.3000</td>
<td>0.23540</td>
</tr>
<tr>
<td>Positive Personal Characteristics</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>NA</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>Potential to Achieve Future Goals</td>
<td>NA</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>All Factors</td>
<td>0.6</td>
<td>0.3000</td>
<td>0.225</td>
</tr>
</tbody>
</table>

*Note. There was significant trend for the treatment (B) phase for academic competence and all factors at the α=0.05 significance level. Due to the trend in academic competence, a traditional t-test or ANOVA (parametric) analysis was not appropriate. The strong positive slope of academic competence suggests that the participant’s academic competence increased steadily during the treatment (B) phase of the study. Significance Level: *0.05, **0.005, ***0.0005.*
Table 13

Regression Results for Participant 2

<table>
<thead>
<tr>
<th></th>
<th>Baseline (A1)</th>
<th>Treatment (B)</th>
<th>Withdrawal (A2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$R^2$</td>
<td>Slope</td>
<td>p-value</td>
</tr>
<tr>
<td>College Knowledge</td>
<td>0.1455</td>
<td>-0.800</td>
<td>0.6186</td>
</tr>
<tr>
<td>Positive Personal Characteristics</td>
<td>0.06667</td>
<td>-0.1000</td>
<td>0.74180</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>0.06667</td>
<td>-0.1000</td>
<td>0.74180</td>
</tr>
<tr>
<td>Potential to Achieve Future Goals</td>
<td>0.06667</td>
<td>0.1000</td>
<td>0.74180</td>
</tr>
<tr>
<td>All Factors</td>
<td>0.1317</td>
<td>-0.900</td>
<td>0.63708</td>
</tr>
</tbody>
</table>

Note. There was an undesirable significant trend for the Treatment (B) phase for all factors except college knowledge and all factors at the $\alpha=0.05$ significance level. Due to the small number of measurements it is possible that all factors would also be significant in a larger/longer study. Due to the indicated trends, a traditional t-test or ANOVA (parametric) analysis was not appropriate.

Significance Level: *0.05, **0.005, ***0.0005.

Table 14

Regression Results for Participant 3

<table>
<thead>
<tr>
<th></th>
<th>Baseline (A1)</th>
<th>Treatment (B)</th>
<th>Withdrawal (A2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$R^2$</td>
<td>Slope</td>
<td>p-value</td>
</tr>
<tr>
<td>College Knowledge</td>
<td>0.5444</td>
<td>1.4000</td>
<td>0.2621</td>
</tr>
<tr>
<td>Positive Personal Characteristics</td>
<td>0</td>
<td>-3.476e-16</td>
<td>1.0000</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>0.1636</td>
<td>-3.000</td>
<td>0.595</td>
</tr>
<tr>
<td>Potential to Achieve Future Goals</td>
<td>0.4545</td>
<td>-5.000</td>
<td>0.3258</td>
</tr>
<tr>
<td>All Factors</td>
<td>0.0812</td>
<td>0.600</td>
<td>0.71396</td>
</tr>
</tbody>
</table>

Note. There was a significant trend for the treatment (B) phase for all factors except potential to achieve future goals at the $\alpha=0.05$ significance level. Due to the small number of measurements it is possible that potential to achieve future goals would also be significant in a larger/longer study. Due to the indicated trends, a traditional T-test or ANOVA (parametric) analysis was not appropriate.

Significance Level: *0.05, **0.005, ***0.0005.

Robust Conservative Dual-Criteria (RCDC)

Due to the significant trend and autocorrelation in several phases across several factors, the Robust Conservative Dual-Criteria (RCDC) Method was used as a statistical analysis tool (Borckardt, 2008). In cases of a significant trend and autocorrelation, Conservative Dual-Criteria (CDC) is used (Fisher, et al., 2003; Swoboda et al., 2010).
However, in this study the additional complexity of outliers required the use of the RCDC instead. With RCDC a significance threshold is determined based on the mean and regression lines of the comparison phase and the number of observations in the comparison phase. Here, the goal is to determine if there was a significant increase in the behavior. A significant result occurs when the actual account is equal to or greater than the significant threshold. The RCDC was computed across all phases for each factor and each participant, and results are reported for all phase comparisons. Results for each participated are recorded in tables 14, 15, and 16. However, due to small number of observations in the baseline phase (4 per participant) and withdrawal phase (4 per participant), the key findings were described for the baseline to treatment analysis. For participant 1, there were significant score improvements for academic competence. For participant 2, there were significant score improvements for college knowledge, academic competence, and all factors. For participant 3, significant score improvements were seen for positive personal characteristics, academic competence, and all factors.

Table 15

Robust Conservative Dual-Criteria (RCDC) for Participant 1

<table>
<thead>
<tr>
<th></th>
<th>Baseline/Treatment</th>
<th>Baseline/Withdrawal</th>
<th>Treatment/Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Significance</td>
<td>Actual Count</td>
<td>Significance</td>
</tr>
<tr>
<td>College Knowledge</td>
<td>9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Positive Personal</td>
<td>9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Characteristics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Competence</td>
<td>9</td>
<td>*11</td>
<td>0</td>
</tr>
<tr>
<td>Potential to Achieve</td>
<td>9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Future Goals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Factors</td>
<td>9</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Note. For participant 1 there was a significant increase in academic competence during the baseline to treatment phase.
Table 16

**Robust Conservative Dual-Criteria (RCDC) for Participant 2**

<table>
<thead>
<tr>
<th></th>
<th>Baseline/Treatment</th>
<th>Baseline/Withdrawal</th>
<th>Treatment/Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Significance</td>
<td>Actual Count</td>
<td>Significance</td>
</tr>
<tr>
<td>College Knowledge</td>
<td>9</td>
<td>*9</td>
<td>0</td>
</tr>
<tr>
<td>Positive Personal Characteristics</td>
<td>9</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>9</td>
<td>*9</td>
<td>0</td>
</tr>
<tr>
<td>Potential to Achieve Future Goals</td>
<td>9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>All Factors</td>
<td>9</td>
<td>*9</td>
<td>0</td>
</tr>
</tbody>
</table>

*Note.* For participant 2 there was a significant increase in college knowledge, academic competence, and all factors during the baseline treatment phase.

Table 17

**Robust Conservative Dual-Criteria (RCDC) for Participant 3**

<table>
<thead>
<tr>
<th></th>
<th>Baseline/Treatment</th>
<th>Baseline/Withdrawal</th>
<th>Treatment/Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Significance</td>
<td>Actual Count</td>
<td>Significance</td>
</tr>
<tr>
<td>College Knowledge</td>
<td>9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Positive Personal Characteristics</td>
<td>9</td>
<td>*12</td>
<td>0</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>9</td>
<td>*12</td>
<td>0</td>
</tr>
<tr>
<td>Potential to Achieve Future Goals</td>
<td>9</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>All Factors</td>
<td>9</td>
<td>*12</td>
<td>0</td>
</tr>
</tbody>
</table>

*Note.* For participant 3 there was a significant increase in positive personal characteristics, academic competence, and all factors during baseline the treatment phase.

**G-Index/ Median Effect Sizes**

There are many ways to calculate effect size; however, other methods have two main assumptions (a) independence between data points (i.e. no autocorrelation) and (b) normality. These assumptions were not met by this dataset. Due to the significant autocorrelation, small sample size, and significant trend in the various phases, G-index was used to calculate effect
size (Cohen, 1988). The G-index compares regression lines across the two phases of interest. The effect size determination for G-index is: small effect size (0.1-0.3), medium effect size (0.31-0.5), and large effect size (>0.51). Tables 17, 18, and 19 display the G-index results for the three participants. Of note is that the sign of the effect size was important in the interpretation of the results. While a large effect size may indicate a change, a negative value indicates a decrease in score. Here the results of the baseline to treatment phase are described. For Participant 1, there was a large effect size for academic competence as supported by the significant improvement in academic competence during the intervention. For participant 2, a large to medium effect size was seen for all factors except for potential to achieve future goals. There was a large to medium effect size for all factors of Participant 3.

Results for baseline to withdrawal and treatment to withdrawal is present in table form, but not discussed as the effect size of most importance is in the baseline to treatment.

Table 18

*G-index Effect Sizes for Participant 1*

<table>
<thead>
<tr>
<th></th>
<th>Baseline/Treatment</th>
<th>Baseline/Withdrawal</th>
<th>Treatment/Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Knowledge</td>
<td>G-index 0.5, Medium</td>
<td>G-index -0.5, Medium</td>
<td>G-index 0.75, Large</td>
</tr>
<tr>
<td>Positive Personal Characteristics</td>
<td>0, NA</td>
<td>0, NA</td>
<td>0.083, NA</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>0.917, Large</td>
<td>1, Large</td>
<td>-0.5, Medium</td>
</tr>
<tr>
<td>Potential to Achieve Future Goals</td>
<td>0, NA</td>
<td>0, NA</td>
<td>0.083, NA</td>
</tr>
<tr>
<td>All Factors</td>
<td>-0.417, Medium</td>
<td>0.5, Medium</td>
<td>-0.667, Medium</td>
</tr>
</tbody>
</table>

*Note.* Grayed values indicated significant effect size in an undesirable direction.
Table 19

**G-index Effect Sizes for Participant 2**

<table>
<thead>
<tr>
<th></th>
<th>Baseline/Treatment</th>
<th>Baseline/Withdrawal</th>
<th>Treatment/Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>G-index</strong></td>
<td>Effect Size</td>
<td>Effect Size</td>
<td>Effect Size</td>
</tr>
<tr>
<td>College Knowledge</td>
<td>0.75 Large</td>
<td>0.75 Large</td>
<td>0.5 Medium</td>
</tr>
<tr>
<td>Positive Personal Characteristics</td>
<td>0.417 Medium</td>
<td>0.75 Large</td>
<td>0.5 Medium</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>0.5 Medium</td>
<td>0.75 Large</td>
<td>0.5 Medium</td>
</tr>
<tr>
<td>Potential to Achieve Future Goals</td>
<td>-0.667 Large</td>
<td>0.5 Medium</td>
<td>0.5 Medium</td>
</tr>
<tr>
<td>All Factors</td>
<td>0.5 Medium</td>
<td>0.75 Large</td>
<td>0.5 Medium</td>
</tr>
</tbody>
</table>

*Note.* Grayed values indicated significant effect size in an undesirable direction.

Table 20

**G-index Effect Sizes for Participant 3**

<table>
<thead>
<tr>
<th></th>
<th>Baseline/Treatment</th>
<th>Baseline/Withdrawal</th>
<th>Treatment/Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>G-index</strong></td>
<td>Effect Size</td>
<td>Effect Size</td>
<td>Effect Size</td>
</tr>
<tr>
<td>College Knowledge</td>
<td>-0.5 Medium</td>
<td>0.25 Small</td>
<td>-0.583 Medium</td>
</tr>
<tr>
<td>Positive Personal Characteristics</td>
<td>0.5 Medium</td>
<td>0.5 Medium</td>
<td>-0.5 Medium</td>
</tr>
<tr>
<td>Academic Competence</td>
<td>0.5 Medium</td>
<td>0.5 Medium</td>
<td>-0.5 Medium</td>
</tr>
<tr>
<td>Potential to Achieve Future Goals</td>
<td>0.667 Large</td>
<td>0.75 Large</td>
<td>-0.5 Medium</td>
</tr>
<tr>
<td>All Factors</td>
<td>0.75 Large</td>
<td>0.75 Large</td>
<td>-0.417 Medium</td>
</tr>
</tbody>
</table>

*Note.* Grayed values indicated significant effect size in an undesirable direction.

**Visual Analysis**

Figures 2, 3, and 4 present line graphs for each phase and factor of the intervention for each participant. A visual analysis of the results confirmed the aforementioned statistical findings. There was little to no response variability for Participant 1 except for a significant change in *academic competence* between the baseline and withdrawal phases. Participant 2 had higher variability than the other participants as indicated by the identification of 4 outliers in the treatment phase. In particular, participant 2 had a significant change in *college knowledge* between the baseline and withdrawal phases. Further analysis is necessary to
determine if other differences exist. Participant 3 had expected variability for this type of study (i.e. no outliers and small standard deviation throughout each phase). In particular, the visual analysis indicates that there was a significant change in college knowledge, positive personal characteristics, and academic competence between the baseline and withdrawal phases. Further analysis is necessary to determine if other differences exist. Regression plots were also displayed to show the positive trend associated with the treatment phase in each of the participants for each of the factors in Figures 5, 6, and 7. Lastly, a summary table was included to summarize the results of the study. The summary tables, 20, 21, and 22, include mean, median, trend (none, increase, decrease, desirable, or undesirable), overlap (the number of overlapping points between phases), and intersect (the first and last observation in each phase). For each variable a comparison was described between the phases.

Figure 2. Data plots for Participant 1. There was a significant change in academic competence between the baseline and withdrawal phases.
Figure 3. Data plots for Participant 2. There was a significant change in college knowledge between the baseline and withdrawal phases. Further analysis is necessary to determine if other differences exist.
Figure 4. Data plots for Participant 3. There was a significant change in college knowledge, positive personal characteristics, and academic competence between the baseline and withdrawal phases. Further analysis is necessary to determine if other differences exist.

Figure 5. Regression for Participant 1

Figure 6. Regression for Participant 2
Table 21

Summary for Participant 1 for Each Factor and Phase

<table>
<thead>
<tr>
<th>Variable</th>
<th>Baseline</th>
<th>Treatment</th>
<th>Withdrawal</th>
<th>Comparison of Treatment to Baseline</th>
<th>Comparison of Treatment to Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Knowledge Level (Mean/Median)</td>
<td>24.75</td>
<td>25.00</td>
<td>25.00</td>
<td>0.25 Mean Increase</td>
<td>No Mean Change</td>
</tr>
<tr>
<td>Positive Personal Characteristics Level (Mean/Median)</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>No Change In Median</td>
<td>No Median Change</td>
</tr>
<tr>
<td>Positive Personal Characteristics Variability (Standard Deviation/Range)</td>
<td>0.5</td>
<td>0.0</td>
<td>0.0</td>
<td>Stable Across Phases</td>
<td>Stable Across Phases</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Analysis Unaffected by Trend</td>
<td>Analysis Unaffected by Trend</td>
</tr>
<tr>
<td>Overlap</td>
<td>3 of 4</td>
<td>12 of 12</td>
<td>4 of 4</td>
<td>Significant Overlap</td>
<td>Significant Overlap</td>
</tr>
<tr>
<td>Intercept Gap</td>
<td>25.25</td>
<td>20.00</td>
<td>20.00</td>
<td>0.08 Mean Decrease +0.08 Mean Increases</td>
<td>Analysis Unaffected by Trend</td>
</tr>
<tr>
<td>Positive Personal Characteristics Variability (Standard Deviation/Range)</td>
<td>0.289</td>
<td>0</td>
<td>0</td>
<td>Stable Across Phases</td>
<td>Stable Across Phases</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Analysis Unaffected by Trend</td>
<td>Analysis Unaffected by Trend</td>
</tr>
<tr>
<td>Overlap</td>
<td>4 of 4</td>
<td>11 of 12</td>
<td>11 of 12</td>
<td>Significant Overlap</td>
<td>Significant Overlap</td>
</tr>
<tr>
<td>Intercept Gap</td>
<td>20.20</td>
<td>19.917</td>
<td>19.917</td>
<td>1.5 Mean Increase</td>
<td>0.5 Mean Increase</td>
</tr>
<tr>
<td>Positive Personal Characteristics Variability (Standard Deviation/Range)</td>
<td>0</td>
<td>0.289</td>
<td>0.000</td>
<td>Stable Across Phases</td>
<td>Stable Across Phases</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>Increasing/Desirable</td>
<td>None</td>
<td>Non-Parametric Statistical Analysis used due to Trend</td>
<td>Non-Parametric Statistical Analysis used due to Trend</td>
</tr>
<tr>
<td>Overlap</td>
<td>4 of 4</td>
<td>1 of 12</td>
<td>1 of 12</td>
<td>Some overlap</td>
<td>Some Overlap</td>
</tr>
<tr>
<td>Intercept Gap</td>
<td>13</td>
<td>13</td>
<td>15</td>
<td>Cumulative Difference</td>
<td>Cumulative Difference</td>
</tr>
<tr>
<td>Academic Competence Level (Median/Median)</td>
<td>10.00</td>
<td>9.917</td>
<td>10.00</td>
<td>0.08 Mean Decrease +0.08 Mean Increases</td>
<td>Analysis Unaffected by Trend</td>
</tr>
<tr>
<td>Academic Competence Variability (Standard Deviation/Range)</td>
<td>0.289</td>
<td>0</td>
<td>0.000</td>
<td>Stable Across Phases</td>
<td>Stable Across Phases</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Analysis Unaffected by Trend</td>
<td>Analysis Unaffected by Trend</td>
</tr>
<tr>
<td>Overlap</td>
<td>4 of 4</td>
<td>11 of 12</td>
<td>11 of 12</td>
<td>Significant Overlap</td>
<td>Significant Overlap</td>
</tr>
<tr>
<td>Intercept Gap</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>No Difference</td>
<td>No Difference</td>
</tr>
</tbody>
</table>

Figure 7. Regression for Participant 3
## Summary for Participant 2 for Each Factor and Phase

<table>
<thead>
<tr>
<th>Variable</th>
<th>Baseline</th>
<th>Treatment</th>
<th>Withdrawal</th>
<th>Comparison of Treatment to Baseline</th>
<th>Comparison of Treatment to Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level (Mean/Median)</td>
<td>24.75</td>
<td>25.00</td>
<td>25.00</td>
<td>0.25 Mean Increase</td>
<td>No Mean Change</td>
</tr>
<tr>
<td>Variability (Standard Deviation/Range)</td>
<td>0.5</td>
<td>0.0</td>
<td>0.0</td>
<td>Stable Across Phases</td>
<td>Stable Across Phases</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Analysis Unaffected by Trend</td>
<td>Analysis Unaffected by Trend</td>
</tr>
<tr>
<td>Intercept Gap</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>No Difference</td>
<td>No Difference</td>
</tr>
<tr>
<td>Level (Mean/Median)</td>
<td>20.00</td>
<td>19.917</td>
<td>20.00</td>
<td>0.08 Mean Decrease</td>
<td>+0.08 Mean Increases</td>
</tr>
<tr>
<td>Variability (Standard Deviation/Range)</td>
<td>0</td>
<td>0.289</td>
<td>0</td>
<td>Stable Across Phases</td>
<td>Stable Across Phases</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Analysis Unaffected by Trend</td>
<td>Analysis Unaffected by Trend</td>
</tr>
<tr>
<td>Intercept Gap</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>No Change in Median</td>
<td>No Change in Median</td>
</tr>
<tr>
<td>Level (Mean/Median)</td>
<td>13</td>
<td>14.5</td>
<td>15.0</td>
<td>1.5 Mean Increase</td>
<td>0.5 Mean Increase</td>
</tr>
<tr>
<td>Variability (Standard Deviation/Range)</td>
<td>0</td>
<td>0.674</td>
<td>0.000</td>
<td>Stable Across Phases</td>
<td>Stable Across Phases</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>2</td>
<td>0</td>
<td>Increasing/Desirable</td>
<td>Non-Parametric Statistical</td>
</tr>
<tr>
<td>Overlap</td>
<td>13</td>
<td>13</td>
<td>15</td>
<td>Cumulative Difference</td>
<td>Cumulative Difference</td>
</tr>
<tr>
<td>Level (Mean/Median)</td>
<td>10.917</td>
<td>10.963</td>
<td>10.06</td>
<td>0.08 Mean Decrease</td>
<td>0.08 Mean Increase</td>
</tr>
<tr>
<td>Variability (Standard Deviation/Range)</td>
<td>0</td>
<td>0.289</td>
<td>0.000</td>
<td>Stable Across Phases</td>
<td>Stable Across Phases</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Analysis Unaffected by Trend</td>
<td>Analysis Unaffected by Trend</td>
</tr>
<tr>
<td>Overlap</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>Treatment</td>
<td>Treatment</td>
</tr>
<tr>
<td>Level (Mean/Median)</td>
<td>14.5</td>
<td>17.5</td>
<td>18.0</td>
<td>3 Median Increase</td>
<td>0.5 Median Increase</td>
</tr>
<tr>
<td>Variability (Standard Deviation/Range)</td>
<td>0.577</td>
<td>1.030</td>
<td>0.500</td>
<td>No Stability in Baseline or Treatment</td>
<td>No Stability in Baseline or Withdrawal More Stable than Treatment</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Non-Parametric Statistical</td>
<td>No-Parametric Statistical</td>
</tr>
<tr>
<td>Overlap</td>
<td>0</td>
<td>4.0</td>
<td>4.0</td>
<td>Same Overlap</td>
<td>Same Overlap</td>
</tr>
<tr>
<td>Level (Mean/Median)</td>
<td>10.5</td>
<td>13.0</td>
<td>13.5</td>
<td>2.5 Median Increase</td>
<td>2.5 Median Increase</td>
</tr>
<tr>
<td>Variability (Standard Deviation/Range)</td>
<td>0.957</td>
<td>1.084</td>
<td>0.577</td>
<td>No Stability in Baseline or Treatment</td>
<td>No Stability in Withdrawal or Treatment</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Non-Parametric Statistical</td>
<td>Non-Parametric Statistical</td>
</tr>
<tr>
<td>Overlap</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>No Overlap</td>
<td>No Overlap</td>
</tr>
<tr>
<td>Level (Mean/Median)</td>
<td>9.5</td>
<td>10.0</td>
<td>10.0</td>
<td>0.5 Median Increase</td>
<td>0.5 Median Increase</td>
</tr>
<tr>
<td>Variability (Standard Deviation/Range)</td>
<td>0.957</td>
<td>0.669</td>
<td>0.000</td>
<td>No Stability in Baseline or Treatment</td>
<td>No Stability in Withdrawal or Treatment</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>No Significant Trend</td>
<td>No Significant Trend</td>
</tr>
<tr>
<td>Overlap</td>
<td>4</td>
<td>12.0</td>
<td>4.0</td>
<td>Significant Overlap</td>
<td>Significant Overlap</td>
</tr>
<tr>
<td>Intercept Gap</td>
<td>8</td>
<td>8</td>
<td>10</td>
<td>Cumulative Change</td>
<td>No Change</td>
</tr>
</tbody>
</table>

## Visual Analysis Description for Effect Size Reporting

- **No Difference**
- **No Change**
- **Stable Across Phases**
- **No Change in Median**
- **Non-Mean Change**
- **Stable Across Phases**
- **Analysis Unaffected by Trend**
- **No Stability in Baseline or Treatment**
- **Non-Parametric Statistical**
- **Analysis used due to Trend**
- **Analysis used due to Non-Parametric Statistical**
- **Analysis used due to No Overlap**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Mean Change**
- **Analysis used due to No Stability in Withdrawal or Treatment**
- **Analysis used due to No Mean Stability**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**

### Table 23

## Summary for Participant 3 for Each Factor and Phase

<table>
<thead>
<tr>
<th>Variable</th>
<th>Baseline</th>
<th>Treatment</th>
<th>Withdrawal</th>
<th>Comparison of Treatment to Baseline</th>
<th>Comparison of Treatment to Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level (Mean/Median)</td>
<td>17.00</td>
<td>21.333</td>
<td>23.750</td>
<td>3.333 Mean Increase</td>
<td>2.42 Mean Increase</td>
</tr>
<tr>
<td>Variability (Standard Deviation/Range)</td>
<td>2.449</td>
<td>2.387</td>
<td>0.500</td>
<td>No Stability in Baseline or Treatment</td>
<td>Treatment</td>
</tr>
<tr>
<td>Trend</td>
<td>5</td>
<td>6</td>
<td>0</td>
<td>Non-Parametric Statistical</td>
<td>Non-Parametric Statistical</td>
</tr>
<tr>
<td>Overlap</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>Some Overlap</td>
<td>Some Overlap</td>
</tr>
<tr>
<td>Level (Mean/Median)</td>
<td>14.50</td>
<td>17.83</td>
<td>18.25</td>
<td>3.33 Mean Increase</td>
<td>0.42 Mean Increase</td>
</tr>
<tr>
<td>Variability (Standard Deviation/Range)</td>
<td>0.577</td>
<td>1.030</td>
<td>0.500</td>
<td>No Stability in Baseline or Treatment</td>
<td>No Stability in Withdrawal or Treatment</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Non-Parametric Statistical</td>
<td>No-Parametric Statistical</td>
</tr>
<tr>
<td>Overlap</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>No Overlap</td>
<td>No Overlap</td>
</tr>
<tr>
<td>Level (Mean/Median)</td>
<td>14.5</td>
<td>17.5</td>
<td>18.0</td>
<td>3 Median Increase</td>
<td>0.5 Median Increase</td>
</tr>
<tr>
<td>Variability (Standard Deviation/Range)</td>
<td>0.957</td>
<td>1.084</td>
<td>0.577</td>
<td>No Stability in Baseline or Treatment</td>
<td>No Stability in Withdrawal or Treatment</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Non-Parametric Statistical</td>
<td>Non-Parametric Statistical</td>
</tr>
<tr>
<td>Overlap</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>No Overlap</td>
<td>No Overlap</td>
</tr>
<tr>
<td>Level (Mean/Median)</td>
<td>9.5</td>
<td>10.0</td>
<td>10.0</td>
<td>0.5 Median Increase</td>
<td>0.417 Mean Increase</td>
</tr>
<tr>
<td>Variability (Standard Deviation/Range)</td>
<td>0.957</td>
<td>0.669</td>
<td>0.000</td>
<td>No Stability in Baseline or Treatment</td>
<td>No Stability in Withdrawal or Treatment</td>
</tr>
<tr>
<td>Trend</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>No Significant Trend</td>
<td>No Significant Trend</td>
</tr>
<tr>
<td>Overlap</td>
<td>4</td>
<td>12.0</td>
<td>4.0</td>
<td>Significant Overlap</td>
<td>Significant Overlap</td>
</tr>
<tr>
<td>Intercept Gap</td>
<td>8</td>
<td>8</td>
<td>10</td>
<td>Cumulative Change</td>
<td>No Change</td>
</tr>
</tbody>
</table>

### Visual Analysis Description for Effect Size Reporting

- **No Difference**
- **No Change**
- **Stable Across Phases**
- **No Change in Median**
- **Non-Mean Change**
- **Stable Across Phases**
- **Analysis Unaffected by Trend**
- **No Stability in Baseline or Treatment**
- **Non-Parametric Statistical**
- **Analysis used due to Trend**
- **Analysis used due to Non-Parametric Statistical**
- **Analysis used due to No Overlap**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**
- **Analysis used due to No Stability in Baseline or Treatment**

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110
Attitude Toward Treatment (ATT)

The three participants completed the Attitude Toward Treatment (ATT), a self-report measure designed to assess participants’ attitudes about the value of the intervention when it was completed (See Appendix D). The ATT consists of the fourteen 7-point Likert type items with the wording presented in the past tense in order to assess post-treatment attitudes. The ATT provides a measure of the clients’ subjective experiences, and this is considered a common method of measuring social validity (Hott et al., 2015). The ATT scale ranges from a low of 14 to a high score of 98. As shown in table 23, there was a significant treatment effect across all three participants who all scored within the high range for attitudes toward treatment.

Table 24

| Attitude Toward Treatment Scores: Means, Standard Deviations, and Total Scores |
|-----------------|-----------------|-----------------|
| Participant 1   | Participant 2   | Participant 3   |
| M = 6.93        | M = 6.36        | M = 6.36        |
| SD = 0.27       | SD = 0.74       | SD = 1.01       |
| Total score = 97 | Total score = 89 | Total score = 89 |

*Mean = mean, and SD = standard deviation*

Unforeseen Participant and Setting Changes

The counselor/investigator documented all unforeseen changes in each of the participant’s circumstances and behaviors that may have influenced the findings and all changes in the setting where the interventions were occurring that may have also influenced the findings. Doing so enhanced controlling for threats to the internal validity of the study (Hott et al., 2015). The counselor/investigator conducted the treatment phase of the
intervention (treatment phase B) at the participants’ foster homes for participants 2 and 3, and in the community for participant 1 for up to one hour for six weeks. She believed that the various environmental settings had an impact on participants’ behaviors during sessions. Participant 3 appeared to have an abundance of support for her goals within her home environment. The participant lived in a kinship foster care situation in which her two aunts were caring for her. The aunts actively engaged with the counselor/investigator and offered their support for the participant’s college and academic major exploration, made sure that she completed her homework assignments daily, and would check in after the sessions were over to get an update on the participant’s progress. From the counselor/investigator’s perspective, participant 3’s home environment appeared to be safe, supportive, and affirming for the participant.

Participant 2 had the most notable unforeseen changes in behaviors as indicated during the 5th and 6th sessions of the intervention phase of the S.T.A.R.S Program. During this time period, she was having issues with her foster parents that started a couple of days before the participant had a week off from school for spring break. During the 4th session, participant 2 confided in the counselor/investigator that she was secretly attending Gay-Straight Alliance (GSA) club meetings after school, but as to not divulge her whereabouts, told her foster parents she was going to science club meetings instead. She explained to the counselor/investigator that she was a lesbian and felt her foster parents would not accept her if they knew. Prior to the 5th session, the participant accidentally wore her GSA club t-shirt home, and her foster mother questioned her about why she owned the shirt. A lecture from
the foster mother ensued, and for the next couple of weeks, the participant presented with a
downcast mood during her S.T.A.R.S. sessions with the counselor/investigator.

Though participant 2 actively participated in the 5th and 6th intervention sessions, the
counselor/investigator noticed the change in behavior and lower self-efficacy. Participant 2
admitted she was hurt by not being able to come out to her foster mother and wondered about
how she will be accepted by others in college. The counselor/investigator then spent some
additional time talking with the participant about the situation to help her get back to a place
where she felt valued and supported. The counselor/investigator also explored resources and
centers on the university campuses she was interested in attending that would support her
identification within the LGBTQ community. Doing so helped the student realize some
places she could go on a college campus to have a safe alliance and future support and
resources.

Participant 1 appeared to have a stable home environment though the participant and
the foster parent had consistent disagreements, as reported by the participants. The
participant also mentioned that there was very little room for privacy in the apartment since
there were multiple youth living in the home. As a result, the participant opted to meet in a
public setting for her six sessions. Participant 1 appeared to have thoroughly enjoyed meeting
in the community and was able to receive the individualized attention desired. By session 5,
participant 1 mentioned to the counselor/investigator that she was considering moving out of
her foster home and in to an independent living situation via a local non-profit organization.
This option appeared to be most pleasing to the participant as reflected through her
excitement and the opportunity to live on her own with some assistance. During session 6,
the participant reported that she indeed decided to join the independent living program where she would be given a furnished apartment and the opportunity to engage in skill building programming that would help her achieve adult self-sufficiency. She reported that she would be moving the following month and that she had made amends with her foster parent; therefore, she felt she would be living the foster home on a positive note. To review the transcriptions of the six intervention sessions with the three participants, please refer to Appendices E and F.
CHAPTER 5: DISCUSSION

Summary of the Study

The purpose of the study was to examine the effects of customized individual counseling interventions on the career and college readiness of adolescents within foster care. To this end, an intervention program entitled, Students That Are Reaching Success (S.T.A.R.S.) was created by the counselor/investigator. Three customized individual interventions were created within the S.T.A.R.S. framework. The three female participants in the study were adolescents in foster care custody by a department of social services in a southeastern county and attended various high schools in the county. Given the lack of attention toward the career and college readiness of foster care youth, particularly adolescents aging out of the foster care system, a goal of the study was to provide effective career and college readiness interventions to individuals in this population with an emphasis on encouraging them to be both proactive and self-sufficient in their educational development process. Furthermore, a second goal was to expand the body of knowledge on the career and college readiness self-efficacy of foster care youth in the counseling literature. A third goal was to enhance the educational development of foster care youth by utilizing applicable conceptual frameworks as viable foundations for both understanding the contexts of and providing appropriate proactive educational services for these youths. The conceptual frameworks were: the Ecological Model for Human Development (Bronfenbrenner, 1979), Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994), Cognitive Information Processing Approach (CIP; Peterson, Sampson, Lenz, & Reardon, 1992), and the American School Counselor Association (ASCA, 2012) National Model. They were used as
a foundation for creating individualized counseling interventions with the desired outcome of enhancing the career and college readiness self-efficacy of the participants. A fourth goal was to promote the post-secondary educational attainment and to enhance the post-secondary educational expectations of these youth.

An N=1/ A-B-A single-subject experimental design was used. This design was replicated three times to enhance generalization of the findings and offset possible attrition of participations. After baseline (Phase A) data were collected over a two-week period, participants met with the investigator individually for one hour, once per week over the course of six weeks (Phase B [treatment]). Following the six-week intervention, there was a two-week hiatus from the treatment when outcome data were collected (Phase A repeated-withdrawal). The experiment was delivered over a ten-week time frame.

The Career and College Readiness Self-Efficacy Inventory (CCRSI; Baker & Parikh Foxx, 2012) was the measure from which the dependent variables were derived. The customized individual career and college readiness counseling intervention was the independent variable, and the four CCRSI career and college readiness self-efficacy factors were the dependent variables. The counselor/investigator viewed graphic data across the baseline-to-treatment and treatment-to-withdrawal phases to see if the changes throughout the intervention were stable for the four factors for each of the three participants. The research questions were as follows:
• What was the effect of the customized individual counseling intervention on the college-knowledge self-efficacy of participants across the treatment and withdrawal phases?

• What was the effect of the customized individual counseling intervention on the positive personal characteristics self-efficacy of the participants across the treatment and withdrawal phases?

• What was the effect of the customized individual counseling intervention on the academic competence self-efficacy of the participants across the treatment and withdrawal phases?

• What was the effect of the customized individual counseling intervention on the potential to achieve future goals self-efficacy of the participants across the treatment and withdrawal phases?

Overall, the customized career and college readiness intervention program was most effective for increasing academic competence across all three participants. It is noted that very little change was shown for the potential to achieve future goals factor. This was expected due to the high level of competency of each participant in this area prior to the study as indicated by the high, consistent baseline scores for each participant.

Discussion of the Findings

Participant Demographics

Although the minimum sample size of a single-subject experimental design is one participant (N=1), the “gold standard” for N=1 studies is at least three participants to account
for attrition, gain a more diverse sample to better assess which particular intervention(s) worked for which participant(s), and enhance generalizability of the findings (Lenz, 2015). Therefore, the minimal sample size criterion was met. Participant 1 was a 17-year-old African American female student. She was a senior attending a non-traditional high school in a southeastern city. It was a gateway school to a local community college; therefore, any student who attends the high school could choose to pursue a post-secondary certificate or associate degree shortly after high school graduation. Participant 1 was scheduled to graduate from high school in January 2017 and held a 2.6 grade point average (GPA). She was a 15-year-old White and African American (Bi-racial) female student. She was a sophomore attending a traditional, public high school in a southeastern city, and was an honor-roll student with a 3.9 GPA. Participant 3 was a 17-year-old African American female student. She was a senior attending a traditional, public high school in a southeastern city. Participant 3 was scheduled to graduate in June 2016 and had a 3.4 GPA. At the time of the study, she hoped to attend college in Fall 2016 and did not know what academic major she wanted to pursue.

**Career and College Readiness Self-Efficacy**

It was hypothesized that each participant’s career and college readiness self-efficacy would be improved through a customized individual counseling intervention program. Assessments were based on the four CCRSI (Baker & Parikh Foxx, 2015) factors: (a) college knowledge, (b) positive personal characteristics, (c) academic competence, and (d) potential to achieve future goals. This hypothesis was supported in that elements of the customized
individual counseling intervention program effectively improved the career and college readiness self-efficacy of each participant to some degree and for some factors.

Specifically, descriptive statistics, visual analyses, and significance testing (i.e. RCDC and G-Index) revealed that the intervention program was most effective for increasing academic competence self-efficacy in participant 1, college knowledge self-efficacy in participant 2, and college knowledge self-efficacy, positive personal characteristics self-efficacy, and academic competence self-efficacy in participant 3. The program was most effective for increasing academic competence across all three participants. Very little change was shown for the potential to achieve future goals factor because of the high level of competency the participants had in this area prior to the study (i.e., ceiling effect).

The pre- and post-CCRSI total scores for each participant indicated that there was indeed an overall improvement in the career and college readiness self-efficacy of participants from the beginning of the intervention until the end of the intervention. However, looking at individual scores for each of the four factors per participant was more appropriate to determine on which factors the participant improved specifically and by how much they improved within each factor across baseline to withdrawal phases.

For participant 1, the analysis suggested that, although she already had a high level of self-efficacy in her potential to achieve future goals and college knowledge prior to the intervention, she was able to feel more confident using appropriate academic success skills (e.g. effective study skills and preparing for a test successfully) while in high school to work toward achieving access to post-secondary education. Participant 1 appeared to learn the importance of staying on track to graduate from high school in a timely manner, and she
learned about effective study habits and time management skills to use as success tools currently and in her future post-secondary educational environment. This was especially important for participant 1 because she took all of her high school courses online and had little or no face-to-face interaction with teachers.

Participant 1 also worked after school and did not get home from work until after 9 pm each evening. As a result, she was too exhausted to study when returning home. Before participating in the study, she had planned to attend a community college because her high school was connected to a post-secondary institution. However, she was unsure of what academic major and career choice she wanted to pursue. By participating in the intervention program, participant 1 was able to re-prioritize her commitments and put her academics in the forefront (i.e., cutting down her work hours, studying at least 1-2 hours daily, and improving time management,). She was also better able to utilize support systems such as her school counselor and explore and chose an academic major.

The analysis for participant 2 suggested that the intervention program helped her to feel more confident in her beliefs about engaging in the post-secondary education preparation and access process (i.e. college knowledge). This included: (a) the admission selections process, (b) ways to financially afford post-secondary education, (c) academic requirements for work on the college level, and (d) cultural differences in the respective post-secondary education settings. Although the participant was already confident that she wanted to pursue a post-secondary education and in her ability to achieve her future goals, she was unsure of the steps it took to do so. As a sophomore high school student, she had minimal exposure to the post-secondary education exploration and preparation processes, yet she was consistently
encouraged by her support system to go to college. A high-achieving student, participant 2 knew she wanted to attend a four-year institution and was unsure of where she wanted to go, what she wanted to study, and what it would take to get there. By participating in the program, the participant was able to explore different colleges and universities and select a potential 4-year university she wanted to attend, learn about the college admissions process (e.g. what is on a college application and what is needed to apply for college), discover options for paying for a post-secondary education, find ways she can feel safe and supported in her identity within the college environment, and be able to explore academic majors and careers in order to select a potential academic major (i.e. double major in History and Religious Studies).

The analysis suggested that, though she already had a higher level of self-efficacy in her potential to achieve future goals, the overall intervention program appeared to have been more useful across the four CCRSI factors for participant 3 in comparison to the other two participants. Participant 3 was able to improve her college knowledge, academic competence, and confidence in achieving success in the future, better utilize her supports, and feel confident in her ability to live a good life in the future. Prior to the study, participant 3 knew that she wanted to attend college and had the encouragement, influence, and support of her foster parents to do so. She even applied to a couple of universities as an undeclared major due to her desire to want to stay in close proximity to the foster home. However, she had very little knowledge about the financial aid process, how to explore academic majors and future careers, and what aspects of a college/university she understood (e.g., services, resources, class size, college size and clubs/organizations). She explored academic majors and potential
careers, various colleges/universities that had interesting academic majors, ways to pay for post-secondary education, and study skills and time management. Her foster parents often checked in with the counselor/investigator to learn of the participant’s progress. By the end of the program, the participant chose a post-secondary institution, was accepted in to the university, and chose Agriculture and Environmental Systems with a concentration in Environmental Studies as her academic major of study.

**Similarities, Differences, and Overall Findings Across Participants**

Looking across participants, the intervention program was most effective for increasing the *academic competence self-efficacy* across all three participants. On the other hand, there was very little change shown for *potential to achieve future goals self-efficacy* across participants. This was expected due to the high level of pre-treatment self-efficacy the three participants had in this area that was indicated by the high baseline scores. Visual analyses, which confirmed the statistical findings, showed that there was a significant change in *college knowledge* between the baseline and withdrawal phases for participants 2 and 3 only. This made sense because participant 1 already had a higher level of *college knowledge self-efficacy* due to her exposure to the community college that was affiliated with her high school and having had conversations with her school counselor regarding the admissions process prior to the study.

Participant 2 had higher variability than the other participants due to 4 outliers identified in the treatment phase. As a result, further data analyses would be to determine if other differences existed aside from *college knowledge*. Overall, the intervention appeared to have been most useful for participant 3 in that there was a significant increase in *college*
knowledge, positive personal characteristics, and academic competence self-efficacy between the baseline and withdrawal phases, and the variability for this type of study was minimal (i.e., no outliers and small deviations throughout each phase). On the other hand, participant 3 had lower baseline scores, indicating more room for improvement prior to the treatment phase.

Showing more of an improvement in positive personal characteristics compared to the other participants was not surprising for participant 3 because she was four months away from graduation when beginning the intervention program. With no career path or academic major in mind, the participant personally felt that she was behind in her post-secondary education preparation compared to her peers whom she explained had already been accepted to the colleges of their choice and had declared an academic major. As a result of her uneasiness, she felt that time was quickly running out to make decisions about college, she felt uncertain about her future, did not know how to go about discovering her passion, and did not know who could assist her in doing so. These challenges seemed less daunting as she progressed through the intervention program.

Ray (2015) indicated that if a client shows either a decline or no improvement during the A phase but then shows some improvement during the B phase, there is reason to believe that the intervention can be the cause of the improvement. In this regard, the improvements shown across the four factors with each participant can be perceived at least in part due to the impact of the customized individual counseling interventions created.
Findings Compared with the Literature Reviewed

As indicated within the literature, foster care youth aspire to pursue a post-secondary education but succumb to multiple academic, familial, and social environment disruptions that impede their educational expectations (Kirk et al. 2011). Each of the participants faced unfortunate circumstances as a result of being placed in foster care. For instance, participants 1 and 3 had to change high schools after being placed in foster care. As a result, they had to make up certain courses required for high school graduation. Participant 1 was placed in a non-traditional high school after experiencing discipline issues at her previous school. She also worked after school each day, impeding her academic progress. Participant 2 did not feel comfortable discussing her sexual orientation with her foster parents, resulting in an altercation between her and the foster parents during the treatment phase, as well as having doubts about whether or not she will be accepted by others in the college environment. Participant 3 felt she was behind her peers in making post-secondary educational decisions, causing her to feel uneasy. All of these factors had an adverse impact on the educational expectations of the participants prior to or during the intervention, though they all had aspirations to pursue a post-secondary education prior to treatment (i.e., very little change was shown for the potential to achieve future goals factor). The findings in the present study indicate that their educational expectations may indeed have been enhanced.

Unrau et al. (2012) found that, though youth in foster care have high college performance aspirations, they are less prepared academically when they enter college compared to their peers, resulting in a performance gap in their first semester of college. Findings from the present study indicated that the intervention program was most effective
for increasing the academic competence self-efficacy across all three participants. Consequently, the intervention appeared to offer those providing academic support services for foster care students while in secondary schools with a strategy for preventing the performance gap identified in Unrau et al. (2012). Hudson (2013) stated that youth in foster care want and need mentoring as they merge into adulthood and out of the foster care system. The three participants admitted that they needed the assistance of knowledgeable and supportive adults to achieve their post-secondary educational goals and adult self-sufficiency. Participants 2 and 3 had the support and encouragement of their foster parents to pursue post-secondary education and needed assistance from a professional to either understand the post-secondary educational process (participant 2) or engage in post-secondary education preparation (participant 3). Participant 1 did not have a close relationship with her foster parent who did not take a vested interest in her post-secondary pursuits and felt she had the support of at least one other adult (i.e., the counselor/investigator) because of the intervention experience.

The Ecological Model of Human Development (Bronfenbrenner, 1979) was used as a framework during the treatment phase to explore and identify the support networks of each participant. This component was included in the intervention so that the participants could gain or maintain sustainable relationships with individuals who will help them to successfully prepare for post-secondary education or succeed in the post-secondary educational environment. The findings suggest that this was effective for participant 3 (i.e., significant change in positive personal characteristics).
New or Surprising Findings

Using the Robust Conservative Dual-Criteria (RCDC), a non-parametric statistical inference method, as a statistical analysis tool proved to be quite useful. It allowed the counselor/investigator to make statistical inferences in spite of the small number of observations and because of the significant trend and autocorrelation of the data. The findings were surprising for some of the participants given the amount of detailed interactions the counselor/investigator had with each one during the treatment phase. For instance, though participant 1 showed significant change in *academic competence* between the baseline and withdrawal phases, the counselor/investigator would have predicted a more significant change in *college knowledge*. The participant did not know what academic major she wanted to study in college, her potential career choices, or about specific grants for youth aging out of foster care to pay for post-secondary education prior to the intervention, and all of those topics were covered therein. After spending a significant amount of time discussing and exploring academic major and careers, ways to pay for post-secondary education, and potential four-year institutions to attend after graduating from community college, the counselor/investigator expected to see more growth in this area. One possible explanation was that the participant may have rated her self-efficacy levels higher than they actually were in the baseline phase, leaving very little room for improvement.

Observations about Customizing Treatments for Participants

The process of customizing the career and college readiness intervention program involved meaningful input from the participants. The Cognitive Information Processing (CIP) Approach (Peterson, Sampson, Lenz, & Reardon, 1992) and the American School
Counselor Association (ASCA, 2012) National Model proved to be essential tools in customizing the interventions based on the participants’ individual needs. During the first session of the treatment phase, the counselor/investigator went over the participants’ initial CCRSI results completed during day 1 of the baseline phase (A1). Consequently, the counselor/investigator and participants were then able to create individual learning plans (ILP; see appendix E) using the CCRSI results as a basis for goal setting and planning for the next five individual sessions. Learning about each participant’s individual needs and desired outcomes for participating in the S.T.A.R.S. program, coupled with the creation of the ILP, truly steered the direction for customizing treatment for each participant in a positive direction. After creation of the ILP, The counselor/investigator and the participants signed the completed ILPs to recognize that they were both in agreement on what was to be discussed. This process proved to be seamless and helped to keep each session organized and goal-oriented and kept the participants engaged in the learning process. Ending each session with a brief mention of what would be discussed during the following session was helpful for the participants.

Several of the customized lessons proved beneficial for either two or all three of the participants, given their CCRSI results and expressed post-secondary planning needs. Therefore, efforts were not duplicated. For example, all three participants needed to explore financial aid, scholarship, and grant options, especially as they pertained to their youth in foster care status. Additionally, all three participants engaged in academic major exploration and post-secondary institutions exploration and were taken to a national college fair as a hands-on college exploration/admissions experience. The outcomes for each participant from
attending the college fair varied depending on grade level, which colleges they were 
interested in learning more about, and their academic interests. In addition to using the CIP 
Approach and ASCA Model as applicable frameworks for developing lessons, the Ecological 
Model for Human Development (Bronfenbrenner, 1979) helped account for the participants’ 
worldview and helped them to formulate their support network of knowledgeable adults who 
will continue to aid them as they work toward the goal of pursuing post-secondary education. 
Furthermore, the Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994) 
helped participants set realistic and attainable goals, examine outcome expectations, learn the 
meaning of self-efficacy, and recognize the educational resources and knowledge needed to 
enhance their career and college readiness self-efficacy.

Given that two of the participants were in their senior year of high school and were 
scheduled to graduate in either the fall or spring of 2016, several components of their 
individual lessons mirrored one another in preparation for post-secondary education. 
Participant 2 was a sophomore in high school, and some of the lessons created for her 
differed from the other two. For example, participant 2 was provided with a sophomore year 
of high school completion checklist and also spent time exploring the various components of 
a college application. Given the circumstances that placed each of the participants in foster 
care and the adversity they have faced, the counselor/investigator was able to engage each 
participant in a worksheet/discussion entitled, “Ten Years, From Now, How Do You See 
Yourself?” This was included to discuss supports that will help participants to be successful 
in their futures and to further enhance potential for achieving future goals.
Observations about the Data Collection Processes

Numerous barriers that foster care youth face such as lack of transportation, multiple foster care placements in various counties, time constraints, and low educational expectations made conducting an experimental study challenging. These barriers were highlighted in the literature on foster care youth and, therefore, needed to be taken into account when creating a process for data collection in the current study. First, each meeting took place in the participants’ foster home because transportation and time constraints were a concern. This was a challenge for the counselor/investigator since participants lived in various parts of the county and only had limited days and times when they could meet when the foster parent was present. Furthermore, participants were asked to complete the CCRSI twice weekly via a Qualtrics electronic survey. Although this process was explained to each participant in person and a paper copy of the assessment schedule was given to them, all three participants failed to take the assessment when originally asked to do so at some point during the intervention. This even occurred after phone calls and e-mail reminders were given to participants, resulting in some participants taking the assessment a couple of hours prior to the counselor/investigator’s arrival to the home for the follow-up session or taking assessments twice on the same day.

An electronic system for collecting data proved to be a useful tool. It helped to keep track of data, track how long it took each participant to complete the assessment (i.e., to ensure the participants were not rushing through the assessment for the sake of getting it done), randomize the order of questions so that participants would not select answers based on their previous assessment answers, and was convenient for the participants to take on their
own. No issues occurred with participants failing to have access to internet services; however, this could have been of concern for other students in foster care who may not have access to internet within the home.

**Generalizability of the Findings**

Lenz (2015) recommended that an N=1 research design should be replicated at least three times before being generalizable. Given that the study began with four participants and finished with three, the recommendation from Lenz was essential pertaining to foster care youth who oftentimes experience high mobility. The sample consisted of two seniors and one sophomore student. Both seniors had significant changes in the *academic competence* factor, possibly indicating that students with similar demographic characteristics would need assistance staying on track academically to finish high school successfully. Since the sophomore student recorded the most significant change in the area of *college knowledge*, it appears that similar students would need the most help understanding the admission selections process, ways to financially afford post-secondary education, academic requirements for college, and cultural differences in the secondary versus post-secondary education environment.

It is important to note that the needs of foster care youth are unique and individualized given the multiple barriers they face before and as a result of being in foster care custody. In this regard, it may not be possible to generalize these findings for all adolescents in foster care. However, given their unique needs, it was essential that a single-subject experimental design was used in the present study. Furthermore, given the challenges regarding generalizability for single-subject designs, it will also be essential for an
intervention such as this one to be replicated with additional foster care youth to consider whether the findings are worthy of generalization or not.

**Limitations Related to Methodology**

There were some limitations related to the methodology. It is possible that additional dependent measures would have enhanced the range of outcome data. The limited opportunity for dependent variable observations in the three phases could have resulted in smaller effect sizes. More time to collect data over the three phases may have allowed the independent variable to be more effective and enhance the effect sizes. However, effect sizes need to be considered in conjunction with other factors, such as the population of interest. Since foster care youth are considered high risk for a number of reasons and providing self-monitoring data was challenging, a small effect size may be considered sufficiently important.

Without stable baseline data, change will go undetected after the onset of the intervention. Therefore, the investigator must attain a stable and accurate assessment of the dependent variable prior to the start of the intervention (Heppner et al., 2008). According to Hixson, Christ, and Bruni (2014), what is considered stable will depend on several factors, including the type of measure taken and the amount of experimental control needed. In the present study, the short baseline phase was a threat to internal validity. There was not sufficient data collected or enough time to assess participants’ career and college readiness self-efficacy prior to treatment (i.e., no stable baseline data), as well as whether or not there was a lasting impact after withdrawal of treatment. Furthermore, because the intervention took place in the foster home of each participant (i.e., field experiment), there was
susceptibility for participants to, at times, have reactive effects to their home environments (e.g., altercations with foster parents and distracting from others in the homes).

Testing could have caused a threat to internal validity in that participants took the CCRSI 20 times over the course of the 10-week intervention and perhaps could have remembered their previous answers. Though the order of presenting the assessment questions was randomized, participants could have remembered their responses from previous assessments, particularly those who took the assessment twice in the same day (i.e., not taking the assessment in a timely manner).

Participants were recruited from one department of social services program. Additional participants were not available for a variety of reasons. Consequently, a convenience sample was acquired.

The treatment alone may not account for all changes in the participants’ responses. Active participation in the social services program prior to the study may have contributed to high pre-treatment scores on some CCRSI factors and also enhance responses to the treatment intervention. On the other hand, it seems unreasonable to expect that all of the participants would have low self-efficacy scores across all of the CCRSI factors unless the selection strategy for the study was to include only participants who had low self-efficacy across all of the factors.

Failure to have a complete assessment-taking schedule across the study also proved to be a limitation. During the baseline and withdrawal phases, participants were given a schedule of dates when they were supposed to take the electronic-version of the CCRSI. During the treatment phase, the counselor/investigator met with participants on different
dates; therefore, participants were informed that they must take the CCRSI twice weekly: once after the weekly session, and once before the end of their week. However, participants continuously did not take the assessment on time, resulting in constant reminders, taking the CCRSI twice on the same date, and taking the CCRSI immediately before the next session.

Time constraints and restrictions on contact with professionals in the participant’s support networks also served as a limitation to the intervention. There would have been added benefit in connecting with the participants’ school counselor to share what interventions were being completed during treatment and gaining recommendations for treatment form the school counselor based on the participant’s school needs. However, restrictions put in place by the department of social services limited contact with outside entities and, thus, was beyond the scope of this study.

**Recommendations for Counseling Practice**

The results of the present study have significant implications for counselors working in school, community, and higher education settings who facilitate the needs of adolescents in foster care. For school counselors, the significance of creating customized counseling interventions to meet the individualized career and college readiness needs of youth in foster care is essential. Therefore, utilizing the individual student planning component of the ASCA National Model (2012) will be a useful tool for customizing individual counseling interventions for foster care youth, planning ongoing activities that will help them with goal-setting and planning for the future, incorporating their support networks, and developing learning and graduation plans. Furthermore, school counselors can use appraisal and advisement strategies to enhance the career and college readiness of students in foster care by
working with them to evaluate their own interests, skills, and abilities and by helping them to make informed decisions about their future (ASCA, 2012).

School counselors are encouraged to create support and educational programming for students in foster care. Because multiple foster care placement changes may serve as a barrier to high school completion and an overall disruption to the education process, school counselors are challenged to coordinate career and college readiness programming needs that will allow for foster care youth to receive an adequate amount of information regardless of when they enter their schools. For instance, school counselors can host a postsecondary education preparation workshop for students in high school where professionals who specialize in college access are invited to present. School counselors can also communicate programming efforts to foster caregivers and child welfare personnel and remain transparent about program results to key stakeholders so that the educational needs of foster care youth are met and adjusted as necessary. This is especially important since, according to Cox (2013), most school personnel are not well informed about the needs of foster care youth. Making sure foster care youth and their legal guardians have adequate access to and copies of their educational records (e.g., high school transcripts and individualized education plan) is also vital and can be coordinated by the school counselor.

Policy-level changes regarding the educational needs of foster care youth must also be taken into account when discussing the career and college readiness of foster care youth. For example, Day et al. (2012) explained that high school and college students who attended two Kidspeak public forums in Michigan spoke to policy makers about their barriers to obtaining access to college and completing high school and communicated their ideas on
what could occur that will help students similar to themselves overcome these barriers. In this regard, school counselors can engage and coordinate policy or legislative-level advocacy efforts by organizing social/political advocacy efforts, such as a legislative day, that address the educational needs of foster care youth and rally individuals to get involved in these efforts. They can accomplish this goal through engagement in state- or national-level school counseling organizations.

Counselors who understand the importance of contexts in the foster youth’s various environments can assist them with their quest for postsecondary education. For instance, within the microsystem, school and community counselors can attend monthly child and family team meetings that are led by the foster youths’ social workers to address school needs, mental health concerns, and request adequate assistance. Bruyere and Garbarino (2010) stated that in order for support networks to be effective at the mesosystem level, bidirectional relationships must be created between the support services and the children and their families. Counselors are challenged to create effective bidirectional relationships between themselves and other members of the youths’ support networks to both fully understand and facilitate their individual post-secondary educational needs.

Community and school counselors can collaborate with stakeholders to introduce foster care youth to programs that will assist them with their transition into postsecondary education institutions at the exosystem level. School and community counselors can also familiarize themselves with programs aimed at providing postsecondary education services to current and former foster care youth who are in college, helping these youth recognize more
targeted sources of support that they can receive in the post-secondary education environment.

Emerson (2006) emphasized that the child welfare system does not focus primarily on education, and most student services professionals at colleges do not know how to address the needs of youth transitioning out of foster care. Therefore, it’s important for counselors in schools and communities to introduce students in foster care to educational support programs that can appropriately assist them and inform community organizations and college personnel of their needs, which can, in turn, form effective collaborative relationships.

According to Hoffman (2014) student affairs professionals must increase their understanding of the challenges foster care youth face as they attempt to gain access to higher education and attempt to reduce these challenges by having a better understanding and acknowledgment of their unique needs. In this regard, counselors in college settings are encouraged to understand the challenges of foster care youth, particularly as they relate to their transition into the post-secondary education environment. College counselors can create support groups for adolescents aging out of foster care that both address and normalize the transition challenges they face, provide academic and personal support services and resources, and help incoming students build community in their new environment.

Furthermore, counselor educators can teach their students about career and college readiness self-efficacy and how the post-secondary education aspirations of particular sub-populations of students are impacted by multiple barriers. They can include career and college readiness tools and counseling strategies for working with underserved student populations within their course curriculum.
**Recommendations for Future Research**

Given the aforementioned recommendations, future research related to the current study should include focus on replication of the study to potentially increase generalizability to adolescents in foster care. Though the present single-subject experimental design was replicated the recommended three times, it would be advantageous to expand the body of knowledge on the career and college readiness self-efficacy of foster care youth in the counseling literature. Moreover, suggestions offered in the literature on the educational enhancement of foster care youth have been mostly conceptual in nature. After seeing the impact of the intervention program presented in the study, investigators could utilize a quantitative, experimental design approach to research on foster care youth to both educate them on career and college readiness and transitional and independent living skills, and to examine if their interventions were effective. Since these and previous findings suggested that the Career and College Readiness Self-Efficacy Inventory (CCRSI; Baker & Parikh Foxx, 2012) is potentially a useful assessment instrument for evaluating the effects of customized programmatic interventions designed to influence attitudes of young adolescents toward being constructively focused on careers and post-secondary education beyond high school, it could be a useful assessment tool for investigators who want to examine the effects of individual or small group career counseling interventions on adolescents in foster care.

Continuous and ongoing support for adolescents in foster care as they work to achieve career and college readiness self-efficacy was emphasized through this study. If there is not ongoing support for foster care youth, we could begin to see declines in their educational progress as they attempt to navigate the everyday challenges they may face. In
In this regard, future research can focus on the impact that support networks have on the career and college readiness of adolescents in foster care to further examine these roles and how these systems can be strengthened to best facilitate the educational needs of these youth. The Ecological Model of Human Development (Bronfenbrenner, 1979) could be a useful conceptual framework for this type of study so that the influence of the environments can be adequately examined.

Finkelstein, et al. (2002) stated that school personnel may provide the strongest connection between foster youth and their formal education; however, they sometimes have little awareness of the foster care status and the barriers faced in their home environment and familial background. Therefore, more research on the role that school counselors can play in the career and college readiness of foster care youth can be beneficial. For example, Gavin Williams (2016) recommended that school counselors can serve as leaders and advocates by forming collaborative relationships and initiatives with school personnel, family members, and representatives of community organizations. Research on the effectiveness of these proposals can both strengthen school counselors’ understanding of foster care youth needs and provide recommendations for best practices.

Unrau et al. (2012) stated that little is known about ways higher education professionals can offer assistance to foster care youth during their college transition. Additional research on the academic, personal/social, and career needs of transitional age foster care youth who are entering the post-secondary educational environment is recommended. For example, how counselors on college campuses can provide services and
support for these students as they attempt to thrive and retain in this new environment appears to be an important research question.

**Conclusion**

The findings revealed that customized individual counseling interventions can indeed enhance the career and college readiness self-efficacy of adolescents in foster care. Recognizing that the educational needs of foster care youth are both individual and unique, assessment tools, such as the CCRSI, can be used as both a tool to customize interventions that can meet individual needs and used to evaluate the effectiveness of these interventions. The findings also indicated that the post-secondary education going needs of individuals vary across the career and college readiness self-efficacy factors. Moreover, using applicable conceptual frameworks such as the Ecological Model of Human Development, Social Cognitive Career Theory (SCCT), the Cognitive Information Processing (CIP) Approach, and the American School Counselor Association Model as foundations for designing interventions has potential for making them more substantive and standardized.

There appears to be no previous empirical literature on understanding and enhancing career and college readiness of foster care youth. The present study made an important contribution, and more research is clearly needed. As other professional fields, such as social work, continue to provide research that sheds light on the educational deficits and subsequent needs of youth in foster care, especially with transitional age foster care youth, the counseling field is challenged to demonstrate how practitioners can develop and evaluate useful interventions.
As the educational disparities foster care youth experience become more prevalent both through professional literature and in mainstream society, individuals will become more sensitive to their needs and thus apt to find ways to assist them in reaching their highest potential. “It takes a whole village to raise a child” is an African proverb that means that the upbringing of a child is a communal effort. This saying is especially true for youth in foster care who must successfully navigate their way to adult self-sufficiency. This will not be possible without help from a strong support network and tools that will ensure both their personal and educational success. As counselors become more educated on the unique needs of foster care youth, they can play a lead role in these support networks and customize interventions that can help to meet these needs.
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APPENDICES
Appendix A: Consent Form

North Carolina State University

GUARDIAN INFORMED CONSENT FORM

Research Title: The Effects of Customized Individual Counseling Interventions on the Career and College Readiness of Adolescents in the Foster Care System

Principal Investigator: Regina Gavin Williams Faculty Sponsor (if applicable): Dr. Stanley Baker

What are some general things you should know about research studies?

Your child is being asked to take part in a research study. Your child’s participation in this study is voluntary. They have the right to be a part of this study, to choose not to participate or to stop participating at any time without penalty. The purpose of research studies is to gain a better understanding of a certain topic or issue. Your child is not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which your child is being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your child’s participation, do not hesitate to contact the researcher named above.

What is the purpose of this study?

The purpose is to help adolescents think about and prepare for post-secondary education and future careers through a set of customized individual counseling interventions. These counseling interventions are designed to fit the individual needs of each adolescent. These interventions will help increase participants’ belief that they can achieve a post-secondary education, as well as to increase their opportunities to prepare for post-secondary education and consider potential career options.

What will happen if you take part in the study?

If you agree to let your child participate in this study, he or she will be asked to participate in a ten-week intervention program with the investigator during a scheduled time based on participant and investigator availability. The intervention is aligned with components of the LINKS Program that builds on career and college readiness. The investigator will serve as the counselor in the intervention program and will provide the customized individual career and college readiness counseling interventions and assessments to the student during designated after school hours. The counseling intervention will consist of six individual, in-person sessions with the counselor for approximately sixty-minutes for a total of six hours. The participant will also be asked to engage in self-monitoring activities throughout the ten-
week program, to include two weeks prior to the intervention program and two weeks after the intervention program ends. All participants will be assessed multiple times as a part of the intervention and only those who consent will have the information from those assessments used for research purposes.

**Risks**

There are minimal risks associated with participation in this research. If we become aware of abuse, or neglect, to your child or any other child, we must report it to child protective services because the law requires this. If we are concerned that your child may hurt himself/herself or someone else, we are required to report it to program coordinator and to get help for your child and for anyone else that might get hurt.

**Benefits**

This study is designed to give your child (the participant) a better understanding of post-secondary education and future careers in order to strengthen his or her beliefs and ability to achieve a post-secondary education after high school. In addition, your child’s participation in the study will allow the researcher to gain a better understanding of what fosters or inhibits change towards counseling practices related to career and college readiness.

**Confidentiality**

The information in the study records will be kept confidential to the full extent allowed by law. Data will be stored securely in a locked site. No reference will be made in oral or written reports that could link your child to the study. Your child’s name will not be shared or put on any final written reports.

**Compensation**

Your child will receive a small incentive for participating throughout the entire nine-week study. The incentive is to be determined.

**What if you have questions about this study?**

If you have questions at any time about the study or the procedures, you may contact the researcher, Regina Gavin Williams, at 229-402-3466 or rjgavin@ncsu.edu.

**What if you have questions about your rights as a research participant?**

If you feel you or your child have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919/515-4514).
Guardian Consent to Allow Your Child to Participate

“I have read and understand the above information. I have received a copy of this form. I agree to let my child participate in this study with the understanding that I may choose to stop my child from participating at any time without penalty or loss of benefits to which I am or my child am otherwise entitled.”

Guardian’s signature ___________________________ Date ________________
Investigator’s signature ___________________________ Date ________________
PARTICIPANT CONSENT FORM

You are being invited to participate in a research study. I am doing this to learn more about what students feel like they need to know in order to feel confident about pursuing a post-secondary education. If you agree to be in this study, you will meet with me for six weeks individually and agree to participate in a two-week follow-up period. Each individual session will take 60 minutes of your time and include one counseling session per week. I will also have you complete an assessment each week following the sessions in order to see if the lessons worked. After the six-week individual counseling sessions, I will ask you to continue to take the same assessment twice over a period of two weeks.

While I will make every effort to keep your information private, there are two things we cannot keep private. If we become aware of abuse, or neglect, to you or any other child, we must report it to child protective services because the law requires this. If we are concerned that you may hurt yourself or someone else, we are required to report it to the program coordinator, to get help for you and for anyone else that might get hurt.

If you agree to be in the study, you will learn more about how to prepare for and afford a post-secondary education better as well as learn academic and personal success skills that can help you successfully complete high school.

I will be the person conducting the study, therefore if you have any questions, feel free to ask me at any time. If you do not wish to be involved in the study, you do not have to. You can also choose to stop your involvement in the study at any time.

Assent to Participate

I have been told about the study, I know why it is happening, and what I will be asked to do. I also know that I do not have to participate in the study if I do not want to. If I have questions, I can ask Regina Gavin Williams at any time. I can stop my participation at any time. My guardian also knows that I am being asked to participate in this study.

PLEASE SIGN BELOW IF YOU AGREE TO BE IN THIS STUDY.

Student’s name: ___________________________ Date: _______________
Researcher’s name: ___________________________ Date: _______________

A copy of this form will be provided to you to take with you.
Appendix B: Career and College Readiness Self-Efficacy Inventory

CCRSI

Name: ____________  
Participant ID#: ____________

Directions: Please inform us about your beliefs about education beyond high school and the future. There are no right or wrong answers. Please answer every question using the following scale. Place the number you have chosen in the blank to the left of the item.

Strongly Agree = 5  
Somewhat Agree = 4
Neither Agree or Disagree = 3,  
Somewhat Disagree = 2  
Strongly Disagree = 1

1. I know how post-high school education can help me achieve my life and career goals.

2. I believe I have the potential to succeed in the right post-high school education situation.

3. I know and understand the post-high school education application process.

4. I know how to get the post-high school information I need.

5. I know how to get the financial aid needed for post-high school education.

6. I know how to set goals for myself.

7. There are important influential persons in my life who believe in me.

8. There are also other persons who can help me achieve my goals.

9. I know how to read a textbook successfully.

10. I know how to prepare for a test successfully.

11. I know how to take class notes successfully.

12. I know how much pay for someone’s work it takes to make a good living.

13. I have confidence in being able to live a good life 10 years from now.

14. I know about the various ways to pay for a post-high school education.
Appendix C: 14 Items of the CCRSI

14 Items of the CCRSI

**Factor 1: College Knowledge**
3. I know and understand the post-high school education application process
4. I know how to get the post-high school information I need.
5. I know how to get the financial aid needed for post-high school education.
12. I know how much pay for someone’s work it takes to make a good living.
14. I know about the various ways to pay for a post-high school education.

**Factor 2: Positive personal characteristics**
6. I know how to set goals for myself.
7. There are important influential persons in my life who believe in me.
8. There are also other persons who can help me achieve my goals.
13. I have confidence in being able to live a good life 10 years from now.

**Factor 3: Academic competence**
9. I know how to read a textbook successfully.
10. I know how to prepare for a test successfully.
11. I know how to take class notes successfully.

**Factor 4: Potential to achieve future goals**
1. I know how post-high school education can help me achieve my life and career goals.
2. I believe I have the potential to succeed in the right post-high school education situation.
Appendix D: Attitude toward Training Measure (ATT)

**Attitude toward Training Measure (ATT)**

Now that you have completed the individual career and college readiness counseling intervention program, please complete the following questions by circling the number on the scale which is closest to your feelings.

1. How confident are you that this program will be successful in helping you?
   - □ 1 not at all confident
   - □ 2
   - □ 3
   - □ 4 somewhat confident
   - □ 5
   - □ 6
   - □ 7 very confident

2. How logical does this type of program seem to you?
   - □ 1 not at all logical
   - □ 2
   - □ 3
   - □ 4 somewhat logical
   - □ 5
   - □ 6
   - □ 7 very logical

3. Are you willing to undertake a similar program sometime in the future?
   - □ 1 not at all willing
   - □ 2
   - □ 3
   - □ 4 somewhat willing
   - □ 5
   - □ 6
   - □ 7 very willing

4. How beneficial do you think this program was for you?
   - □ 1 not at all beneficial
   - □ 2
   - □ 3
   - □ 4 somewhat beneficial
   - □ 5
   - □ 6
   - □ 7 very beneficial
5. How does this program compare in effectiveness with just doing nothing?
   - 1 much worse than nothing
   - 2
   - 3
   - 4 the same as nothing
   - 5
   - 6
   - 7 much better than nothing

6. How does this program compare in effectiveness with teaching yourself?
   - 1 much better than own attempts
   - 2
   - 3
   - 4 same as own attempts
   - 5
   - 6
   - 7 much worse than own attempts

7. How useful were the described program techniques?
   - 1 not useful at all
   - 2
   - 3
   - 4 moderately useful
   - 5
   - 6
   - 7 very useful

8. How well was the program explained?
   - 1 not at all well
   - 2
   - 3
   - 4 moderately well
   - 5
   - 6
   - 7 very well
9. How believable was the program?
   - 1 not at all believable
   - 2
   - 3
   - 4 moderately believable
   - 5
   - 6
   - 7 very believable

10. How valuable is the program in treating self-defeating behaviors?
    - 1 not at all valuable
    - 2
    - 3
    - 4 moderately valuable
    - 5
    - 6
    - 7 very valuable

11. To what degree has the program changed your idea of problems related to self-defeating behaviors?
    - 1 no change at all
    - 2
    - 3
    - 4 moderate change
    - 5
    - 6
    - 7 very much change

12. How understandable was the explanation of the program?
    - 1 not at all understandable
    - 2
    - 3
    - 4 moderately understandable
    - 5
    - 6
    - 7 very understandable
13. To what degree did this program help in understanding yourself?
   □ 1 not at all helpful
   □ 2
   □ 3
   □ 4 moderately helpful
   □ 5
   □ 6
   □ 7 very helpful

14. To what extent does the program allow for insight into yourself?
   □ 1 no insight at all
   □ 2
   □ 3
   □ 4 moderate insight
   □ 5
   □ 6
   □ 7 very much insight
Appendix E: Individual Learning Plan

## Individual Learning Plan

### Participant 1

Goal(s):  
#1 Exploring and narrowing down an academic major.  
#2 Narrow down a four-year major.  
#3 Explore ways to pay for college.  
#4 Explore study strategies.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Purpose/Outcome</th>
<th>Estimated Time Commitment</th>
<th>Goal #</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use CFNC website to explore academic majors</td>
<td>Choose an academic major of study</td>
<td>1 hour</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Use CFNC to narrow down a 4-year college</td>
<td>Select a college after attending community college</td>
<td>1 hour</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Financial aid, grants, and scholarships exploration</td>
<td>To fund education</td>
<td>1-2 hours</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Choose a community college</td>
<td>Attend community college after high school</td>
<td>1 hour</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Utilizing study skills</td>
<td>Increase reading skills</td>
<td>1 hour</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

This plan can be changed based on what is learned from completing the above activities. The purpose of the plan is to work toward mutually agreed upon problem-solving goals. Activities may be added or subtracted as needed.

__________________________________________  ____________________________________________
Student                                    Date                                    Staff Member                                Date
Individual Learning Plan

Participant 2

Goal(s): #1 Explore academic majors that match career choice.
#2 Review the college application process and ways to pay for college.
#3 Engaging in short-term and long-term goal-setting.
#4 Review time management skills.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Purpose/Outcome</th>
<th>Estimated Time Commitment</th>
<th>Goal #</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage in academic major exploration using the CFNC website.</td>
<td>Narrow down your college major choice</td>
<td>1-2 hours</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Examine what information goes on a college application</td>
<td>To know what to expect when it is time to apply for college</td>
<td>1 hour</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Explore financial aid, scholarships, and grants</td>
<td>Funding a college education</td>
<td>1-2 hours</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Discuss the high school to college transition/ what life looks like 10 years from now</td>
<td>Develop a plan/ feel confident about the future</td>
<td>2 hours</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Time management strategies</td>
<td>School/personal life balance</td>
<td>1-2 hours</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

This plan can be changed based on what is learned from completing the above activities. The purpose of the plan is to work toward mutually agreed upon problem-solving goals. Activities may be added or subtracted as needed.

__________________________________________  _______________________
Student                                      Date                  Staff Member   Date
Individual Learning Plan

Participant 3

Goal(s): #1 Academic major and career exploration.
#2 Ways to pay for college/ salary averages for careers.
#3 Engaging in short-term and long-term goal-setting.
#4 Review time management skills.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Purpose/Outcome</th>
<th>Estimated Time Commitment</th>
<th>Goal #</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage in academic major exploration using the CFNC website.</td>
<td>Declaring an academic major and finding a college to attend</td>
<td>3 hours</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Career exploration using O-Net</td>
<td>Narrow down career choices to see what career interest would be more suitable</td>
<td>3 hours</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Explore financial aid, scholarships, and grants</td>
<td>Ways to pay for college</td>
<td>2-3 hours</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Discuss the high school to college transition/ what life looks like 10 years from now</td>
<td>Develop a plan/ feel confident about the future</td>
<td>2 hours</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Planning study time versus personal time</td>
<td>Learn to use time effectively and not procrastinate</td>
<td>1-2 hours</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Preparing for the college leave</td>
<td>Getting set and ready to leave for college</td>
<td>1-2 hours</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

This plan can be changed based on what is learned from completing the above activities. The purpose of the plan is to work toward mutually agreed upon problem-solving goals. Activities may be added or subtracted as needed.

______________________________  ____________________________
Student                        Date                        Staff Member      Date
Appendix F: Session Plans

Session 2

Session 2: Shoot for the STARS: Exploring Potential Careers & Academic Majors

Student Name: Participant 1

Date: 3/10/16

Session Objective: To explore careers that fit participant’s personality in order to narrow down an academic area for post-secondary study.

Session goals:

- Explore the student’s current knowledge regarding post-secondary education using the College Knowledge Questionnaire.
- Explore academic majors and careers that are related to the student’s personality and interests using Holland’s Code.
- Explore academic major profiles using bigfuture.collegeboard.org in order to narrow down academic major(s) of interest.
- Explore careers and career information using O*Net.

1. Homework Check-in (10 min.)
   a. Career and College Readiness Model Review: What did you take away from reviewing this model?
      i. Create goals and expectations to achieve career and college readiness (What you should know and be able to do).
      ii. Have specific outcomes and measures to know you are meeting expectations for career and college readiness and success (How do you know you’ve met expectations?).
      iii. What should institutions provide that will allow you to achieve career and college success (Pathways and supports)?
      iv. What do institutions needs to help you ensure your readiness for college and careers (Resources and structures)?

   b. Senior College Checklist
      i. What areas were you able to successfully check off?
      ii. What areas did you place an “x” next to that you still needed to accomplish?
         1. Plan for accomplishing areas marked with an “x”

2. Review the College Knowledge Questionnaire (5 min.)
   a. Explore any follow-up questions related to the questionaire
3. **Academic Majors and Careers Exploration (30 min.)**
   a. Academic majors to match your interests: Discovering your Holland Code
      i. Holland’s Code (RIASEC) - What is it and why is it used?
      ii. The Holland Code Test: The test consists of 48 tasks that you will have to rate by how much you would enjoy performing each on a scale of (1) dislike (2) slightly dislike (3) neither like not dislike (4) slightly enjoy (5) enjoy. The test will take most five to ten minutes to complete.
         [http://personality-testing.info/tests/RIASEC/](http://personality-testing.info/tests/RIASEC/)
         1. My Holland code is: SCE
         2. Explore careers and majors using code on O*NET
         3. My career(s) of interest for further exploration is as follows:
            Pre-K teacher; early childhood education
   b. College Foundation of North Carolina (CFNC.ORG) and Big Future by the College Board (bigfuture.collegeboard.org) websites - registration and overview (13 min.)
      i. Explore academic major profiles:
         [https://bigfuture.collegeboard.org/majors-careers](https://bigfuture.collegeboard.org/majors-careers)
      ii. My academic major(s) of interest for further exploration is as follows:
         Early childhood education; kindergarten and pre-school education.

4. **Wrap Up (2 min.)**

5. **Homework**
   a. Further explore career interest(s) using O*Net ([https://www.onetonline.org/](https://www.onetonline.org/)). Write down three facts you discover from researching the career(s).

   ____________________________________________________________

   ____________________________________________________________

   ____________________________________________________________

   b. Write down the main things you think you would need to feel comfortable when attending college (e.g. class size, large vs. small colleges, urban vs. rural area, public vs. private college, extracurricular activities, etc.)

   ____________________________________________________________

   ____________________________________________________________

   ____________________________________________________________

   c. Review Greater Raleigh National College Fair Map (March 22)

   ★ Next Up: Finding the right college based on your best fit and academic interests.
Session 2: Shoot for the STARS: Exploring Potential Careers & Academic Major

Student Name: Participant 2

Date: 3/9/16

Session Objective: To explore careers that fit participant’s personality in order to narrow down an academic area for post-secondary study.

Session goals:

- Explore the student’s current knowledge regarding post-secondary education using the College Knowledge Questionnaire.
- Explore academic majors and careers that are related to the student’s personality and interests using Holland’s Code.
- Explore academic major profiles using bigfuture.collegeboard.org in order to narrow down academic major(s) of interest.
- Explore careers and career information using O*Net.

1. Homework Check-in (10 min.)
   a. Career and College Readiness Model Review: What did you take away from reviewing this model?
      i. Create goals and expectations to achieve career and college readiness (What you should know and be able to do).
      ii. Have specific outcomes and measures to know you are meeting expectations for career and college readiness and success (How do you know you’ve met expectations?).
      iii. What should institutions provide that will allow you to achieve career and college success (Pathways and supports)?
      iv. What do institutions needs to help you ensure your readiness for college and careers (Resources and structures)?
   b. Sophomore College Checklist
      i. What areas were you able to successfully check off?
      ii. What areas did you place an “x” next to that you still needed to accomplish?
         1. Plan for accomplishing areas marked with an “x”
2. **Review the College Knowledge Questionnaire (5 min.)**
   a. Explore any follow-up questions related to the questionnaire

3. **Academic Majors and Careers Exploration (30 min.)**
   a. Academic majors to match your interests: Discovering your Holland Code
      i. Holland’s Code (RIASEC) - What is it and why is it used?
      ii. The Holland Code Test: The test consists of 48 tasks that you will have to rate by how much you would enjoy performing each on a scale of (1) dislike (2) slightly dislike (3) neither like not dislike (4) slightly enjoy (5) enjoy. The test will take most five to ten minutes to complete. [http://personality-testing.info/tests/RIASEC/](http://personality-testing.info/tests/RIASEC/)
         1. My Holland code is: ISC
         2. Explore careers and majors using code on O*NET
         3. My career(s) of interest for further exploration is as follows:
            Religious studies; history; ancient studies; library science
   b. College Foundation of North Carolina (CFNC.ORG) and Big Future By the College Board (bigfuture.collegeboard.org) websites - registration and overview (13 min.)
      i. Explore academic major profiles:
         [https://bigfuture.collegeboard.org/majors-careers](https://bigfuture.collegeboard.org/majors-careers)
      ii. My academic major(s) of interest for further exploration is as follows:
         Religious studies and history

4. **Wrap Up (2 min.)**

5. **Homework**
   a. Further explore career interest(s) using O*Net ([https://www.onetonline.org/](https://www.onetonline.org/)). Write down three facts you discover from researching the career(s).__________________________________________________________

   b. Write down the main things you think would need to put on a college application (e.g. SAT/ACT scores, personal information, etc.)
      _________________________________________________________________

   c. Review Greater Raleigh National College Fair List of Schools (March 22)

★ **Next Up:** Exploring what information goes on a college application/ what the application process looks like.
Session 2: Shoot for the STARS: Exploring Potential Careers & Academic Majors

Student Name: Participant 3
Date: 3/8/16
Session Objective: To explore careers that fit participant’s personality in order to narrow down an academic area for post-secondary study.

Session goals:
- Explore the student’s current knowledge regarding post-secondary education using the College Knowledge Questionnaire.
- Explore academic majors and careers that are related to the student’s personality and interests using Holland’s Code.
- Explore academic major profiles using bigfuture.collegeboard.org in order to narrow down academic major(s) of interest.
- Explore careers and career information using O*Net.

1. Homework Check-in (10 min.)
   a. Career and College Readiness Model Review: What did you take away from reviewing this model?
      i. Create goals and expectations to achieve career and college readiness (What you should know and be able to do).
      ii. Have specific outcomes and measures to know you are meeting expectations for career and college readiness and success (How do you know you’ve met expectations?).
      iii. What should institutions provide that will allow you to achieve career and college success (Pathways and supports)?
      iv. What do institutions needs to help you ensure your readiness for college and careers (Resources and structures)?

   b. Senior College Checklist
      i. What areas were you able to successfully check off?
      ii. What areas did you place an “x” next to that you still needed to accomplish?
         1. Plan for accomplishing areas marked with an “x”

2. Review the College Knowledge Questionnaire (5 min.)
   a. Explore any follow-up questions related to the questionnaire

3. Academic Majors and Careers Exploration (30 min.)
   a. Academic majors to match your interests: Discovering your Holland Code
      i. Holland’s Code (RIASEC) - What is it and why is it used?
      ii. The Holland Code Test: The test consists of 48 tasks that you will have to rate by how much you would enjoy performing each on a scale of (1) dislike (2) slightly dislike (3) neither like not dislike (4) slightly enjoy (5)
enjoy. The test will take most five to ten minutes to complete. 
http://personality-testing.info/tests/RIASEC/

1. My Holland code is: IAS
2. Explore careers and majors using code on O*NET
3. My career(s) of interest for further exploration is as follows: Math; architecture; photojournalism

b. College Foundation of North Carolina (CFNC.ORG) and Big Future By the College Board (bigfuture.collegeboard.org) websites - registration and overview (13 min.)
   i. Explore academic major profiles:
      https://bigfuture.collegeboard.org/majors-careers
   ii. My academic major(s) of interest for further exploration is as follows: Architecture and journalism. Wants to look at majors at NC A&T and NCCU.

4. Wrap Up (2 min.)

5. Homework
   a. Further explore career interest(s) using O*Net (https://www.onetonline.org/). Write down three facts you discover from researching the career(s).

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

   b. Write down the main things you think you would need to feel comfortable when attending college (e.g. class size, large vs. small colleges, urban vs. rural area, public vs. private college, extracurricular activities, etc.)

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

   c. Review Greater Raleigh National College Fair Map (March 22) 

★ Next Up: Finding the right college based on your best fit and academic interests.
Session 3: STAR Struck: Finding the Right Post-Secondary Education Institution for Me

Student Name: Participant 1  
Date: 3/17/16

Session Objective: To explore post-secondary schools that have participant’s academic major of interest and where she would feel most comfortable attending.

Session goals:
• Examine the items the student needs in order to feel most comfortable attending college.
• Utilize student’s list of needs to narrow down college options using school finder tools on CFNC website.
• Come up with 3-5 questions the student would like to ask an admission counselor based on the college(s) she is interested in learning more about in order to prepare for the Greater Raleigh National College Fair.

1. Homework Check-in (15 min.)
   a. Career Interest(s) Exploration: What three facts did you discover from researching careers in Early Childhood Education and Kindergarten and Pre-School Education (B-K)?
      She learned that it will take a lot of skill and patience to work with younger students and that she would need to learn various subjects.
      i. Was there one career that stood out to you more than the other? **Wants to work more with Pre-Kindergarten students**
      ii. What about academic major? Early childhood education
   b. Holland Code: Did you further review your code, SCE? If so, what did you discover?
   c. Did you sign up for the CFNC.org and Bigufuture.collegeboard.org? **Yes**
   d. College Comfort: What are the main things you think you would need to feel comfortable when attending college (class size, large vs. small colleges, urban vs. rural area, public vs. private college, extracurricular activities, etc.)?
      She’s okay with big class sizes, wants to be in the city, attend a school with an early childhood education program, medium size school, a public institution, sports teams, and dance.

2. Finding the Right College Fit (40 min.)
   a. Post-secondary schools that fit your needs.
      i. School Finder:  
         https://www1.cfnc.org/Plan/For_College/Explore_Postsecondary_Schools/School_Finder/School_Finder.aspx
      1. My schools that match my needs to further explore are as follows:  
         NC A&T State University, UNC-Greensboro
2. Recognizing your “deal breakers”
   Does not want to be in Durham; would like to have a college with a fashion design or business programs as two potential back up majors

b. Questions to ask an admissions counselor (National College Fair Preparation)
   1. What are three to five questions you would like to ask an admission counselor for each college/university you may be interested in learning more about or in general.
      1. What education majors do they offer? 2. What scholarships are available? 3. Do you offer any summer bridge programs?

3. Wrap Up (2 min.)
   a. Reminder: Greater Raleigh National College Fair next week

4. Homework
   a. Further research at least 3 colleges/universities you are interested in learning more about by completing the College Exploration Day worksheet in your binder.
   b. Review Greater Raleigh National College Fair Map and narrow down schools to visit (March 22).

★ Next Up: Paying for college and life 10 years from now.
Session 3: STARRY-Eyed: Demystifying the College Application Process

Student Name: Participant 2
Date: 3/17/16
Session Objective: To explore the components of the college application and the college application process.
Session goals:
- Examine the items the student needs to gather in order to successfully complete a college application.
- Review a mock college application in order to see an example of what a completed college application would look like.
- Come up with 3-5 questions the student would like to ask an admission counselor based on the college(s) she is interested in learning more about in order to prepare for the Greater Raleigh National College Fair.

1. Homework Check-in (15 min.)
   a. Career Interest(s) Exploration: What three facts did you discover from researching careers in History, Religious Studies, Ancient Studies, or Library Science? Leaning more towards History with a minor in Religious Studies
      i. Was there one career that stood out to you more than the other? Historian or Archeologist
         ii. What about academic major? History and Religious Studies
   b. Holland Code: Did you further review your code, ISC? If so, what did you discover? Yes
   c. Did you sign up for the CFNC.org and Bigufuture.collegeboard.org?
   d. Write down the main things you think you need for a college application: resume, recommendation letters, transcript

2. Demystifying the College Application Process (40 min.)
   a. What goes on a college application?
         1. Please write down the main components of a college application: Application forms, high school transcript, final transcript,
admissions test scores, letters of recommendations, essays, interviews

ii. UNC course and admissions requirements:
https://www1.cfnc.org/Plan/For_College/College_Entrance_Requirements/College_Entrance_Requirements.aspx

iii. Mock college application (college knowledge activity)
1. What parts stood out to you? The family part of the application (mother and father’s information)

iv. Avoiding the big college application mistakes (handout)

   b. Questions to ask an admissions counselor (National College Fair Preparation)
      1. What are three to five questions you would like to ask an admission counselor for a college/university you may want to learn more about? _____________________________

3. Wrap Up (2 min.)
   a. Reminder: Greater Raleigh National College Fair next week

4. Homework
   a. Further research at least 3 colleges/universities you are interested in learning more about by completing the College Exploration Day worksheet in your binder.
   b. Review Greater Raleigh National College Fair Map and narrow down schools to visit (March 22).

★ Next Up: Paying for college and life 10 years from now.
Session 3: STAR Struck: Finding the Right Post-Secondary Education Institution for Me

Student Name: Participant 3
Date: 3/15/16

Session Objective: To explore post-secondary schools that have participant’s academic major of interest and where she would feel most comfortable attending.

Session goals:
- Examine the items the student needs in order to feel most comfortable attending college.
- Utilize student’s list of needs to narrow down college options using school finder tools on CFNC website.
- Come up with 3-5 questions the student would like to ask an admission counselor based on the college(s) she is interested in learning more about in order to prepare for the Greater Raleigh National College Fair.

1. Homework Check-in (15 min.)
   a. Career Interest(s) Exploration: What three facts did you discover from researching careers in Architecture and Journalism?
   - Being a photojournalist can be a free-lance job; she is uninterested in parts of journalism’
   - professional photographers make on average $38,000 and photographers for a newspaper or magazine make on average $40,000. Realized she’s not interested in architecture;

   i. Was there one career that stood out to you more than the other? Photography
   ii. What about academic major? No

   b. Holland Code: Did you further review your code, IAS? If so, what did you discover?

   c. Did you sign up for the CFNC.org and Bigufuture.collegeboard.org?

   d. College Comfort: What are the main things you think you would need to feel comfortable when attending college (class size, large vs. small colleges, urban vs. rural area, public vs. private college, extracurricular activities, etc.)?
   - Urban setting, public school, medium-large size, extracurricular activities, sports teams HBCU, medium size or large city, no more than two hours away from Durham

2. Finding the Right College Fit (40 min.)
   a. Post-secondary schools that fit your needs.

   i. School Finder: [https://www1.cfnc.org/Plan/For_College/Explore_Postsecondary_Schools/School_Finder/School_Finder.aspx](https://www1.cfnc.org/Plan/For_College/Explore_Postsecondary_Schools/School_Finder/School_Finder.aspx)
1. My schools that match my needs to further explore are as follows:
   1. NC A&T State University and North Carolina Central University; 2. UNC-Wilmington and UNC-Greensboro
2. Recognizing your “deal breakers” Too small or rural area
   b. Questions to ask an admissions counselor (National College Fair Preparation)
      1. What are three to five questions you would like to ask an admission counselor for each college/university you may be interested in learning more about or in general.
1. Are there scholarship opportunities offered through your university? 2. What do you offer for students who are undecided about their major? 3. What types of programming and events do you offer to help first-year students transition into college during the 1st one-two months.

3. Wrap Up (2 min.)
   a. Reminder: Greater Raleigh National College Fair next week

4. Homework
   a. Further research at least 3 colleges/universities you are interested in learning more about by completing the College Exploration Day worksheet in your binder.
   b. Review Greater Raleigh National College Fair Map and narrow down schools to visit (March 22).

★ Next Up: Paying for college and life 10 years from now.
Session 4: Wish Upon a STAR: Paying for College and Life in the Future

Student Name: Participant 1
Date: 3/24/16

Session Objective: To explore ways to pay for post-secondary education and to examine expectations and long-term goals in adult life.

Session goals:
- Increase student’s understanding of the various ways individuals can pay for a post-secondary education.
- Allow student to effectively examine and set realistic expectations for her future based on how she would like to live 10 years from now.

1. Homework Check-in (10 min.)
   a. Go over the College Exploration Day worksheet that was completed for homework. From the colleges/universities you researched, what information stood out to you? Is there one college that is standing out to you more than another? She would like to major in Early Childhood Education and she likes colleges in the Raleigh/Durham area because it would be close to home
   b. Greater Raleigh National College Fair- What schools did you find more appealing and why? Shaw University, UNC-Greensboro, UNC-Wilmington, East Carolina University; liked Shaw because there was a program for students in foster care.

2. Ways to Pay for a Post-Secondary Education (30 min.)
   a. What is student financial aid?
      i. Financial aid is money from federal, state, and private sources used to pay college costs. There are two general types of aid: gift aid and self-help aid.
         1. Gift aid: The two types of gift aid are grants and scholarships. Generally grants and scholarships are the same thing - aid given to
a student for which the student does not have to work or have an obligation to repay.

2. **Self-help aid**: There are also two kinds of self-help aid - loans and employment:
   a. **Loans**: money used to pay current expenses with an obligation for repayment at some future time, usually with interest
   b. **Employment**: part time campus or off-campus job

b. **There are multiple sources of financial aid awards**. Some examples are: State programs, Federal programs, College and University programs, Local, regional, and national private programs (foundations, clubs, organizations)

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<tr>
<th>d. <strong>Financial Aid FAQs</strong></th>
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<tr>
<td>1. Some new information I learned about financial aid for college is as follows: She knows the different types of financial aid.</td>
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<tr>
<th>e. <strong>NC Reach</strong>: <a href="http://www.ncreach.org/faq/">http://www.ncreach.org/faq/</a></th>
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<tbody>
<tr>
<td>i. <strong>What is NC Reach?</strong> NC Reach is a state-funded scholarship offered to qualified applicants for up to 4 years of undergraduate study at NC public colleges and universities. Available funding is awarded after other public funds and scholarships have been applied. NC Reach provides comprehensive student support, including mentors, care packages and internships.</td>
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<td>ii. <strong>Who is eligible for NC Reach?</strong></td>
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<tr>
<td>1. Legal residents of North Carolina, eligible for in-state tuition rates</td>
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<td>2. Adopted from NC Division of Social Services (DSS) foster care after the age of 12, OR, aged out of NC DSS foster care at age 18 (they must have been in care on their 18th birthday)</td>
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<td>3. Enrolled in one of the 74 NC public community colleges, colleges or universities</td>
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<td>4. Under the age of 26 (participants remain eligible until their 26th birthday)</td>
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3. **Life Ten Years From Now (20 min)**
   a. Ten Years, From Now, How Do You See Yourself? Worksheet
   b. How does this future lifestyle compare to your future career goal (e.g. annual salary, affording the lifestyle you want)? She must get a college degree in order to
go in to Early Childhood Education field. She desires to live comfortably with a house, a job as a teacher, and a car.

c. What individuals in your life provide support for you in working towards your post-secondary education and career goals? The LiINKS coordinator, her social worker, her school counselor

4. **Wrap Up (2 min.)**
   
a. Reminder: Greater Raleigh National College Fair next week

5. **Homework**
   
a. Make a list of all of the activities you do in a single day and the time it takes you to do those activities (e.g. sleep, personal grooming, studying, school time, etc.). Also write down a list of the ways you study.

★ **Next Up: Time management skills and study strategies.**
Session 4: Wish Upon a STAR: Paying for College and Life in the Future

Student Name: Participant 2

Date: 3/24/16

Session Objective: To explore ways to pay for post-secondary education and to examine expectations and long-term goals in adult life.

Session goals:
- Increase student’s understanding of the various ways individuals can pay for a post-secondary education.
- Allow student to effectively examine and set realistic expectations for her future based on how she would like to live 10 years from now.

1. Homework Check-in (10 min.)
   a. Go over the College Exploration Day worksheet that was completed for homework. From the colleges/universities you researched, what information stood out to you? Is there one college that is standing out to you more than another?
      UNC-Greensboro: Has a good History Department, the class sizes are no overwhelming (20-30 students in most classes). Has a concentration in Religious Studies.
   b. Greater Raleigh National College Fair- What schools did you find more appealing and why?
      UNC-Asheville: The university is smaller, the class size is on average 15-20 students; She can major in History and Religious Studies. Thinks the city would be great to live in; believes she can build a true connection with her professors there. Her ranking of potential places to attend college are 1) UNC-Ashville, 2) UNC-Greensboro, and 3) UNC-Chapel Hill.
   c. College application form recap. Some applications may ask for teacher recommendations and some many not. She would need to go to the university’s website to see the admissions requirements.

2. Ways to Pay for a Post-Secondary Education (30 min.)
   a. What is student financial aid?
      i. Financial aid is money from federal, state, and private sources used to pay college costs. There are two general types of aid: gift aid and self-help aid.
         1. Gift aid: The two types of gift aid are grants and scholarships. Generally grants and scholarships are the same thing - aid given to a student for which the student does not have to work or have an obligation to repay.
2. **Self-help aid**: There are also two kinds of self-help aid - loans and employment:
   a. **Loans** - money used to pay current expenses with an obligation for repayment at some future time, usually with interest
   b. **Employment** - part time campus or off-campus job

b. **There are multiple sources of financial aid awards.** Some examples are: State programs, Federal programs, College and University programs, Local, regional, and national private programs (foundations, clubs, organizations)

c. **Financial Aid FAQs**
      1. Some new information I learned about financial aid for college is as follows: There are different types of financial aid; the difference between subsidized versus unsubsidized loans.

d. **Review glossary of financial aid terms** (i.e. difference between unsubsidized vs. subsidized loans).

e. **NC Reach**: [http://www.ncreach.org/faq/](http://www.ncreach.org/faq/)
   i. **What is NC Reach?** NC Reach is a state-funded scholarship offered to qualified applicants for up to 4 years of undergraduate study at NC public colleges and universities. Available funding is awarded after other public funds and scholarships have been applied. NC Reach provides comprehensive student support, including mentors, care packages and internships.
      
   ii. **Who is eligible for NC Reach?**
      1. Legal residents of North Carolina, eligible for in-state tuition rates
      2. Adopted from NC Division of Social Services (DSS) foster care after the age of 12, OR, aged out of NC DSS foster care at age 18 (they must have been in care on their 18th birthday)
      3. Enrolled in one of the 74 NC public community colleges, colleges or universities
      4. Under the age of 26 (participants remain eligible until their 26th birthday)

3. **Life Ten Years From Now (20 min)**
   a. Ten Years, From Now, How Do You See Yourself? Worksheet
   b. How does this future lifestyle compare to your future career goal (e.g. annual salary, affording the lifestyle you want)?  
      **Would like to have a nice lifestyle, have a house, her own car, and a good career.**
   c. What individuals in your life provide support for you in working towards your post-secondary education and career goals?  
      **Foster parents, LINKS coordinator**
4. **Homework**
   a. Make a list of all of the activities you do in a single day and the time it takes you to do those activities (e.g. sleep, personal grooming, studying, school time, etc.).

★ **Next Up: Time management skills and further exploring colleges.**
Session 4: Wish Upon a STAR: Paying for College and Life in the Future

Student Name: Participant 3
Date: 3/21/16

Session Objective: To explore ways to pay for post-secondary education and to examine expectations and long-term goals in adult life.

Session goals:
- Increase student’s understanding of the various ways individuals can pay for a post-secondary education.
- Allow student to effectively examine and set realistic expectations for her future based on how she would like to live 10 years from now.

1. Homework Check-in (10 min.)
   a. Go over the College Exploration Day worksheet that was completed for homework. From the colleges/universities you researched, what information stood out to you? Is there one college that is standing out to you more than another? Environmental and Sustainable Studies (NC A&T), Environmental Geospatial Science, Journalism, and Mass Communication. Environmental and Sustainable Studies peaked her interest the most.
   b. Greater Raleigh National College Fair- What schools would you like to visit and why? NC A&T University, North Carolina Central University, UNC-Greensboro, and UNC-Wilmington. Most interested in NC A&T particularly because of Environmental and Sustainable Studies major, the city, size of university, and an HBCU.

2. Ways to Pay for a Post-Secondary Education (30 min.)
   a. What is student financial aid?
      i. Financial aid is money from federal, state, and private sources used to pay college costs. There are two general types of aid: gift aid and self-help aid.
         1. Gift aid: The two types of gift aid are grants and scholarships. Generally grants and scholarships are the same thing - aid given to a student for which the student does not have to work or have an obligation to repay.
         2. Self-help aid: There are also two kinds of self-help aid - loans and employment:
            a. Loans - money used to pay current expenses with an obligation for repayment at some future time, usually with interest
b. **Employment** - part time campus or off-campus job

b. **There are multiple sources of financial aid awards.** Some examples are: State programs, Federal programs, College and University programs, Local, regional, and national private programs (foundations, clubs, organizations)

c. **Financial Aid FAQs**
      1. Some new information I learned about financial aid for college is as follows: The difference between unsubsidized versus subsidized loans.

d. **Review glossary of financial aid terms.**

e. **NC Reach:** [http://www.ncreach.org/faq/](http://www.ncreach.org/faq/)
   i. **What is NC Reach?** NC Reach is a state-funded scholarship offered to qualified applicants for up to 4 years of undergraduate study at NC public colleges and universities. Available funding is awarded after other public funds and scholarships have been applied. NC Reach provides comprehensive student support, including mentors, care packages and internships.
   ii. **Who is eligible for NC Reach?**
      1. Legal residents of North Carolina, eligible for in-state tuition rates
      2. Adopted from NC Division of Social Services (DSS) foster care after the age of 12, OR, aged out of NC DSS foster care at age 18 (they must have been in care on their 18th birthday)
      3. Enrolled in one of the 74 NC public community colleges, colleges or universities
      4. Under the age of 26 (participants remain eligible until their 26th birthday)

3. **Life Ten Years From Now (20 min)**
   a. Ten Years, From Now, How Do You See Yourself? Worksheet
   b. How does this future lifestyle compare to your future career goal (e.g. annual salary, affording the lifestyle you want)?
      Wants to be fully independent, have a family of her own, a nice career, a house, and car.
   c. What individuals in your life provide support for you in working towards your post-secondary education and career goals? Her foster parents, her aunts and uncles, teacher, and LINKS Coordinator.

4. **Wrap Up (2 min.)**
   a. Reminder: Greater Raleigh National College Fair next week

5. **Homework**
a. Make a list of all of the activities you do in a single day and the time it takes you to do those activities (e.g. sleep, personal grooming, studying, school time, etc.)

★ Next Up: Time management skills and reviewing college majors again.
Session 5: STAR Track: Staying on Track to Graduate from High School

Student Name: Participant 1

Date: 3/31/16

Session Objective: To learn effective time management and study skills in order to stay on track for high school graduation.

Session goals:

- Keep student on a successful track towards high school graduation and post-secondary educational attainment.
- Prioritize immediate and non-immediate daily tasks in order to make effective use of time.
- Learn and practice effective study skills in order to achieve well academically.
- To decrease procrastination on academic-related tasks.

1. Homework Check-in (10 min.)
   a. Make a list of all of the activities you do in a single day and the time it takes you to do those activities (e.g. sleep, personal grooming, studying, school time, etc.)
   Work 8 hours 4 days/week; school Mon.-Fri. (8am-12pm); study 3 days/week (3-4 hours total); works each Sat. and goes to church on Sun. Does not have that much free time.

2. Staying on track towards high school graduation
   a. What do you think it will take to successfully stay on track towards graduation? Eliminate some work hours; Wants to choose morning classes and work in the afternoon so that she can get home earlier; when she goes to college she wants to look in to working during the day and going to school in the evenings. She feels that is stressful handling both school and work so she is trying to find a new job where she does not have to work such long hours. She is trying to remove job as the barrier to her staying on track for graduation.
   b. Review of High School Graduation Requirements- handout
      i. Are you on track towards graduation? Yes or No. Yes, since she goes to a non-traditional high school where you work on computers at your own pace, she will graduate in January 2017.

3. Learning and Choosing Effective Study Skills (10 min)
   a. Study Skills Bingo
      i. As you call out each statement, give an example of what that looks like in practice.
ii. Which of these study skills do you believe will be helpful in keeping you on track towards graduation

4. Time management skills (35 min.)
   a. Time Management- Putting Things in to Perspective: Where is your time going?
      i. Worksheet- Where is your time going throughout the week? The remaining hours you have left is time you have allowed yourself to study.
      ii. Some things I discovered about prioritizing my time are: Work less hours and finding a new job so that she can dedicate more time to studying and working towards graduation. Study her hardest classes first.
   b. Time Management for Teens- handout
   c. Time Management Worksheet
      i. Planning how to use your time effectively based on
         1. Identifying Obligated Time
         2. Identifying Free Time
         3. Analyzing Your Situation
      ii. Ways I will use time management skills to better prioritize my time are: Build in self-care time; work less hours; and keep track with hours dedicated to studying

5. Wrap Up (2 min.)
   a. How will time management skills help you in college? Put school first and have a part-time job that works around her school schedule.

6. Homework
   a. Write down your expectations and how to best prepare for the community college environment.

   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

★ Next Up: Preparing for the community college environment
Session 5: Jump STARt Your Time Management Skills

Student Name: **Participant 2**

Date: **3/30/16**

Session Objective: To learn effective time management skills in order to stay on track for matriculating through high school.

Session goals:

- Keep student on a successful track towards high school matriculation and post-secondary educational attainment.
- Prioritize immediate and non-immediate daily tasks in order to make effective use of time.
- To decrease procrastination on academic-related tasks.

1. **Homework Check-in (10 min.)**
   a. Make a list of all of the activities you do in a single day and the time it takes you to do those activities (e.g. sleep, personal grooming, studying, school time, etc.)
      Wakes up at 6:30am; leave for school at 7:15am; come home by 3:30pm; may spend one hour on homework if she remembers to complete it; dinner at 6:30pm; watch tv.

2. **College Major Check-In**
   a. What college majors are you continuing to review? What new information have you discovered?
      Student really likes UNC-Asheville. She is really interested in History and Religious Studies and thinks this is what she would to pursue as a potential major. She likes the fact the UNC-Asheville is a smaller campus and believes she would enjoy the area.

3. **Time management skills (30 min.)**
   a. **Time Management- Putting Things in to Perspective: Where is your time going?**
      i. Worksheet- Where is your time going throughout the week? The remaining hours you have left is time you have allowed yourself to study.
      ii. Some things I discovered about prioritizing my time are: Realized she is not spending enough time dedicated to school work and needs to make homework a priority; some ways to do this are write down assignments when given; chunking time; set a plan and write out steps to accomplish this goals (e.g. writing down schedule in planner, writing a to-do list; studying earlier in the day once she gets home, etc.).
b. Time Management for Teens- handout

c. Time Management Worksheet
   
i. Planning how to use your time effectively based on
      1. Identifying Obligated Time
      2. Identifying Free Time
      3. Analyzing Your Situation

   ii. Ways I will use time management skills to better prioritize my time are:
       Allot at least 3 hours/day to studying and setting a certain time of day after
       school to study at home.

4. Wrap Up (2 min.)

   a. How will time management skills help you in college? To keep track of
      assignments, study more effectively, and help with the transition in to college life.

5. Homework

   a. What are all of the tools you would need to both successfully graduate from high
      school?:

      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________

★ Next Up: Preparing for High School Graduation and Access to College
Session 5: Jump STaRt Your Time Management Skills

Student Name: Participant 3

Date: 3/31/16

Session Objective: To learn effective time management skills in order to stay on track for high school graduation.

Session goals:

- Keep student on a successful track towards high school graduation and post-secondary educational attainment.
- Prioritize immediate and non-immediate daily tasks in order to make effective use of time.
- To decrease procrastination on academic-related tasks.

6. Homework Check-in (10 min.)
   a. Make a list of all of the activities you do in a single day and the time it takes you to do those activities (e.g. sleep, personal grooming, studying, school time, etc.)
   Wakes up at 6am; bathroom times for 30-45 min; hair/grooming 20-30 min.; leave for school at 7:10am; come home at 2:45pm or 3:30pm; wait for sister to get off of the bus at 4pm; spends 1-2 hours on homework; dinner at 6pm; watch tv the rest of the night. She feels schedule does not work well for her because she goes to sleep late, sometimes eats late, or does homework late.

7. College Major Check-In
   a. What college majors are you continuing to review? What new information have you discovered?
   Environmental sustainability as first choice; communications/mass communications as second choice; Environmental sustainability with a minor in communications as a third choice. Look at NC A&T, NCCU, and UNCG. Has applied to NC A&T and has been accepted with major undeclared. Waiting to hear back from NCCU and has not applied to UNCG.

8. Time management skills (30 min.)
   a. Time Management- Putting Things in to Perspective: Where is your time going?
      i. Worksheet- Where is your time going throughout the week? The remaining hours you have left is time you have allowed yourself to study.
      ii. Some things I discovered about prioritizing my time are:
Look over notes everyday; budget enough time dedicated to school- need to prioritize homework; write down assignments when given; chunking time; set a plan and write out steps to accomplish these goals (e.g. writing down schedule in planner, writing a to-do list; studying earlier in the day once she gets home, etc.)

b. Time Management for Teens- handout
c. Time Management Worksheet
   i. Planning how to use your time effectively based on
      1. Identifying Obligated Time
      2. Identifying Free Time
      3. Analyzing Your Situation
   ii. Ways I will use time management skills to better prioritize my time are: Going to sleep at a decent hour; allot at least 3 hours/day to studying.

9. Wrap Up (2 min.)
a. How will time management skills help you in college? Keeping things in order to eliminate stress.

10. Homework
   a. Make a list of all of items you would need to both successfully enter and leave for college:

   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

★ Next Up: Preparing to leave for college
Session 6: Super STAR Status: Preparing for the College Leave

Student Name: Participant 1

Date: 4/7/16

Session Objective: To learn effective ways to prepare for post-secondary education

Session goals:

- Prepare student for the post-secondary education environment.
- Review the college planning timeline for student’s current grade level and for the first year of college.
- Answer student’s lingering questions regarding preparing for post-secondary education and future careers.

1. Homework Check-in (10 min.)
   a. What are your expectations of the community college environment? How do you feel it is to best prepare for this environment?
      The community college she will attend has her major and offers classes at varying times of day; stay focused (no “senioritis”); try to maintain good grades and not giving up when things get difficult.

   b. STARS Recap: What information do you still desire to know more about regarding your preparation for post-secondary education?
      She felt like she learned a lot about the Early Childhood Education major and wants to look at attending East Carolina University or UNCG, or UNCW after attending two years of community college. She will continue to research the profession a little more.

2. Preparing for the College Leave (40 min.)
   a. The Big College To-Do List- Top 10 tips:
      http://collegelife.about.com/od/beforeyouarrive/a/todolist.htm
      i. New tips I discovered after reviewing this list were:
         Making sure to consider safety and personal belongings and the college lingo (TA’s, RA’s, etc.)

      ii. The college planning tips I will need the most assistance with are:
         Staying focused (time management)
b. **Reviewing the College Planning Timeline**
   [https://www1.cfnc.org/Plan/For_College/Prepare_For_College/College_Planning_Timeline/12th_Grade.aspx](https://www1.cfnc.org/Plan/For_College/Prepare_For_College/College_Planning_Timeline/12th_Grade.aspx)
   i. 12th grade timeline review
   ii. First-year of college timeline review
   iii. Some steps I need to work on to successfully plan for my college leave are:

   ________________________________________________________________
   ________________________________________________________________

   c. **Adults in my life who can successfully help me prepare for my college leave are:**
   S.T.A.R.S. counselor, LINKS coordinator, and social worker; she knows that her brother would have wanted to see her graduate, he passed away last year.

3. **Wrap Up (5 min.)**
   a. What are some things you learned after being a participant in the S.T.A.R.S. Program?
   Time management skills; things need for college; how to pay for college (financial aid), career and college major focus
   b. My next steps in deciding on a college major and institution are:
   Try to find day care and pre-school job shadow opportunities within the individual learning plan; continue to take part in the life skills program; fill out the FAFSA; Talk to school counselor to schedule SAT/ACT; apply to community college (with the help of the school counselor); look at course catalog for community college.

4. **Homework**
   a. Please take the S.T.A.R.S. Assessment on the following dates:
      i. April 7 & April 8
      ii. April 12 & April 14
      iii. April 19 & April 21

   ★ **Next Up: S.T.A.R.S Culminating Dinner on April 28th at 6pm.**
Session 6: Super STAR Status: Preparing for High School Graduation and Access to College

Student Name: Participant 2

Date: 4/7/16

Session Objective: To learn effective ways to prepare for high school graduation and entrance in to post-secondary education.

Session goals:

- Prepare student for successfully graduating from high school and entrance in to the post-secondary education environment.
- Review the high school planning timeline for student’s current grade level and the following grade level.
- Answer student’s lingering questions regarding preparing for post-secondary education and future careers.

1. Homework Check-in (10 min.)
   a. What are all of the tools you would need to both successfully graduate from high school? All of her high school credits; preparation and no procrastination; SAT/ACT scores; good GPA; staying involved in extracurricular and co-curricular activities; volunteer hours; and good grades.
   b. STARS Recap: What information do you still desire to know more about regarding your preparation for post-secondary education?
      Would like to pursue a degree in History and Religious Studies from UNC-Asheville. Would like to continue to learn more about the resources offered at UNC-Asheville.

2. Preparing for High School Graduation (40 min.)
   a. Mapping Your Future® Guide to Life after High School: Junior Year
      i. New tips I discovered after reviewing this guide were:
         Look out for scholarship scams and look for scholarships to attend UNC-Asheville and outside of the university.
      ii. The tips I will need the most assistance with are:
         Continuing to look for academic scholarships.
   b. Reviewing the High School Planning Timeline
      https://www1.cfnc.org/Plan/For_High_School/High_School_Planning_Timeline/10th_Grade.aspx
i. 10th grade timeline review
ii. 11th grade timeline review
iii. Some steps I need to work on to successfully plan for high school graduation are:
   Would like to establish a savings account; let her family knows what she would like to study; would like to obtain a summer internship. Job shadowing opportunity; wants to pass classes with good grades each year

   c. Adults in my life who can successfully help me prepare for post-secondary education are:
      Foster parents and Mr. Earl.

3. Wrap Up (5 min.)
   a. What are some things you learned after being a participant in the S.T.A.R.S. Program?
      Everything! She did not know much prior to the program and was able to develop a deep understanding of the college preparation process, career development, and what it will take to truly do well in high school. It helped her to think about what she wants to do in life as well as how to look for scholarships and financial aid.
   b. My next steps on preparing for college and careers are:
      Do more research about what Asheville offers to make sure that is where she wants go; volunteer and internships towards career goals (e.g. historian; anthropologist).

4. Homework
   a. Please take the S.T.A.R.S. Assessment on the following dates:
      i. April 7 & April 8
      ii. April 12 & April 14
      iii. April 19 & April 21

   ★ Next Up: S.T.A.R.S Culminating Dinner on April 28th at 6pm.
Session 6: Super STAR Status: Preparing for the College Leave

Student Name: Participant 3

Date: 4/5/16

Session Objective: To learn effective ways to prepare for post-secondary education

Session goals:

- Prepare student for the post-secondary education environment.
- Review the college planning timeline for student’s current grade level and for the first year of college.
- Answer student’s lingering questions regarding preparing for post-secondary education and future careers.

1. Homework Check-in (10 min.)
   a. What are all of the items you would need to both successfully enter and leave for college:
      Final transcript, staying focused, applying for on-campus housing, better organizational skills, items needed for the first-year of college.

   b. STARS Recap: What information do you still desire to know more about regarding your preparation for post-secondary education?
      She decided to attend NC A&T University School of Agriculture and Environmental Science in order to pursue her bachelors in Agriculture and Environmental Systems with a concentration in Environmental Studies. She has been doing her research on the college, its programs, and its resources, she will just need to apply for on-campus.

2. Preparing for the College Leave (40 min.)
   a. The Big College To-Do List- Top 10 tips:
      http://collegelife.about.com/od/beforeyouarrive/a/todolist.htm
      i. New tips I discovered after reviewing this list were:
         Keeping in touch with people when leaving for college; making sure to stay safe; contacting roommate prior to coming to college.
      ii. The college planning tips I will need the most assistance with are:
         Time management and money management; how to find on-campus job opportunities her second year of college.

   b. Reviewing the College Planning Timeline
      https://www1.cfnc.org/Plan/For_College/Prepare_For_College-College_Planning_Timeline/12th_Grade.aspx
i. 12th grade timeline review
ii. First-year of college timeline review
iii. Some steps I need to work on to successfully plan for my college leave are:
    Finish financial aid application; officially declaring her major; housing application; attend NC A&T Open House; formally accept her invitation to attend NC A&T.

c. Adults in my life who can successfully help me prepare for my college leave are:
   Aunts, uncles, and sister.

3. **Wrap Up (5 min.)**
   a. What are some things you learned after being a participant in the S.T.A.R.S. Program?
      She figured out what she want to do (college major, future career path) and what college she wants to attend to pursue her college degree.
   b. My next steps in deciding on a college major and institution are:
      She decided on her college major and institution.

4. **Homework**
   a. Please take the S.T.A.R.S. Assessment on the following dates:
      i. April 5 & April 7
      ii. April 12 & April 14
      iii. April 19 & April 21

★ **Next Up: S.T.A.R.S Culminating Dinner on April 28th at 6pm.**
Appendix G: Outline of the Components of the Customized Individual Career and College Readiness Counseling Intervention Program

Outline of the Components of the Customized Individual Career and College Readiness Counseling Intervention Program

Topics to cover with a participant will be chosen based on the participant’s individual needs.

- **Factor 1: College Knowledge**
  - (a) The admission selections process
    - What does the college admission selections process look like?
    - Common college application components
    - Using CFNC and the College Board websites
    - What does a college admissions officer look for?
    - Virtual undergraduate admissions tours
    - Assistance with completing college applications
  - (b) Ways to financially afford post-secondary education
    - Need-based versus academic-based scholarships
    - Foster Care to Success Programs
      - NC Reach Scholarship
      - Education Training Voucher (ETV)
    - The Federal Government / The U.S. Department of Education
      - Completing the FAFSA
      - Federal grants
      - Federal student loans
      - Employment through the federal work-study program
    - College Application Week
    - Application and SAT/ACT waivers
    - Online scholarship databases
    - Scholarships provided by the post-secondary education institution
    - Major corporations and companies
    - Philanthropic organizations
  - (c) Academic requirements for work on the college level
    - UNC System Minimum Course Requirements
      - [http://www.northcarolina.edu/?q=prospective-students/minimum-admission-requirements](http://www.northcarolina.edu/?q=prospective-students/minimum-admission-requirements)
    - Minimum GPA, SAT/ACT requirements
    - What is academic integrity?
    - Full-time versus part-time college student
    - Avoiding academic probation
  - (d) Cultural differences as student transition from secondary to postsecondary education
    - Understanding and appreciating cultural differences
- Understanding the college environment
  - College best fit: reviewing college campus demographic information
  - Diversity and culture
  - College offices and departments focusing on diversity and inclusion
  - Living on campus versus commuting

- **Factor 2: Positive personal characteristics**
  - Grit and perseverance
  - Integrity
  - Resilience
  - Taking initiative
    - Getting goals accomplished
    - Asking for help when needed
  - Developing and maintaining positive interpersonal relationships
  - Becoming information seekers
    - Seeking information about post-secondary education and careers from knowledgeable professionals
  - Being teachable
    - Following advice that is given by supportive and knowledgeable adults
  - Dedication to goals

- **Factor 3: Academic competence**
  - Using appropriate study skills
  - Time management strategies
  - Utilizing academic resources
  - Knowing and using your learning style
  - How does academic performance in high school relate to access to post-secondary education?

- **Factor 4: Potential to achieve future goals**
  - Creating the Individual Learning Plan (ILP)
  - Setting short-term and long-term goals
    - Developing SMART goals
    - Developing post-secondary education and career goals
  - What does life look like ten years from now?
  - The more you learn, the more you earn
  - Thinking about the road ahead
    - Recognizing/developing your support network (“coaches and cheerleaders”)
  - What are the different post-secondary educational options?
- Linking careers to post-secondary education attainment
  - Future career and college majors exploration
    - College exploration day
    - Discovering your Holland code
  - Making best fit decisions with college choice