PERCEPTIONS OF ACADEMIC ABILITY AND THE ROLE OF SUPPORTIVE LEARNING ENVIRONMENTS: AN ACTION RESEARCH STUDY INSIDE THE GED CLASSROOM

By

Arcelle Taylor

May, 2026

Director of Dissertation: Crystal Chambers, PhD
Major Department: Educational Leadership and Foundations

ABSTRACT

High school dropouts often reenter education with limited academic support and prior negative schooling experiences that undermine confidence and persistence. Adult Basic Education (ABE) and General Educational Development (GED) programs provide critical pathways forward, yet many learners continue to face challenges related to academic self-efficacy and engagement.

This qualitative study examined how theory-informed instruction grounded in cognitive learning theory and challenge and support theory shaped the academic experiences of GED students in an ABE program at a rural community college. Data from student interviews, classroom observations, and instructor interviews indicate that students entered the program with resilient self-beliefs despite past challenges and that participation in a supportive yet challenging learning environment reinforced confidence, engagement, and future educational aspirations. While students experienced the intervention as seamlessly integrated into the broader GED program, instructors described it as strengthening intentional, learner-centered instruction and reinforcing their professional identities. Together, these findings suggest that theory-informed

instruction adds meaningful value by enhancing both student academic self-concept and instructional practice within adult education settings.

PERCEPTIONS OF ACADEMIC ABILITY AND THE ROLE OF SUPPORTIVE LEARNING ENVIRONMENTS: AN ACTION RESEARCH STUDY INSIDE THE GED CLASSROOM

A Dissertation

Presented to the Faculty of the Department of Educational Leadership and Foundations

East Carolina University

In Partial Fulfillment of the Requirements for the Degree

Doctor of Education in Educational Leadership and Foundations

By

Arcelle Taylor

May 2026

Director of Dissertation: Crystal Chambers, Ph.D.

Dissertation Committee Members:
David Siegel, Ph.D.
Jerry Johnson, Ed.D.
Katrina Arnold, Ed.D.

DEDICATION

This dissertation is dedicated to my Husband Tyrone Lee Taylor for his unmatched love and support of me although many times I did not deserve it. I acknowledge the sacrifices you made in your life to support me through this arduous journey. Only someone who is your best friend and loves you to your core can do all you did during my evolution to become Dr. Taylor. I see you; I love you and I thank you for being perfect for me. You listened when I made no sense, you hugged when I needed it and you stood next to me when I was going to fall. I love you so much, my dearest heart. I also dedicate this dissertation to my daughter Tori James Taylor who shows me what happiness looks like every day. She is a testament to surviving when the odds are stacked against you. I hope through my journey you will be in this place one day writing a dissertation. I hope the world hears your voice and is better for it. Mommy loves Daddy and Tori so much, you are my world.

ACKNOWLEDGEMENTS

I'd like to acknowledge the following people in no specific order for taking this journey with me and supporting me in ways that I can never repay. My Mother Claire S. Buckner who showed me what an intelligent, loving and determined woman looks like. It is from you that I have the knowledge to become a Doctor. My sisters Amber L. Buckner, Andrya L. Threatt and Stepheny S. Buckner for loving and supporting me and ALWAYS being my cheerleaders, even when I would question myself. Thank you for being there for every writing break and never allowing me to throw in the towel. I love each of you to the literal moon and back.

Dr. Chuck and Mrs. Sandra Wallington for being the family I chose, you have been a solid rock for me in every way imaginable and I thank GOD for you. Thank you for the long pep talks, reviewing my writing and encouragement to give more when I was spent. To Dr. Heidi T. Aldes, my (BFF) friend and sister, thank you for loving me when I felt I didn't deserve it. Thank you know truly knowing this journey as we were in tandem, yet in different states. Thank you for being my true sister in-spite of…

To my cohort members that will forever be etched on my heart; Dr. Carla Williams, Dr. Phylicia Bridgers and soon-to-be Dr. Byron "BJ" Dickey. I love you dearly fam! Late nights, classes that never stopped, people and situations we didn't understand, tears, wanting to give up and the side-aching laughter… who could ever forget "truffles" after this? To Dr. Xavier King and Dr. Shari Burton, writing chapter two with you was life changing. Going from not knowing my topic to becoming an expert with you was amazing you are both dynamic leaders and I am thankful for you. I know we will never forget "New Dead People", belly aching laughter and the clicking of Dr. King's keyboard.

To my former team at RCC, Alecia Gaines, Maher Haddad and Jennifer Roberts (thank you Claire Roberts for my writing blanket, it lasted 3 years!), thank you for always being there for me even when I was hell to deal with. You are the best team I've ever worked with and I miss you. I pray our paths will cross again. Alecia N. Gaines, you are my gift from GOD! Without you none of this would've been possible. Thank you for being my sister-friend. Thank you for your dynamic heart and brain and ability to be where I needed you when I needed you.

Dr. Jordan Bullington-Miller, what else can I say to you but "Thank you so much" from sticking with me when I was a wreck to talking me off the ledge, to being there when I completed. You are a rock in a weary land. You are a mighty woman who is also "the bomb" without you I shudder to think what would have happened. I thank GOD for meeting you and becoming my real friend.

To my dearest friend Anna M. Mazig, you always have seen and continue to see the best in me. Thank you for ALWAYS calling me on the carpet, challenging me and holding me accountable. We will get our project done now; I love you.

And finally, to my Aunts "The Aunts" Denise, Debra, Janet and Jeannie. Thank you for all the care, compassion, late nights, early mornings, school conferences, listening, responding and loving on me you've done my entire life. You are in this work as you were part of creating the woman I am today. I love you all more than I can say.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1: INTRODUCTION

In the 2023-2024 academic year alone, more than 10,000 students dropped out of a North Carolina public school between grades 1 and 12 (North Carolina Department of Public Instruction [NCDP], 2025). While this data represents a slight decline in the dropout rate compared to the previous year, over the last three years, North Carolina public schools have averaged an annual loss of 10,337 students, with the highest percentage leaving school in grade 9 (NCDPI, 2025). The North Carolina Community College system plays a crucial role in supporting students in completing their high school equivalency credentials. One of the existing pathways is completing the General Education Development (GED) credential. Through the Finish High School program, available at all 58 community colleges in North Carolina, students can enroll for free instruction to prepare for the GED standardized assessment to earn a high school equivalency credential (North Carolina Community College [NCCC], n.d.). The program was launched in 2015, and to date, there has been limited research on the lived experiences of GED students across the state. More broadly, existing studies in GED programs have focused on student struggles (Hansen et al., 2019; Nguyen, 2018; Phillips, 2023) and a lack of academic skills (Parker, 2019). However, by doing so, this work often views GED students through a deficit lens, labeling students as "at risk" rather than emphasizing their strengths and life experiences. Additionally, existing studies have not explored the GED classroom as a cognitive learning environment nor how to equip instructors to cultivate an academic space that enhances the academic self-concept of GED students.

Cognitive learning theory has been shown to present teachers and students with a deeper understanding of how they process new information (Bjork et al., 1974; Turner, 1973; Vygotsky, 1978). Such knowledge empowers students by positioning them as active participants in their

learning experiences. When combined with Sanford's (1962, 1966) challenge and support theory, which asserts that students thrive in environments balancing intellectual challenge with necessary support, instructors can create an academic setting that enhances knowledge while building student confidence.

This study aimed to examine how a cognitive learning environment, one that is both supportive and challenging, shapes GED students' self-perception of academic ability at Connections Technical and Community College (a pseudonym). Using an action research approach, I partnered with a veteran adult educator to design and support a professional development series, which was facilitated by the veteran educator and prepared two GED instructors to integrate cognitive learning into their lesson plans and create a learning environment that was both challenging and supportive. Following this training, the instructors led a lesson incorporating both theories into their instruction. The study explored students' self-perceptions both before and after the lesson to understand how such an intervention influenced their academic self-concept. As such, this research fills a gap in the literature by providing insights into the experiences of GED students and offering practical strategies to enhance students' self-perception of academic ability.

Established in 1942, the GED program aimed to create an alternative path for adults lacking a high school diploma to earn an equivalent credential (Quinn, 2014). The program was initially created to assist returning World War II veterans who had interrupted their education to enlist in the military and consequently lacked a high school diploma. The program sought to facilitate their reintegration into civilian life by providing an opportunity to showcase their academic skills and knowledge.

Gradually, the GED became accessible to a wider demographic of adults who had not completed high school, enhancing their educational and employment prospects (GED Testing Service, 2022). It is important to distinguish between the GED and the broader term High School Equivalency (HSE). HSE refers to any credential recognized as equivalent to a traditional high school diploma. The GED is a type of standardized assessment used to earn an HSE credential. Individuals who pass the GED demonstrate academic skills and knowledge comparable to those of students who have completed a conventional high school education. The GED test assessed the skills and knowledge generally obtained in high school, encompassing mathematics, science, social studies, and language arts. Over 20 million people have successfully passed the test, leading to the GED credential. Approximately 150,000 individuals take the GED test annually (GED Testing Service, 2022). By choosing to return to school, GED students demonstrate personal responsibility and perseverance. Often, the departure of these students from the more conventional pathway of high school graduation is seen as detrimental to their personal growth and their ability to contribute to society at large (American Psychological Association [APA], 2012; Lansford et al., 2016). However, despite the previous academic disruption, these students are often driven by the aspiration to increase their employment opportunities through higher education (Best GED Classes, 2024).

According to Broton et al. (2022), many individuals attempt to persist through GED programs while balancing the responsibilities of employment, family, and finances while pursuing their credentials. Many GED students encounter obstacles, including financial difficulties, familial obligations, or disruptions in their formal schooling. These stressors can compound challenges, compelling students to leave high school before completion (Business Wire, 2023). As such, community colleges in North Carolina are making efforts to accommodate

a significant number of GED students as our community college system is explicitly structured to address the special requirements of the GED population (Long & Mullin, 2014).

This chapter sets the stage for the study with an overview of the context and the background of the focus of practice. It also presents the questions and theoretical frameworks that guide the study, defines key terms, and provides a description of the study's scope, my assumptions as the researcher, and the limitations. As no study occurs in isolation, I also use this chapter to introduce my collaborative inquiry partners, including a description of how their knowledge and perspectives will enhance the overall quality and rigor of the study.

Background of the Focus in Practice

The extant literature attributes students' premature exit from school as being rooted in systemic challenges, including enrollment in underfunded K-12 schools (Parker, 2019) and inequitable disciplinary practices (Blake et al., 2020). Research also identifies students' early departure as a consequence of teachers' stress and burnout (Brady et al., 2023). Additionally, personal or family events, including physical and mental health challenges (Gao et al., 2020), have been linked to student disengagement and, ultimately, the decision to leave school before graduating (Garrett-Peters et al., 2019). Prior negative experiences build resistance, suspicion of others, and self-doubt (Brown et al., 2019). These factors disproportionately impact Black, Indigenous, People of Color (BIPOC) students. Choosing to enroll in a GED program reflects an act of self-agency, though often a fragile one, as the prior decision to leave school may undermine students' confidence in their academic ability. This is compounded by economic barriers. The Georgetown University Center on Education and the Workforce (CEW) predicts that more than 80% of all "good jobs" will require some form of post-secondary education by 2031 (Strohl et al., 2024, p. 10). CEW defines a "good job" as one that provides the minimum

income to cover basic living costs in the United States. As of 2024, that salary number is $43,000 annually. The center's research shows that meeting this threshold is often only achievable with some form of postsecondary education, thus perpetuating a wage gap and economic insecurity among students who leave school before graduation. The completion of the GED credential opens pathways to additional educational and workplace success. As such, it is the responsibility of community college instructors and administrators to create climates within their educational spaces where students feel supported and believe they can be successful.

However, creating this climate requires a different kind of intentional support that recognizes and honors the individual learner, as well as the evolving needs and development of that individual. Cognitive learning theory can serve as the vehicle to achieve this as it provides instructors with insights into how their students process new information (Bjork et al., 1974; Turner, 1973; Vygotsky, 1978). Furthermore, when combined with Sanford's (1962, 1966) challenge and support theory, which offers a framework for how instructors can effectively balance support and challenge to facilitate learning, cognitive learning theory can enhance instructional support by emphasizing the students' role in the learning process (Bjork et al., 1974, Turner, 1973; Vygotsky, 1978).

From Sanford's (1962, 1966) challenge and support theory, we know that instructors can foster resilience and promote a growth mentality by providing both challenge and support in the learning environment. Studies have shown that when higher education institutions are committed to cultivating an environment that balances appropriate challenges with accessible support, students are more likely to persist (Longerbeam, 2016), and educators can effectively increase the self-efficacy of their students (Virtue et al., 2020). At the same time, cognitive learning theory positions learners as active participants in their learning process (Bjork et al., 1974;

Turner, 1973; Vygotsky, 1978). Recent work by Khan et al. (2023) shows that the application of cognitive learning theory in educational spaces can alleviate anxiety in learners, while Greitzer (2002) demonstrated how instructors who apply cognitive learning theory can create more engaging lessons. While other studies have investigated the application of cognitive learning theory and challenge and support theory as mutually exclusive frameworks, this study explores their intersection inside the context of a GED classroom where instructors have the potential to holistically support students' education and life goals.

To understand how those in the profession can better support GED students, I collaborated with a veteran adult educator who facilitated professional development training for the instructors of the morning GED course at CTCC. This training demonstrated how to apply cognitive learning and challenge and support theory in lesson planning. The instructors were then tasked with teaching a lesson incorporating both theories. As the researcher, I observed each lesson to compare and document the learning environments. However, as this study sought to explore the influence of a cognitive learning environment that is both challenging and supportive on students' perception of their academic abilities, I also met directly with GED students before and after the observed lesson to gain insight into their academic self-conception. These pre-/ and post-interviews served to capture how the intervention impacted the student experience within the GED course and influenced their belief that they can be successful within it.

Context of Study

This focus of practice was situated at Connections Technical and Community College (CTCC), a pseudonym for a rural community college in eastern North Carolina. The pseudonym is used to protect the identities of participants and to center the reader's attention on the lessons learned, rather than on the institution itself.

CTCC is a public, two-year commuter institution serving approximately 17,000 credit and non-credit students annually across its main campus in Connections County and through online offerings. The college awards associate degrees, diplomas, and certificates in more than 70 academic and technical programs. Current student demographics are as follows: 53.2% Black/African American, 26.4% White, 12.8% Hispanic, 3.9% Other/Unknown, and 2.8% identify as multiracial. Approximately 57% of students identify as female, while 42.5% identify as male.

In addition to traditional academic programs, CTCC offers adult basic education and literacy training, English language acquisition courses, customized training for business and industry, workforce development programming, small business assistance, and personal enrichment classes. These non-credit programs account for 34.9% of the student population, many of whom are enrolled in Adult Basic Education and GED coursework. Combined, CTCC offers more than 280 credentials across curriculum and continuing education programs.

CTCC was chartered by the North Carolina State Board of Education in March 1961 and began operations that year. The college initially served 96 students across nine programs. Between 1964 and 1984, the institution expanded significantly, adding a student lounge with recreational facilities, offering Business Computer Programming courses, and eventually building an administrative center in the late 1980s, which remains in use today.

CTCC educates and empowers people for success. With a culture of excellence and innovation, the college serves as a vital partner in the economic and workforce development of the region. CTCC provides access to dynamic learning opportunities designed to foster personal enrichment, successful career preparation, and seamless transfer to higher education. Furthermore, CTCC Connections Technical and Community College promotes student success

through engaging, inclusive, and high-quality instruction, along with equitable support services that help students achieve their academic and career goals. The institution's core values include:

Community – CTCC plays a vital role in the growth of the eastern North Carolina region by offering educational opportunities to the citizens of Connections County and surrounding areas.

Success – CTCC believes success is multifaceted. The college strives to prepare students for both personal and professional achievement.

Equity – CTCC recognizes the barriers students face and is committed to equity-minded policies and practices that support the success of all learners.

Integrity – We act with integrity in all matters, fostering accountability and transparency.

These guiding principles reflect CTCC's broader commitment to social justice. They also inform this study, which sought to create a learning environment within the GED program that is student-centered, inclusive, community-building, and rooted in excellence and integrity.

These guiding principles align with the overarching commitment to social justice in the community. The college's values inform this study as my research aims to create a learning environment within the GED program that is student-centered, inclusive of all students, builds community, and holds excellence and integrity in high regard.

Statement of Focus of Practice

The focus of this inquiry was to explore how training GED instructors in both cognitive learning theory and challenge and support theory influenced the self-perception of academic ability among GED students enrolled at a rural community college. Similar to the students who enroll in other programs at CTCC, the students who enroll in the GED program are not pursuing their goals in a vacuum. When these students arrive on campus, they are often balancing

academic pursuits with the competing priorities of work and family responsibilities (Broton et al., 2022). However, GED students also face the added psychological barrier of previous negative experiences in school that often manifest into self-doubt (Brown et al., 2019). For these reasons, the GED student population is often seen as academically vulnerable.

Existing research has illustrated the intricacy of factors that contribute to early departure from school such as teacher burnout (Bottiani et al., 2019; Brady et al., 2023), low familial support (Garrett-Peters et al., 2019), accessibility of GED programs (Grover, 2013), diminished academic self-efficacy (Frey, 2020), and overall disengagement with education due to the over-discipline of BIPOC populations (Blake et al., 2020; Delpit, 2006). Additionally, extensive research has explored the persistence of GED students (Johnson, 2023; Lewis, 2009; McCaskill-Mitchell, 2009), the barriers they face (Hansen et al., 2019; Nguyen, 2018; Phillips, 2023), and their future educational pursuits (Smith & Locke, 1999). However, to date, there are no studies that focus on how the learning environment influences the self-perception of GED students. Furthermore, there are limited studies that equip GED instructors with practical strategies for enhancing students' academic self-concept. This study sought to close that gap by training two GED instructors in two intersecting educational theories, cognitive learning and challenge and support, to understand how this investment into the instructor shapes the self-perception and experiences of GED students.

Cognitive learning theory champions learners as active participants in the learning process (Bjork et al., 1974; Turner, 1973; Vygotsky, 1978). By preparing instructors to consider how their students process new information, CTCC can cultivate an academic environment that empowers GED students. Furthermore, Sanford's (1962, 1966) theory of challenge and support posits that by constructing an educational space that appropriately challenges learners while

providing necessary support, educators can foster the development of their students. The action research approach to this study leverages qualitative data to understand how the intersection of these theories within instructor training impacts the self-perception of GED students working toward credential completion.

To this end, the instructors of the morning GED course at CTCC participated in professional development to prepare them to integrate cognitive learning theory in their lesson planning and to create a learning environment that is both challenging and supportive for GED students. The instructors then led a lesson incorporating both theories into their instruction. This inquiry focused on students' experiences both before and after the lesson to better understand if such an intervention influenced students' belief in their ability to successfully navigate through difficulties, realize their potential for success, and thrive in an academic environment.

FoP Guiding Question(s)

This study employed an active research methodology to understand how training instructors in both cognitive learning theory and challenge and support theory influences the self-perception of GED students enrolled at a rural community college. The following research questions guide this study:

RQ1. How do GED students conceptualize their academic abilities and the influential elements that play a role in their success *before* enrolling in the GED course?

RQ2. How does participating in a cognitive learning environment that is both supportive and challenging influence how GED students perceive their academic abilities?

RQ3. How does the GED instructor conceptualize the value of incorporating cognitive learning theory and challenge and support theory into lesson planning and instruction?

Overview of Inquiry

This focus of practice employed a three-phased action research design. Action research, also known as AR, is a rigorous methodology that seeks to generate new knowledge by acting within the study's context (Watkins et al., 2023). It is an appropriate research approach as it challenges the researcher to initiate and guide meaningful change in response to the unique needs of the organization (Watkins et al., 2023). AR is grounded in Lewis's (1946) notion of action, which emphasizes practical problem-solving with iterative knowledge development. Utilizing multiple cycles of inquiry, an action researcher identifies an issue or circumstance and formulates an intervention or modification to address a challenge. Once the intervention has been executed, AR calls on the researcher to assess the results of the action and analyze the outcomes to guide the subsequent cycle (Watkins et al., 2023).

In alignment with AR, the present study evolved through three distinct phases. In Phase I, I conducted interviews with students prior to the intervention to learn about their past academic experiences and how they have shaped self-perception. This initial interview was also designed to glean insight into student expectations for the program and motivations for enrolling. Collecting this data provided insight into the areas students found most difficult in the past. This knowledge, in turn, allowed me to prepare the GED instructors to approach those subjects through a cognitive learning lens to assist students in areas of difficulty. Using a semi-structured interview protocol (see Appendix C), I sought to understand how students perceived their academic abilities at the starting point of the GED course. The qualitative data collected in Phase I addressed the first guiding question of student perceptions of academic abilities before engaging in the intervention.

In Phase II, I collaborated with a veteran adult educator who facilitated professional development training for both GED instructors. During the training, the instructors were taught how to add cognitive learning theory to their lesson plans, including proactive engagement, deep thinking, individualized education, problem-solving skills, social engagement, creativity, endurance, and receptiveness to feedback (Merriam & Bierema, 2014). The instructors were also introduced to methods of challenge and support, providing students with content that expands their knowledge and skills and develops their ability to question, analyze, and thoroughly explore concepts. This training, as designed, equipped the instructors to incorporate active engagement strategies in the learning process, encompassing collaborative tasks, dialogues, and practical projects during lessons (Merriam & Bierema, 2014). Sanford (1966) posited that students acquire knowledge most effectively when actively participating in the learning process rather than merely absorbing information passively. It was expected that by utilizing cognitive learning approaches to instruction, the instructor would be more effective in supporting learners. Following this training, I observed the classroom to document how the instructor incorporated cognitive learning theory into their lesson plans in a challenging and supportive environment.

In Phase III, I conducted interviews with participating students to understand how they experienced the intervention and how they saw themselves in the academic context. Similar to Phase I, I used a semi-structured interview protocol in Phase III (see Appendix D). In addition to exploring student perceptions of the lesson itself, I also sought to understand how students are conceptualizing their academic abilities now that they have completed the lesson. The questions raised in this final phase asked students to reflect on the learning experience, the challenges they anticipated they will face as they work toward credential completion, and their beliefs that they are capable of surmounting those challenges. I employed an action research design strategy

utilizing interviews to gain insights into the lived experiences of the GED students participating in the study. This design invited participants to share their stories as the primary form of data collection, positioning them as active contributors to the inquiry process. It is understood that effective storytelling engages both the emotional and intellectual dimensions of an audience, prioritizing clarity, engagement, and purposeful structure (Weiss, 1994). Within this action research approach, storytelling is central to understanding the complexities of human experience and supports participant reflection. These conversations address Research Question 2.

Also, in Phase III, I interviewed the instructors to better understand the impact of professional development on their instruction. Using a semi-structured interview protocol (see Appendix E), the instructors were invited to share their own story of incorporating cognitive learning theory into lesson planning and their efforts to create a learning environment that balances appropriate challenge with necessary support. The goal of these interviews was to understand how the instructors conceptualized the value of applying both theories into their lesson planning and instruction. During the interview, I also shared my observational notes from the intervention and invited the instructor to contribute their perspective of the lesson itself. As such, interviews with the instructors addressed Research Question 3.

Through this iterative approach and action research design, I was able to capture student and instructor stories in their voices and learn more about the lived experiences of the people involved in the GED program. Understanding these experiences and how they align with existing research provides important context for GED educators. Most importantly, the implications of this study sheds light on how GED students may thrive in a cognitive learning environment that is both challenging and supportive, thereby filling a gap in the literature and contributing practical knowledge to the field.

Inquiry Partners

To ensure rigor and fidelity, this study was conducted in collaboration with four key inquiry partners at CTCC: the GED program director, two instructional leaders, and a veteran GED instructional specialist. Their complementary expertise strengthened the study's design, implementation, and interpretation, grounding the findings in the institutional and instructional realities of CTCC.

The GED program director offered deep knowledge of academic support structures and institutional engagement strategies. During Phase I, the director and I examined data on GED students' prior experiences and expectations to identify opportunities to enhance existing support and improve students' transition into, and continued progress within, the program. Two instructional leaders contributed essential practitioner insight into the day-to-day learning experiences of GED students. As frontline instructors, they brought firsthand understanding of the academic, motivational, and socioemotional factors shaping adult learners' engagement. Their expertise in andragogy and familiarity with students' diverse life contexts informed strategies to strengthen academic self-concept and ensure that the study centers student-focused, equity-driven practice.

A final inquiry partner was a veteran Instructional Specialist, whose expertise in the GED curriculum, cognitive learning theory, and Sanford's (1962) challenge-and-support framework were critical to the intervention's effectiveness. She designed and facilitated the professional development session that prepared an additional GED instructor to implement theory-based strategies in the classroom, ensuring that the intervention was both pedagogically sound and responsive to GED learners' needs.

Theoretical Framework

This study employed a theoretical framework that integrates Sanford's (1962) challenge and support theory with cognitive learning strategies. Sanford's theory posits that optimal development occurs when individuals attain an appropriate balance of intellectual challenge and necessary support. Overwhelming challenges without necessary scaffolding may induce stress or failure, whereas too much encouragement without challenge can lead to complacency and diminished development (Sanford,1966). This study sought to investigate whether integrating challenge and support theory with cognitive learning could holistically develop GED students and strengthen their self-perception of academic ability.

Challenge and Support Theory

Sanford (1962, 1966) asserted that increased self-efficacy in college students is facilitated by an environment that is diverse, intricate, and compelling enough to challenge students while also providing resources that help them navigate those challenges successfully. This approach is appropriate for GED students as often the premature departure from school may have prevented them from experiencing an academic environment that balances challenge and support effectively.

Combining the theory of challenge and support with cognitive learning allows instructors to create lessons that enhance cognitive growth while offering fundamental scaffolding for student success. This integration can help instructors create an environment that fosters cognitive engagement with tailored support for individual learners. This balance of challenge and support fosters deeper cognitive processing, cognitive development, and the creation of new knowledge. Together, these frameworks provide a robust methodology for promoting skill learning and cognitive improvement.

When conceptualizing appropriate support, Sanford (1962) posited that if learners are given overly difficult tasks, they may struggle to acquire the necessary knowledge and skills for growth, leading to frustration and a potential loss of motivation. On the other hand, if the challenge is beyond the student's current skillset or knowledge and appropriate support is not in place, the student may disengage and retreat. In 1966, Sanford proposed the third tenet of readiness to his theory of challenge and support, which suggests that growth and development depend on students' preparedness, both physically and psychologically, to be challenged. To facilitate student growth, it is imperative to offer students opportunities to engage in challenges that push them beyond their current knowledge while at the same time ensuring that they have the necessary support to navigate those challenges. Although providing challenge and support is beneficial, it does not provide a guarantee that the learner will always avoid failure or unfavorable results. Nevertheless, it does ensure that in the event of such outcomes, there will be individuals and protocols in place to assist students with problem-solving and coping strategies (Sanford, 1966).

Cognitive Learning Theory

Cognitive learning theory relates to challenge and support theory as they both underscore the constantly evolving nature of an individual's growth. Cognitive learning theory illustrates the mental processes by which learners interact with and comprehend complex problems, whereas Sanford's (1962) theory offers a framework for educators to guide students through the problem-solving process. Collectively, these theories indicate that individuals grow when they are effectively challenged and supported in their course of study and encouraged to actively reflect on their learning process (Bjork et al., 1974; Sanford, 1962; Turner, 1973; & Vygotsky, 1978).

Table 1.

Research Inquiry Method

Tenets of Challenge & Support	Research Question	Instrumentation
Tenet 1- Readiness: For development to occur, a student must be mentally and physically ready to tackle challenges within the learning environment.	RQ1: How do GED students conceptualize their academic abilities and the influential elements that play a role in their success *before* enrolling in the GED course?	Semi-structured interviews during the first week of class.
Tenet 2- Support: The importance of establishing a nurturing and secure environment that encourages risk-taking and exploration, which are vital for development.	RQ3: How does the GED instructor conceptualize the value of incorporating cognitive learning theory and challenge and support theory into lesson planning and instruction?	Semi-structured interviews with GED instructors following the professional development series and subsequent intervention. Observational notes during the intervention lesson taken by the researcher.
Tenet 3- Challenge: When students are developmentally ready and receive appropriate support, they are better equipped to engage with challenging tasks that stretch their current skills or knowledge. Such a challenge fosters growth and development.	RQ2: How does participating in a cognitive learning environment that is both supportive and challenging influence how GED students perceive their academic abilities?	Semi-structured interviews following the intervention

Note. Sanford, N. (1962). Higher Education as a Social Problem. In N. Sanford (Ed.), The American College: A psychological and social interpretation of the higher learning. p. 10–30. John Wiley & Sons, Inc.
Sanford, N. (1966). Self and Society: Social Change and Individual Development (1st ed.). Routledge.

In this study, cognitive learning theory serves as a vehicle through which GED students will receive the challenge and support they need. Cognitive learning theory strategies focus on the mental processes involved in learning—such as attention, memory, perception, and problem-solving—rather than outward behavior. The theory emphasizes the learner's active participation in building knowledge and comprehension of the world (Bjork et al., 1974; Turner, 1973; & Vygotsky, 1978). When applied, cognitive learning theory has been shown to enhance problem-solving (Sweller, 2011) and critical thinking skills (Halpern, 1998).

The emphasis on cognition invites students to construct cognitive representations, or internal models, of the world based on their own experiences. This allows students to organize new knowledge and predict future outcomes. An essential component of this process is schema theory, which suggests that individuals construct cognitive frameworks to comprehend new information. The term schema was introduced by psychologist Frederic Bartlett (1932) and later promoted by Jean Piaget (1952) through cognitive development theory. Both posit that schemas refer to patterns of thought and experiences that shape how individuals see the world. When a pattern emerges and a schema is established, it becomes a preconceived idea. We evaluate future experiences and new ideas by holding them up against an established schema to see how they fit together. If new knowledge contradicts established schemas, individuals may modify them or create new ones.

This active engagement with information corresponds with constructivist learning theories posited by Vygotsky (1978), Bjork et al. (1974), and Turner (1973), who asserted that learners develop comprehension through interaction with their environment and peers. Cognitive learning encompasses the cultivation of problem-solving abilities, where learners assess situations, make judgments, and implement solutions to overcome obstacles. This idea is often

likened to information processing theory, which conceptualizes our mind as a system that encodes, stores, and retrieves information for later recall. Each of these theories emphasizes that learning is an active, constructive process in which knowledge is not just absorbed but actively generated and modified.

Definition of Key Terms

The following are definitions utilized in the study. In some cases, a term may be used frequently by the reader. However, I have included definitions for clarity and to ensure all readers have a deeper understanding of the language used.

Adult Basic Education– Formalized instruction provided in the United States that offers adult learners with demonstrated low literacy or limited English language proficiency support in reading, mathematics, writing, and technology, to prepare the learner to complete a high school equivalency credential (Hohn et al., 2019).

Barrier – A circumstance or obstacle that prevents communication or the progress of a student (Gao et al., 2020).

BIPOC – An inclusive term that stands for Black, Indigenous, People Of Color. The term is rooted in activism, and it is meant to acknowledge the systemic and historical challenges experienced by Black and Indigenous communities (Bottiani et al., 2019). The origin of BIPOC is traced to 2013, but the term grew in visibility in 2020 (Garcia, 2020).

Cognitive Learning Theory – A theory that explores how individuals acquire new knowledge through the act of thinking about their learning process. The theory investigates how our thinking can be influenced by internal and external factors and celebrates the individual as an active participant in knowledge construction (Bjork et al., 1974; Turner, 1973; & Vygotsky, 1978).

Dropout – A person who has prematurely exited K-12 education before completion of a high school diploma or who has rejected conventional methods of obtaining the diploma. Individuals may choose to enroll in a GED program to obtain the high school equivalent credential (Gedd-Munoz et al., 2023; Gao et al., 2020).

General Educational Development (GED) – Refers to a system or program that prepares a learner for standardized examinations that entitles those who pass to receive a diploma equivalent to completion of high school. This credential is an alternative to a traditional high school diploma (American Council on Education [ACE], n.d.).

High School Equivalency (HSE)– Refers to a credential that is determined to be equivalent to the high school diploma. Once a learner passes an HSE exam, either through the GED or the HiSET, the learner has demonstrated that they possess the same knowledge as the more traditional diploma track (Shaffer, 2015).

High School Equivalency Test (HiSET)– A standardized assessment that measures the academic knowledge and skills equivalent to those demonstrated through the traditional high school diploma. The HiSET exam, like the GED, can be completed as an alternative to the traditional diploma path (Klieger et al., 2022).

North Carolina Community College (NCCC) System – NCCC is a network of 58 community colleges across North Carolina. The system umbrella serves every resident of the state by providing affordable and accessible education. The statewide network was formally established by the North Carolina General Assembly in 1957. Responsibilities of the system include data collection and reporting, budget allocation, and establishing and administering standards, policies, and curricula universal to all community colleges in the state (North Carolina Community Colleges [NCCC], n.d.).

Sanford's Challenge and Support Theory – Sanford (1962) posited that students experience challenges when they face situations for which they are not prepared with the appropriate skills or knowledge. Conversely, he defined "supports" as the people and services in the students' environment that help them navigate challenges successfully (Sanford, 1962, 1966).

Social Contagion Theory – A theory suggesting that behaviors, emotions, and ideas can spread rapidly within a social network, influencing individuals to adapt and replicate them (Dupere et al., 2021).

Student Disengagement – Lack of motivation, trauma, exhaustion, and feelings of hopelessness expressed by students related to the way they're being taught and other related variables (Bottiani et al., 2019). It is often expressed as the student presenting as detached from the learning environment (Chipchase et al., 2017).

Teacher Stress and Burnout – The negative emotional reaction that occurs when an individual perceives a discrepancy between the demands in their environment and the resources they have to deal with those demands. If demand exceeds resources, over-stress and burnout are experienced (Brady et al., 2023; Gordon & Espinoza, 2020).

Assumptions

A critical assumption in this study was that the students and the instructors who participated were honest and forthcoming in disclosing their personal and academic experiences in the interviews. Although I presume that the majority of participants will provide honest insights, this presumption recognizes the possibility of social desirability bias, wherein participants may modify their responses to conform to perceived expectations or desirability.

To mitigate any coercive pressure, real or perceived, students were assured that all data gathered during the interviews would be kept confidential, with identities anonymized to

safeguard privacy. This was underscored by a clear explanation of the consent form, which highlighted the privacy and confidentiality of the information disclosed. To alleviate pressures felt by the instructors, I communicated the purpose of the study not as an evaluation of their instruction, but rather an investigation into how theory-based strategies play a role in students' self-perceptions. Additionally, I emphasized transparency by sharing observational notes and a transcription of the instructor's interview to invite the instructor to contribute. This was a form of member checking designed to enhance the validity of the study, but I hope that it also served to invite the instructor to engage actively in the research and offer authentic insight into the value of the intervention.

These assumptions were necessary to conduct the study. By emphasizing the protection of students' confidentiality and the instructor's pivotal role in the research, I hoped to foster a climate of trust and transparency, promoting more precise and authentic responses from all participants and ensuring that they felt safe to share their stories in the research space.

Scope and Delimitations

My study examined the experiences and self-perception of students obtaining their GED at CTCC. I investigated how students perceived their academic ability before beginning the GED course and following the intervention to assess the impact. The study aimed to establish a cognitively challenging yet supportive learning environment that will address the social and emotional obstacles that affect students' success. I examined how professional development supported the instructor in formulating lesson plans that incorporated cognitive learning theory. Additionally, I evaluated the impact of the intervention on students' self-perception of academic ability.

This study was conducted at CTCC, a rural community college situated in eastern North Carolina. It concentrated on a particular cohort of students enrolled in the GED program. As such, the study was contextually bound within CTCC and involved a limited number of students who were self-selected to participate. I recognize that by relying on self-selection, the study runs the risk of a skewed sample insofar as it may be assumed that the students who chose to return to the GED program and to participate in the present study believe that they will be successful in the program. Yet, choosing to enroll in the GED course and participate in the study does not guarantee that the student will complete the credential. It is assumed that participants will face the same obstacles and barriers to success in the GED course as their course peers. As such, I assume that any selection bias produced only a minimal impact.

However, due to the small, non-random sample of GED students, the study scope is inherently constrained. The study does not pursue statistical generalizability because of the limited, localized sample and the single-site context. Instead, the findings are analytically generalized. This indicates that although the findings may not be universally applicable to all GED programs across the country, the insights and trends identified may be relevant to other community colleges with comparable demographics and student populations. Employing analytic generalizability facilitates wider implications, especially regarding community colleges catering to non-traditional students pursuing a high school equivalency diploma.

The study concentrated on students' personal and academic experiences, omitting other variables such as institutional policies or external factors that may also affect student success in GED programs. Although these factors are significant, they are beyond the purview of the present study. As the researcher, I focused on the experiences of GED students in this specific context, offering a comprehensive understanding of their perspectives, yet it will not encompass

all factors affecting program outcomes. These delimitations were essential for sustaining a concentrated and feasible research scope while also establishing the parameters for interpreting and applying the findings.

Limitations

All research faces limitations, and this study was no exception. As a product of the inquiry design, I am aware of certain shortcomings. First, attendance in the CTCC GED program can be inconsistent due to the substantial commitments students are juggling. This may inhibit a student's ability to participate in the study. To address this potential limitation, I thoroughly explained the process to each participant and emphasized that their consistent participation will help to redesign the GED program to meet the specific and holistic needs of students.

A second limitation revolved around an existing power dynamic in the study. Following the intervention, students may not feel comfortable completing the second phase of the inquiry as they may assume that their experiences serve as an evaluation or judgment of their instructor and may choose not to divulge all information. This may occur due to the power imbalance of a student-instructor dynamic within the GED course that could intimidate students from answering truthfully for fear of retribution. Moreover, one-on-one interviews may be intimidating as I serve both as a researcher and a fellow educator. To alleviate any coercive pressure, real or perceived, I emphasized that the goal of the research was to improve the program and assure participants that their experiences would play an important role in achieving that goal. I also explained how their answers will be utilized in the final dissertation, including the steps I have taken to protect their confidentiality.

Another limitation pertains to students' perceptions of the interview self-selection process. It is possible that students chose to opt out of participation not out of disinterest, but

instead because they perceived their own experiences to be unremarkable or unworthy of sharing. This internalized belief that their stories lack significance may cause students to have chosen not to engage in the study despite the potential value of their contributions. They may assumed that those participants who did engage did so because of notably compelling or dramatic life stories. This has the potential to silence valuable perspectives of students, as well unintentionally invite participants to distort their narratives. To mitigate this, I informed prospective participants that they were in control of what they chose to share. I assured participants that the act of sharing their story in this way was a form of courage and that in recognition of that, I would take steps to ensure they are respected, heard, and cared for in this study.

Finally, engaging in the qualitative interview process may pose emotional challenges for participants, particularly if they have experienced trauma or adversity. This may result in students opting out of the study altogether or feeling discomfort in the interview process. As the researcher, I approached this conversation in the informed consent process with care and empathy. I carefully explained the interview process to the students, choose a comfortable, quiet space to hold the interviews, and partnered with an external researcher to ensure my questions were not invasive. Additionally, I enlisted the support of colleagues from the counseling center on campus, who were on hand during interviews in cased a student experienced emotional distress.

Significance of Inquiry

My action space and focus of practice contributes to advancing knowledge and continuing improvement in the education of GED students and instructors, as there was a gap in

peer-reviewed information related to how participating in a cognitive learning environment that is both challenging and supportive influences GED students' self-perception of academic ability. As is documented herein, there is a plethora of peer-reviewed research related to why students drop out of school, the obstacles related to returning to school, and the obstacles faced while enrolled in a GED program. This study responds to Frey's (2020) finding that GED students often experience diminished motivation and academic self-efficacy following prior negative school experiences. It was the goal of this research to understand how participating in a cognitive learning environment that is both challenging and supportive might change that for the better. The study explored the impact of an intervention infused with cognitive learning and challenge and support theory on GED students' self-perception. I hope that the findings will assist current and future adult educators by filling the knowledge gap and offering GED educators practical strategies for creating a welcoming learning environment and contributing to students' academic, personal, and professional growth.

As a practitioner with more than two decades of experience in GED and English language acquisition (ELA) programs in higher education, I am privileged to create, model, and ensure the practice of continuous improvement among the instructors, staff, and students whom I have interacted. All GED instructors are required to complete 12 hours of professional development annually, which will now include culturally responsive teaching methods, trauma-informed instruction, and community-based organization partnerships relevant to student support and diploma completion. Continuous improvement will also include the GED program partnering with the community college to create a sense of belonging for students by providing college emails and student IDs for GED students. These small tokens can lead to further exploration of programs, student mentoring, and affiliation with on-campus student organizations. The

knowledge of how to construct a positive learning environment is crucial to supporting GED students as they pursue their goals. A strong support network can lead a GED student to seek upward mobility by obtaining a program credential, technical degree, or associate degree. It is my passion, purpose, and gift to provide a safe space and quality education for students who have historically been regarded as societal burdens or problems. This deficit lens does not serve this population. I believe that every student has the right to learn and that an education is not a privilege but instead a fundamental right.

Advancing Equity and Social Justice

According to Chambers (2016), social justice serves as a solution to address social, political, and economic instability. It is a democratic process that aims to achieve full and meaningful participation of all members of society in decision-making and the fair distribution of resources. This process promotes inclusivity and affirmation, ensuring economic, social, physical, and psychological security for all individuals. Chambers (2016) also explains social justice as both a process and a goal, meaning there must be effort placed on reaching the goal of equitable distribution of wealth, opportunities, and privileges in society.

I believe social justice means all members of society begin the race of life at the same starting point in all aspects. Once the race of life begins, obstacles or barriers are not purposefully placed in a society member's way or lane due to their skin color, religious affiliation, sexual orientation, or physical or mental ability. Power in all veins is equitably distributed, and a member of society is not discriminated against due to stereotypes, fear of one or a group losing privileges, or the thought that a select group of society is inherently superior because of the skin in which they were born. Social justice means all children are afforded equitable opportunities to learn in a safe, thriving environment free from over-policing,

prejudice, and anti-black racism. Social justice also means that there is no dominant culture. With that said, social justice would mean that cultures that differ from "mainstream" are not looked upon as foreign, savage, or "interesting" because of miseducation, misunderstanding, or hate.

Chambers (2016) referenced the General Social Survey (2012), which indicated that most Americans had knowledge regarding societal disparities and connected them to personal actions and aptitude. Moreover, there exists a core conviction that inequality is justifiable, and there is minimal opposition to the influence of systems in perpetuating inequality. Within the context of this particular study, which means that too often, GED students are viewed as defective, and their circumstances are the products of character failures. Through this study, I intended to make clear that GED students, when provided a balance of challenge and support, can be successful. I also sought to illustrate their experiences through their voices to garner a greater understanding of their lived experiences as well as the idea that they are and can be productive, well-integrated citizens and community members.

My study advances social justice concerning equity in education and the distribution of community resources as it is poised to uncover counter-narratives from students that will demonstrate inequities at the system level. This research assists in understanding the overarching experience of marginalized populations enrolled in a GED program. It seeks to offer practical strategies to enhance GED students' sense of belonging and construct a supportive learning environment that appropriately challenges and supports our students inside the classroom despite previous traumatic experiences related to their education. Moreover, I hope that through this work, the field of ABE may increase access to careers that lead to upward mobility for historically marginalized populations.

Advances in Practice

This research advances the practice of all GED programs in North Carolina and hopefully beyond state lines as it offers a practical strategy for cultivating a supportive learning environment that serves to enhance students' self-perception. Student life experiences are vital to their learning and play an important role in how they view the importance of what they are learning (Ng et al., 2020). This study may result in changing the method in which GED students are onboarded, taught, and exposed to an academic context that utilizes their gifts, skills, and talents. The study sought to understand how the proposed intervention influences how students see themselves. I hope that the intervention, which is designed to empower students as active agents in their own learning experience, will positively shape student self-perception at institutions across the state and beyond. In so doing, the intervention may produce a ripple effect of increased confidence that extends beyond an academic context and into future career and goal pursuits.

Summary

This chapter introduced the study, including its position within existing literature. The chapter also sets the stage for what's to come through the cognitive learning intervention, data collection procedures, and data analysis. It has outlined the study's significance, the context in which it will take place, and the questions that will guide me, as the researcher, in each iterative phase. Key terms were identified to aid the reader in the work that will follow in subsequent chapters. I have also used this chapter to introduce the scope of the study, its limitations, and my efforts to mitigate those in order to offer a substantive body of work to the field. While this first chapter provided an overview of the inquiry, including a brief description of the study's three phases and the research design, in Chapter 3, I will offer a more comprehensive description of

the methodology. Chapter 4 will present the results of the study, the implication of which will be explored further in Chapter 5.

Finally, this first chapter offered the reader a brief glimpse into the relevant research that is foundational to the current study. This study sought to contribute to this field of adult education and GED programs by offering a unique perspective that fills a knowledge gap, intersecting cognitive learning and challenge and support theory and investigating the impact of theory-based strategies on students' self-perception. In Chapter 2, I will delve deeper into the literature to offer additional context that shapes this project.

CHAPTER 2: REVIEW OF LITERATURE

"The function of education is to teach one to think intensively and to think critically. Intelligence plus character–that is the goal of true education." -Dr. Martin Luther King Jr.

The focus of this inquiry was to explore how training GED instructors in both cognitive learning theory and challenge and support theory influences the self-perception of academic ability among GED students enrolled at a rural community college. Two GED instructors at CTCC participated in a professional development series that highlighted cognitive learning and Sanford's (1962, 1966) theory of challenge and support. Each theory offers a framework for supporting students holistically and empowering them to take an active role in their learning process. The professional development series, as designed, equipped the instructors with strategies for integrating the theories inside their classrooms. By combining the theories, instructors can cultivate a supportive learning environment that encourages GED students to reflect on how they process new information and grow. Following professional development, the instructors were tasked with implementing these strategies into lessons during the morning GED course. The inquiry explored how GED students perceive their academic abilities prior to beginning the course and tracked the evolution of self-perception after participating in the intervention.

GED students are more likely to be older, with a median age of 27 (Best GED Classes, 2024). Each student's path back to school is unique. However, it is important to note that existing studies have documented common challenges including previous enrollment in underfunded K-12 schools (Parker, 2019), inequitable disciplinary practices (Blake et al., 2020), teacher stress and burnout (Brady et al., 2023) and the resultant student disengagement (Bottiani

et al., 2019). Research also points to personal or familial events that disrupt students' education, including physical and mental health challenges (Gao et al., 2020; Gedd-Munoz et al., 2023), which lead students to drop out of school (Garrett-Peters et al., 2019). These prior negative experiences in education shape how GED students see formal education and have been linked to student resistance, suspicion of others, and self-doubt (Brown et al., 2019). These factors disproportionately impact BIPOC students.

When students return to community colleges to complete the GED credential, they are demonstrating resilience despite formidable odds. These challenges lead to diminished self-efficacy (Brown et al., 2019), a psychological barrier that influences how GED students perceive their ability to succeed in academic contexts. When asked about their motivation to return to school, GED students have reported greater personal and professional opportunities for themselves and their families (Sagna & Vaccaro, 2023), enhanced self-esteem and belonging (Strayhorn, 2023), and a proven sense of personal achievement (Rayborn, 2015). For GED students to be successful, any self-doubt cultivated over time must be mitigated by creating an environment that allows the student to put in effort without fear of failure, regardless of the previous obstacles faced. Brown et al. (2019) suggest that this environment should promote self-efficacy in GED students and increase confidence that they can persist and complete the credential. Equally important is the students' sense of belonging in academic spaces, which has been linked to the instructor adapting to the needs and abilities of students to foster a positive sense of self through rigorous instruction (Alivernini & Lucidi, 2011). Across GED programs, establishing cohesiveness and increasing student persistence and completion rates are top priorities (Uretsky & Henneberger, 2023b). This study sought to cultivate a space that balances

challenge and support and empowers GED students to embrace an active role in their learning experience.

As will be documented in this chapter, the existing research into this population has disproportionately highlighted their struggles instead of their strengths. In so doing, literature largely offers a deficit model of understanding. As a scholarly practitioner and leader in the field of adult education, I approached this work from a strengths-based lens that emphasizes the resilience of GED students and encourages them to do the same. By integrating cognitive learning into an academic environment that balances challenge and support, this study sought to understand how an intentionally designed intervention may positively impact the self-perception of GED students. Yet, even as I sought to offer a strengths-based study that counteracts the deficit lens so often found in the field, I also recognize the importance of identifying the barriers and challenges that lead students to leave school prematurely and that persist as they enroll in GED programs. Grasping the full picture of these challenges is crucial to understanding the forces that influence how students perceive themselves.

To that end, Chapter 2 provides contextual insights into the barriers that thwart high school graduation and persist as obstacles when students return to complete the GED. The chapter also expands on the new challenges that arise in GED programs for the students who are striving to complete the credential. I offer insights into the pivotal role of the GED instructor in the success of students, as well as a deeper dive into the shift that transpires from a pedagogy approach that centers on teaching children to an andragogical philosophy that differentiates adult learners from young learners. Additionally, as this research aims to provide instructors with the tools to incorporate cognitive learning theory in their lesson plans to create a learning

environment that is both challenging and supportive, I offer an expanded description of cognitive learning and Sanford's (1962, 1969) theory of challenge and support.

Theoretical Framework

Challenge and Support Theory

This study employed a theoretical framework built upon Sanford's Challenge and Support Theory (1962) and executed through cognitive learning strategies. Based on research by Nevitt Sanford (1962), who has been recognized for his contributions to developmental education and personality development in college students, growth in college students is facilitated by an environment that offers diverse, intricate, and compelling intellectual challenges to students while providing the support necessary to navigate them. Sandford's theory explains that an environment with low levels of challenge and minimal support will result in minimal progress. On the other hand, learning environments that include high levels of challenge with low support structures are detrimental to student learning as the individual experiences substantial obstacles yet lacks the necessary support to succeed. Such experiences contribute to increased anxiety by setting students up to fail. The "High Challenge / Low Support" environment is characterized by the offering of a challenge that is beyond the student's current skill without appropriately preparing the student to surmount it. When this occurs, a student is likely to withdraw, making failure a self-fulfilled prophecy (Evans et al., 2010).

If a learning environment is highly supportive but offers low challenge to students, this constructs an insufficient educational space that fails to foster growth. Instead, Sanford (1962, 1966) posits that the ideal learning environment effectively balances high levels of challenge with high levels of support. Such a space introduces students to tasks and situations that push

Table 2.

The Four Quadrants of Challenge and Support Theory

	Characteristics	Consequences/Outcome
Low Challenge / Low Support	Learning environment tasks do not effectively challenge learners. Only minimal support is provided to students.	Apathy and/or disengagement Limited progress Low self-determination
Low Challenge / High Support	Learning environment tasks do not effectively challenge learners. Students receive high levels of support. Leaves students in their respective "Comfort Zone"	Complacency/stagnation Breeds conformity and fear of failure Reduces engagement
High Challenge / Low Support	Students are presented with tasks that stretch their current skillset. Only minimal support is provided to navigate these challenges/students feel ill-equipped to succeed.	Stress and frustration Students choose to withdraw from the learning environment. Fear of failure leads to avoidance of future learning experiences.
High Challenge / High Support	Students are intellectually challenged. Appropriate support is in place, making students comfortable taking risks. Optimal environment for growth.	Increased engagement, confidence, and self-efficacy Students are more likely to embrace future challenges and set ambitious goals.

Note. Sanford, N. (1962). Higher Education as a Social Problem. In N. Sanford (Ed.), The American College: A psychological and social interpretation of the higher learning. p. 10–30. John Wiley & Sons, Inc.

them intellectually while embedding encouragement and support so that students feel equipped to navigate the challenge. By overcoming an obstacle, students may experience personal development, achievement, and holistic growth, which ultimately enhances self-efficacy (Bandura, 1977).

Challenge and support theory is not solely beneficial in formal education spaces. The tenets are applicable in all learning situations, such as a parent teaching a child to tie their shoelaces. If the parent provides the child with a pair of tennis shoes and directs them to fasten the laces without providing instructions on how to do so, it is likely the child will attempt the task but eventually give up out of frustration. On the other hand, if the parent routinely ties the shoelaces for the child without motivating them to try it themselves, they will be unlikely to learn how to do so. Sanford (1962) warns that in this case, the parents will likely still need to tie their child's shoes when they start college or obtain their first job (Sanford, 1962). In the context of a GED program, students may not have been exposed to the required information mandated in middle or high school curriculum and may not have had prior experience in an educational setting that effectively balances challenge and support in learning. Consequently, if previous educational experiences were characterized by the other three suboptimal quadrants of Sanford's (1962) theory, this may have contributed to their decision to drop out of school.

In 1966, Sanford updated the theory to incorporate the notion of readiness within this paradigm. His assertion posited that for personal development to occur, an individual must first reach a state of readiness to face challenges, both physically and psychologically. The example Sanford offers is that teaching a third grader about quantum physics would not be appropriate, as they are unlikely to have the necessary cognitive readiness for it and would have no connection or prior experiences to conceptualize this new concept. This extends to work with GED students

who may have remained absent from school for an extended period. Such a disruption can hinder the readiness of the students who are ready to complete the GED credential. For this reason, instruction should be tailored to ensure that students are appropriately challenged while provided critical support to navigate the challenges they face in the academic setting.

Students entering a GED program are entering a pivotal phase of personal development. Shortly after beginning the program, the learner may need to reconcile with the understanding that accepting help does not guarantee that they will always avoid failure or negative outcomes when facing a challenge. However, the knowledge that they can seek help reinforces that there are individuals and systems in place that are invested in the learner's success (Sanford, 1962). At this juncture, support from multiple sources such as family, friends, classmates, and instructors is an essential component of student support and often serves as collective motivation for GED students. This support system may urge students to persist and actively pursue assistance as needed (Sanford, 1962).

Sanford's theory states that students must simultaneously experience challenges and support to experience growth. Successful behaviors and attitudes in the classroom are characterized by active involvement in the program, honesty, receiving and providing feedback, firm deadlines, productive class discussions, and relationships with classmates and teachers (Sanford, 1966). In tandem with the above behaviors and attitudes, GED students can benefit from a classroom environment that encompasses challenge and support to ensure they are prepared for and can mitigate future barriers to persist and earn their high school diploma (Sanford, 1966). These are especially important as they promote self-efficacy and aid students with diverse needs. Sanford's theory will be used in this research to support mechanisms of GED student success. The theoretical framework outlines prerequisites for student development and is

fundamental to the development of GED students who have experienced prior school trauma and a premature exit and disruption to their education. The challenge and support theory also emphasizes that an equilibrium of challenge and support be reached as an excessive amount of challenge or imbalance causes the learner to withdraw, while an excessive amount of support results in a failure to foster growth.

Sanford's (1962) theory of challenge and support will be infused into each phase of this study. In Phase I, GED students participated in semi-structured interviews prior to their participation in the theory-based lesson. In those interviews, we discussed previous life and academic experiences. Students were invited to share whether or not they found former education experiences challenging. I asked GED students in these pre-interviews what form of support had been offered in the past, how well those supports worked, and what form of support the student believed would be most beneficial for them as they pursue the GED course. Additionally, students were asked to describe how they perceived their academic abilities in this initial stage and to elaborate on how their perceptions are influenced by those past experiences.

In Phase II, I collaborated with a veteran adult educator who facilitated a professional development session introducing strategies the GED instructors could use to effectively balance challenge and support in the classroom. Following this training, the instructors implemented these strategies into their lessons as the study's intervention. I observed these lessons, documenting my observations to share with the instructors as a form of member checking. The post-interviews in Phase III sought to glean from students how effective they found the intervention to be as a supportive learning environment that assists students through challenges, as well to understand how participating contributed to their self-perception of academic ability. I

also interviewed the instructors in Phase III to fully understand the value they assign to this balance and how implementing challenge and support in their classroom shaped their instruction.

Cognitive Learning Theory

To implement challenge and support theory in this present study, the professional development session offered instructors a second theoretical construct, cognitive learning theory. As designed, cognitive learning offers the instructors in the study a vehicle through which a student can receive both challenge and support and aid in their holistic success (Demetrion, 2021). Piaget (1952) explained cognitive learning theory by stating that learning is not the mere acquisition of knowledge by mimicking or repeating verbatim, but instead, it involves an active interaction between the mind and knowledge. The learner processes and restructures information while organizing it into cognitive frameworks by actively integrating new data (Happs, 1985). Tennyson and Rasch (1988) proposed an instructional design paradigm that emphasizes the development of a learning environment, enabling students to gain knowledge while enhancing their cognitive capacities to utilize and expand that knowledge. Educational professionals have recently reiterated the necessity of designing learning environments that, in addition to material acquisition, foster strategies for higher-order thinking and the enhancement of cognitive talents (Tiruneh et al., 2017).

Cognitive learning theory is associated with constructivism, active learning, information processing, and the enhancement of problem-solving abilities (Demetrion, 2021). It underscores the significance of cognitive processes in the comprehension, organization, and retention of information by concentrating on the active engagement of learners. This theory offers significant insights into instructional design, educational methodologies, and cognitive advancement (Demetrion, 2021). Biggers and Luo (2019) and GottWorth (2022) identified the link between

cognitive learning and student success, asserting that the exercise of students reflecting on their current level of knowledge and understanding is essential for promoting individual resilience and overall success. For this reason, GED programs should create learning environments that encompass traditional classroom strategies and non-traditional teaching methods to ensure that students thrive and reach their goals. By doing so, students can receive the challenge and support they need to be successful.

Cognitive learning strategies can help students by creating a learning environment that promotes active learning and engagement and emphasizes students' prior knowledge. These strategies also promote self-reflection and goal setting, recognition of diverse learning styles, fostering critical thinking and problem-solving, and providing formative and self-assessments of the students' learning (Knowles et al., 2005). When applied in the context of adult basic education, cognitive learning theory intersects with andragogy, or the theory of adult learning (Amiruddin et al., 2023). This intersection yields an understanding that the way adults process new information differs from the process of a child. More broadly, adults appreciate self-directed and experimental learning experiences that emphasize the construction of new knowledge related to their own experience (Livingston & Cummings-Clay, 2023). Understanding how adult learners process information is key to understanding how to create a cognitive learning environment that is both challenging and supportive to serve the student holistically and ensure diploma completion. Given this, I will expand on andragogy later in this chapter.

The Background of the GED Program: In Brief

By the time GED students enroll in the program, they have often experienced setbacks and failure in school contexts that shape how they view their ability to succeed academically (Glennie et al., 2012; Liu, 2020; Ressa & Andrews, 2022). However, their failure is not entirely

their own. Ongoing challenges beyond a student's control contribute to their decision to leave school prematurely, including the underfunding of public schools (Parker, 2019) and inequitable disciplinary practices in K -12 (Blake et al., 2020). GED programs have the opportunity to address any existing gaps in education, skill development, and personal development (Johnson, 2023). GED programs assist students in navigating obstacles to attain educational and professional achievement and facilitate personal advancement, providing access to enhanced possibilities by increasing students' academic knowledge and improving test-taking skills, social-emotional readiness, and workplace preparedness (Johnson, 2023). This is the purpose of GED programs.

In 1942, the U.S. Department of Defense partnered with the American Council on Education to create various tests that included a host of information required to complete a high school diploma (High School of America, 2020). The Adult Basic Education Act of 1966, which is also known as the GED program, was signed into law by President Johnson in 1966 and is therefore known as P.L. 89-750 (High School of America, 2020). As early as the late 1800s and into the early 1900s, organizations emerged to advance the adult education movement in the United States. The start of the 20th century was marked by the rise of numerous organizations and institutions engaged in adult education as the Civil War faded from memory and the country experienced general economic prosperity. These establishments encompassed business and industry, colleges and universities, cooperative extension services, foundations, government agencies (including the military), voluntary health and welfare agencies, independent and residential centers, labor unions, libraries, mass communications media (such as newspapers, books, and magazines), museums and art institutes, proprietary schools, public schools, religious institutions, and voluntary associations (Sticht, 2002).

The GED test was created to examine and assess the knowledge and skills of those who did not obtain a high school diploma and to help students obtain a high school equivalency (HES) credential (High School of America, 2020). For the first seventy years of HSE, the GED was the sole equivalency test available in the United States. However, in 2014, the high school equivalency test (HiSET) was introduced as an additional option for the test (Phillips, 2023). Today, the HiSET and GED are the two standardized assessments used for measuring academic skills and earning a high school equivalency diploma in North Carolina. Each state education department specifies which assessment is accepted. GED assessment is accepted in 41 states and HiSET in 26 states (Phillips, 2023). Currently, all 58 Community Colleges associated with the NCCC System provide residents the opportunity to obtain a GED.

GED programs were designed to address the problem of high school dropouts and to provide students with a new opportunity to complete their secondary education as well as open the door for future post-secondary education and/or career opportunities (Kessler, 2022). Although dropout rates have significantly decreased over the last forty years, there is still a significant number of dropouts in specific types of schools, such as those in high-poverty, rural, and urban areas (Bottiani et al., 2019). Additionally, historically underrepresented students continue to be disproportionately represented among dropouts, which is a serious cause for concern (Bottiani et al., 2019). School dropouts face an increased likelihood of experiencing adverse developmental consequences, including but not limited to, impaired social relationships, engagement in criminal activities, imprisonment, involvement in violent behavior, early parenthood, homelessness, diminished physical and mental well-being, substance abuse, unemployment, and reduced earning capacity throughout their lives (Rifenbark et al., 2022). Furthermore, the decision to drop out of school has far-reaching negative effects on society,

leading to lower tax revenues, increased dependence on social programs, higher demand for healthcare and mental health services, and greater incarceration rates (Kim et al., 2023). Thus, tackling the problem of school dropout and GED student persistence has implications not only for the education system but also for the prevention of issues in the welfare, mental health, and correctional sectors (Webber, 2018).

In 2023, there was a national percentage of a 70% completion rate for those who took at least one of the four subject areas, and 59.9% of students passed all four testing areas when taken together (ACE, 2024). Data from three years prior revealed that in North Carolina, 3,883 students graduated with a GED during the 2020-2021 academic year. Among them, approximately half (46%) did so with the assistance of the GED programs in one of the 58 community colleges across the state (NCCCS, 2021). As such, there is a population of GED students who are attempting to complete the credential without assistance. GED programs, like the one at CTCC, can provide students with a comprehensive understanding of the subjects assessed on the exam and can support the development of essential test-taking skills to ultimately increase the likelihood of success. Beyond the exam, GED programs can help bridge the gap from credential completion to additional postsecondary education and/or professional experiences. This study offers practical strategies to enhance the experience and self-perception of students enrolled in GED programs as they prepare to complete the credential and explore future educational and career opportunities.

Dropout as a Wicked Problem

Wicked problems are so-called not because they are evil, although there may be a degree of evil intent or deliberate indifference to human conditions at their core. In their 1973 paper, "Dilemmas in a General Theory of Planning," Rittel and Webber (1973) refer to dropout as a

“wicked problem,” characterizing it as complex, poorly defined, and challenging to resolve directly (p. 155). The factors contributing to a student’s decision to drop out are interconnected, including social, psychological, economic, and educational elements related to each student’s experience.

Uretsky and Hennenberg (2023) detail a conceptual model of academic success and the life course perspective on the dropout phenomenon. Their model characterizes dropout as a prolonged process that evolves progressively over time. During the fourth year of high school, a student might choose the standard path of graduating with their classmates or stop their studies and leave school without earning a diploma. Students who do not foresee themselves graduating within the planned timeframe may still choose to continue their studies into the following academic year and successive years thereafter. However, the additional time to completion has been linked to increased mental health challenges among adolescents (Tempelaar et al., 2014) and elevated levels of anxiety and depression once the student reaches adulthood (Melkevik et al., 2016).

The decision to drop out of school without obtaining a diploma is multi-faced. It is not necessarily a reaction to present circumstances or even historical ones. The decision cannot be attributed to a singular determinant. The dominant perspective among researchers instead identifies a variety of factors that progressively hinder students' academic progress and contribute to high dropout rates, with a specific focus on individual and school-related influences over time. Students who are prone to dropping out of high school have a variety of reasons for their departure. They often include school conditions and environmental factors at home within resource-constrained communities (Garrett-Peters et al., 2019). Such factors may include considerations at home, student performance, school, and peer factors.

Home Factors

Chambers et al. (2004) suggest several variables that predict school dropout, which include the low socioeconomic status of the family and the lack of books and other academic materials in the home. More factors include the level of schooling of the same-gender parent, low grades, teen pregnancy, and poor outside support, which may lead to prior academic failure and dropout (Chambers et al., 2004). These factors are tightly correlated with poverty, and the tradeoffs parents make between working to provide shelter and sustenance and the need to engage children in positive activities. Research related to dropouts can be related to the way an adolescent perceives their school climate, fairness of school rules, and overall feelings related to teachers and administration (Van Eck et al., 2017).

Although those feelings tend to be favorable in elementary school, they tend to decline once students enter high school (Rifenbark et al., 2023). The research of Chambers et al. (2004) helps explain students' feelings of inadequacy and the propensity for students to lock into a group that exhibits inadequacy and deviant behavior. With that said, as students mature and realize a high school diploma may be required to achieve their personal and professional goals, a GED/ABE program could give them a sense of belonging and achievement. According to Afia et al. (2019), divorce or separation can result in a decrease in the amount of time or resources that parents can dedicate to their children. The variation in parenting approaches may explain the heightened likelihood of academic disengagement among adolescents who may not live with both biological parents (Karhina et al., 2023).

The impact of parental involvement on an adolescent's ability to remain enrolled in school has been linked to the effectiveness of various parenting approaches. Blondal and Abalbjarnadottir (2014) found that parents who practice a more authoritative approach to

parenting, balancing high levels of support with supervision and offering their children autonomy, are more likely to see their children graduate high school. Additionally, parenting techniques can also influence the conduct of adolescents/teenagers. An authoritative parenting approach is linked to a decline in negative behaviors at school (Wu & Su, 2024). By contrast, this study revealed that parenting that is classified as neglectful – low levels of both support and supervision – is linked to heightened aggression in adolescents and increased instances of behavior challenges in school. The ability of parents to establish a well-organized home environment and closely monitor and hold the adolescent/teenager accountable for their behavior, all while maintaining a loving connection with open and honest communication, is an ongoing challenge that must be met to ensure the student's success (Shute et al., 2011).

The correlation between effective parenting techniques and various challenges that teenagers may encounter, such as subpar academic achievement and an elevated likelihood of dropout, can be attributed to insufficient parental oversight, communication, and absence of affection (Afia et al., 2019). This research indicates that parents of dropouts had diminished proficiency in enforcing regulations and cultivating an affectionate bond with their adolescents, in contrast to parents who form robust connections and offer genuine parental affection Sagna & Vaccaro (2023) and McKnight (2020) suggest that families can provide tangible support while students are working toward completing their educational goals by providing financial support, maintaining the household and childcare, and providing an overall sense of security or safety net for a student as they persist in completing their diploma. Bott-Lyons and Guillaume (2023) agree that this level of support for students is crucial to their success. They emphasize that an institution can provide similar support to GED students and that when a college cultivates an environment that balances accountability and support, similar to the role of

an authoritative parent at home, the institution can nurture a student's intellectual curiosity and academic self-efficacy both in the GED program and in future post-secondary education. The support network that will encourage GED student persistence is likely to include parents, extended family, peers, and college personnel.

Student Academic Performance

Inadequate school performance may lead to low self-esteem, dissatisfaction, and disengagement. Students who do not meet grade-level standards or consistently experience academic failure are at an increased risk of dropping out of their education (Parker, 2019). Inadequate teacher standards and support can lead to student disengagement if learners perceive that educators hold low standards or fail to provide adequate academic assistance. Bullying and school safety concerns may be contributing factors to school dropout as students who encounter bullying or perceive their school environment as unsafe may refrain from attending school or exhibit emotional withdrawal, resulting in disengagement (Seelman & Walker, 2018). An adversarial or uncomfortable educational setting may compel students to withdraw to evade these challenges.

Insufficient educational resources, characterized by underfunded institutions with inadequate provisions (including restricted access to counseling, extracurricular activities, or contemporary learning materials), can adversely affect student achievement. This lack of resources may hinder students from obtaining the necessary support to maintain engagement and achieve success (Parker, 2019). Chronic absenteeism can be a strong predictor of dropout rates. Frequent school absenteeism might result in academic decline and heightened disengagement among students, and in certain instances, educational institutions may fail to intervene adequately to mitigate chronic absenteeism (Brown et al., 2019).

Teacher Stress and Burnout

School can be stressful for students and teachers alike. Research indicates a student's negative prior academic experiences may be attributed to teacher stress and burnout as a variety of student behaviors and academic needs fall squarely on the shoulders of the teacher (Brady et al., 2023). The job of teaching itself, along with personal demands can contribute to teacher burnout, which includes pressure to ensure students meet goals and objectives within the academic year, large workloads and classroom sizes, and the ambiguity of their role due to understaffing, student misbehavior, and classroom management (Brady et al., 2023). For these reasons, teachers may find themselves in a working environment where they feel overwhelmed, unsupported, and unable to teach students. According to Parker (2019), North Carolina trails behind many states in teacher compensation and per-pupil spending and continues to prove its inability to produce significant changes in this area. Reasons for low teacher support and student disengagement may also be related to low-funded schools, resulting in inadequate teaching salaries. While providing adequate teaching salaries and professional development can help mitigate these challenges, addressing the larger issue of teacher working conditions is warranted (Toropova et al., 2020).

An examination of the Maslach Burnout Inventory (MBI) and the Stress in General (SIG) survey, measuring teacher's work stress quality, work stress quantity, and life stress indicated three types of stress for teachers. The number one stressor was administration, followed in order by students and parents (Brady et al., 2023). Using the MBI and SIG instruments, it is well documented that the emotional labor of teaching often leads to feeling emotionally drained or exhausted (Cece et al., 2021; Kokkinos, 2006; Mérida-López & Extremera, 2017). Beyond

stress, teacher burnout is attributed to a lack of personal accomplishment and emotional exhaustion (Brady et al., 2023).

Teachers in urban, low-income schools face high job stress and burnout, which may be driven by their need to support students who disproportionately face serious stressors like poverty, trauma, and chronic exposure (Bottiani et al., 2019). Many low-income Black and Latinae students are usually zoned to schools that are under-resourced, over-enrolled, and taught by underqualified teachers (Isenberg et al., 2022; Mangiante, 2011; Qin & Bowen, 2019). Research has shown that students in this setting can become easily disengaged and have a propensity to drop out of school before graduation (Bottiani et al., 2019).

Given parallel resource constraints, stress and burnout are similarly experienced by rural teachers, although the experiences are not the same (Abel & Sewell, 1999; Kingsford-Smith, 2023; Mendoza-Castejon et al., 2020; Xia & Butler, 2023). Rural students are more likely than their urban counterparts to complete high school (Chambers, 2020), and in many communities, this is adequate success (Agger et al., 2018). Moreover, the communal features of rural communities mediate stress and burnout differently for rural teachers (Kingsford-Smith et al., 2023). That said, even when stress is mitigated, students in rural areas often face the stress of economic challenges, limited access to resources, and transportation barriers (Irvin et al., 2014). Supporting students through these challenges has been linked to teacher burnout and stress in rural schools (Downes & Roberts, 2018). Responding to those challenges requires an investment in the teachers serving students in rural schools. Yet, Kingsford-Smith et al. (2023) find a lack of relevant professional development provided to rural teachers, which negatively impacts teacher working conditions and wellbeing.

To ensure teachers are teaching effectively while experiencing burnout, many begin by observing and evaluating their practices (Delpit, 2006). Evaluating instructors provides a significant opportunity to analyze obstacles to successful communication. Teachers have the responsibility of effectively communicating with a growing number of students and their parents, who come from varied backgrounds. Additionally, teachers themselves are a diverse group, and their evaluation by examiners, even from within their social circles, can lead to significant misunderstandings. When there is a misunderstanding of intentions, behaviors may also be misunderstood. As historian Jay Featherstone puts it, "If people read what you are doing entirely differently, then what you are doing will be entirely different" (Delpit, 2006, p. 135). Therefore, even well-intentioned observations have the potential to perpetuate teacher burnout and stress, which in turn produces a harmful ripple effect on the students themselves (Madigan & Kim, 2021).

Student Racial Stress in School

In the United States, the majority of teachers in the workforce are White. According to the National Center for Education Statistics (2023), 80% of all public-school teachers in the U.S. identified as White in the 2020-2021 academic year. White teachers with predominately White students often exhibit lower racial stress and higher classroom and behavioral expectations due to teaching a homogenous group of students (Bottiani et al., 2019). Gordon and Espinoza (2020) indicate that if the leader of the classroom environment is stressed and has low expectations of BIPOC students, they become disengaged in learning and relationship-building with their teacher. Racial disparities in school settings can cause students to experience a great amount of stress and disengagement. Research has shown students from diverse racial backgrounds often

encounter various racial stressors, such as teasing and bullying, inside educational settings (Low et al., 2024; Vervoort et al., 2010).

These stressors have been linked to adverse effects on their mental well-being and academic performance (Saleem et al., 2021). An instance of racial discrimination occurring inside the school environment, perpetrated by both instructors and students, is linked to the development of sadness, anger, and reduced self-esteem (Coker et al., 2011). There is a correlation between racial discrimination that occurs within schools and bad academic consequences, such as less student participation, more severe evaluations, and lower grades (Unnever et al., 2015). A longitudinal study of African American pupils found that there was a negative correlation between school-based racial discrimination and academic performance, academic values, and academic self-concept (Saleem et al., 2021). Each of these studies and the evidence they offer underscore the link between racial stressors and higher rates of dropout among BIPOC students (National Center for Education Statistics [NCES], 2024).

Microaggressions

Racial microaggressions refer to common and brief instances of verbal, behavioral, or environmental mistreatment that express disparaging or negative racial slights and insults to an individual or group (Sue, 2015). The issue of teachers expressing implicit bias and mistrust is of particular importance in student disengagement because it can create lower levels of BIPOC student/teacher trust and the expectation of BIPOC students to misbehave. A teacher's expectation of a student’s propensity to misbehave will eventually present itself. These encounters, which occur within a school setting, have an impact on the adjustment of the targeted person or group. Black adolescents are susceptible to both individual and institutional instances of racism at school, which can cause stress and potentially lead to trauma (Saleem et al., 2021).

While students meet and navigate racist incidents at school, research indicates that school personnel frequently fail to prioritize, acknowledge, or possess the necessary skills to manage race-related matters (Bentley-Edwards et al., 2020; Bottiani et al., 2019; Legette et al., 2023). Consequently, they typically opt not to actively address these issues. Evading discussions about race is problematic since research indicates that the most effective approach to addressing racial prejudice in an educational setting is for school personnel and counselors to openly acknowledge and validate conversations about race (Legette et al., 2023; Saleem et al., 2021). However, many tend to exclude or impede such opportunities for students and staff belonging to ethnic minority groups from engaging in these conversations. Therefore, school personnel and educators who regularly engage with children may be overlooking a chance to encourage racial reconciliation and cultivate a positive race atmosphere (Saleem et al., 2021). While research has not yet explicitly correlated microaggressions with dropout rates, a clear link has been established by the studies referenced above between microaggressions and the disengagement of students in K-12, which increases the likelihood of dropping out. From Brown et al. (2019), we know that prior negative experiences in school contexts can cultivate resistance and self-doubt in GED students. As such, any instance of microaggressions and/or racial stressors in K-12 academic experiences will likely shape the students' self-perception of ability and expectations for the GED classroom.

Disciplinary Disproportionality

The research of Blake et al. (2020) indicates that although the Civil Rights Act of 1964 prohibits exclusionary discipline based on race, color, or national origin, BIPOC students are disciplined at a higher rate and on a more punitive level than their White counterparts, which may contribute to disengagement and lead to dropout. Schools with higher suspension rates often face numerous challenges and deficiencies that negatively impact student education (Nguyen et

al., 2019). These include limited availability of guidance counselors and advanced placement courses, a scarcity of experienced teachers, and lower scores on state and school exams. A contributing factor to disengagement is the lack of positively engaging work in and outside of the contributing classroom. Furthermore, the UCLA Civil Rights Project has discovered a correlated and similarly worrying trend regarding the amount of instructional time lost by students, primarily of Black ethnicity, who face suspensions or expulsions. The study revealed a strong correlation between students who were prone to suspension and their likelihood of subsequently abandoning their education (Nguyen et al., 2019). BIPOC students who are suspended are at an increased risk of encountering the juvenile justice system and may be more likely to commit serious transgressions, receive more severe school discipline sanctions, and be arrested in the future (Blake et al., 2020).

Over the last 10 years, there has been a growing focus among researchers, activists, and politicians on the harmful effects of exclusionary discipline. Additionally, there has been an emphasis on the unequal punishment of young people from minority ethnic backgrounds. According to the most recent national data, Black children and adolescents, who make up only 16% of the total student population in public schools, accounted for 39% of students who received an out-of-school suspension consequence (Fisher et al., 2022). The disproportionate rate of suspensions among BIPOC students has been linked to academic disengagement and has been shown to increase the likelihood of choosing to discontinue school (Garrett-Peters et al., 2019). This research further supports the link between BIPOC students' decision to leave school prematurely and racial discipline disparities.

Social Contagion

Social contagion refers to the transmission of behavior through contact with others who exhibit the same behavior. Students who decide to drop out of school are often surrounded by a sibling, close friend, or romantic partner who has dropped out of school at some point, thus creating a level of comfort to mimic the same behavior of those they are closely connected with outside of school (Wall-Wieler & Roos, 2017). Dupere et al. (2021) suggest that student dropout rates can be linked to same-age intimates. According to the authors, adolescents who choose to drop out of high school are often socially connected to peers who are "involved in deviant activities" (p. 574) or have dropped out of school themselves.

A connection exists between the research of Archambault et al. (2021) and Strayhorn (2023) at the intersection of student belonging and social contagion. In the case of Strayhorn (2023), the sense of belonging theory posits that students seek to feel they belong in the academic spaces they inhabit. Research has shown that students who experience high levels of belonging in school perform better academically, demonstrate stronger motivation, and are less likely to drop out (Gopalan & Brady, 2020). The phenomenon of social contagion plays a role in belonging, as peers have a strong influence on students' sense of belonging. If a student feels like part of the academic community, they are more likely to engage with the school context. The reverse is also true. If students do not feel they belong in school, they are more susceptible to mimicking negative behaviors they observe in their peers and/or choosing to disengage from learning (Mendoza & King, 2020). The interplay between social contagion and belonging and their collective impact on student success demonstrates that by cultivating an inclusive and supportive learning environment, educators can foster positive academic behaviors.

Rifenbark et al. (2022) states that prior inadequate school attendance is another factor that contributes to students' unfavorable educational experiences in general, particularly concerning students' opinions of the subpar educational institutions they were enrolled in. Absenteeism is indicative of a lack of involvement and a possible inclination to withdraw from educational pursuits. Rifenbark et al. (2022) make an interesting case in stating that discontinuing education has significant adverse consequences for individuals before even enrolling in a GED program. The barriers they have faced, such as a heightened probability of experiencing unemployment, underemployment, and a high reliance on government assistance to meet the needs of daily living, can all contribute to students believing their inadequacies will follow them throughout their GED experience. Such assumptions are likely to hinder how students perceive their ability to succeed in the GED classroom.

Fredricks et al. (2019) make a convincing argument related to high school attrition by stating that students who have had limited social connections or are purposefully excluded by their peers are more likely to become disengaged, increasing their chances of dropping out of school. This study posits that such negative experiences may influence a student's decision to pursue future education if they lead to a sense of inadequacy. Students may fear that they will experience repeated feelings of ostracism in the new academic setting. This may cause a student to delay enrollment in their GED education or, once enrolled, these fears may result in the decision to stop out frequently, ultimately disrupting learning.

Students can be significantly influenced by their peer groups, and the need for conformity might impact academic decisions. Students affiliated with peer groups that disparage education or glorify disobedience may encounter pressure to stay away from school, neglect their education, or even quit to conform to their peers (Dupere et al., 2021). In certain instances,

students may have dropped out of school to gain recognition as "successful" among their peers, even at the cost of their education. Cultural identity may impact certain students' perspectives on school, as marginalized or BIPOC students may perceive that the educational system fails to represent their ideals or experiences (Saleem et al., 2021). They may experience racism, discrimination, or insufficient representation, resulting in feelings of alienation and diminished educational goals. Systemic biases within the classroom and during interactions with educators and administrators may also lead to disengagement and a sense of unwelcomeness in the educational system (Saleem et al., 2021). The absence of constructive role models to emphasize the significance of education may result in students feeling their presence and desire for education are devalued. This may also cause students to struggle to perceive a certain route to success that includes high school completion, resulting in elevated dropout rates.

Obstacles Encountered by GED Students

Resuming classroom education in a GED setting involves confronting emotions of disappointment, incompetence, and shame due to prior perceived academic failure (Nguyen, 2018). These obstacles can persist throughout their postsecondary education, prompting administrators and policymakers in both adult education and community college settings to seek methods to enhance the preparation and assistance provided to this student population such as providing daycare and transportation assistance, peer-tutoring, and a host of wrap-around services for overall support (Nguyen, 2018). Even with these holistic supports in place, these variables can create barriers to student success and persistence due to their direct effect on a student’s capacity to manage school, home, work, and social life.

A barrier is a physical or conceptual obstruction that hinders or restricts movement or access. Adult learners face barriers upon deciding to return to school, such as the negative

emotions bound up in their prior decision to drop out, working full-time while attending school, the inability to pay for childcare and work, and the overall feeling of defeat. Phillips (2023) and Hansen et al. (2019) find that individuals who participate in lifelong learning programs may be unable to continue due to their caring duties and may experience health concerns, cognitive impairments, or physical impairments that hinder their ability to engage. These obstacles may involve alterations in cognitive abilities, such as memory and attention, which can affect one's self-confidence and self-efficacy. GED students who are employed and have low abilities sometimes face employment instability since they can be readily replaced due to their inadequate academic background or certifications. Thus, adults attempting to finish high school-level work often face the formidable challenge of acquiring fundamental skills while juggling work and family responsibilities (Hansen et al., 2019; Phillips, 2023). This is in addition to the scholastic obstacles that previously made high school a struggle.

The language of "barrier" might suggest that a barrier could potentially be eliminated with assistance from the school and community. Nevertheless, a significant number of students returning to earn their diploma fail to navigate around or overcome their barriers because, over time, those barriers have become integral to their identity and may accompany students in a manner that is akin to their shadows (Bickerstaff, 2010). Returning students may perceive their past and current stumbling blocks as enduring, widespread, and unchanging, ultimately shaping their world. In addition, their support network is often impacted by the same reality and therefore provides limited chances to achieve beyond immediate, temporary survival. These challenges, which may feel insurmountable, make the decision to return to school difficult to make (Bickerstaff, 2010).

Emotional Barriers

GED students who are employed sometimes face employment instability if they can be readily replaced due to their inadequate academic background or certifications. It is well-documented that this experience influences the decision to resume classroom education in a GED setting, with students often confronting emotions of disappointment, incompetence, and shame due to prior school dropout (Hansen et al., 2019; McKnight, 2020; Nguyen, 2018; & Phillips, 2023). As Brown et al. (2019) described, these experiences often influence how GED students perceive their ability to succeed in the program. A study by Goto and Martin (2009) revealed that negative self-perceptions of academic ability often result in GED students' electing not to attempt challenging academic work. In self-efficacy theory, this refers to a student engaging in avoidance behaviors, effectively refraining from attempting a task for fear of failure (Bandura, 1977). However, the decision not to attempt a challenge ensures that the student will not succeed, which in turn makes failure a self-fulfilled prophecy.

Additionally, Comings (2007) noted that motivation is often hindered by a negative self-perception of ability among GED students. The mindset or belief that a student cannot succeed in an academic space is often shaped by past failures in academic contexts (Brown et al., 2019). Beder (1990) demonstrated that age plays a role in self-perception as older GED students reported assumptions that their GED peers would be younger and more familiar with academic concepts due to being less removed from formal education. This can be exacerbated by technological deficiencies, both real and perceived. GED students who have been out of school for several years may have to put more effort into their studies, particularly those who lack proficiency in using computers. These students may need to register for computer courses to become more familiar with how the course will be conducted, which is primarily computer-

based. It is crucial to recognize that these modifications require extra time and money to adequately prepare GED candidates for success (Anderson, 2017).

That said, there is empirical evidence that enhanced self-perception among GED students positively influences student persistence and motivation (Wilson, 2016). This research seeks to build upon these findings by exploring how a cognitive learning environment that is both challenging and supportive influences students' self-perception of academic ability. By doing so, the study will offer insight into how educators might cultivate an environment where GED students thrive and reach their full potential.

Andragogy and GED Student Success

Andragogy is "a holistic model that has principles of knowing the needs of the student, developing self-concept, understanding and applying previous experiences to be studied as well as learning readiness, learning orientation, and motivation" (Amiruddin et al., 2023, p.553). Andragogical instruction focuses on the student and approaches the student as a self-directed learner. The approach encourages autonomy, which promotes maturity, self-awareness, and motivation (Amiruddin et al., 2023). Research by Dwivedi (2018) demonstrated that adult learners are more likely to persist in an academic context when the instructor has expertise in andragogy. Kappel (2018) confirms this, finding that an instructor who is well-versed in andragogy can be very effective in promoting self-efficacy, problem-solving, and belonging, which in turn can assist in the persistence and retention of adult learners. This is particularly important for GED programs as the average age of GED students in the U.S. in 2021 was 25 (GED Testing Service, 2021).

Instructors proficient in adult basic education and cognitive learning theory can empathize with the unique requirements of adult learners and enable them to comprehend the

subject matter by emphasizing the importance of understanding the purpose of learning, providing opportunities for hands-on learning, promoting a problem-solving approach to learning, and focusing on topics that have immediate relevance and provide an atmosphere of continued support resulting in student persistence and completion (Amiruddin et al., 2023). To be successful in adult instruction, instructors should be flexible in their teaching approaches, adapting instructional strategies for the learners themselves. For example, Biggers and Luo (2019) found that using guided notes, which are instructor-prepared resources that students can use during the lesson, has been found to facilitate student success rather than a traditional linear teaching approach. Although the linear method of notes taken during instruction may work for some students, it is important to provide other methods such as whole group instruction, presentations, and note-taking documents with space for students to compose responses in their voice and perspective. Such strategies can promote student engagement and appeal to various learning styles to yield better results as opposed to a linear teaching approach (Biggers & Luo, 2020).

Summary

In this chapter, I provided a review of the existing literature offering empirical evidence around dropout decision-making among students. It detailed the external and internal challenges faced by students who ultimately decide to leave school prematurely. I have also used this chapter to provide context around barriers that GED students face when they decide to return to the classroom. The chapter offered a thorough introduction to the two theoretical frameworks that guide this study, challenge and support theory, coupled with cognitive learning theory.

This chapter also explored the significance of GED students' need for belonging in academic contexts, which is particularly important following the academic setback of dropping

out. The research presented also explained how instructional strategies are strengthened by andragogical approaches, which delineate between teaching adult learners and teaching younger students. As highlighted in this chapter, the self-perception of academic ability of GED students is an important predictor for academic motivation and persistence. Yet, only limited work has been done to explore how GED educators can enhance the self-perception of their students. Wilson's (2016) work on this revealed that positive self-perception can increase motivation among GED students. This study seeks to expand upon this idea by offering a practical intervention that can be implemented with GED instructors to cultivate a supportive learning environment. I will use this research to offer evidence of how such an experience may influence the self-perception of academic ability among GED students.

Chapter 3 will offer a description of the study's methodology, including the ways in which data will be collected and analyzed. It will also break down how I will utilize collaborate inquiry partners and the ethical considerations to this work. In Chapter 4, I will share the qualitative findings from conversations with both GED students and the instructor. Finally, I will offer final thoughts, including recommendations for future research and implications for the field of adult basic education in Chapter 5.

CHAPTER 3: METHODS OF INQUIRY

The focus of this inquiry was to explore how training an instructor in both cognitive learning theory and challenge and support theory influences the self-perception of academic ability among GED students enrolled at a rural community college. In interviews with incoming GED students, I sought to understand how they perceived their academic ability before beginning in the program. In interviews, students were invited to reflect on how prior experiences have shaped their decision to return to school and how those past experiences have influenced their academic self-concept. These early conversations also helped to provide context for the instructor on specific academic subjects that proved difficult for our students in the past.

GED students then participated in a curricular intervention grounded in cognitive learning and challenge and support theories, an intervention I observed as the researcher. Following the intervention, I collected data through semi-structured interviews with both students and the instructor. The post-intervention conversations were designed to assess how participating in a cognitive learning environment that balances challenge and support influences students' self-perception of academic ability. The interview with the instructors sought to understand how they conceptualized the value of incorporating cognitive learning and challenge and support theory into their lesson planning and instruction.

This chapter details the study's action research methodology, beginning with an overview of the research questions and the context of the study. I introduce the collaborative inquiry partners and outline the study's three phases, including data collection procedures and the ethical considerations that guide and shape each stage. Finally, I reflect on my role as the scholarly practitioner leading this project, including a description of how my professional experiences inform my approach to this work.

FoP Guiding Question(s)

This study was guided by the following questions:

RQ1. How do GED students conceptualize their academic abilities and the influential elements that play a role in their success *before* enrolling in the GED course?

RQ2: How does participating in a cognitive learning environment that is both supportive and challenging influence how GED students perceive their academic abilities?

RQ3: How does the GED instructor conceptualize the value of incorporating cognitive learning theory and challenge and support theory into lesson planning and instruction?

I addressed the first research question through semi-structured interviews with GED students prior to their participation in the theory-based intervention. The interview protocol was designed to explore prior educational experiences, expectations, motivation for enrolling, and self-perception of academic ability at the start of the course (see Appendix C). GED students were asked how previous school experiences had influenced their self-perception and belief that they can succeed in the academic context.

Likewise, a similar interview protocol was utilized after the intervention to assess how participating in a cognitive learning environment that effectively balances challenges and support influenced the self-perception of academic ability (see Appendix D). The two protocols share a similar structure. The post-intervention protocol emphasizes growth with questions regarding change in self-perception, the influence of the intervention itself, and future academic pursuits. I conducted these semi-structured interviews to address Research Question 2.

Finally, to prepare the GED instructors to lead the intervention, I collaborated with a veteran adult educator who facilitated a professional development series on incorporating cognitive learning theory and challenge and support theory in GED lesson planning and

instruction. In this session, I introduced the GED instructors to theory-based strategies and offered support as they applied them in their lesson planning and subsequent lessons. Those lessons served as the intervention for GED students. Following the lesson, I interviewed the instructor using an interview protocol that explored instructional approaches and philosophies before and after the professional development series (see Appendix E). The protocol also sought to understand how they perceive the intervention's impact on students, as well as on their instruction. I asked the instructors to reflect on the challenges they faced in this process and their recommendations on how to improve the professional development series in the future. This protocol addressed Research Question 3. Additionally, I addressed this third research question through observational notes during the lesson. As the researcher, I observed the instructional space during the intervention. Any notes taken during the observation were shared with the instructor as a form of member checking. The instructor was also invited to provide additional context for my observations.

Inquiry Design and Rationale

This focus of practice employed an action research design, an appropriate methodology given the goal of generating new knowledge within the action space of the GED classroom. This inquiry aimed to provide instructors with the tools to incorporate cognitive learning theory in their lesson plans to create a learning environment that is both challenging and supportive to ensure holistic student success and diploma completion. Many factors contribute to a student's dropping out of school. The combined research of Grover (2013), Frey (2020), Johnson (2023), Brady et al. (2023), Delpit (2006), and Bottiani et al. (2019) illustrate the intricacy of factors that contribute to early departure before completing education such as teacher burnout, low familial support, and overall disengagement with education due to the over-discipline of BIPOC

populations. Such experiences in formal education in the past often result in diminished confidence and academic self-efficacy in GED students (Brown et al., 2019). These internal barriers remain present as students return to school to complete the GED credential and have been linked with a negative attitude toward school (Salusky et al., 2021). However, the challenge with existing research is the deficit lens through which GED students are so often seen. This study seeks to instead focus on what GED programs can do to enhance students' self-perception by centering their role as active players in their learning process. This inquiry focused on how participating in a cognitive learning environment that is both challenging and supportive influences GED students' perception of their academic abilities. It explored how GED instructors can employ theory-based practices to help students successfully navigate through difficulties, realize their potential for success, and thrive in an environment that holistically supports their goals to complete their diploma.

The study evolved in three iterative phases. In the first phase, I conducted interviews with students during orientation to gain a deeper understanding of students' self-perception of their academic ability at the beginning of their GED course. In Phase II, I collaborated with a veteran adult educator who facilitated a professional development session to introduce two GED instructors to cognitive learning theory and challenge and support theory. This training equipped the instructors to incorporate theory-based strategies into their classroom, including collaborative tasks and practical projects during lessons (Merriam & Bierema, 2014). Not only did the series introduce cognitive learning strategies, but it also offered concrete examples of how to cultivate an environment that effectively challenges students while ensuring the necessary support is in place for their success (Sanford,1966). Following this training, the instructors will taught a lesson employing theory-based strategies. I observed the lessons and used observational notes to

describe how the instructor incorporated cognitive learning theory into their lesson plans in a challenging and supportive environment. My notes also offered context on what I observed of student engagement during the lesson. These notes were shared with the instructor afterward as a form of member checking. Their insights were also included in the observational notes for analysis.

In Phase III, I engaged in semi-structured interviews with participating students to understand how students perceive their academic abilities after completing the lesson. This post-intervention interview will investigate change in self-perception. The GED instructors were also interviewed following the intervention with the goal of understanding how they perceived the value of applying cognitive learning and challenge and support theory inside their classroom. The data collected in Phases II and III were analyzed in this final phase.

This action research design offered practical insights for instructors supporting GED students. Action research is invaluable in education as it serves to empower educators to investigate an observed challenge using data and evidence to bring about meaningful changes and effectively close gaps between theory, data, and practice (Hagevik et al., 2012; Hine & Lavery, 2014). The implications of this study highlight how participating in a cognitive learning environment that is both challenging and supportive may influence self-perception of ability and academic self-efficacy, filling an important gap in literature and contributing replicable strategies to the field.

Context of the Study

This focus of practice is positioned in the GED program at a rural community college, CTCC. Community colleges in North Carolina are making efforts to accommodate a significant number of GED students as our community college system is committed to serving GED

students across the state (Long & Mullin, 2014). CTCC is a public two-year commuter institution that serves approximately 17,000 credit and non-credit students annually (CTCC, 2025).

This research will fill the current knowledge gap on how GED classroom practices and theory-based instruction methods, coupled with challenge and support, can foster a community of students who can learn, complete their diplomas, and positively contribute to society. CTCC's mission is to provide access to the transformative power of education in a diverse and dynamic environment (CTCC, n.d.b). The college's vision centers on providing access to excellence and opportunity. The college's values are:

Community – CTCC plays a vital role in regional development by providing educational opportunities to residents of Connections County and surrounding areas.

Success – The institution defines success as multifaceted, preparing students for both personal and professional achievement.

Equity – CTCC acknowledges the barriers students face and is committed to equity-minded policies and practices that promote success for all learners.

Integrity – The college upholds integrity in all operations, fostering a culture of accountability and transparency.

These principles align with the overarching commitment to social justice in the community. The college's values inform my study as the research aims to create a learning environment within the GED program that is student-centered, includes all students, builds community, and holds excellence and integrity in high regard.

Inquiry Partners

To ensure that this study was conducted with rigor and fidelity, I collaborated with four key inquiry partners at CTCC: two instructional leaders, the director of the GED program, and the veteran GED instructor who designed and facilitated the profession development session. Each brought valuable expertise and contextual insight that enhanced the study's design, implementation, and interpretation. Their perspectives served to ground the findings in the lived realities of CTCC, ensuring that outcomes are both meaningful and actionable.

The director oversees the GED program at the college. With a deep understanding of academic support resources and institutional strategies for student engagement, the director provided valuable insight into how CTCC supports GED learners. During Phase I, the data collected illuminated the prior experiences and expectations that GED students bring to the program. The director and I collaboratively explored how this initial data could be used to strengthen existing support systems and facilitate GED students' successful transition through the program and their continued academic progress beyond it.

Additionally, two instructional leaders at CTCC served as critical partners in understanding and improving the learning experience for GED students. Positioned on the frontlines of instruction, they brought firsthand insight into the academic, emotional, and motivational challenges faced by adult learners. Their deep knowledge of andragogy, familiarity with students' diverse life experiences, and ongoing relationships with learners made them uniquely equipped to inform strategies that foster academic self-concept. By engaging instructional leaders in this study, I not only centered practitioner expertise but also reinforced the importance of student-centered, equity-driven approaches within adult education.

A final, crucial inquiry partner in this study was the veteran instructional specialist. With her knowledge of the GED curriculum, student needs, and cognitive learning theory, as well as Sanford's (1962) challenge and support framework, the Instructional Specialist was integral to the study's success. The instructional specialist helped to design the professional development session to equip GED instructors with the skills to implement theory-based strategies in the GED classroom. Her expertise, andragogical approach, and deep understanding of GED students were essential to ensuring the effectiveness of the intervention.

Ethical Considerations

Ethical considerations were a top priority throughout this study to ensure the protection and respect of all participants, as well as to uphold the integrity of the research process. The Institutional Review Boards (IRB) at East Carolina University (ECU) and CTCC reviewed and approved the study before any communication with prospective participants, ensuring compliance with all ethical guidelines and federal regulations. The IRB approval process enhances the protection of participants' rights and welfare, ensuring that the research complies with ethical standards and institutional policies.

Knowledgeable consent guarantees that all participants are thoroughly informed about the study's purpose, scope, and potential risks. Before participating, each student received a comprehensive consent form that explicitly delineated the nature of the research, the specifics of their involvement, and their rights as participants (see Appendix B). The consent form underscored that participation is voluntary and that students could exit the study at any moment without repercussions to their academic status or affiliation with the institution. The consent form assured students that whether or not they chose to participate, their decision would

not affect their eligibility for services within the GED program. To safeguard participant privacy, all identifiable information was maintained in strict confidentiality and anonymity.

Participants' names were be substituted with pseudonyms of their choosing in both the transcripts and the reporting of findings. All data was securely stored in password-protected files, with access restricted to the researcher. Students retained the right to withdraw, which is integral to the informed consent process, and were informed of this right before consenting to participate. Efforts to safeguard participants from harm, including psychological distress, were explained to each participant. Given that the study encompasses interviews regarding personal and educational experiences, certain students did disclose sensitive or emotional narratives. Participants are guaranteed the option to omit any questions they found uncomfortable and to terminate the interview at their discretion. Furthermore, all participants received resources for counseling or academic assistance in the event of distress as a result of the interview.

As a researcher previously affiliated with other GED programs in the state, I recognize that an indirect power dynamic may still exist. Although I do not hold any supervisory or instructional role at the site where this study was conducted, my long-standing professional experience and previous leadership role in GED programming may influence how students perceive my involvement. To reduce any discomfort or hesitation, I reiterated that participation was entirely voluntary, and that choosing not to participate would have no impact on students' program status, services, or educational opportunities. This study was focused on understanding and improving the overall student experience, rather than on evaluating any one individual within the program. All data was collected and analyzed in accordance with ethical research standards as described in the consent phase and as approved by the IRB, ensuring respectful and accurate representation of participant voices.

Inquiry Procedures

To investigate the role of the supportive learning environment in the self-perception of academic ability among GED students at CTCC, I employed a three-phased, qualitative action research method. The action research design was selected for the opportunity to address a challenge within my organizational action space (Watkins et al., 2023). Utilizing multiple cycles of inquiry, action research seeks to identify a challenge, formulate an intervention, execute that intervention, and assess the results to guide meaningful change (Watkins et al., 2023).

In Phase I, I collected data through semi-structured interviews with GED students to understand the self-perceptions of academic ability at the start of the GED program. The interview protocol was designed to explore past educational experiences, self-perceptions, expectations, and motivation for enrolling in the program (see Appendix C). As such, it addressed Research Question 1. In Phase II, I partnered with a veteran adult educator who facilitated a professional development session to equip the two GED instructors with theory-based teaching strategies in alignment with cognitive learning and Sanford's (1962) theory of challenge and support. In this second phase, the GED instructors then implemented the strategies in a lesson with their GED classed. This lesson served as a cognitive learning intervention. As the researcher, I observed the intervention and shared observational notes with the instructors as a form of member checking. These notes were analyzed as part of the response to Research Question 3.

The final phase, Phase III, involved post-intervention interviews with participants to understand their experience within the lesson. While the interview protocol was designed to explore students' experiences in the intervention, the primary focus was understanding the impact on self-perception of academic ability (see Appendix D). As such, the post-interview data

Table 3.

Inquiry Procedures by Phase

Phase	Instrumentation	Research Question Alignment
Phase I - Onboarding & Consent	Semi-structured interviews with participants during the first week of classes (Appendix C)	RQ1: How do GED students conceptualize their academic abilities and the influential elements that play a role in their success *before* enrolling in the GED course?
Phase II - Intervention and Observation	The researcher observes the intervention to collect observational notes. Notes will be shared with the instructors for insight and member checking.	RQ3: How does the GED instructor conceptualize the value of incorporating cognitive learning theory and challenge and support theory into lesson planning and instruction?
Phase III - Data Collection & Analysis	Semi-structured interviews with participants after the intervention (Appendix D) Semi-structured interviews with participants after the intervention (Appendix E)	RQ2: How does participating in a cognitive learning environment that is both supportive and challenging influence how GED students perceive their academic abilities? RQ3: How does the GED instructor conceptualize the value of incorporating cognitive learning theory and challenge and support theory into lesson planning and instruction?

collection addressed Research Question 2. Also, in Phase III, I interviewed the instructors to understand their perception of the intervention's value in supporting GED students. This interview sought to offer the instructors a space to reflect on their teaching approaches and how leading a theory-based intervention influenced how they perceive their role and impacts student engagement and success. The data collected from instructors through interviews in Phase III, combined with the observational notes in Phase II, addressed Research Question 3. The triangulation of data in this way ensured my ability to capture the intricate details and complexities of student and instructor experiences while simultaneously assessing the intervention's impact on self-perception.

Phase I

Phase I took place prior to the professional development session. GED students were invited to participate in the study. As part of the informed consent process, I shared the purpose of the study with prospective participants. The discussion emphasized the voluntary nature of the study to assure participants that the decision to participate or not would in no way affect their standing in the GED program, nor would the decision to leave the study at any point. I explained how data would be collected and the steps I would take to protect their confidentiality. Once participants elected to participate and signed the consent form (see Appendix B), I conducted the pre-intervention interview with each student to collect data related to students' self-perception of academic ability at the initial point of the program and to understand their expectations of and motivations for the GED course.

These were semi-structured interviews using the interview protocol in Appendix C and are designed to address Research Question 1. By evaluating GED student perceptions of ability prior to the intervention, I established baseline data to compare to data collected post-

intervention. This was a crucial step in evaluating the impact of a supportive learning environment that promotes the cognitive development of GED students.

Description of Participants and Recruitment Strategies

GED students were invited to participate in the study through an email sent to students prior to my site visit in October 2025. Once I arrived on site, I conducted an in-person overview of the study, walking prospective students though the study's purpose and the informed consent process. Each of the prospective participants were attending a face-to-face high school equivalency class. Students interested in participating notified the program director of their intention to take part in the study and reviewed and signed the informed consent form.

This course was selected as the setting for this study as it had the highest percentage of attendance throughout the academic year, thus the possibility of providing a clear view of how the strategies involved can be attributed to the change in self-perception. While students can enroll in the GED course as a minor, only GED students who are 18 and older were invited to participate in the study. Once students had given their consent to participate, they were invited to complete the initial interview on site. I encouraged participants to be honest and authentic in answering questions during the interview process and invited students to choose a pseudonym that would be used to protect their identity and maintain confidentiality.

Instrumentation

This qualitative study employed an action research approach, prioritizing meaningful change within an action space (Watkins et al., 2023). In Phase I, I conducted semi-structured interviews with GED student participants using an interview protocol (see Appendix C). Administered at the start of the week, the protocol sought to understand students' past education experiences and how they have shaped their self-perception of academic ability. Questions

explored the motivation that brought GED students back to school and what their expectations for the program looked like at the beginning. By evaluating participants' previous experiences and how they have shaped self-perception during new student orientation, I was able to determine a baseline to compare post-intervention data. Choosing to employ an interview, rather than other qualitative instruments, allowed for a more nuanced understanding of student experiences and perceptions as an interview invited the participant to convey both in their own words (Creswell & Poth, 2018; Merriam & Tisdell, 2015; Seidman, 2019). The interview was conducted only once a participant has consented to be part of the study.

Data Analysis

Once interviews were complete in Phase I, I transcribed them verbatim and conduced a thematic analysis to decipher initial thoughts and perceptions before the intervention itself. Thematic analysis is a qualitative method for identifying and interpreting patterns and themes within the interview data (Saldaña, 2009). This analysis aimed to understand how the integration of a cognitive learning environment that is both supportive and challenging influences GED students' self-perception of academic ability. To do so, I followed a methodical procedure to guarantee rigor and consistency in data analysis.

I reviewed each Phase I interview transcription to identify initial patterns and significant ideas. The initial coding process involved labeling individual sections, words, or statements in the data. After initial codes were assigned, I organized related codes into categories that encapsulated particular facets of students' experiences and perceptions. For instance, codes about support structures were categorized under a theme like "student support services," whereas codes indicative of personal challenges were coded under a theme of "barriers to success." These broader categories were synthesized into overarching themes. I analyzed how these themes

addressed Research Question 1 and represented self-perceptions of academic ability before GED students participate in the intervention.

To guarantee the validity and reliability of the analysis, I implemented strategies such as member checking to present the initial results or interpretations to participants for confirmation that the themes accurately represent their experiences and perceptions. I also debriefed with inquiry partners following the interviews to discuss my analysis process and thematic findings. This step was crucial as collaborating with inquiry partners strengthens the trustworthiness of the analysis and helps mitigate researcher bias. This rigorous methodology for data analysis ensured that the results were rooted in the participants' experiences and would yield significant insights for enhancing the GED program at CTCC.

Summary of Phase I

The information gathered in Phase I established a baseline from which to compare data collected in Phases II and III to assess the intervention's impact on self-perception. Once a GED student consented to participate in the study, I conducted the initial interview using the protocol presented in Appendix C. Thematic analysis of the interview transcriptions shed light on how students conceptualized their ability to excel in the GED program as they returned to education following a prior academic setback. Overarching themes were shared with the participants directly as a form of member checking.

The thematic analysis also provided context and insight that enhanced the professional development session for GED instructors and subsequent intervention. This is an important step in action research methodology, which uses a cyclical design to adapt to the evolving needs of the context (Watkins et al., 2023). This first phase was designed to inform the overall study inquiry by creating a foundation for the instructors to build a cognitive learning environment that

is both challenging and supportive regardless of past and current barriers the student has experienced. Phase II then built upon its foundation with the facilitated professional development to create a cognitive learning environment that is both challenging and supportive.

Phase II

During Phase II, the GED instructors participated in a professional development series facilitated by a veteran adult educator. The series introduced cognitive learning theory coupled with a challenging and supportive learning environment. Professional development included theories created by Jean Piaget and Liv Vygotsky which posit that a dynamic learning environment for adults can be established by providing diverse hands-on, real-world tasks (Piaget, 2008; Turner, 1973) and incorporating collaborative learning experiences that enable learners to collectively address problems, exchange ideas, and gain insights from each other (Vygotsky, 1978). This fosters a learning environment where adults actively engage in their education while receiving support through social interactions with peers and instructors. As an experienced educator, the facilitator offered methods to incorporate cognitive learning theory into lesson plans to create a challenging and supportive environment that would holistically support student success.

This professional development aimed to prepare the GED instructor to create a cognitive learning environment that is both challenging and supportive. It also offered insights gleaned from Phase I regarding overarching themes around student expectations and past academic experiences. Following professional development, the instructors created lesson plans that infused the subject matter content with cognitive learning theory and challenge and support. When those lesson plans were implemented in the GED classroom, I observed the instructor's demonstration of cognitive learning theory and challenge and support and took detailed

observational notes. The notes were shared with the instructors, who were invited to offer their observations. The addition of the instructor's observations enhanced the credibility and depth of the data collected, as well as served a form of data triangulation to mitigate researcher bias.

Inquiry Approach/Intervention

This intervention was grounded in Sanford's (1962) theory of challenge and support. The instructors present progressively complex challenges and provided support to students through process modeling, detailed instructions, and formative feedback. The class then utilized journaling or group discussions to contemplate the tactics utilized in their problem-solving schema.

As the researcher, my observations of the intervention focused on student attendance and engagement with the course content and instructor. I took detailed notes regarding the interactions between GED students in small groups and the classroom at large. Observations were collected through audio recordings and field notes. The purpose of the observation was to capture the real-time dynamics of the learning environment, including learner interactions with challenging tasks and support mechanisms. The nature of those support mechanisms included instructor feedback, peer collaboration, or instructional scaffolding. Following the lesson, I shared my observational notes with the instructors and invited them to contribute their own observations. Including multiple perspectives is an important step toward enhancing reliability and credibility and mitigating researcher bias. Furthermore, the observations of the instructor enriched the dataset by offering breadth and depth to my observations.

Summary of Phase II

Built from the foundations of Phase I, Phase II included the professional development session and intervention. The professional development prepared the instructor to engage in

effective teaching strategies connecting cognitive learning theory and challenge and support inside the GED classroom. After participating in the sessions, the instructors showcased their ability to create lesson plans to implement theory-based strategies into their instruction. The implementation of those strategies served as the study's intervention.

As the researcher, I partnered with a veteran adult educator to support professional development training and observed the instructor's implementation with students. Through audio recordings and field notes, I documented the behaviors and engagement of students. Those observational notes were shared with the instructors, who were invited to contribute their observations and encouraged to clarify any details from my notes. The observational notes were analyzed in Phase III and addressed, in part, Research Question 3.

Phase III

During Phase III, I collected the final data through semi-structured interviews with GED students and instructors. Having established a baseline in Phase I, the interviews with students in Phase III offered insight into how the intervention influenced self-perception of academic ability. The comparison of post-intervention qualitative data to the initial interview thematic analysis addressed Research Question 2. The interview with the instructor explored how they experienced theory-based lesson planning and instruction. This data highlighted how the instructor conceptualized the value of the professional development session and its application in their instruction. The thematic insights gleaned from instructor interviews, along with observational notes in Phase II, addressed Research Question 3.

It is in Phase III where I completed the data analysis. Using a similar approach to Phase I, I transcribed interviews verbatim and engage in a thematic coding process to uncover larger themes around the intervention's influence on self-perception. This phase of the study was

informed by an action research strategy that used storytelling to better understand cognitive processes (Watkins et al., 2023). Narratives captured in interviews conveyed the experiences of GED students and the evolution of how they perceived their ability to succeed in academic spaces. These narratives were shared with individual participants as a form of member checking to ensure that I had accurately captured their perceptions and experience in the GED course.

The qualitative approach was designed to transcend mere data gathering and processing and instead sought to capture the nuances of participant experiences, the institutions in which they enroll, and their expectations for the future (Creswell & Poth, 2018). This action research methodology also emphasizes social justice, empowerment, and improvement of participants' experiences (Creswell & Poth, 2018; (Watkins et al., 2023). While the results may not produce immediate or dramatic changes in the lives of the participants, this study sought to empower students by engaging them as active agents in their learning. In doing so, the study aimed to enhance their academic self-perception. Furthermore, the study aspires to contribute meaningful institutional change by reinforcing its commitment of service to the students.

Analysis of Approach

The focus of this inquiry was to explore how training an instructor in both cognitive learning theory and challenge and support theory influences the self-perception of academic ability among GED students enrolled at a rural community college. Prior academic setbacks, such as the decision to leave school prematurely, may diminish the academic self-efficacy of GED students (Brown et al., 2019; Comings, 2007). Yet, Wilson (2016) provided evidence that when self-perception is enhanced, GED students are more likely to persist to credential completion. This study expands upon that finding by investigating whether the infusion of

cognitive learning and challenge and support theory-based strategies influences the perception of academic ability among GED students.

The study uses an action research methodology to chart self-perception from the beginning to the GED course through the theory-based intervention. Qualitative data was captured through pre-intervention interviews with incoming GED students and post-intervention interviews to track any change in self-perception as a result of participating in the lesson. The analysis focused on identifying themes within the data related to students' perceptions, challenges, and overall expectations. This approach categorized and made sense of large amounts of qualitative data that aim to bridge the knowledge gap by offering practical strategies for the integration of a cognitive learning environment that is both supportive and challenging. By collecting data before and following the intervention, I tracked the actual or perceived change in how students perceived their ability to succeed in academic spaces.

Moreover, as this study was concerned with offering practical strategies to the field of adult education, I collected qualitative observational data of the intervention through field notes and audio recordings. Observations were shared with the instructors, who were encouraged to offer their observations and clarify any details from my notes. I also solicited the instructor's perspective through semi-structured interviews. Engaging the instructor as an active participant in the study offered insight into the value of the intervention and implementing cognitive learning and challenge and support theory-based strategies in a GED course.

Summary of Phase III

Phase III completed data collection and analysis in the study. I conducted post-intervention interviews with students and the instructor to address Research Questions 2 and 3. The post-interviews with students were compared to the themes synthesized in Phase I to

compare changes in self-perception over time. The post-interviews with the instructor, in conjunction with the analysis of observational field notes, offered insight into the value of the intervention and its applicability to the broader field of adult basic education.

I complete all analyses in this study. However, a study completed in isolation cannot be considered reliable. As such, I engaged inquiry partners in each phase. In Phase I, inquiry partners were kept abreast of progress and early thematic analysis. As Phase I served as the foundation of the study, larger themes that emerge from pre-intervention interviews with students were communicated to inquiry partners who could offer contextual insights into how institutional policies may serve to enhance academic self-perception or reinforce negative perceptions. This was especially important for adapting the professional development series implemented in Phase II.

My collaborative inquiry team and I met throughout Phase III to discuss the study, my analysis procedures, and the overarching themes as they emerged. Additionally, the stories captured belong to the students themselves. In recognition of that, I composed narratives that convey the experiences I interpreted them. Each narrative was shared directly with the individual student to ensure that I had accurately captured their story.

Inquiry Design Rigor

To mitigate researcher bias and enhance reliability, with the student's consent, I recorded both the initial and final interviews. I did the same with the instructors. Throughout the data collection process, I maintained a journal of follow-up questions and reflections. Keeping a journal allowed me to document my thoughts without disrupting the interview process. This phase of the study was informed by an action research strategy that used storytelling as a means of understanding cognitive processes. This was an important step, as action research invites the

retelling of stories without significant interruption (Lewis, 2017; (Watkins et al., 2023). The student's narrative could be limited by chronological sequencing and potential distortion in storytelling, as participants often recall lived experiences non-sequentially and may combine details from similar scenarios in their lives (Clandinin & Connelly, 2004; Riessman, 2007). To ensure credibility, participants examined transcripts of their interviews and were encouraged to clarify meaning or intent that was not made clear during the initial interview. This was true for students as well as the instructors. However, the instructors also had the opportunity to review the observational notes from the intervention and were invited to offer their perspectives and clarify my observations as a form of member checking and to strengthen the internal validity of the findings.

Research concentrated on specific student populations or groups generally encounters the limitation of social desirability bias, which influences how individuals respond to questions. The unconscious desire to please and answer questions correctly may alter how students answer questions during the interviews (Krumpal, 2013; Patton, 2015; Podsakoff et al., 2003). My educational background served as an advantage to research as I was able to meet with each participant individually, disseminate the protocol beforehand, and enable each student to feel comfortable in expressing their lived experiences without reproach or feelings of inadequacy. However, I also recognize the indirect power dynamic at play in the interview process because of my previous leadership in GED programs and partnership with the CTCC program staff (Creswell & Creswell, 2018). This may produce constraints regarding narrative distortions and authenticity. As such, I worked to establish trust by reassuring participants that the study is confidential and that no identifiable information would be shared as part of this research. In this conversation, I reiterated that stories shared as part of the research would be shared using the

pseudonym chosen by the participant, thus engaging them in the process of safeguarding confidentiality. I also sought to build rapport by communicating that no two students would share the same background and that, because of this, there were no right or wrong answers to the questions. I also reiterated in both the informed consent process and before both interviews that the goal of this work was to improve the GED program in support of GED students.

Furthermore, while I did not disrupt the interview process in order to capture authentic narratives, I did share the transcription of the interview and any follow-up questions captured in my journal directly with the student and instructors and invite their feedback and clarification. This step was taken to enhance the analysis of qualitative data within the defined timeframes to ensure validity and meaning (Lewis, 2017). The triangulation and member checking steps presented herein were designed to enhance the rigor and reliability of the study and to ensure that it could meaningfully contribute to improvements and the field of adult education at large.

Delimitations, Limitations, and Assumptions

Delimitations

This study will be conducted at CTCC, a rural community college situated in eastern North Carolina. It concentrated on a particular cohort of students enrolled in the GED program. The study involved a limited number of students who self-selected to participate and who chose their own pseudonyms. Due to the voluntary and self-selected nature of recruitment, the study involved only a small, non-random sample of GED students, thus inherently constraining the scope of the findings. The study does not pursue statistical generalizability because of the limited, localized sample and the single-site context. Instead, the findings are analytically generalized. While this means that the particular findings may not be universally applicable to all GED programs across the country, the insights and trends identified may be relevant to other

community colleges with comparable demographics and student populations. Employing analytic generalizability facilitates wider implications, especially regarding community colleges catering to non-traditional students pursuing a high school equivalency diploma.

The study concentrated on students' personal and academic experiences and self-perceptions, omitting other variables such as faculty perspectives, institutional policies, or external factors that may also affect student success in GED programs. Although these factors are significant, they were beyond the purview of the present study. This study focused instead on the experiences of GED students in this specific context, offering a comprehensive understanding of how a theory-based intervention in the GED course influences students' self-perception of academic ability. While the intervention has the potential to impact program outcomes, including persistence and credential completion, the study did not focus on them. The singular focus on self-perception of academic ability is an important step for enhancing GED programs and, as such, may catalyze future research. These delimitations were essential for sustaining a concentrated and feasible research scope while also establishing the parameters for interpreting and applying the findings.

Limitations

Like all research endeavors, no matter how well designed, this study has limitations. Challenges related to attendance and behavior are ongoing concerns in the GED and ABE programs at CTCC. The potential for inconsistent attendance to disrupt a student's ability to participate in study is a significant limitation. To address this, I clearly explained the goal of the project and conveyed to each participant that consistent participation is necessary for future improvements in the program.

Beyond general absences, students may not have felt comfortable completing the second phase of the inquiry as they may feel that their responses are an evaluation of the GED instructor and consequently choose not to divulge all information. This could occur out of the desire to elevate an instructor they feel connected to, or it may be the result of intimidation and the fear of retribution if post-intervention responses are negative. I took important steps to mitigate these limitations through a commitment to transparency in each phase. Before any interview with participants, I assured them that the goal of the study was not to evaluate the instructor but instead to explore how we could improve the program to holistically support GED students. also reiterated that confidentiality was paramount to the study and explained in detail the steps presented herein to protect their identities in all reporting.

A related limitation is the intimidating nature of participating in one-on-one interviews with a former director of another GED program and leader in the field of ABE, whether the source of any discomfort is real or assumed. This power dynamic could result in a condition where students chose to be untruthful or shut down because they divulged a traumatic moment(s) of their lives. To address this, I stated clearly at each stage of the project that its purpose is to improve the program and reiterated the importance of safeguarding confidentiality. I also enlisted the assistance of counselors from the college counseling center, who were accessible on the day of the interviews. This step was important given the potential for sensitive story sharing. As the researcher, it is my responsibility to minimize harm, therefore, I ensured that support was in place should a participant experience discomfort or emotional distress during the interview. Finally, I chose a comfortable, quiet space to hold the interviews. Each of these steps was taken in recognition of the limitations inherent in this study and sought to mitigate them to minimize harm to participants while ensuring the credibility of data collected for interpretation.

Assumptions

An essential assumption is that all students engaged in the one-on-one interviews were honest and forthcoming in disclosing their personal and academic experiences. However, given the power dynamic at play, I recognize the threat of social desirability bias. To avoid coercive pressure, real or perceived, I ensured transparency during the research process by communicating efforts to protect confidentiality and reiterated that choosing to participate or not participate in the study would in no way impact their eligibility for the GED program or services. I also made clear that participants could choose to withdraw from the study at any time and that no justification would be required.

To address any pressure felt by the instructor, I communicated the purpose of the study and the three research questions that guided it. This discussion took place before the study began and served to assure the instructors that this research was not meant to evaluate their instruction, but rather to implement theory-based strategies and to investigate how those strategies influence students' academic self-concept. In particular, I emphasized Research Question 3, which sought to understand the value of the intervention from the instructor's perspective. By emphasizing this and by communicating clearly how the instructor would be invited to review, contribute, and clarify observational notes, I hoped to engage the instructors as active partners in the study.

The assumption that all participants were honest in the interviews was necessary to conduct the study, but I hope that by reiterating how students' confidentiality will be protected and by engaging the instructors as active partners in the research, I was able to create a space where all participants felt comfortable to share their experiences candidly.

Role of the Scholarly Practitioner

I have been in the field of education for 25 years and have served in a higher education leadership capacity for 15 years. My work has been centered on first-year, first-generation BIPOC and historically underrepresented groups of students. As a scholarly practitioner, I see my role as connecting theoretical frameworks with practical applications in educational contexts. My experience working directly with GED students provides an applied perspective on the research. This enables me to analyze current literature and theories through a critical lens while ensuring that the results of my study possess practical significance. I am not merely a researcher observing from afar. I am actively involved in the educational setting, enabling me to discern issues and suggest solutions for direct implementation. Alongside my research endeavors, I assume the position of a reflective practitioner. I consistently reflect on my instructors' teaching methods, student interactions, and the obstacles they encounter in completing the GED program. This reflective process shapes my research design, as I recognize the potential biases and assumptions stemming from my direct interactions with students.

My continuous reflection enables me to modify the study as it advances, ensuring its relevance to both my professional practice and the students' needs. I perceive my role as an advocate for the students with whom I collaborate. This research serves not merely as an academic inquiry but as a means to enhance the comprehension of GED students and their lived experiences in the program, potentially resulting in the refinement of teaching methodologies. I intend to utilize my research findings to enhance instructional strategies, thereby fostering a more supportive learning environment for students. The commitment to providing actionable insight is foundational to my role as a practitioner-scholar, as I strive to implement positive changes within the institution informed by empirical evidence.

Furthermore, my positionality influences my approach to the design and execution of this study. I am well-versed in the GED program's particular challenges, which enables me to customize the research methodology to accurately capture the complexities of the study's context. I chose a qualitative methodology to gain profound insights into students' lived experiences, acknowledging the intricacy of their narratives and the significance of their unique stories. I consider my research to be an integral aspect of my ongoing professional development. This study sought to advance the field of adult education while simultaneously fostering my growth as an educator and researcher. The insights acquired from this investigation have enhanced my current pedagogical methods, enabling me to improve my engagement with non-traditional students.

By intersecting my professional expertise in adult education and direct experiences in the GED program with existing literature, I intended to produce results that are both theoretically relevant and practically useful. My participation ensures that the study's results will directly benefit the students and the institution, improving the educational environment and support systems. Moreover, undertaking this research enhanced my development as a more reflective, evidence-based educator, armed with resources to make meaningful changes in the field.

Summary

This study aimed to explore how training an instructor in both cognitive learning theory and challenge and support theory influences the self-perception of academic ability among GED students enrolled at a rural community college. To achieve this, I employed a three-phase action research methodology, utilizing qualitative data to convey the story of GED students' self-perception as they enrolled and engaged in a cognitive learning environment that was both challenging and supportive. In Phase I, GED students were introduced to the study and invited to

participate in the informed consent process. It is in this first phase that initial interviews were conducted to understand self-perception before the intervention.

In Phase II, the GED instructors were trained to incorporate cognitive learning and challenge and support theory in their lesson planning and instruction. Afterward, they led a lesson grounded in both theories and observed by the researcher. Phase III included post-intervention interviews with students to assess change in self-perception and with instructors to assess the value of utilizing the theory-based strategies.

This chapter introduced the three phases of the study, as well as offered a deeper look at the study's delimitations, limitations, and assumptions. I have also presented a discussion of the instruments used and steps taken to mitigate the study's limitations and enhance its rigor. **Chapter 4** will dive deeper into the results, beginning with a discussion of the participants and weaving through data collection and analysis procedures. The findings of the study, presented first in Chapter 4, will be further interpreted in Chapter 5. These final interpretations will shed light on how the results support and expand existing frameworks or contribute new knowledge to the field. I will also use Chapter 5 to offer implications for practice and recommendations for future research

CHAPTER 4: QUALITATIVE RESULTS

The focus of this inquiry was to explore how training an instructor in both cognitive learning theory and challenge and support theory influences the self-perception of academic ability among GED students enrolled at a rural community college. As established in Chapter 1, the students enrolled in the GED program at CTCC are not completing their credential in a vacuum. They do not step into the classroom five days each week with the luxury of focusing solely on academic content. GED students, not unlike the other students who walk among them at CTCC in other degree programs, are juggling academic work with competing priorities and external responsibilities. However, what is different about the GED students who arrive on the campus each day is that they bring with them the psychological burden of previous negative experiences in academic spaces that often manifest into self-doubt and fear (Brown et al., 2019). Although the journey to the GED classroom varies for each student, the premature exit from a traditional high school frequently results in GED learners being viewed as academically vulnerable.

Chapter 2 detailed the complexity of factors that contribute to early departure from school such as teacher burnout (Bottiani et al., 2019; Brady et al., 2023), low familial support (Garrett-Peters et al., 2019), accessibility of GED programs (Grover, 2013), diminished academic self-efficacy (Frey, 2020), and overall disengagement with education due to the over-discipline of BIPOC populations (Blake et al., 2020; Delpit, 2006). It also detailed the extensive research on the persistence of GED students (Johnson, 2023; Lewis, 2009; McCaskill-Mitchell, 2009), the barriers they face (Hansen et al., 2019; Nguyen, 2018; Phillips, 2023), and their future educational pursuits (Smith & Locke, 1999). And yet, to date, there have been no studies that focus on how the learning environment influences the self-perception of GED students.

Moreover, there were only limited studies that provided GED instructors with practical strategies for enhancing students' academic self-concept. This study sought to close that gap by training GED instructors in two intersecting educational theories, cognitive learning and challenge and support, to understand how this investment into the instructor shapes the self-perception and experiences of GED students.

In October of 2025, following approval from the IRB, I traveled to CTCC to implement the intervention and collect data from student and instructor participants. While there, I partnered with a veteran adult educator to deliver professional development for two GED instructors, introducing cognitive learning theory and challenge and support theory and their application within the GED classroom. Over the course of one full week, I met with GED students who consented to participate in the study for semi-structured interviews both prior to and after the intervention to understand the impact of receiving instruction grounded in cognitive learning and challenge support. Cognitive learning theory champions learners as active participants in the learning process (Bjork et al., 1974; Turner, 1973; Vygotsky, 1978). By preparing instructors to consider how their students process new information, CTCC can cultivate an academic environment that empowers GED students. Furthermore, Sanford's (1962, 1966) theory of challenge and support posits that by constructing an educational space that appropriately challenges learners while providing necessary support, educators can foster the development of their students. The action research approach to this study leverages qualitative data to understand how the intersection of these theories within instructor training impacts the self-perception of GED students working toward credential completion (Watkins et al., 2023).

Alongside gathering data on the student experience, I conducted semi-structured interviews with each instructor after they completed the facilitated training and integrated both

theories into their classrooms, in order to better understand the instructor perspective. In this chapter, I offer insights into the data collection procedures, the analysis process, and qualitative findings as they address each of the three guiding research questions. In the final chapter, I will expand upon results to offer implications for practice, recommendations for future research, and a reflection of my own leadership growth as a result of conducting this study.

Site Change

This study was originally designed for implementation at an institution other than CTCC, one that was similar in size and student demographics but faced a distinct set of instructional challenges. At the initial site, the GED program operated primarily within a traditional pedagogical framework, emphasizing instructor-centered delivery of content. This approach stood in contrast to the needs of GED learners, many of whom had previously disengaged from formal education and would benefit more from an andragogical model that centers adult learning principles, lived experience, and holistic student development. Consequently, the study was conceptualized as a theory-informed intervention aimed at preparing instructors to shift their instructional practices. Specifically, the design focused on professional development grounded in cognitive learning theory and challenge and support frameworks, with the goal of fostering more inclusive, student-centered learning environments that recognize and affirm the whole learner. However, within days of receiving approval to implement the study, the original research site became unavailable, necessitating an immediate transition to a new institutional partner. CTCC agreed to serve as the study site and demonstrated a strong commitment to both the research process and the students they serve. While this transition allowed the study to proceed, it also introduced a significant contextual shift. Unlike the original site, instructors at CTCC were already deeply engaged in andragogical practice. Their teaching philosophies and classroom

environments reflected a clear emphasis on student-centered learning, relationship-building, and holistic support. As a result, the study did not function as an intervention designed to shift instructional practice, as originally intended. Instead, it illuminated and affirmed a program in which these principles were already embedded.

This shift in context has important implications for the interpretation of findings. Rather than demonstrating the effects of introducing theory-based instructional frameworks, the study highlights the outcomes of a program already aligned with those frameworks in practice. At the original site, students were described as struggling to adjust to the GED program, in part due to a lack of holistic and responsive support. In contrast, CTCC faculty had intentionally cultivated learning environments where students could thrive, suggesting that the integration of andragogical principles was already contributing to positive student experiences. Within this context, the third research question emerged as particularly significant. While the study did not result in a transformation of instructional approach, it provided instructors with a shared language to articulate their existing practices and, importantly, offered affirmation of the work they were already doing. This affirmation functioned as a meaningful outcome in itself, reinforcing instructional identity and validating pedagogical choices.

A second consequence of the abrupt site transition was its impact on the study's timeline. The need to pivot quickly resulted in a condensed implementation period of approximately one week. This compression limited the ability to clearly distinguish between phases of the study and reduced opportunities for iterative learning across those phases. As discussed later in this chapter, future research would benefit from replicating this study over a longer duration, allowing insights from earlier phases to more fully inform subsequent stages of implementation and analysis.

Taken together, these contextual factors, the shift in institutional setting and the abbreviated timeline, are essential to understanding the scope and meaning of the study's findings. They shape not only what the study was able to examine, but also how those findings should be interpreted. The discussion that follows is grounded in this context and should be read with these considerations in mind.

Participant Descriptions

Ten adult learners were selected from the GED program at CTCC. To ensure the confidentiality of the study, each participant was assigned a pseudonym. The group was composed of five females and five males, all of whom were 18 years of age or older. Minors were excluded from the study, and the consent form did not collect age information. At the time of the study, all participants were enrolled in two GED preparation courses. These courses consisted of a face-to-face class that met on either Mondays and Wednesdays from 9:00 a.m. to 1:00 p.m. or a face-to-face class that met on Mondays through Thursdays from 9:00 a.m. to 12:00 p.m. For the students who consented to participate, length of enrollment in the GED program ranged from at least one month to nearly two years. Participants selected their own pseudonym to allow for a depiction of distinct experiences while guaranteeing their anonymity. Chosen pseudonyms include Nate, Cindy, Peter, Jackie, Show, Becky, Nancy, Sarah, Booker, and Plum. The two instructors who participated in the study have also been assigned pseudonyms: Mr. Lock and Ms. Doors.

Nate: Young man who came to the GED program after leaving school in the 6th grade. He was out of traditional school for a while and needed to return. He hopes to become a real estate agent or a mortgage broker. He may even obtain a college degree after walking across the stage with his GED. However, first on the list is his driver's license.

Cindy: A young mother of an infant who came to the GED program because traditional school "just wasn't for me." She plans to get her CNA, Associates of Science, Bachelor of Nursing, and master's degree in nursing after obtaining her GED. She sees no limits.

Peter: A young man who had a very tough time in traditional school with bullying, and therefore, he acted out. Because of so many challenges he left thinking he would not return. He enrolled in the GED program to earn his GED because he wants to either go to a university in the Deep South or go into the Army.

Jackie: A middle-aged mother of three children, one of whom is deceased. After going to English as a second language classes and becoming proficient in English, she enrolled in the GED program to obtain the credential and matriculated directly into college. She is also in the program because she made a promise to her deceased child that she would go back to school, and she kept her promise.

Show: A young man who had a lot of support in traditional school but was not surrounded by the right people to help him stay motivated. He came to the GED program because his little brother came, so he thought "Why not me?" He plans to become a computer software engineer.

Becky: A middle-aged woman who dealt with horrific bullying while in traditional school. She did not feel liked or wanted. She came to the GED program to complete her certification so she can obtain her CNA license 1 & 2. She loves working with the elderly.

Nancy: A middle -aged woman who came to the GED program to make a better life for her and her children. Nancy is motivated by her children's support and the encouragement of all her classmates and especially her instructor, whom she is grateful for.

Sarah: A middle-aged woman who came to the GED program to create a better life for herself, her children, and her grandchildren. She has faced the death of two grandchildren and has named her catering business after them. She plans to earn her culinary arts certificate after she obtains her GED.

Booker: A young man who dealt with several types of bullying while in traditional school. Booker never saw himself returning to school. Thankfully, his mother signed him up for the program, and he has been going strong. After he gets his GED, he plans to get a certificate in a pathway program at CTCC.

Plum: A retired armed security guard, near 60 years old. He never told his three adult sons or his wife that he had not received his high school diploma. When he finally told his wife, she promised to throw him the biggest party once he graduates. That will be perfect, as Plum's three sons still do not know he does not have his diploma. He always says the young folks "fuel" him. Plum came to the GED program to obtain his diploma and go straight to a cyber- security class and learn how to run his own cybersecurity firm.

Mr. Lock: A current GED instructor with a kinesiology background. He happened upon this work more than seven years ago because he wanted to serve the population at CTCC through a meaningful capacity. His classroom is open and invites students to try even if they feel they are going to get it wrong. He breaks things down to a granular level not to demean his students, but to show them how valuable their prior knowledge is to their future learning. He is the type of instructor that brings apples for his students to celebrate them, not the other way around, which is a great change of pace.

Ms. Doors: A current GED instructor with over 25 years of K-12 experience. She began working with the GED program at CTCC after she retired from the school system and found her itch for teaching needing to be scratched. Her classroom is warm, inviting and very colorful. She is an encourager of her students, allowing space for curiosity, conversations, and sometimes failure. Should one of her students fail a test, Ms. Doors allows for a small pity party and then she and the rest of the class encourage that student to get back on the saddle. She is the go-to person for her students and the true heart of her classroom and their experience.

Data Collection

This study employed an action research method to understand how training instructors in both cognitive learning theory and challenge and support theory could influence the self-perception of GED students enrolled at a rural-serving community college. Data was collected from pre-/ and post-interviews interviews with students, interviews with the two GED instructors, and my own observation of the GED classroom. As the researcher, I partnered with a veteran adult educator to support a professional development session for instructor participants, which was facilitated by the veteran educator, and I observed instructors' implementation of the strategies within the GED classroom. The semi-structured interviews with the instructors occurred after each had taught the observed lesson to allow them the opportunity to share their experience and express their understanding of how cognitive learning along with challenge and support theories influenced their instruction, as well as student participation.

Timeline of the Study

The study was initially intended to be conducted over a three-month period; however, unforeseen circumstances beyond the researcher's control necessitated a modification to the original timeline. In order to guarantee timely access to all participants and to facilitate the

professional development session for the two instructors involved, CTCC requested a revised schedule that provided only five days to complete the study. I submitted an addendum to the IRB documenting this change in timeline and received approval before moving forward.

On Sunday, October 5, 2025, I traveled to Connections, NC from Greensboro, NC to conduct the study. The following day, Monday, October 6, I arrived on the CTCC campus to greet prospective participants and to offer context on the purpose of the study and the data collection procedures. Prospective students were told that the study would take place throughout the week of October 6 and assured that the decision to participate or not participate would in no way affect their standing in the GED program and that, at any point in the study, they may choose to terminate participation without consequence nor a need to provide rationale for that decision. Students were assured that protecting the confidentiality of participants was tantamount to this work. I explained the steps that would be taken to protect the identity of any student who consented to participate, including the use of pseudonyms for participants and the institution. I began the site visit Monday by conducting pre-interviews with GED student participants. That same day, the instructional specialist facilitated a professional development session to prepare two GED instructors to deliver a theory-based lesson. Tuesday and Wednesday involved classroom observations as I observed the instructors implementing the lesson. I concluded the site visit Thursday by conducting post-interviews with the GED students and individual interviews with both instructors. It was an immersive experience. I conducted the study for approximately five hours each day for four days. Data collection was completed on Thursday, October 9, 2025 (see Table 4 for full study schedule).

Table 4.

Full Schedule of Research Study

Weekday	Time	Details
Monday, 10/6	8:00 AM	Arrive and set up area for interviews
	9:00 AM	Introduction of researcher and the study to students and staff. Students invited to participate; consent forms signed.
	9:30 AM – 11:30 AM	Pre-interviews with student participants
	11:30 AM	Researcher set up room for professional development
	12:00 PM – 1:00 PM	The veteran educator facilitated the professional development session for GED instructors and provided theory-based lesson plans.
Tuesday, 10/7	8:00 AM	Researcher arrived and sets up interview space
	9:00 AM - 1:00 PM	Researcher observed theory-based lessons (Classroom 1). Participating students invited to complete the post-interview following the lesson
Wednesday, 10/8	8:00 AM	Researcher arrives and set up interview space
	9:00 AM - 1:00 PM	Researcher observed theory-based lessons (Classroom 2). Participating students invited to complete the post-interview following the lesson
Thursday, 10/9	8:00 AM	Researcher arrived and set up interview space
	9:00 AM – 12:00 PM	Post-interviews with students completed following lesson
	12:00 PM – 1:00 PM	Instructor interviews completed

Note. This agenda was contingent upon class flow and student availability

Professional Development

The professional development session lasted for approximately 50 minutes and included a significant amount of interaction with the GED instructional specialist and the instructors. As training began the instructional specialist introduced herself to the instructors and explained the definition of cognitive learning and challenge and support theory and how it related to adult education. She then moved to explain the details of each theory and used visual aids and media examples to assist the instructors in understanding the content. The instructors were engaged, had visual contact and interacted with the instructional specialist throughout the session. At the conclusion of the lesson the instructors were given a shell to create a lesson plan encompassing cognitive learning and challenge and support theory that included the required subject areas of English and Reading for teaching GED/Adult learners.

The instructors Mr. Lock and Ms. Doors, then created lesson plans from the shell provided. I observed the lessons of each class being taught. During the lessons, each instructor used discussion-based learning, real-world examples, and reflection activities, and the students were encouraged to think critically, connect prior knowledge, and engage in problem-solving. The instructors provided supportive prompts while introducing challenging topics (e.g., racism, fairness, freedom). Mr. Lock's Think-Pair-Share activity encouraged students to recall personal experiences as he linked historical events (Jim Crow laws, Greensboro Four) to modern issues (e.g., Buffalo shooting) ,helping students construct new understanding. Metacognition was used when asking questions of reflection ("Why is reflection important?"), which promoted awareness of their thinking processes. During the lessons, students were asked to tackle complex social issues and compare historical and current contexts as well as seeing a refreshing scene turn into a very complicated life lesson.

Table 5.

Theory-Based Professional Development Agenda

Topic	Notes/Guiding Question
Introduction	What is Cognitive Learning & Challenge and Support Theory in Adult Education?
Cognitive Learning Theory	Activate prior knowledge, make connections, spaced repetition and interweaving.
Challenge and Support Theory	Identify learning objective, design challenge, integrate support and differentiate.
Visual Aids	Associated Aids that students can touch, media that requires interaction.
Lesson Plans	Instructors create lesson plans from a lesson plan shell provided based on cognitive learning and challenge and support theory.

Each instructor provided structured questions, historical examples, and a safe environment for discussion where their students felt comfortable sharing opinions and demonstrated growth-oriented thinking ("We need challenges to grow") and the different reasons we use flowers in our country. The instructors appeared to value the theories as tools for deep learning, critical thinking, and personal growth, and their lesson designs suggest a belief that learning happens through reflection and real-world connections, not just rote memorization, vocabulary, and testing. Each instructor incorporated cognitive learning and challenge-support principles to foster engagement, resilience, and higher-order thinking, which are key skills for adult learners preparing for the GED.

Qualitative Data Collection

The data collection for this study transpired over three phases. In Phase I, I conducted semi-structured pre-interviews with students and supported the facilitated professional development session for instructors. In Phase II, I observed the theory-based intervention within both GED classrooms and shared observational notes with the instructors as a form of member-checking. In the final phase, I conducted the post-interviews with students after professional development and lesson plans were introduced, as well as interviews with individual instructors.

During the pre-interviews with GED students investigated their previous learning experiences and perceptions regarding the GED program. The semi-structured interviews yielded essential insights into the student experience that helped shape the professional development session. Phase I concluded with the professional development session with both GED instructors. The session concentrated on cognitive learning and challenge and support theories while offering evidence-based andragogical strategies aimed at assisting adult learners in rural community college environments.

In the second phase, following the professional development session, the instructors delivered a math and English lesson to GED students, where they were encouraged to employ the theory-based strategies. I observed these lessons to assess classroom engagement using an IRB-approved GED classroom observation protocol (see Appendix G).

In the final phase of data collection, post-interviews were conducted with the two instructors following their implementation of the professional development strategies in their lessons. The interviews examined the instructors' reflections on the training, their experiences implementing new instructional methods, further use of the methods, and their perceptions of student responses and engagement. After the lesson, students also participated in post-interviews to share their experiences and to better understand their self-perception of academic ability following the intervention. All interviews were semi-structured, recorded with participant consent, and transcribed verbatim for analytical purposes. The sequence of data collection activities facilitated a thorough comprehension of the experiences of both students and instructors regarding the implementation of professional development in the GED program.

Data Analysis

The data analysis was guided by the three research questions and utilized a focused coding process to determine patterns within participant responses. The focused coding process involves classifying coded data according to thematic or conceptual resemblance. This style of coding is appropriate for nearly all qualitative research (Saldana, 2016). This methodology and targeted coding process were most suitable for this study, as my objective was to enable student voices to guide the findings and for the theory to arise from their lived experiences rather than from researcher assumptions.

Focused coding is an iterative process that commences with an initial coding phase, during which codes are assigned to the collected data, followed by axial coding, where patterns and connections between the initial codes are revealed. Consequently, focused coding facilitates a more flexible methodology, with each phase building upon the previous one, enabling insights to develop and be honed progressively (Saldana, 2016).

Upon the completion of verbatim transcription of all interviews, I conducted several rounds of coding to guarantee the precise representation of the data. In the initial coding cycle, open coding was utilized to extract preliminary concepts, terms, or phrases that represented participants' experiences pertinent to each research question. Codes were derived directly from the participants' language to ensure reliability to the data. Upon completion of open coding, I completed an axial coding stage where open codes were further analyzed to identify patterns and categories. A final round of analysis, selective coding, was used to refine the analysis into large themes. This iterative coding cycle was used for each of the three research questions as each question corresponded with specific data collection (see Table 3).

Through analysis, larger themes emerged for each of the three research questions. Each theme was explicitly connected to each research question and is presented herein as such to guarantee coherence with the study's objectives. The themes illustrated recurring concepts that encapsulated participants' collective and distinct experiences regarding (a) students perceptions of their academic ability prior to enrolling in a GED program (b) student perceptions post-professional development, (c) instructor experiences in executing new strategies, and observing them, and (d) the overall influence of professional development on GED instruction within the rural community college context.

Qualitative Results

Research Question 1

How do GED students conceptualize their academic abilities and the influential elements that play a role in their success before enrolling in the GED course?

In order to address this first research question, I needed to connect with students prior to their participation in the theory-based intervention. To do this, I conducted pre-interviews on the first day of my site visit with any student who consented to participate in the study. Interviews occurred in-person and on-site at CTCC. Each participant was invited to select their own pseudonym to protect confidentiality, a crucial step not only for ethical leadership, but in a study like this one where students were asked to reflect on their experiences in previous academic spaces and to share their self-perception of academic ability. The stories shared in these spaces are as compelling, and they are sensitive. What follows are the personal narratives of GED students who have navigated immense difficulty but have persisted and remain committed to surmounting obstacles in pursuit of their goal.

Theme 1. Despite prior negative educational experiences, GED students re-enter learning environments with a resilient sense of confidence and an enduring belief in their capacity to succeed.

During my pre-interviews with the GED students, it was clear that despite prior negative educations experiences, the students believed in their ability to succeed in the GED program. An important thing to note is that the decision to leave school prematurely was rarely tied to negative interactions in academic spaces. Rather, personal challenges were often the catalyst for early departures. Students shared experiences like having a baby early in life and leaving school to take care of their child or negative influences in the environment outside of school. Often

students shared that when they chose to leave school, they did so because at the time they saw no other way forward.

However, even when students pointed to external factors, some shared stories of negative experiences in academic spaces as well. They described teachers not taking the time to explain material and discipline challenges that led to getting kicked out of school and disengaging as early as 6th grade. And yet, even as students described prior negative experiences in those academic spaces, it was clear that they did not allow those experiences to define what they were capable of in the GED program. One participant, Plum, revealed that he had never told his wife that he didn't finish high school. He described feelings of insecurity when around his wife's family for this reason. Yet, in the same conversation, Plum was quick to point out his strengths, namely that he was good at recalling details. He assured me that he was trying his "best to learn what [he's] supposed to learn and come to school." I watched Plum as he pivoted in the interview from a focus on discouraging past outcomes to issuing a reminder to himself that if he stayed consistent this time, he would reach his goal.

This positive reframe was common among students in pre-interviews. When we spoke, Becky recalled that "teachers didn't take time explain things" in earlier education experiences, but now, in the GED program, she was committed to completing the credential and moving on to a career in the medical field. She was confident that she would be successful in this endeavor. This showing of optimism was a thread in each story told in the pre-interview stage. Students were consistently turning a prior negative experience into a catalyst for positive change. Statements like Becky's are peppered through this theme, as I spoke more with the students I heard more examples of negative experiences from previous academic experiences, such as struggling to juggle school while having to work seven days a week with three jobs or not

understanding what was being taught. Students would mention that they had never being good at math and group projects or that they struggled to get to class on time. Yet, without fail, they would turn the conversation away from those experiences, as if turning the chapter of a book, and would refocus our conversation in the present. They described feeling proud "of [their] decision to go back to school," and described themselves as "passionate and hardworking," "persistent," "independent, hardworking, and very intelligent." One student, Jackie, told me, "once I have the information, I got it."

Even as prior educational experiences served as a barrier to persisting in traditional school environments, I found those experiences did not deter them from reentering to school. In fact, many stressed the necessity of returning to school. For example, Booker stated, "There was no other option other than coming back to school." Statements like this reveal the resilience and grit involved in the decision to return to school, as choosing to stay out and not pursue the credential could have easily been made. Even as deciding not to return served to limit prospects, it would be an easier path than committing to return to a GED program, investing hours each weekday morning, but for students like Booker, as he considered his life, he saw no other option.

Despite the expression of there being no other option, students did not seem frustrated by their reality. I found that students maintained a very positive outlook pertaining to their academic ability. One student, Cindy, shared that she sees herself as successful, even as she couldn't succeed in traditional school. When we spoke, she told me that she knew she "[could] succeed in the GED program." Another student, Show, who pointed to being in a bad environment as his reason for leaving school without the diploma, told me, "I believe in myself now!" Yet another, Nate, reiterated that he wasn't the same person he was before. On the day we met, Nate described himself as "honest, funny, and very cool," which, as he told me, represented a

substantial shift for a student who had previously withdrawn from school in the 6th grade due to personal circumstances and the pandemic. For Plum, who had left school because he became a father at the age of 17 and stayed out well into his late 50's to take care of his family, there was a strong sense of pride in his ability to recall the details of situations and numbers.

Within the group, there were two student participants who had previously attended school outside of the United States. One of these students, Jackie, noted the difficulty of working toward the GED credential as a non-native English speaker. However, even as she described this challenge, Jackie stressed the desire to "put forth the effort" to succeed in the GED program. Every student's experience was unique, and yet, a common thread persisted. Despite previous negative experiences and academic difficulty, each student was optimistic about their likelihood of success. They believed they could be successful, and they each pointed to evidence such as academic strengths and a strong work ethic. There was pride and self-confidence in these conversations. They did acknowledge the challenges they faced previously. These students were not looking at this experience through rose-colored glasses. The students I spoke to knew the challenges didn't go away just because of time and distance. If anything, they seemed to know that returning to school now would be harder. Yet, they maintained a belief in their ability to succeed in the academic context of their GED classroom. The program staff, as it turned out, played a role in that.

When they spoke of the GED staff, participants agreed that these individuals were a source of support for them. One described the GED staff as "helping a whole lot, but it's up to me to pass." Notes like this that both acknowledge the gift of support while maintaining personal accountability were consistently offered in pre-interviews. Students were quick to point out their connection to the program staff and to affirm that they felt supported in their academic journey.

This wasn't the first time a student had felt supported by an educator. Two participants described having one caring teacher or adult in their lives who encouraged them and helped them stay focused. However, they also recognized that a single supportive relationship was not enough to help them navigate the complex and often overwhelming experience of leaving traditional school. As they returned to the classroom, they carried a renewed determination to finish what they had started and a sincere belief in their own abilities. Yet, those earlier experiences still left a lasting emotional imprint, one that continued to shape how they viewed themselves, school, and their place in it.

Theme 2. Participants identified the social dynamics of schooling, particularly negative peer interactions, as a central factor shaping their previous academic struggles and disengagement in traditional education.

Traditional school for these participants involved a great deal of negative interactions with peers. Bullying, in its many forms, were frequently described in pre-interviews. Becky described "people not wanting to sit beside [her]" as a negative social interaction that hurt her and further influenced her decision not to return to school. Four other participants, Booker, Peter, Show, and Cindy, also described bullying as being one of the catalysts for leaving school. In their own way, students described feelings of distress and fear in social interactions with peers in traditional schooling.

For Cindy, that manifested into social anxiety. She described how, when feeling anxious, she often chose to remain quiet in school rather than speaking up to ask for help due to persistent bullying. Peter, Show, and Booker experienced bullying in another way. Show recalled negative social interaction as "seeing people I didn't like" meaning the "bully." While Peter reported "I saw myself as good in the classroom, but bad in the hallways." He elaborated by explaining that

he often felt pressure to face his bullies in a more open space outside the classroom which meant he had to protect himself, hence his self-description of being "bad in the hallways." For Booker, the experience of feeling bullied was the main reason he quit attending school.

Interestingly, while the social interactions of traditional education experiences were harmful, the student participants still saw themselves as successful in traditional academic spaces. Plum offered concrete examples of his knowledge of numbers in our interview, although he did not tie that knowledge to formal schooling. But for the others, many points to specific academic subjects where they had thrived such as language arts, social studies, and English. Booker told me explicitly, "I excelled in everything. I took advanced classes in science and math." His statement shows his belief in his ability to do well in school despite negative social interactions. Another participant, Jackie, told me, "I do not remember the early years of school, but I do remember excelling in middle school." Later, she reiterated this point: "English is my second language, but I did well in math."

In each of these cases, social dynamics played a meaningful role in the decision to leave school prematurely. Negative peer interactions had shaped how participants experienced traditional schooling, often making it difficult to remain engaged, even when they believed in their academic potential. Importantly, participants consistently emphasized that their self-belief did not disappear when they left school. Even before re-enrolling, they still saw themselves as capable learners.

However, with time, a different kind of social relationship began to take shape. In every interview, students described a powerful source of support emerging from the people they loved, whether it was a partner, children, siblings, or another close family member. These relationships provided encouragement, accountability, and a sense of shared purpose. If earlier social

interactions had contributed to discouragement and disconnection, now it was social connection that was propelling them forward. The same force that once hindered their educational journeys was now fueling their return and their determination to complete what they had once left behind.

Theme 3: Despite past hardships, participants found renewed purpose through the love of those closest to them, a powerful emotional foundation that fueled self-belief and determination to succeed.

The pre-interviews brought up a myriad of negative experiences regarding traditional education, but despite the hardships, academic or social, student participants saw themselves as achievers. For many of them, that self-perception was tied to a person they wanted to make proud. When Sarah talked about the decision to return to school, she noted her pride in her own children and grandchildren:

> Well, I have three young men who I pushed and encouraged to finish school who graduated and went back to school and have degrees. One went for welding and now he's doing truck driving, and the other one is doing heating and air conditioning. And my middle one, he's in the Air Force. So, it encouraged me to do it for me because I wanted to have my own business and at least leave something back for my kids and my grandkids, leave something back for them.

That idea of leaving a legacy was a recurring theme. When students considered their own abilities, they often put those thoughts in the context of other people who believed in them, noting a strong desire to live up that support. When we spoke before the intervention, Plum noted that he hoped to impress his wife and his three sons, and yet beneath that goal was something equally important: a desire to see himself the way they already saw him, as someone who could achieve. He told me:

> If I just sit down and apply myself. See, I had gotten in the comfort zone by being retired for the last three years it's just like do I really have to do it? But I want to impress myself.

Family was a clear driving force for the students in the study, but many also pointed to outside influences and supporters. Even when previous academic experiences had been fraught, several participants could point to at least one educator in the past who had believed in them and that support had left a lasting impact. For Cindy, there had been a steady stream of kind teachers over the years, and their encouragement continued to shape her long after her premature exit from traditional school. As she returned to the GED program, she reflected on that kindness:

> Yes, every year of the school year I always had one teacher, at least one teacher that I will always go to for help in any subject. And then my mom and my dad they'll help me with any subject. My mom would not help with math because she's not good at math, but my dad helps with math and my mom helps with English and language arts and stuff like that. So, before I stopped going to school I had this one teacher at [school] who helped out a lot, and he was an art teacher, so I always go upstairs to his class and always ask for help in any subject that I had.

Encouragingly, as student participants described the impact of caring adults both in traditional educational experiences of the past and family support, students were quick to point out that they were also finding similar supportive connections with their CTCC GED instructors. Like Nate, who believed that he would be successful in the GED program because of the growing network of people who championed him:

> My teacher now, [Ms. Doors], she's helped me a whole bunch. My uncle that I'm living with now, he's helped me, he's helped me a lot with school stuff. All my elementary

school teachers were great; they helped me out a lot. Cause I always had problems at home and stuff so they would help me out a lot when I was in school.

While not every student participant experienced the support of a caring adult in earlier educational experiences, the tide was turning now that they had enrolled in CTCC's GED program. Overall, prior to the intervention, students conceptualized their academic abilities as shaped by a blend of internal resilience, social experiences, and personal relationships. Despite earlier negative or discouraging experiences, they described re-entering the GED program with renewed confidence and a belief in their ability to succeed. At the same time, they recognized that much of their prior academic struggle stemmed not from a lack of ability but from harmful school social dynamics, in particular, negative peer interactions, which undermined their engagement in traditional settings. Ultimately, participants framed their current motivation and sense of capability around the love and support of those closest to them, which provided a powerful emotional anchor and strengthened their determination to pursue and achieve their GED.

As I wrapped up the initial interviews, I was encouraged by the expanding scope of their support systems. Yet, this thread proved even more profound when just a few days later I sat down with students for a conversation post-intervention. What first emerged as a spark of an idea in the initial interviews grew into something more certain: when GED students are provided a cognitive learning environment facilitated by caring adults who pair supports with academic challenge, they reclaim their confidence and begin to envision a future that genuinely excites and inspires.

Research Question 2

How does participating in a cognitive learning environment that is both supportive and challenging influence how GED students perceive their academic abilities?

Research Question 2 aimed to investigate the impact of participation in a cognitive learning environment that was both supportive and challenging on GED students' self-perceptions of their academic abilities. This inquiry is aligned with constructivist and self-efficacy theories, which assert that optimal learning occurs when students are actively involved in cognitively challenging tasks, accompanied by encouragement, feedback, and emotional support (Bandura, 1997; Vygotsky, 1978). In order to answer this second research question, I re-connected with student participants after they participated in the theory-based intervention. On the first day on site, I worked in collaboration with a veteran educator to facilitate a professional development workshop with the two GED instructors who would implement the lessons in their classroom. The session centered on strategies to balance appropriate academic challenges with necessary support. The instructors were tasked with immediately implementing the lessons into their course the following day using the materials provided in the workshop. To understand the impact of the intervention on the students themselves, I conducted post-interviews on the day the intervention/classroom lesson was taught. Interviews occurred in-person and on-site at CTCC. Each participant was invited to share their experience of engaging in the lesson. Their stories convey a powerful message. When GED students engage in a cognitive learning environment that balances challenges and support, they begin to reclaim their academic confidence, dream of a future beyond the GED, and find connection in their peers and instructors that fosters academic resilience.

Theme 1. Within the GED program, students described reclaiming their confidence and seeing themselves again as capable learners.

A noticeable trend in post-intervention conversation was the way GED students were reclaiming their academic confidence in the program. Despite previous difficulty in academic spaces, the students in this study were not only invested in their success in the GED program, but they were also rediscovering themselves as capable learners. Students described feeling empowered to engage in learning tasks they had previously avoided, indicating a shift in their self-perception as learners. In nearly every interview, students consistently described feeling "way more confident." Many noted the contrasting parallels of their emerging self-assurance with earlier feelings of uncertainty or self-doubt in traditional schooling. This was particularly true among the students who had been away from school for several years. As Becky explained, "I wasn't in school for a while. I didn't know what to do before, now I know more stuff," ultimately highlighting how re-engagement in structured learning restored academic self-concept. When asked how they felt about their academic abilities after the lesson, Sarah answered, "More confident. At first I was like, 'I don't know,' but now I'm confident I can pass my tests." For many, the decision to enroll in the GED program was a turning point. Now, having experienced consistent support and documented successes in the program, the students described a reclaiming of academic confidence.

Several students attributed their growing confidence to the encouragement and guidance of their instructors. As Jackie put it, "I feel more confident; my instructor put me on the right track." Students began to see challenges as opportunities rather than obstacles. As Becky explained, "Algebra is tough. I keep at it until I get there." This persistence reflects a significant mindset shift from task avoidance to resilience

Academic self-concept had been growing as students adopted new learning habits and strategies in the program. Many described being more intentional about studying and engaging with materials. Nate shared "I study more, put in time in class and at home. I didn't care before; now I put more focus on it." Booker echoed this when they described a change in approach to learning: "At first, I didn't ask for help. Now I do to help break it down better." These examples suggest that increased confidence was more than an outcome, but rather a driver of continued persistence. Students could point to specific actions they were taking that were producing success. The act of trying, staying late, studying harder, and asking questions reinforced the belief that success was achievable through their sustained effort.

Students' reflections also revealed how confidence extended beyond academics to their broader self-concept. Jackie noted, "I'm more secure about a lot of things. Insecurity is all in your mind." Show told me, "I didn't see myself continuing with school. Now that I see it's something I can do, why not do it?" As they were reflecting in the post-interviews, several of the students explicitly noted the contrast of their current motivation and the disengagement they felt in prior academic experiences. Like Cindy who told me, "Before I saw myself as not going to school… I saw that I could do it," and Nancy, who told me, "I stopped doubting myself." Such statements demonstrate how the GED experience fostered not only skill development but also a positive learner identity.

Even when faced with setbacks, students reported sustained confidence. Jackie shared, "I didn't pass the first test but still tried. I put 5,000 hours into a program to help me learn. I missed the test by 7 points; still think I can pass." This persistence was a recurring topic in post-interviews and indicates that GED students not only believe that they can success but believe they can learn from mistakes in the academic environment. Such resilience was important

particularly for students like Nate who had been away from school for many years: “I really didn’t feel confident. I stopped school in 6th grade and was gone for years… but it all came back to me after taking the test.”

Through these reflections, it became evident that participation in the GED program overall had helped students reclaim confidence that had been lost following the premature departure from a traditional education experience. Despite that setback, the students in this study had begun to see themselves not as people who had failed, but rather as capable, persistent learners with the tools and mindset to succeed. This sense of reclaimed capability was central to their motivation, perseverance, and emerging academic self-concept.

Many participants entered the GED program with feelings of insecurity and uncertainty, frequently stemming from prior educational experiences. One student, Nancy, recounted experiencing significant insecurity and embarrassment, sharing that the return to school had initially provoked self-doubt. Others expressed similar concerns. For instance, Sarah, who, when asked how it felt to return to school answered, “Not too great. I felt like I was behind and not able to do it.” This sentiment was echoed by Plum who admitted feeling nervous: “Scared, I didn’t feel like I was gonna belong.” For most of their counterparts in the program, merely entering the classroom constituted an act of bravery, a first stride toward reclaiming a part of themselves that had long seemed unattainable. Yet, even with these initial concerns, students reported an important shift as they became more engaged with the program, especially as they earned achievements, both big and small. Achievements like finding their voice in the classroom, as Peter shared: “I started off quiet, I talk more now, I’m a good listener, hardworking, trying to achieve.” Becky shared the experience of becoming more vocal. She told me: “I’m a whole lot

better than when I first came. I wasn't talking a lot. I'm doing more talking, I'm more open and willing to learn."

An important distinction emerged in the data: although the questions invited students to reflect on the impact of the intervention, they didn't talk about it as a separate or standalone experience. Instead, they naturally folded it into the broader GED program, an environment already doing powerful work. In other words, the intervention didn't stand out because it fit well within the existing structure of the program. In post-interviews, students talked about a learning environment where challenges were real, but so was the support they needed to overcome them. As such, the intervention aligned with what was already working, reinforcing existing momentum without disrupting students' sense of progress.

For students, the instructional shifts after the professional development session felt like a seamless part of a space where many were actively rebuilding their academic self-concept. The GED program had become a genuine confidence builder at CTCC. Each success built upon the last, strengthening students' connection to the program and their belief in their own abilities. These wins acted as a mirror, reflecting back academic potential they hadn't always seen in themselves. As their confidence grew, so did their aspirations, extending well beyond earning the GED.

Theme 2. Students view the GED program not as an endpoint, but as a gateway to future education and opportunity.

Across interviews, students overwhelmingly framed the GED not as a finish line, but as the starting point of a much longer educational and professional journey. For many, the program represented a pivotal moment, a chance to reset, rebuild confidence, and reimagine what might

be possible for their futures. The GED became more than a credential; it was a doorway into opportunity and a symbol that their goals were once again within reach.

Students frequently described the experience as a powerful turning point in both mindset and direction. Booker captured this shift clearly: “Drastically, I didn’t think I’d go back to school, but once I got here and saw career pathways for my future, I wanted to keep going so I can start.” His words reflect a broader pattern in the data: as students began to see themselves as capable again, they also began to see new routes forward. Nancy reinforced this sense of clarity and renewed purpose, sharing, “I have a better and clearer thought for my future,” while Plum described the GED as “a treasured bucket list… I want it,” signaling both accomplishment and aspiration.

Students were not simply earning a credential; they were building momentum. The program prompted them to think beyond immediate needs and begin planning for careers, stability, and long-term growth. Many had specific goals in mind: Cindy hoped to obtain her CNA and eventually attend nursing school; Sarah planned to pursue culinary arts; Plum talked eagerly about taking “a start-up business course in cyber security,” connecting his past experience in armed security to a future he could now imagine. What emerged was a picture of students actively linking their histories, identities, and interests to new possibilities, a form of future-oriented thinking often associated with strengthened self-efficacy.

Local colleges and continuing education opportunities featured prominently in these plans. For many, CTCC and similar institutions were seen as natural next steps that felt accessible, familiar, and aligned with their growing confidence. As Show put it succinctly, “I’ll probably take a course at CTCC,” reinforcing how seamlessly students were beginning to map their futures onto concrete pathways.

A powerful driver behind these ambitions was students' desire to create better lives not only for themselves but also for their families. This motivation surfaced repeatedly in interviews. "I feel like I can do it for a better life for myself and my kids," Nancy explained, a sentiment echoed by others who saw education as a form of generational uplift. Sarah shared, "I see a bright future to help my kids and my community," tying personal progress to broader social impact. Faith, gratitude, and a sense of purpose also shaped their aspirations; Becky described her determination this way: "Imma praise the Lord and get my CNA license 1 & 2."

As students looked ahead, their visions were hopeful and marked by a renewed belief in what they could achieve. Some planned to enroll in college or transfer to four-year institutions; others anticipated earning technical certificates and entering the workforce. A few even imagined graduate degrees, possibilities they might not have voiced prior to experiencing success in the GED program. Even when looking toward celebrations, the confidence was unmistakable. "I'm going to college," Plum said, "but first I'mma have the biggest party you ever seen." This forward momentum illustrates why the impact of the intervention is not easily isolated: students experienced the instructional shifts not as something new or disruptive, but as part of the same supportive, confidence-building environment that was already propelling them toward these expanded futures.

Across these stories, one message was clear: students did not see the GED as the end of their academic story. They saw it as the beginning. Their goals, whether in nursing, engineering, culinary arts, business, or skilled trades, were rooted in a growing sense of capability and purpose. In this way, the GED program served as a launchpad, reshaping how students viewed themselves and expanding what they believed their futures could hold. This also underscores the value of the intervention's subtlety: because it aligned so closely with existing program

strengths, students folded it into the broader experience rather than marking it as separate. Rather than producing a dramatic break, the intervention reinforced what was already working, adding to a learning environment where growth felt continuous, natural, and attainable.

Theme 3. While content matters, the learning climate matters more: GED students emphasized that the encouragement of instructors and peers made the greatest difference in their growth.

Students consistently emphasized that while mastering academic content was important, what truly sustained their progress was the climate of encouragement surrounding them. The GED classroom functioned as a place where support, shared goals, and belonging mattered as much as the lessons themselves. This emphasis on relationships—both with instructors and peers—emerged as a defining feature of their experience. Nancy summarized this clearly: "Help from the teacher and the students makes me feel like I can make it." For many, the classroom became a space where they could trust that they were not navigating challenges alone. This sense of community not only strengthened their academic skills but also reinforced their belief that they were capable learners once again.

Time and again, students described how deeply their instructors shaped their motivation to persist. Booker shared, "Really great, my instructor is great; he makes it easier than what I thought," while Nate reflected, "My teacher has boosted my confidence a lot, she's great!" Sarah added, "My classmates influence me; we're all trying to choose the same thing." These reflections show that encouragement operated on multiple levels: through instructional clarity, emotional reassurance, and a shared commitment to success. The learning climate was both supportive and challenging, a place where students felt seen and capable, and where each small win felt like a collective accomplishment.

Instructors, in particular, played a central role in helping students rebuild their academic identities. Many described their instructors as patient, motivating, and deeply invested in their growth. Jackie explained, “My teacher empowers everybody. I feel like, ‘Hey, I can do it,’” while Booker noted, “My teacher, he makes me feel comfortable and welcomed in class, keeping me on track.” Show even found comfort in the familiarity of the instructor’s style, remarking, “The teacher reminds me of a teacher I had in high school.” Such comments highlight the emotional labor and relational work that instructors bring to the classroom, efforts that make learning feel both accessible and meaningful. Cindy captured this simply: “How my teacher does her job makes it easy for me.”

Peers also played a powerful role in shaping the learning climate. Many students found motivation in being surrounded by classmates with similar goals or different life experiences. Sarah said, “Being around people that’s [*sic*] younger than me has influenced me to keep going,” while Plum shared, “Being around young people fuels me. Listening to them brings back memories of my three boys.” These intergenerational dynamics add layers of encouragement that transcended age or background. Nancy described this shared support vividly: “Being encouraged by people around me, we encourage each other.” Peter echoed this, saying, “Seeing other students pass tests makes me feel like I can do it too.” Collectively, these relationships formed a foundation of accountability, belonging, and shared resilience.

Together, instructors and peers created an environment where learning felt personal, possible, and deeply relational. Becky conveyed this contrast sharply: “My teacher is real good. The people in the class are real good. Not like when I was going to real school.” For many, the GED classroom offered something they had not experienced in previous educational settings; a place where they felt valued, supported, and capable of success. This relational environment

played a significant role in shaping their confidence, rekindling long-term goals, and sustaining their belief that it was never too late to learn.

Importantly, the strength of this learning climate helps explain why the intervention blended so seamlessly into the students' experience. Because the GED program was already characterized by trust, support, and growth-oriented relationships, any instructional shifts introduced through the intervention were interpreted as natural extensions of what was already working. Students did not perceive the intervention as a departure from familiar practices but rather as reinforcement of the supportive and challenging environment they depended on. This organic integration made its impact difficult to measure in isolation, but it also demonstrated that the intervention complemented rather than disrupted the program's existing strengths. In a setting where encouragement and challenge were already deeply embedded, the intervention served to affirm, enhance, and align with the program's ongoing momentum.

Taken together, the findings from Research Question 2 illustrate a learning environment where confidence, aspiration, and support were already deeply embedded in the student experience. Students described reclaiming their sense of themselves as capable learners, imagining futures beyond the GED, and emphasizing that the climate of encouragement mattered as much as, if not more than, the content itself. Because of this strong foundation, the intervention did not emerge as an isolated catalyst of change. Instead, students interpreted the instructional modifications as a natural extension of what the GED program already did well: offer challenge within a deeply supportive space. In this context, the intervention reinforced momentum rather than redirecting it, making its discrete impact difficult to separate from the broader program climate.

This reinforces why Research Question 3 becomes essential. If students experienced the intervention as part of the program's "business as usual," it suggests that the principles of cognitive learning theory and challenge and support theory were already being enacted long before the intervention was formally introduced. To understand the roots of this seamless alignment and to illuminate how such an affirming learning environment is intentionally created, the perspective of the instructors is critical.

Research Question 3

How does the GED instructor conceptualize the value of incorporating cognitive learning theory and challenge and support theory into lesson planning and instruction?

This analysis examined how GED instructors understand, interpret, and apply cognitive learning theory and challenge and support theory within their instructional planning and classroom practices. Data were drawn from observations following a professional development session introducing the instructors to both theories. The instructors implemented a theory-aligned lesson and participated in post-lesson interviews. The professional development session was conducted in a traditional classroom equipped with a projector and screen and included modeling, examples, and props designed to demonstrate theory-to-practice integration.

Findings reflect both instructors' sense-making processes and the ways they translated theory into instructional action. Although both instructors valued the integration of theoretical frameworks, notable differences emerged in how each conceptualized and operationalized them. Mr. Lock approached the lesson using a detailed written plan, while Ms. Doors relied more heavily on her instructional intuition and prior experience, preferring not to use formal plans. Interviews illuminated how these differences in preparation style connected to broader andragogical beliefs, experiences in adult education, and understandings of learners' needs.

Combining observational data with interview reflections provides a fuller understanding of how each instructor constructed meaning around the theories and how those interpretations shaped their instructional decisions. Because these interpretations were shaped by what occurred instructionally, the next section begins by describing each lesson in detail before examining how the instructors made sense of, and valued, the theoretical frameworks.

Ms. Doors Lesson "The Flowers"

At 9:00 a.m. on October 7, 2025, Ms. Doors welcomed her six students into the classroom. With a warm smile, she announced the day's topic: "The Flowers." The students leaned forward, sensing that this lesson would be more than definitions and worksheets. To begin, Ms. Doors drew a large bubble-concept map on the board. In each bubble, she wrote questions designed to spark memories and imagination: "Things you know about flowers," "When do you give them?" and "Why do you give them?" Immediately, the students came alive. Cindy remarked that flowers could be "food for the soul," a way to show care. Peter noted how flowers could comfort someone in need. Others contributed examples such as weddings, birthdays, sympathy gestures, each adding a layer of meaning.

As the ideas accumulated on the board, Ms. Doors acknowledged their focus, eye contact, and eagerness to share and ask questions. The room hummed with energy. Once the concept map was complete, Ms. Doors introduced the day's reading: a story titled *The Flowers*. She read aloud, her voice carrying the emotions of the story. The students listened intently, absorbed in the journey of a young girl named Myop. When the story concluded, she gently placed the paper on her desk and posed questions to deepen comprehension: *"What did she come across?" "What did she step onto?" "What was the rose attached to?" "What did she say about the rope?"* She

reminded the students that Myop began the story full of joy, only to encounter sadness as the harsh realities of the world unfolded around her.

Hands shot up across the room. Students analyzed the story with curiosity and insight, discussing Myop's surroundings, her journey, and the shift from bright innocence to darker understanding. They recognized that the flowers at the story's end symbolized beauty, resilience, and awareness: a reminder that even when faced with evil or sorrow, meaning and hope could persist.

Encouraged by their enthusiasm, Ms. Doors divided the students into three small groups, each focusing on a different aspect of the story: Setting, Imagery, and Symbolism. The classroom buzzed with conversation as students wrote down their observations, circulated during a gallery walk, added details, and learned from one another's perspectives.

Finally, the students regrouped in a small circle, still energized. Ms. Doors asked softly, "So, what was this lesson really about?" One by one, students offered pieces of insight, which she wove together. The lesson, as she explained, was about using prior knowledge, supporting ideas with evidence, and thinking critically about a story. It was about discovering deeper meaning, asking thoughtful questions, and understanding how something as simple as a flower could carry the weight of beauty, emotion, and even sorrow. As the period ended, the students left not just knowing more about flowers but appreciating how stories can bloom with layered meaning when examined closely.

Mr. Lock's Lesson "The Fourth of July"

The next day, October 8, 2025 at 9:00 am, Mr. Lock began class by offering students apples, inviting them to take one at any point during the lesson. The gesture was simple, but it immediately created a welcoming, participatory atmosphere. The lesson that followed combined

lecture, discussion, multimedia, and real-world examples, keeping students engaged and encouraging eye contact, questions, and thoughtful responses.

To launch the lesson, Mr. Lock asked students to participate in a think-pair-share activity using the prompt: “Have you ever experienced or witnessed something that changed how you understood fairness or freedom?” The room buzzed with discussion. Students raised contemporary and historical examples, including debates about “Black jobs,” systemic inequality, and government power. One student noted that their Black male instructor did not hold a “Black job,” reflecting on systemic patterns where most instructors are white females. Other students connected the current penal system to modern-day slavery and noted disparities in wealth and authority, while current events, like the current government shutdown, became part of the conversation.

Once students shared, Mr. Lock introduced the story of young Audre Lorde taking a trip to Washington, D.C. for Independence Day. The story revealed a harsh reality: though she expected excitement, her family was denied service at a restaurant because of their race. Through this experience, Audre confronted the limits of freedom and equality, learning that America did not always extend its promises to everyone.

The class then examined the story in depth. Students discussed why Audre went on the trip, how the setting then differed from today, and the persistence of racial inequities. Mr. Lock guided reflection on historical context, citing the Greensboro Four and the sit-ins at Woolworth’s lunch counters, and students drew connections to contemporary events, like a 2022 attack in Buffalo, NY. Their engagement was evident. Students offered personal reflections, asked questions, and wrestled with the implications of racism past and present.

Mr. Lock then invited students to reflect on challenges: “How do you feel about challenges?” Booker responded, “We need them to grow.” This led to a discussion of Audre Lorde’s lesson on freedom and equality, with students noting that her story illustrated both progress and enduring inequities. Mr. Lock emphasized reflection as a key component of learning: understanding real experiences, connecting them to personal insights, and applying those lessons beyond the classroom.

Throughout the lesson, students remained engaged, sharing their perspectives, responding to peers, and receiving targeted feedback. Mr. Lock’s approach demonstrated how reflection, guided discussion, and connection to lived experiences can foster deeper understanding, critical thinking, and an appreciation for the broader social and historical context of concepts like fairness and freedom. By the end of the period, students had not only explored history and social justice but had actively practiced analyzing, questioning, and reflecting, skills essential to both academic growth and personal development.

The detailed classroom accounts of Ms. Doors and Mr. Lock illustrate how theory-informed strategies unfold in practice. From concept maps and small-group discussions to reflective exercises and connections to real-world experiences, each lesson demonstrated deliberate efforts to engage students cognitively while fostering a supportive, collaborative environment. These moments provide the context for understanding how instructors themselves conceptualize the value of cognitive learning theory and challenge and support theory. The following analysis draws on post-lesson interviews and observational data to highlight instructors’ perspectives, revealing the intentional ways they balance activating prior knowledge with cultivating a learning community that promotes engagement, confidence, and growth.

Theme 1. GED instructors view theory-based instruction as the blend of activating students' prior knowledge and cultivating a supportive learning community that enhances engagement and learning.

In both interviews, the instructors described theory-based instruction as a careful balance between cognitive activation, helping students connect new content to what they already know, and social-emotional support, which fosters confidence, persistence, and a willingness to take academic risks. Ms. Doors emphasized that activating prior knowledge is foundational to her approach. She intentionally draws on students' lived experiences to make abstract skills concrete, explaining that cognitive learning theory mirrors her natural teaching style. For instance, when teaching fractions, she relates concepts to cooking or other everyday scenarios, helping students visualize and internalize ideas that might otherwise feel inaccessible.

The instructors also highlighted the challenge of addressing multi-level classroom needs. Ms. Doors explained that she strives to "take students from where they are," using tools such as the Tests of Adult Basic Education (TABE) to form small learning groups tailored to students' specific strengths and areas for growth. While some whole-group instruction occurs, she emphasized that targeted small-group or individualized work is often more effective in building both comprehension and confidence. The "Flowers" lesson observed in Ms. Doors' classroom demonstrated this principle in action: students were guided to connect personal experiences to the text while engaging collaboratively, allowing them to construct meaning together.

The professional development around theory-based strategies shaped instructors' thinking, even as time constraints limited depth. Ms. Doors described the session as useful but rushed, wishing for more examples and opportunities to process content fully. Despite this, she considered the session highly effective and noted that the training aligned closely with her

instructional philosophy. In practice, she frequently employs concept maps and thinking maps to surface prior knowledge and activate cognitive engagement. Simultaneously, she nurtures a supportive classroom climate, reinforcing small successes, celebrating contributions, and encouraging peer support to cultivate a community in which students feel safe to participate and take intellectual risks.

Mr. Lock similarly valued theory-based strategies, explaining that they helped him focus on individual student needs, promote engagement, and motivate learners toward their academic goals. He described these approaches as a means of signaling care, providing an academic "push," and reinforcing students' belief in their own potential. Observations from his "Fourth of July" lesson show how reflection, discussion, and connection to students' experiences brought the theoretical approaches to life, fostering both cognitive engagement and a safe, collaborative environment.

Both instructors agreed that the intervention itself was valuable, though both noted that more planning time and examples would have strengthened implementation. Mr. Lock reflected, "I didn't really know where to start," noting that time constraints made it challenging to read the story, integrate theoretical components, and plan guiding questions. They suggested that future professional development sessions include longer blocks for discussion, modeling, and practice, ensuring that instructors feel confident in translating theory into meaningful classroom experiences.

Overall, the instructors' reflections and observed lessons illustrate that theory-based instruction in the GED program is not merely an abstract concept. It is enacted through intentional scaffolding, activation of prior knowledge, and cultivation of a supportive learning community. Together, these strategies foster engagement, confidence, and the skills students

need to succeed academically while reinforcing a culture of care and collaboration within the classroom.

Theme 2. After implementing the theory-based strategies, GED instructors report increased engagement and student confidence.

The lessons played a central role in encouraging student participation and fostering a supportive learning environment. Both instructors observed that students felt comfortable sharing their thoughts, offering praise to peers, and receiving constructive feedback in return. The strategies implemented during the lessons, ranging from small-group discussions to reflective activities, were described as engaging, meaningful, and effective in promoting active participation. Instructors expressed confidence in using these approaches in future lessons, noting that even students who typically remained quiet or disengaged were noticeably more involved and interested in the content.

Ms. Doors highlighted concrete examples of growth in student confidence. One student, who rarely spoke in class, reported that the lesson was "fun and interesting," while another, usually hesitant to be called on for fear of being wrong, became more assured when participating in a small group. The collaborative structure appeared to lower anxiety and provide a safe space for risk-taking, allowing students to engage more fully. Similarly, Mr. Lock described a student who often entered class with her head down; during the lesson, she showed increased confidence, actively contributing to discussions and demonstrating genuine curiosity.

Instructors also noted that confidence-building extended across the classroom as a whole. Students who typically hesitated to participate became more talkative and engaged when working in groups. Mr. Lock recalled a learner from another country who shared a deeply personal story during the activity, illustrating a noticeable shift in comfort and willingness to

take academic risks. Ms. Doors observed another student who frequently second-guessed herself; when praised for her contributions, she smiled with a newfound sense of validation and pride.

Across these observations, instructors emphasized that nearly all students were actively engaged, willing to contribute, and supported one another in learning. These findings suggest that the combination of cognitive activation and a supportive classroom climate can significantly increase participation and confidence, particularly for adult learners who may have previously experienced academic setbacks. Mr. Lock summarized this sentiment succinctly: building confidence and providing a safe, encouraging environment is "half the battle" in helping adult learners take the academic risks necessary for growth.

Ultimately, the observed increase in engagement and confidence demonstrates how theory-based instructional strategies, when applied intentionally, not only support content learning but also cultivate the social-emotional skills and self-efficacy that underpin long-term academic success. The classroom becomes a space where learners feel empowered, connected, and motivated. It becomes a community where both cognitive challenge and supportive guidance coexist to maximize learning outcomes.

The patterns observed in student engagement and confidence underscore how deeply the GED program's learning environment supports growth. As students connected prior knowledge, collaborated with peers, and received consistent encouragement, their willingness to take academic risks and deepen understanding became evident. These outcomes highlight not only the value of theory-informed strategies for learners but also the ways in which implementing these approaches shapes instructors' own professional practices. Building on the success of activating cognitive engagement and fostering supportive classrooms, instructors reflected on how integrating cognitive learning and challenge and support theories into their instruction had

influenced their teaching philosophies, pedagogical decisions, and professional identities. Theme 3 explores this perspective, revealing how theory-based instruction both guides and transforms the instructors who bring it to life in the classroom.

Theme 3. By integrating cognitive learning and challenge and support theories into their instruction, instructors expanded their sense of professional identity.

For both instructors, integrating cognitive learning and challenge and support theories into their teaching extended beyond individual lessons; it influenced how they conceptualized themselves as educators. Mr. Lock described how his teaching philosophy had evolved over time, particularly given his entry into adult education from a kinesiology background. He reflected on the learning curve he experienced in adapting to the diverse needs of adult learners, noting that this shift required rethinking how he structured instruction and engaged students. His approach became increasingly learner-centered, aligned with his long-standing philosophy of "taking students from where they are," building on prior knowledge and gradually layering in new skills and concepts. Cognitive learning and challenge and support theories reinforced this philosophy, offering practical frameworks for guiding students' thinking, connecting prior experiences to new content, and facilitating reflection on challenges within both lessons and broader life contexts.

Similarly, Ms. Doors emphasized that working with students from varied backgrounds necessitates strong, consistent support systems, particularly because many learners face significant personal and academic obstacles. She noted that both theories meaningfully influenced her instructional decisions and continue to shape how she designs lessons. Drawing on prior knowledge and helping students link it to new concepts emerged as a core strategy she intends to strengthen, ensuring that learning is both accessible and meaningful. While Ms. Doors

has always prioritized student support, she acknowledged there is “always opportunity to do more,” particularly for learners who may not have previously experienced consistent encouragement or validation. Her commitment to celebrating small achievements and providing the “push” students need reflects a deliberate, theory-informed approach to fostering motivation and resilience in adult learners.

Reflecting on their experiences, both instructors described how applying these theoretical frameworks enhanced their confidence and professional identity. Mr. Lock noted that, over 7.5 years with the GED program, he has supported a high number of graduates annually and has increasingly relied on these strategies to guide engagement and learning. Ms. Doors described herself as someone who can “think around things” to determine what is best for students, a flexible approach that allowed her to implement theory-based practices seamlessly. Both recognized the value of seeing their instructional decisions validated in the classroom: when students were engaged, confident, and participating actively, the instructors felt affirmed in their choices.

Beyond the immediate classroom outcomes, the integration of theory into daily practice provided a reflective lens for instructors to evaluate and expand their professional roles. They observed that lessons informed by cognitive and challenge-support principles not only enhanced student learning but also strengthened their capacity to adapt, innovate, and respond to diverse learner needs. Theories that once seemed abstract became tangible tools for shaping instruction, fostering classroom communities, and cultivating their own identities as responsive, intentional, and reflective educators. By embedding these approaches into practice, instructors deepened their understanding of what it means to teach with both rigor and care, demonstrating that professional growth and student success are intertwined.

Summary

This chapter presented findings from pre- and post-interviews with students, classroom observations, and post-interviews with instructors, resulting in nine themes across three research questions. These themes describe both how learners experienced the GED program and how instructors implemented and interpreted the theory-based intervention.

For Research Question 1, which explored how students conceptualize their academic abilities *before* enrolling in the GED program, three themes emerged. Despite prior negative educational experiences, students re-entered learning with a resilient sense of confidence and an enduring belief in their capacity to succeed. Participants also identified the social dynamics of schooling, particularly negative peer interactions, as a central factor shaping their previous struggles and disengagement. Finally, many learners found renewed purpose through the love and support of those closest to them, an emotional foundation that fueled their self-belief and determination to succeed.

Research Question 2 examined how participation in a cognitive learning environment that is both supportive and challenging influenced students' perceptions of their academic abilities. Students described reclaiming confidence and seeing themselves as capable learners within the GED program. They viewed the program not as an endpoint but as a gateway to future educational and professional opportunities, envisioning paths to college, technical training, and meaningful careers. Students emphasized that while content mattered, the learning climate, particularly the encouragement of instructors and peers, was central to their growth. Across these experiences, learners described an environment where challenges were real but met with support, allowing them to take risks, celebrate successes, and develop a stronger sense of academic self-concept.

For Research Question 3, which focused on instructors' perspectives, three complementary themes emerged. Instructors described theory-based instruction as a blend of activating prior knowledge and cultivating a supportive learning community, balancing cognitive engagement with social-emotional encouragement. They reported that implementing these strategies increased student engagement and confidence, particularly among learners who were typically quiet or hesitant. Finally, integrating cognitive learning and challenge-support theories into their instruction expanded instructors' professional identities, providing tools for intentional lesson planning, reflection on practice, and reinforcement of learner-centered philosophies.

Across all three questions, an important distinction became clear. While students rarely identified the intervention as a discrete or standalone element, describing it instead as part of the broader GED program, this should not be seen as a limitation. Rather, it indicates that the intervention integrated seamlessly into an already effective and supportive learning environment. From the instructors' perspective, however, the intervention's value is evident: it reinforced their teaching philosophies, offered strategies for intentional and theory-informed instruction, and enhanced their ability to support learners' cognitive and social-emotional growth.

Taken together, these findings suggest that the intervention's impact is twofold. For students, it reinforced and complemented the strong foundation of the CTCC GED program, supporting confidence, aspiration, and academic engagement. For instructors, it provided both validation of existing practices and practical tools to make instruction more deliberate, responsive, and theory-aligned. The intervention therefore adds meaningful value, even when its effects cannot be fully parsed from the broader program experience. Chapter 5 will interpret these findings in relation to the literature, discuss implications, and offer recommendations for future practice.

CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

North Carolina public elementary and secondary education continues to face high student attrition, with more than 10,000 students leaving public schools in 2023–2024 and an average annual loss exceeding 10,000 over the past three years, most frequently in ninth grade (NCDPI, 2025). The North Carolina Community College System supports these learners through the Finish High School program, which offers free GED preparation statewide (NCCC, n.d.). Despite the program's reach, little research has explored GED students' lived experiences or how classroom environments shape their academic self-concept, with existing studies often emphasizing deficits rather than strengths.

This study examined how instructional strategies grounded in cognitive learning theory and Sanford's challenge and support model can shape GED students' perceptions of themselves as learners. Guided by a three-phase action research design, the investigation employed an iterative, context-driven approach to implementing and evaluating change (Lewin, 1946; Watkins et al., 2023). Data collection included pre- and post-student interviews, professional development for two GED instructors, classroom observations, and follow-up interviews with the instructors after the intervention was implemented.

Chapter 5 presents the key findings, interprets their significance in relation to the research questions and theoretical framework, and outlines the practical implications of the study. It concludes with recommendations for future practice and research.

Summary of the Findings

In Chapter 4, I presented findings from student pre- and post-interviews, classroom observations, and instructor interviews, resulting in nine themes across the three research

questions. Together, these findings illustrate how students experienced the GED program and how instructors implemented and conceptualized the value of the theory-based intervention. For the first research question, which focused on students' perceptions of their academic abilities prior to entering the GED program, participants described entering with a resilient belief in their capacity to succeed despite earlier negative school experiences. Many attributed past academic struggles to challenging peer dynamics, while also identifying encouragement from family and loved ones as a key source of motivation as they returned to their education.

The second research question explored how the intervention, a professional development-informed approach designed to create a cognitively supportive and appropriately challenging learning environment, impacted students' academic self-concept. Findings indicated that participation in the GED program strengthened students' confidence, clarified their understanding of their academic abilities, and fostered a growing belief in future educational and career opportunities. While content remained important, students emphasized that the supportive climate established by instructors and peers played the most significant role in their growth.

The third research question explored instructors' perspectives on implementing theory-based strategies in the GED classroom. Instructors described balancing activation of prior knowledge, fostering community, and integrating cognitive and social-emotional support. They observed increased student engagement and confidence, particularly among learners who were typically hesitant, and noted that the intervention expanded their instructional toolkit, encouraging reflection and more intentional lesson planning.

Across all research questions, students perceived the intervention as part of the broader GED program rather than a separate component. Instead of signaling a limitation, this suggests that the intervention aligned naturally with an already supportive environment. Instructors,

however, recognized its distinct value, noting that it affirmed their teaching philosophies and strengthened theory-informed practice. Overall, the findings indicate that the intervention reinforced an effective program for students while providing instructors with practical strategies that enhanced their work. Chapter 5 will further interpret these results, discuss implications for practice, and offer recommendations for future research.

Interpretation of the Findings

This study was originally designed for implementation at an institution other than CTCC, one that was similar in size and student demographics but faced a distinct set of instructional challenges. At the initial site, the GED program operated primarily within a traditional pedagogical framework, emphasizing instructor-centered delivery of content. This approach stood in contrast to the needs of GED learners, many of whom had previously disengaged from formal education and would benefit more from an andragogical model that centers adult learning principles, lived experience, and holistic student development. Consequently, the study was conceptualized as a theory-informed intervention aimed at preparing instructors to shift their instructional practices. Specifically, the design focused on professional development grounded in cognitive learning theory and challenge and support frameworks, with the goal of fostering more inclusive, student-centered learning environments that recognize and affirm the whole learner. However, within days of receiving approval to implement the study, the original research site became unavailable, necessitating an immediate transition to a new institutional partner. CTCC agreed to serve as the study site and demonstrated a strong commitment to both the research process and the students they serve. While this transition allowed the study to proceed, it also introduced a significant contextual shift. Unlike the original site, instructors at CTCC were already deeply engaged in andragogical practice. Their teaching philosophies and classroom

environments reflected a clear emphasis on student-centered learning, relationship-building, and holistic support. As a result, the study did not function as an intervention designed to shift instructional practice, as originally intended. Instead, it illuminated and affirmed a program in which these principles were already embedded.

This shift in context has important implications for the interpretation of findings. Rather than demonstrating the effects of introducing theory-based instructional frameworks, the study highlights the outcomes of a program already aligned with those frameworks in practice. At the original site, students were described as struggling to adjust to the GED program, in part due to a lack of holistic and responsive support. In contrast, CTCC faculty had intentionally cultivated learning environments where students could thrive, suggesting that the integration of andragogical principles was already contributing to positive student experiences. Within this context, the third research question emerged as particularly significant. While the study did not result in a transformation of instructional approach, it provided instructors with a shared language to articulate their existing practices and, importantly, offered affirmation of the work they were already doing. This affirmation functioned as a meaningful outcome in itself, reinforcing instructional identity and validating pedagogical choices.

A second consequence of the abrupt site transition was its impact on the study's timeline. The need to pivot quickly resulted in a condensed implementation period of approximately one week. This compression limited the ability to clearly distinguish between phases of the study and reduced opportunities for iterative learning across those phases. As discussed later in this chapter, future research would benefit from replicating this study over a longer duration, allowing insights from earlier phases to more fully inform subsequent stages of implementation and analysis.

Taken together, these contextual factors, the shift in institutional setting and the abbreviated timeline, are essential to understanding the scope and meaning of the study's findings. They shape not only what the study was able to examine, but also how those findings should be interpreted. The discussion that follows is grounded in this context and should be read with these considerations in mind.

Research Question 1

How do GED students conceptualize their academic abilities and the influential elements that play a role in their success before enrolling in the GED course?

Research Question 1 explored how GED students conceptualized their academic abilities and the factors that influence their success *before* enrolling in the program. Overall, participants described entering the GED program with a resilient belief in their capacity to succeed despite prior negative educational experiences. This resilience is particularly notable given that school dropout has been widely characterized as a "wicked problem," shaped by interconnected social, psychological, economic, and institutional forces that unfold over time rather than as a single, isolated decision (Rittel & Webber, 1973; Uretsky & Hennenberg, 2023). Participants' reflections align with a life course perspective, suggesting that their disengagement from K–12 schooling was not the result of academic inability, but rather the cumulative impact of adverse conditions that gradually eroded their sense of belonging and self-efficacy.

Returning to a learning environment that addressed their specific needs, students demonstrated persistence even in the face of formidable obstacles known to diminish academic self-concept, including chronic absenteeism, under-resourced schools, and strained relationships with peers and educators (Brown et al., 2019; Parker, 2019). Motivation to return to school was often tied to aspirations for greater personal and professional opportunities (Sagna & Vaccaro,

2023), enhanced self-esteem and belonging (Strayhorn, 2023), and a desire to reclaim a sense of personal achievement that had previously felt unattainable (Rayborn, 2015). These findings reinforce prior research suggesting that adult learners re-engage with education not merely to obtain credentials, but to reconstruct their academic identities after prolonged periods of disengagement.

Social dynamics of prior schooling, particularly negative peer interactions, played a significant role in shaping participants' earlier academic struggles. Experiences of bullying, exclusion, and social contagion, where disengagement was normalized within peer networks, contributed to withdrawal from school and reinforced beliefs that educational spaces were unsafe or unwelcoming (Dupere et al., 2021; Fredricks et al., 2019). For several participants, these dynamics intersected with racial stressors, including microaggressions and disciplinary disproportionality, which research has shown to undermine academic self-concept and increase dropout risk among BIPOC students (Blake et al., 2020; Saleem et al., 2021). Such experiences cultivated resistance, suspicion, and self-doubt that lingered well beyond students' initial departure from school (Brown et al., 2019).

Despite these compounded challenges, participants identified strong emotional support from family and loved ones as foundational to their renewed sense of purpose and self-belief. Consistent with prior research, this support functioned as both an emotional anchor and a practical safety net, enabling students to imagine academic success as attainable (Bott-Lyons & Guillaume, 2023; Sagna & Vaccaro, 2023). Collectively, these findings suggest that GED students' academic self-concept is shaped through an ongoing negotiation between past educational harm and present sources of validation and support. Recognizing this complexity

underscores the importance of GED programs that intentionally foster belonging, affirm resilience, and counteract the long-term effects of prior disengagement.

Research Question 2

How does participating in a cognitive learning environment that is both supportive and challenging influence how GED students perceive their academic abilities?

The second research question examined how participation in a cognitive learning environment that was both supportive and appropriately challenging influenced GED students' perceptions of their academic abilities. Overall, students described reclaiming their confidence and seeing themselves as capable learners. This shift is particularly meaningful given that returning to education often requires GED students to confront enduring emotional and structural barriers rooted in prior academic failure, including shame, self-doubt, and fear of repeated failure (Nguyen, 2018; Hansen et al., 2019). Consistent with scholarship framing dropout as a "wicked problem," participants' academic disengagement did not stem from a lack of ability but from a prolonged accumulation of barriers that shaped how they viewed themselves as learners long before entering the GED classroom (Bickerstaff, 2010; Rittel & Webber, 1973).

Despite these obstacles, participation in a learning environment that balanced challenge with support allowed students to interrupt patterns of avoidance behavior commonly associated with low academic self-efficacy. Prior research suggests that GED students who hold negative perceptions of their academic ability often avoid challenging tasks to protect themselves from failure, reinforcing a self-fulfilling cycle of disengagement (Bandura, 1977; Goto & Martin, 2009). In contrast, participants in this study described instructors who intentionally scaffolded learning, encouraged risk-taking, and normalized struggle as part of the learning process. This

instructional approach enabled students to engage with challenging material without fear, contributing to renewed confidence and persistence.

Social dynamics further distinguished the GED learning environment from participants' prior K–12 experiences. While earlier schooling was often characterized by bullying, exclusion, and deteriorating perceptions of fairness and belonging (Rifenbark et al., 2023; Van Eck et al., 2017), the GED classroom fostered a climate of mutual respect and encouragement. Students emphasized that peer support and instructor attentiveness were central to their sense of academic belonging, echoing research linking positive learning climates to increased motivation and engagement among adult learners (Wilson, 2016). Becky's account of instructors taking the time to explain concepts illustrates how individualized support helped dismantle long-standing assumptions of incompetence and enabled students to envision future academic and professional goals.

These findings align closely with andragogical theory, which emphasizes learner autonomy, relevance, and the integration of prior experiences as foundations for adult learning success (Amiruddin et al., 2023). Instructors who employed andragogical strategies, such as flexible teaching methods, guided notes, and problem-centered instruction, created cognitive learning environments that validated students' lived experiences while holding high expectations (Biggers & Luo, 2019; Dwivedi, 2018). By emphasizing relevance and providing consistent support, instructors helped students reinterpret challenges as achievable rather than threatening. Collectively, these findings suggest that a supportive yet challenging cognitive learning environment plays a critical role in reshaping GED students' academic self-perception. When instructional practices intentionally address emotional barriers and promote self-efficacy, GED

students are more likely to persist, engage deeply with learning, and reclaim an academic identity previously disrupted by disengagement.

Research Question 3

How does the GED instructor conceptualize the value of incorporating cognitive learning theory and challenge and support theory into lesson planning and instruction?

Research Question 3 explored how GED instructors conceptualized the value of incorporating cognitive learning theory and Sanford's challenge and support model into lesson planning and instruction. Overall, instructors described theory-based instruction as a deliberate and relational process that balances activating students' prior knowledge with cultivating a supportive learning community. This approach aligns with cognitive learning theory and Sanford's (1962) challenge and support framework, which emphasizes that meaningful learning occurs when students are sufficiently challenged while simultaneously supported through structure, encouragement, and validation. Instructors quickly aligned with the theoretical framework, noting that when cognitive and affective strategies are intentionally blended, students are more willing to engage, take risks, and persist through difficulty.

Importantly, these findings stand in contrast to much of the existing literature on GED students, which has historically emphasized barriers, deficiencies, and disengagement. While prior research has extensively documented teacher burnout, institutional constraints, and student-level challenges (Bottiani et al., 2019; Brady et al., 2023), this study intentionally shifts away from a deficit-oriented lens. Rather than asking why GED students struggle, this inquiry centers what becomes possible when instructors are equipped with theory-based tools and afforded the opportunity to implement them within a supportive instructional context. By focusing on

instructors' conceptualizations and classroom practices, this study highlights how GED programs can function as sites of possibility, resilience, and intellectual growth.

After implementing theory-based strategies, instructors observed noticeable changes in student confidence, engagement, and academic risk-taking. Students who had previously remained quiet or disengaged began participating more actively in discussions, collaborating with peers, and expressing curiosity about course material. Ms. Doors noted that one student described a lesson as "fun and interesting," while another student, typically reluctant to be called on, demonstrated increased confidence when working in a small group. Similarly, Mr. Lock described a student who frequently entered class withdrawn, with her head down, but who became visibly engaged during the lesson, offering thoughtful responses and asking questions. These observations reinforce the notion that learning environments designed to balance challenges with support can disrupt avoidance behaviors rooted in fear of failure and reshape students' perceptions of themselves as capable learners.

The classroom observations provided a rare, close-up view of how theory-informed instruction unfolds in real time. Ms. Doors' lesson on "The Flowers" demonstrated how activating prior knowledge through concept mapping, discussion, and collaborative analysis allows students to enter complex texts with confidence. Rather than positioning students as passive recipients of knowledge, she treated their lived experiences as intellectual assets, validating their interpretations and encouraging deeper inquiry. The use of small-group work, gallery walks, and reflective questioning created a learning environment where challenge was normalized and support was collective. Students were not shielded from complexity; instead, they were invited to engage with it in ways that felt accessible and meaningful.

Similarly, Mr. Lock's lesson on The Fourth of July illustrated how challenge and support can coexist within discussions of historically and emotionally complex topics. Drawing from his background in kinesiology, Mr. Lock approached learning as an active, embodied process, emphasizing reflection, dialogue, and real-world application. By inviting students to connect concepts of freedom and fairness to their lived experiences and contemporary events, he positioned them as critical thinkers capable of grappling with ambiguity and injustice. His intentional use of think-pair-share activities, guided discussion, and historical context allowed students to engage deeply without fear of being "wrong." Small gestures, such as offering apples at the start of class, further reinforced a sense of belonging and care, signaling that students' well-being mattered alongside their academic growth.

Instructors' professional backgrounds played a critical role in shaping their instructional approaches. Ms. Doors' extensive K–12 experience informed her ability to create a warm, structured classroom environment that balanced encouragement with accountability. Her willingness to allow "pity parties," followed by collective encouragement to persist, reflected a deep understanding of the emotional barriers adult learners carry into the classroom. Mr. Lock's transition from kinesiology to adult education required intentional reflection on how adults learn, particularly those returning to education after negative schooling experiences. Both instructors described theory-based instruction as expanding their professional identities, enabling them to teach with greater intentionality, responsiveness, and confidence.

These findings also complicate dominant narratives around teacher burnout. While existing research rightly emphasizes the emotional labor and systemic stressors educators face (Brady et al., 2023; Delpit, 2006), the instructors in this study described theory-informed practice as energizing rather than depleting. Engaging with cognitive learning theory and challenge and

support principles provided a framework for making sense of student behavior, reducing frustration, and fostering more meaningful connections with learners. Rather than viewing disengagement as a student deficit, instructors interpreted it as a signal for instructional adjustment, reflection, and support.

Grounded in adult learning theory, or andragogy, instructors emphasized autonomy, relevance, and respect for prior experiences as foundational to student success (Amiruddin et al., 2023). Both classrooms demonstrated how learner-centered practices, such as flexible instructional strategies, opportunities for reflection, and validation of lived experience, can promote motivation and persistence among GED students. These approaches align with research suggesting that when adult learners feel respected, supported, and intellectually challenged, they are more likely to reframe prior academic failures and engage fully in the learning process.

Collectively, the findings from Research Question 3 underscore the value of shifting the focus of GED research from deficit to design. This study offers a front-row seat to instructional environments that work well for GED students, illuminating the intentional practices, relational dynamics, and theoretical grounding that support both student and instructor growth. By centering instructor perspectives and classroom practice, this research contributes a strengths-based narrative that highlights what GED programs can become when theory is translated into practice with care, intentionality, and respect for learners' lived experiences. In doing so, it positions GED classrooms not as sites of remediation, but as spaces of transformation, possibility, and renewed academic identity.

Theoretical Framework

This study is grounded in a theoretical framework that integrates Sanford's challenge and support theory with cognitive learning theory to examine the development of GED students' self-

perception of academic ability. Sanford's theory posits that optimal student growth occurs when appropriate academic challenges are balanced with sufficient support; excessive challenges without support can lead to frustration and disengagement, whereas support without challenge may inhibit development and limit intellectual growth. This balance is particularly relevant for GED students, many of whom may not have previously experienced an educational environment that effectively fostered both challenge and support. By explicitly considering the emotional, cognitive, and social dimensions of learning, Sanford's framework provides a lens through which to understand how adults re-engage with education after prior academic setbacks.

The findings of this study reinforce the relevance of challenge and support theory in GED contexts. Students reported that participating in lessons designed to be both cognitively demanding and emotionally supportive helped them reclaim confidence and view themselves as capable learners. For example, in Ms. Doors' "The Flowers" lesson, students were encouraged to draw on prior knowledge through a concept map and to collaborate in small groups while analyzing symbolism, imagery, and textual meaning. The combination of challenge: analyzing layered narrative elements, and support: the structured group work, reflective questioning, and instructor guidance, allowed students to engage deeply with the content and recognize their own ability to think critically. Similarly, in Mr. Lock's "Fourth of July" lesson, students navigated complex discussions about freedom, equity, and historical context, connecting prior knowledge with new concepts while receiving scaffolding through guided questioning and real-world examples. Observational data and student feedback demonstrated that learners who might otherwise have been hesitant to participate became engaged, offering insights and reflecting critically on content, illustrating Sanford's assertion that growth occurs at the intersection of challenge and support.

Cognitive learning theory complements Sanford's framework by emphasizing learners' active mental processes, including attention, memory, problem-solving, and reflection. The study revealed that when instructors intentionally employed cognitive strategies, such as concept mapping, think-pair-share, and reflective questioning, students were able to organize prior knowledge, construct new understanding, and critically evaluate ideas. These strategies not only enhanced comprehension of the subject matter but also contributed to a shift in students' self-perception. For instance, students described feeling capable of tackling challenging material and appreciated that their prior experiences and knowledge were valued within the learning process. This aligns with schema theory, as learners were able to integrate new information into existing cognitive frameworks, and with constructivist perspectives, which emphasize active knowledge construction through interaction with content and peers (Bjork et al., 1974; Turner, 1973; Vygotsky, 1978).

The results of this study also highlight how a strength-based approach amplifies the impact of these theories. Rather than framing GED students solely through the lens of deficits, the inquiry centered on students' potential and resilience, demonstrating that theory-informed instruction can provide opportunities for growth, engagement, and confidence-building. Instructors' professional identities and classroom practices were essential to this process. Mr. Lock's emphasis on real-world application and curiosity-driven discussion, and Ms. Doors' encouragement and structured reflection, illustrate how challenge and support theory and cognitive learning strategies translate into actionable pedagogical practices. These practices enabled students to experience incremental successes, take intellectual risks safely, and engage in sustained reflection, all of which reinforced their academic self-efficacy.

Together, challenge and support theory and cognitive learning theory provide a cohesive framework for designing GED instructional interventions that are both rigorous and supportive. The findings of this study suggest that when instructors intentionally balance cognitive challenge with scaffolded support, students not only develop stronger academic skills but also cultivate positive self-perception, persistence, and confidence. By integrating theory and practice, this framework offers a blueprint for creating GED learning environments that nurture the intellectual and affective growth of adult learners, providing a replicable model for educators seeking to promote holistic student success.

Limitations/Delimitations of the Study

This qualitative study was conducted at a single rural community college in eastern North Carolina and focused on a small, self-selected cohort of GED students. Due to the localized, non-random sample and single-site design, the study does not aim for statistical generalizability; instead, findings are analytically generalized to similar community college contexts serving non-traditional GED students. The study intentionally centered on students' personal and academic experiences and self-perceptions, excluding faculty perspectives, institutional policies, and program outcomes such as persistence or completion. Its scope was deliberately limited to examining how a theory-based intervention influenced students' self-perception of academic ability.

Key limitations included inconsistent student attendance, potential response bias due to concerns about evaluating the instructor, and power dynamics associated with one-on-one interviews conducted by an experienced ABE leader. These issues were mitigated through transparency, assurances of confidentiality, clear communication of the study's purpose, supportive interview conditions, and the availability of counseling resources. Despite these

constraints, careful design and ethical safeguards were employed to enhance data credibility and minimize participant harm.

Despite these constraints, the study provides meaningful insights into the ways theory-informed instructional strategies can shape GED students' academic self-concept. The careful design, ethical safeguards, and rich qualitative data contribute to a nuanced understanding of student experiences, offering evidence to inform future research, professional development, and practice in adult basic education. In this way, the study's findings extend beyond its immediate context, highlighting actionable strategies for enhancing learner engagement, confidence, and persistence in similar educational settings.

Implications for Practice

The findings of this study suggest several critical implications for GED practitioners seeking to strengthen students' self-perception of academic ability and promote persistence. Foremost, GED instructors and program leaders should intentionally design learning environments that thoughtfully balance academic challenges with tailored instructional and emotional support. Consistent with Sanford's challenge and support theory, educators must provide tasks that extend students beyond their current skill level while simultaneously offering scaffolding, guidance, and positive feedback. When challenges are too difficult without adequate support, students may experience frustration or disengagement; conversely, excessive support without meaningful challenge may limit intellectual growth. The classroom examples from this study illustrate how these principles operate in practice: Ms. Doors' "The Flowers" lesson incorporated small-group activities and reflective questioning that challenged students to analyze symbolism while fostering a safe space for exploration. Mr. Lock's "Fourth of July" lesson blended discussion, historical analysis, and real-world connections to challenge students

cognitively while offering consistent scaffolding and encouragement. These strategies highlight the value of deliberate, theory-informed instructional design in GED classrooms.

Additionally, practitioners are encouraged to integrate cognitive learning strategies that actively engage students in the learning process. Problem-solving, metacognitive reflection, and knowledge construction allow students to actively interact with new concepts, apply prior knowledge, and make meaning from their experiences. In this study, students reported increased confidence when they were encouraged to articulate their thinking, reflect on prior experiences, and participate in structured peer interactions. By emphasizing active learning, GED instructors shift students from passive recipients of information to empowered learners capable of monitoring their progress and developing a sense of agency. This aligns with research in adult learning theory, which highlights the importance of leveraging learners' prior experiences, autonomy, and motivation in cultivating persistence and engagement (Amiruddin et al., 2023). Assessing students' readiness, academically, emotionally, and socially, is another critical implication. Differentiated instruction, flexible pacing, and responsive scaffolding ensure that challenges are developmentally appropriate for each learner. GED students often enter the classroom with diverse educational histories, ranging from long absences from formal schooling to prior experiences of failure, marginalization, or trauma. Recognizing and responding to these factors is essential for preventing disengagement while encouraging growth. The study illustrated that even small gestures, such as offering apples in Mr. Lock's classroom or providing structured encouragement in Ms. Doors' class, can signal support, enhance comfort, and encourage risk-taking, which are essential for academic and personal growth.

Finally, this study emphasizes the importance of professional development for GED instructors focused on integrating Sanford's (1962) challenge and support theory with cognitive

learning strategies. Training that deepens instructors' understanding of how to align rigor with scaffolding can foster deliberate, learner-centered practices that enhance student engagement, confidence, and self-perception. Educators trained in these strategies can more effectively create environments where students feel empowered to take intellectual risks, reflect on their learning, and experience incremental successes. The professional development materials included in the Appendix provide a practical blueprint for supporting instructor capacity-building. Ultimately, these findings suggest that GED programs can create more equitable, responsive, and empowering learning environments when instructional design is informed by theory, evidence, and deliberate attention to the holistic needs of adult learners.

Recommendations for Future Research

Building on the findings and implications of this study, several avenues for future research emerge that could strengthen understanding and practice in GED education. First, replicating the integration of challenge and support theory with cognitive learning strategies across multiple GED programs and institutional contexts is essential. Extending observations over three to six months would allow researchers to examine longitudinal effects on student engagement, confidence, and persistence. Multi-site research could also illuminate how contextual variables, such as urban versus rural settings, cohort composition, or resource availability, affect the efficacy of theory-informed instruction. This broader investigation would provide evidence on the scalability and generalizability of the findings, helping program leaders make informed decisions about instructional design.

Future studies should also examine the relationship between students' self-perception of academic ability and measurable program outcomes, including attendance, participation in GED testing, and credential completion rates. While the current study focused on shifts in self-

perception, linking these attitudinal changes to tangible outcomes could offer evidence of whether enhanced academic self-efficacy directly supports persistence and achievement. For instance, researchers could track whether students who report increased confidence following cognitive and challenge-support interventions demonstrate higher test attempts, improved scores, or increased retention compared with students in more traditional instructional settings.

Another promising direction is exploring the relative impact of specific cognitive learning strategies, such as scaffolded instruction, problem-based learning, concept mapping, or metacognitive reflection, on GED students' academic confidence and learning outcomes. Disentangling the effects of individual strategies may help instructors prioritize instructional practices that are most effective for diverse adult learners. Similarly, research could examine how students' prior educational experiences, learning styles, and cultural backgrounds interact with these strategies to optimize engagement and persistence.

Examining students' readiness for challenge, encompassing emotional, psychological, and academic preparedness, is also warranted. Understanding how readiness influences the effectiveness of challenge and support interventions could enable instructors to tailor instruction to meet learners where they are, thereby maximizing growth and minimizing frustration. Longitudinal research could investigate whether interventions designed to build readiness prior to challenging lessons enhance outcomes across multiple GED subjects.

Finally, further research on professional development for GED instructors is critical. Investigating how training in challenge and support theory and cognitive learning strategies influences instructional practices, student–instructor relationships, and program outcomes could provide actionable guidance for program leaders and policymakers. This includes understanding how instructor backgrounds, teaching philosophies, and prior experience shape the

implementation of these strategies, and whether deliberate reflection on practice enhances their efficacy. Collectively, these research directions would provide a robust evidence base to guide GED instructional innovation, inform policy, and support adult learners in achieving academic success and positive self-perception.

Implications and Reflections on Scholarly Practitioner Role

As I began this study examining perceptions of academic ability and the role of supportive learning environments within a GED classroom, I anticipated that participant stories would closely mirror the challenges well documented in the literature. The literature review foregrounded systemic inequities that contribute to K–12 disengagement, including underfunded schools, high teacher turnover, over-disciplining of BIPOC students, persistent microaggressions, and the characterization of dropout as a "wicked problem." I entered the research expecting participants to primarily affirm these documented injustices through their lived experiences.

While elements of the literature were present in participants' accounts, the findings ultimately challenged my initial assumptions. Rather than centering their narratives on deficit-based explanations or lingering in past educational harms, participants demonstrated remarkable resilience and a future-oriented focus. They spoke with clarity and determination about completing their GED and pursuing goals beyond the classroom. Although some students referenced painful or traumatic experiences that contributed to their departure from traditional schooling, these experiences did not define how they understood themselves as learners. Instead, participants articulated a renewed sense of academic possibility grounded in purpose, perseverance, and belief in their own capacity to succeed.

This reframing required me, as a researcher and practitioner, to confront my own assumptions. The students' stories shifted the focus from what had failed them in the past to what sustained them in the present. This realization reinforced the importance of research that moves beyond deficit-oriented frameworks and instead highlights learner agency, strength, and aspiration, particularly within adult education contexts that are often framed through remediation rather than potential.

My positionality as the researcher also played a significant role in shaping this study. Originally, the research was designed to take place at the community college where I had been employed for over two and a half years. However, unforeseen professional disruptions required a rapid and unplanned pivot. The loss of my position necessitated identifying a new research site under significant time and logistical constraints. Multiple institutions were contacted, and several potential opportunities dissolved due to circumstances beyond my control. Ultimately, the study was conducted at a different community college, CTCC, during a condensed five-day period over fall break rather than the originally intended three-month timeframe.

While these constraints significantly altered the scope of the study, they also provided unexpected insight into the relational dynamics of trust, vulnerability, and engagement in qualitative research. Despite my lack of prior connection to the institution, instructors and students welcomed the study with openness and enthusiasm. Students engaged fully in the research process, asked thoughtful questions about consent and confidentiality, and demonstrated a strong sense of ownership over their participation, particularly through the selection of pseudonyms and their understanding of how their stories would be represented.

During interviews, participants spoke candidly and with emotional depth, sharing experiences of hardship, growth, and hope. Their willingness to engage so openly in such a brief

timeframe suggests that trust was established not through prolonged familiarity, but through authenticity, transparency, and mutual respect. In this way, the study underscores the role of the scholarly practitioner not only as a researcher, but as a relational presence, one who honors participant voice and creates space for meaningful storytelling within ethical research boundaries.

As the study concluded, I was struck by both the richness of the data collected and the limitations imposed by time. Even within four instructional days, the intentional integration of challenge, support, and cognitive learning strategies yielded observable shifts in student engagement and self-perceptions of academic ability. Instructors expressed a desire for deeper professional development and extended collaboration, further signaling the potential impact of sustained implementation.

These reflections point to clear implications for future research and practice. Expanding this study across multiple sites and extending its duration would allow for deeper exploration of instructional alignment, longitudinal changes in academic self-concept, and the sustained impact of professional development for GED instructors. For me, this experience reaffirmed the responsibility of the scholarly practitioner to remain adaptable, reflective, and grounded in the lived realities of learners. Even within constrained conditions, research rooted in respect, rigor, and responsiveness can illuminate pathways toward more equitable and empowering adult education environments.

Conclusion

The persistence of student attrition in North Carolina public schools underscores a critical educational challenge with long-term consequences for individuals, families, and communities. While recent data suggest a slight decline in annual dropout rates, North Carolina public schools

have averaged more than 10,000 students leaving the K–12 system each year over the past three years, with the highest percentage of students exiting in ninth grade (NCDPI, 2025). These trends have lasting social, economic, and personal impacts, including reduced career opportunities, diminished earning potential, and decreased civic engagement. In response to this ongoing challenge, the North Carolina Community College System (NCCCS) provides a vital pathway for reengagement through high school equivalency programs, including the GED credential offered statewide via the Finish High School initiative (NCCC, n.d.). GED programs represent more than a credentialing pathway, they provide adult learners with an opportunity to reclaim confidence, develop academic skills, and reimagine their educational trajectories.

The findings of this study illuminate how both GED students and instructors experienced a theory-based instructional intervention designed to balance cognitive challenge and social-emotional support. Across the study, students entered the program with varying degrees of resilience and self-perception shaped by prior negative school experiences, including disengagement, social exclusion, or academic struggle. Despite these challenges, students consistently reported increased confidence, clarity, and motivation following participation in theory-informed lessons. Students highlighted that their growth was fostered not solely by exposure to content but by the supportive learning climate, the intentional scaffolding of tasks, and the opportunity to engage cognitively while feeling encouraged and validated. Ms. Doors' "The Flowers" lesson, for example, demonstrated how reflective questioning, collaborative group work, and conceptual mapping activated prior knowledge while providing a safe environment to take intellectual risks. Similarly, Mr. Lock's "Fourth of July" lesson showed how integrating real-world connections, historical analysis, and guided reflection can challenge students cognitively while offering ongoing feedback and emotional support. These classroom

examples illustrate the practical application of cognitive learning and challenge-and-support theories, providing students with experiences that enhanced both competence and confidence.

Instructors' reflections further underscore the value of theory-based instruction. They described how integrating cognitive and affective strategies reinforced their professional identities and aligned with their teaching philosophies. Mr. Lock emphasized that adapting strategies from his kinesiology background required intentional attention to student readiness and engagement, fostering meaningful reflection and dialogue. Ms. Doors noted that deliberate encouragement and celebration of incremental successes strengthened students' motivation and self-efficacy. Collectively, these findings suggest that theory-informed approaches not only enhance student outcomes but also expand instructor capacity, providing them with structured methods to intentionally balance challenge and support while cultivating active, reflective learners.

Importantly, this study takes a strengths-based perspective, challenging the deficit-oriented lens that dominates much of the GED and adult education literature. Rather than framing GED students as "remedial" or "at-risk," this research highlights their agency, resilience, and capacity for growth when provided with appropriately structured, supportive, and engaging learning opportunities. The study demonstrates that students' academic self-perception can be strengthened through deliberate instructional design, scaffolding, and social-emotional support, offering a model for reframing adult education from a deficit-focused paradigm to one that emphasizes empowerment and potential.

This research contributes to adult education and GED literature by providing empirical evidence that instructional strategies grounded in cognitive learning theory and Sanford's (1962) challenge and support model are both theoretically sound and practically effective. While prior

research emphasizes adult learning theory broadly, this study applies those frameworks directly to GED classrooms, addressing a gap in literature that has often generalized adult learners without adequate focus on high school equivalency populations. Furthermore, it illustrates the interplay between instructional design, classroom climate, and student outcomes, highlighting actionable strategies that can be adapted to other adult education contexts.

Several limitations should be acknowledged. The study was conducted within a single GED program with a limited number of participants, which allowed for rich, in-depth analysis but limits generalizability. Future research should examine the implementation of theory-informed instruction across multiple GED programs, including urban and rural contexts, correctional education settings, and online or hybrid learning environments. Longitudinal and mixed-methods research could further explore whether improvements in self-perception translate into sustained engagement, persistence, and credential completion. Additionally, research could investigate the impact of professional development for instructors in challenge-and-support and cognitive learning strategies, examining the ripple effects on student engagement, classroom climate, and learning outcomes.

Despite these limitations, the findings offer meaningful implications for practice, highlighting how GED programs can intentionally cultivate supportive, challenging, and cognitively engaging learning environments. By activating prior knowledge, scaffolding new learning, promoting reflection, and providing consistent encouragement, educators can strengthen students' academic self-concept, foster persistence, and support long-term educational success. This study demonstrates that when theory-informed strategies guide GED instruction, adult learners are empowered to achieve academic growth and fully realize their potential.

REFERENCES

Abel, M. H., & Sewell, J. (1999). Stress and burnout in rural and urban secondary school teachers. *The Journal of Educational Research*, *92*(5), 287-293. https://doi.org/10.1080/00220679909597608

Afia, K., Dion, E., Dupéré, V., Archambault, I., & Toste, J. (2019). Parenting practices during middle adolescence and high school dropout. *Journal of Adolescence (London, England.), 76*(1), 55-64. https://doi.org/10.1016/j.adolescence.2019.08.012

Agger, C., Meece, J. & Byun, S.Y. (2018). The influences of family and place on rural adolescents' educational aspirations and post-secondary enrollment. *Journal of Youth and Adolescence, 47*(12), 2554-2568, doi: 10.1007/s10964-018-0893-7.

Alivernini, F., & Lucidi, F. (2011). Relationship between social context, self-efficacy, motivation, academic achievement, and intention to drop out of high school: A longitudinal study. *The Journal of Educational Research, (104)*4, 241-252. https://doi.org/10.1080/00220671003728062

American Association of Community Colleges. (2024). *About community colleges*. American Association of Community Colleges. https://www.aacc.nche.edu/about/

American Council on Education. (n.d.). *Our history: A history of leading the way*. https://www.acenet.edu/About/Pages/history.aspx#:~:text=In%201942%2C%20ACE%20helped%20to%20develop%20the,and%20national%20college%20and%20career%20readiness%20standards.

American Psychological Association. (2012). *Facing the school dropout dilemma*. https://www.apa.org/pi/families/resources/school-dropout-prevention.pdf

Amiruddin., Baharuddin, F. R., Takbir., Setialaksana, W., & Nurlaela. (2023). Andragogy, peeragogy, heutagogy and cybergogy contribution on self-regulated learning: A structural equation model approach. *International Journal of Instruction, 16*(3), 551-572. https://doi.org/10.29333/iji.2023.16330a

Anderson, O. S. (2017). *Perspectives on the Challenges GED Students Face to Attain Proficiency* [Doctoral dissertation, Trident University International]. ProQuest Dissertations Publishing.

Archambault, I., Cantin. S., Dixson. E., Duere. V, & Lacourse. E (2021). Social contagion and high school dropout: The role of friends, romantic partners, and siblings. *Journal of Educational Psychology, 113*(3), 572-584. https://doi.org/10.1037/edu0000484

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 191-215. https://doi.org/10.1037/0033-295X.84.2.191

Bartlett, F. C. (1932) *Remembering: A study in experimental and social psychology* (2nd ed.). Cambridge University Press.

Beder, H. (1990). Reasons for nonparticipation in adult basic education. *Adult Education Quarterly, 40*(4), 207-208. https://doi.org/10.1177/0001848190040004003

Bentley-Edwards, K. L., Stevenson, H. C., Thomas, D., Adams-Bess, V., & Coleman-King, C. (2020). Teaching scared: Pre-service teacher appraisals of racial stress, socialization and classroom management self-efficacy. *Social Psychology of Education: An International Journal, 23*(5), 1233-1257. https://doi.org/10.1007/s11218-020-09578-8

Best GED Classes. (2024). *How to prepare for the GED test: A comprehensive guide*. Best GED Classes. https://www.bestgedclasses.org/how-to-prepare-for-the-ged-test

Bickerstaff, S. E. (2010). *Youth returning to school: Identifies imposed, enacted, resisted, and explored.* [Doctoral dissertation, University of Pennsylvania]. UPenn Repository.

Biggers. B, & Luo. T. (2020). Guiding students to success: A systematic review of research on guided notes as an instructional strategy from 2009-2019. *Journal of University Teaching and Learning Practice, 17*(3). https://files.eric.ed.gov/fulltext/EJ1264517.pdf

Bjork, R. M., Dunbar, R. E., Barlow, T. A., Zimmer, B. J., Szoke, R., Brosio, R. A., & Salomon, G. (1974). Book review section 3. *Educational Studies*, *5*(4), 258–269. https://doi.org/10.1207/s15326993es0504_8

Blake, J. J., Smith, D. M., Asha, U., Marchbanks, Miner P., I., II, Wood, S., & Eason, J. M. (2020). Behind the eight ball: The effects of race and number of infractions on the severity of exclusionary discipline sanctions issued in secondary school. *Journal of Emotional and Behavioral Disorders, 28*(3), 131-143. https://doi.org/10.1177/1063426620937698

Blondal, K. S., & Adalbjarnardottir, S. (2014). Parenting about school dropout through student engagement: A longitudinal study. *Journal of Marriage and Family, 76*(4), 778-795. https://doi.org/10.1111/jomf.12125

Bottiani, J. H., Duran, C. A. K., Pas, E. T., & Bradshaw, C. P. (2019). Teacher stress and burnout in urban middle schools: Associations with job demands, resources, and effective classroom practices. *Journal of School Psychology, 77*(36), 1-16. https://doi.org/10.1016/j.jsp.2019.10.002

Bottiani, J. H., McDaniel, H. L., Henderson, L., Castillo, J. E., & Bradshaw, C. P. (2020). Buffering effects of racial discrimination on school engagement: The role of culturally

responsive teachers and caring school police. *Journal of School Health, 2020*(12), 1019-1029. doi: 10.1111/josh.12967

Bott-Lyons. T. C., & Guillaume. R.O. (2023). Launching pads and home bases: Peer support and college success for high school students. *COABE Journal: The Resource for Adult Education, 12*(1), 11-21.

Brady, L. L., McDaniel, S. C., & Choi, Y. (2023). Teacher stress and burnout: The role of psychological work resources and implications for practitioners. *Psychology in the Schools, 60*(6), 1706-1726. https://doi.org/10.1002/pits.22805

Broton, K. M., Mohebali, M., & Goldrick-Rab, S. (2022). Deconstructing assumptions about college students with basic needs insecurity: Insights from a meal voucher program. *Journal of College Student Development, 63*(2), 229-234. https://doi.org/10.1353/csd.2022.0018

Brown, T. M., Galindo, C., Quarles, B., & Alice LaRue, J. C. (2019). Self-efficacy, dropout status, and the role of in-school experiences among urban, young adult school-leavers and non-leavers. *The Urban Review, 51*(5), 816-844. https://doi.org/10.1007/s11256-019-00508-3

Business Wire. (2023, October 4). *How student retention teams are saving high school dropouts*. https://www.businesswire.com/news/home/20231004025864/en/How-Student-Retention-Teams-Are-Saving-High-School-Dropouts

Cece, V., Guillet-Descas, E., & Lentillon-Kaestner, V. (2021). The longitudinal trajectories of teacher burnout and vigour across the school year: The predictive role of emotional intelligence. *Psychology in the Schools, 59*(3), 589-606. https://doi.org/10.1002/pits.22633

Chambers, D., Dunn, C., & Rabren, K. (2004). Variables affecting students' decisions to drop out of school. *Remedial and Special Education (RASE), 25*(5), 314-323. https://www.proquest.com/scholarly-journals/variables-affecting-students-decisions-drop-out/docview/57099706/se-2

Chambers, C. R. (2016). *Law and social justice in higher education.* Routledge.

Chambers, C. R. (2020). Let's give ‘em something to talk about: Spurring college conversations among rural students, schools, and families. In H. C. Greene & B. S. Zugelder (Eds.), *Handbook of Research on Leadership and Advocacy for Children and Families in Rural Poverty* (pp. 279-294). IGI Global.

Chipchase, L., Davidson, M., Blackstock, F., Bye, R., Colthier, P., Krupp, N., Dickson, W., Turker D., & Williams, M. (2017). Conceptualizing and measuring student disengagement in higher education: A synthesis of the literature. *International Journal of Higher Education, 6*(2), https://doi.org/10.5430/ijhe.v6n2p31

Clandinin, D. J., & Connelly, F. M. (2004). *Narrative inquiry: Experience and story in qualitative research*. Jossey-Bass.

Coker, T. R., Elliott, M. N., Kanouse, D. E., Grunbaum, J. A., Schwebel, D. C., Gilliland, M. J., Tortolero, S. R., Peskin, M. F., & Schuster, M. A. (2011). Perceived racial/ethnic discrimination among fifth-grade students and its association with mental health. *American Public Health Association, 99*(5), 878-884. https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2008.144329

Comings, J. P. (2007). *Persistence: Helping adult education students reach their goals.* Literacy Information and Communication System (LINCS). Retrieved April 2025 from http://www.ncsall.net/fileadmin/resources/ann_rev/comings-02.pdf

Community Health Assessment (2024). *My Future NC*. Retrieved April 2025 from https://www.myfuturenc.org/.

Connections Technical Community College [CTCC] (2025).GED Enrollment [Unpublished data].

Connections Technical Community College [CTCC] (n.d.a).College and Career Readiness (GED, HiSET, & ESL. Retrieved April 21, 2025.

Connections Technical Community College [CTCC] (n.d.b).Our History. Retrieved April 9, 2025.

Creswell, J. W, & Poth, C. N. (2018). *Qualitative inquiry & research design: choosing among five approaches* (4th ed.). Los Angeles: SAGE.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications, Inc.

Delpit, L. (2006). *Other people's children: Cultural conflict in the classroom.* The New Press.

Demetrion, G. (2021). Probing the interface between learning theory and practice in adult basic education. *Adult Literacy Education, 3*(2). https://doi.org/10.35847/GDemetrion.3.2.22

Downes, N., & Roberts, P. (2018). Revisiting the schoolhouse: A literature review on staffing rural, remote, and isolated schools in Australia 2004-2016. *Australian and International Journal of Rural Education, 28*(1), 31-54. https://search.informit.org/doi/10.3316/informit.266568991636396

Dupéré, V., Dion, E., Cantin, S., Archambault, I., & Lacourse, E. (2021). Social contagion and high school dropout: The role of friends, romantic partners, and siblings. Journal of Educational Psychology, 113(3). https://doi.org/10.1037/edu0000484

Dwivedi. S.K., (2018) Andragogy: The teaching strategies developed for adult learners. *Journal of Emerging Technologies and Innovative Research, 5*(4), 880-883. https://www.jetir.org/papers/JETIR1811C34.pdf

Evans, N. J., Forney, D. S., Guido, F. M., Patton, L. D., & Renn, K.A. (2010). *Student development in college: Theory, research, and practice* (2nd ed.). Jossey-Bass.

Fisher, B. W., Wiley, S. A., & McGlynn-Wright, A. (2022). Suspended again: The racialized consequences of a 9th grade suspension on future suspension patterns. *Race and Social Problems, 14*(3), 254-267. https://doi.org/10.1007/s12552-021-09332-5

Fredricks, J. A., Parr, A. K., & Brauer, S. (2019). What matters for urban adolescent's engagement and disengagement in school: A mixed-methods study. *Journal of Adolescent Research, 34*(5), 491-527. https://doi.org/10.1177/074355841983063

Frey, S. (2020). *Success in Learning, Literacy, and Life: Views of Adult Basic Education Students and Federal Policy* [Master's thesis, Pennsylvania State University]. ProQuest Dissertations & Theses.

Gao, F., Mei, Q., & Guo, C. (2020). Relationship between depression and student engagement of senior high school students and the mediating role of resilience. *Revista Argentina De Clínica Psicológica, 29*(1). https://doi.org/10.24205/03276716.2020.3

Garcia, S. E. (2020, June 17). *Where did BIPOC come from?* The New York Times. Retrieved March 29, 2025, from https://www.nytimes.com/article/what-is-bipoc.html#:~:text=The%20acronym%20stands%20for%20%E2%80%9Cblack,media%20was%20a%202013%20tweet.

Garrett-Peters, P. T., Mokrova, I. L., Carr, R. C., Vernon-Feagans, L., & The Family Life Project Key Investigators. (2019). Early student (dis)engagement: Contributions of household

chaos, parenting, and self-regulatory skills. *Developmental Psychology, 55*(7), 1480-1492. https://doi.org/10.1037/dev0000720

GED Testing Service. (2022, October). *GED by the numbers: October 2022 update*. GED Testing Service. https://www.ged.com/educators-admins/in-session/ged-by-the-numbers_oct2022/

GED Testing Service. (2021, November 10). *President's corner: Looking back at 2021 and looking forward to 2022.* Retrieved April 2025 from https://www.ged.com/educators-admins/in-session/presidents-corner_nov2021

Glennie, E., Bonneau, K., Vandellen, M., & Dodge, K. A., (2012). Addition by subtraction: The relation between dropout rates and school-level academic achievement. *Teacher's College Record, 114*(8), 1-26. https://pmc.ncbi.nlm.nih.gov/articles/PMC3763746/

Gopalan, M., & Brady, S. T. (2020). College students' sense of belonging: A national perspective. *Educational Researcher, 49*(2), 134-137. https://doi.org/10.3102/0013189X19897622

Gordon, S. P., & Espinoza, S. (2020). Instructional supervision for culturally responsive teaching. *Educational Considerations, 45*(3) 1-23. https://doi.org/10.4148/0146-9282.2208

Goto, S. T., & Martin, C. (2009). Psychology of success: Overcoming barriers to pursuing further education. *Journal of Continuing Higher Education, 57*(1), 10-21. https://doi.org/10.1080/07377360902810744

GottWorth. A, (2022) Anxiety and Learning in Education. *COABE Journal: The Resource for Adult Education 11*(1). p. 1-6.

Greitzer, F. (2002). A cognitive approach to student-centered e-learning. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 46*, 2064–2068. https://doi.org/10.1177/154193120204602515

Grover, S. D. (2013). *Exploring General Education Development Retention* [Doctoral dissertation, Walden University]. ProQuest Dissertations & Theses.

Hagevik, R., Aydeniz, M., & Rowell, C. G. (2012). Using action research in middle level teacher education to evaluate and deepen reflective practice. *Teacher and Teacher Education, 28*(5), 675-684. https://doi.org/10.1016/j.tate.2012.02.006

Halpern, D. F. (1998). Teaching critical thinking for transfer across domains: Dispositions, skills, structure training, and metacognitive monitoring. *The American Psychologist, 53*(4), 449-455. DOI: 10.1037//0003-066x.53.4.449

Hansen, J.R., Talmage, C. A., Thaxton, S. P., & Knopf, R. C. (2019) Barriers to age-friendly universities: Lessons from other lifelong learning institute demographics and perceptions. *Gerontology & Geriatrics Education, 40*(2), 221-243. DOI: 10.1080/02701960.2019.1572003

Happs, J. C. (1985). Cognitive learning theory and classroom complexity. *Research in Science & Technological Education, 3*(2), 159-174. https://doi.org/10.1080/0263514850030109a

High School of America. (June 20, 2020). *What is GED in America?* Retrieved April 9, 2025, from https://www.highschoolofamerica.com/what-is-a-ged-in-america/#

Hine, G. S. C., & Lavery, S. D. (2014). Action research: Informing professional practice within schools. *Issues in Educational Research, 24*(2), 162-173. http://www.iier.org.au/iier24/hine.html

Hohn, M. D., Lawrence, W., McKinney, J., Rosen, D. J., Santos, M. G., Sheppard, R., Smith, G., & Ziskind, A. (2019). Adult basic education: Community health partnerships and health disparities, *Health Literacy Research and Practice, 3*(3). https://doi.org/10.3928/24748307-20181125-01

Irvin, M. J., Byun, S., Meece, J. L., & Farmer, T. W. (2014). Educational barriers of rural youth: Relation of individual and contextual difference variables. *Journal of Career Assessment, 20*(1), 71-87. https://doi.org/10.1177/10690727114201

Isenberg, E., Max, J., Gleason, P., & Deutsch, J. (2022). Do low-income students have equal access to effective teachers? *Educational Evaluation and Policy Analysis, 44*(2), 234-256. DOI: 10.3102/01623737211040511

Johnson, A. M. (2023). *Grit as a Predictor of Academic Success and Persistence Among GED Students Enrolled in an Adult Education Program* [Doctoral dissertation, San Houston State University] ProQuest Dissertations & Theses.

Kappel, P. L. (2018). *A Qualitative Study of Adult Students' Experiences with Persistence Support* [Doctoral Dissertation, University of Wisconsin-Milwaukee] ProQuest Dissertations & Theses.

Karhina, K., Bøe, T., Hysing, M., Askeland, K. G., & Nilsen, S. A. (2023). Parental separation and school dropout in adolescence. *Scandinavian Journal of Public Health, 52*(5), 632-639. https://doi.org/10.1177/14034948231164692

Kessler-Eng, D. (2022). Placement reform and the nontraditional student. *Research & Teaching in Developmental Education*. 8-14. https://eric.ed.gov/?q=source%3a%22Research+%26+Teaching+in+Developmental+Education%22&ff1=eduTwo+Year+Colleges&id=EJ1343590

Khan, Z., Adnan, J., & Raza, S. (2023). Cognitive learning theory and development: Higher education case study. *IntechOpen*. https://doi.org/10.5772/intechopen.110629

Kingsford-Smith, A. A., Collie, R. J., Loughland, T., & Nguyen, H. T. M. (2023). Teacher wellbeing in rural, regional, and metropolitan schools: Examining resources and demands across locations. *Teaching and Teacher Education*, *132*(2023) DOI:10.1016/j.tate.2023.104229

Kim, Y. A., Lee, D. H., Heo, S. J., & Kim, M. J. (2023). Longitudinal perspective of the stigmatization of secondary school dropouts. Psychology in the Schools, 60(6), 1979–2000. https://doi.org/10.1002/pits.22847

Klieger, D. M., Williams, J. M., Bochenek, J. L., & Ezzo, C. (2022). Validating HiSET tests as high school equivalency tests that improve educational, vocational, and quality-of-life outcomes. *ETS Research Report Series, 2022*(1). DOI:10.1002/ets2.12359

Knowles, M. S., Holton III, E. F., & Swanson, R. A. (2005). *The adult learner: The definitive classic in adult education and human resource development* (6th ed.). Taylor & Francis Group.

Kokkinos, C. M. (2006). Factor structure and psychometric properties of the Maslach Burnout Inventory-Educators survey among elementary and secondary school teachers in Cyprus. *Stress & Health, 22*(1), 25-33. https://doi.org/10.1002/smi.1079

Krumpal, I. (2013). Determinants of social desirability bias in sensitive surveys: A literature review. *Quality & Quantity, 47*(2013), 2025-2047. https://doi.org/10.1007/s11135-011-9640-9

Lansford, J. E., Dodge, K. A., Pettit, G. S., & Bates, J. E. (2016). A public health perspective on school dropout and adult outcomes: A prospective study of risk and protective factors

from age 5 to 27. *Journal of Adolescent Health, 58*(1), 652-658. https://www.jahonline.org/article/S1054-139X(16)00049-5/fulltext

Legette, K. B., Iruka, I. U., Halberstadt, A. G., & Forte, A. B. (2023). Teachers' awareness of systemic and individual racial bias as a first step towards anti-racist schools. *Teaching and Teacher Education, 132*(2023), https://doi.org/10.1016/j.tate.2023.104213

Lewis, K. (1946). Action research and minority problems. In G. W. Lewin (Ed.), *Resolving social conflicts*. Harper & Row.

Lewis, N. R. (2017). *Herstory: Exploration of the lived experiences of women who were first to lead an HBCU 1994 to 2014.* [Doctoral dissertation, Trident University International] ProQuest Dissertations & Theses.

Lewis, T. M. (2009). *Identifying ways to improve learner persistence in GED programs.* [Doctoral dissertation, Capella University] ProQuest Dissertations & Theses.

Liu, Y. (2020). A city college's GED students – Factors and unanswered questions. *Journal of Education, 201*(2), 86-95. https://doi.org/10.1177/0022057420904371

Livingston, M., & Cummings-Clay, D. (2023). Advancing adult learning using andragogic instructional practices. *International Journal of Multidisciplinary Perspectives in Higher Education, 8*(1), 2474-2554. https://files.eric.ed.gov/fulltext/EJ1386100.pdf

Low, S., Yu, L., & Temple, J. R. (2024). Traditional and race-based bullying in racial-minority majority and racially diverse schools. *Journal of Youth and Adolescence, 53*(4), 772-783. DOI: 10.1007/s10964-024-01944-5

Long, A., & Mullin, C. M. (2014). *America's Forgotten Student Population: Creating a Path to College Success for GED Completers*. Stylus.

Longerbeam, S. (2016). Challenge and support for the 21st century: A mixed-methods study of college student success. *Journal of The First-Year Experiences & Students in Transition, 28*(2), 33-51. https://eric.ed.gov/?id=EJ1121487

Madigan, D. J., & Kim, L. E. (2021). Does teacher burnout affect students? A systemic review of its association with academic achievement and students-reported outcomes. *International Journal of Educational Research, 105*(2021), https://doi.org/10.1016/j.ijer.2020.101714

Mangiante, E. M. S. (2011). Teachers matter: Measures of teacher effectiveness in low-income minority schools. *Educational Assessment, Evaluation & Accountability, 23*(1), 41-63. http://dx.doi.org/10.1007/s11092-010-9107-x

McCaskill-Mitchell, S. (2009). *The level of persistence in high school drop-outs enrolled in the GED program at a rural community college*. [Doctoral dissertation, Mississippi State University] ProQuest Dissertations & Theses.

McKnight, T. M. (2020). Dispositional factors: Predicting academic achievement and persistence of low-skilled adults enrolled in community college adult basic education programs. [Doctoral dissertation, North Carolina State University] ProQuest Dissertations & Theses.

Melkevik, O., Hauge, L. J., Bendtsen , P., Reneflot, A., Mykletun, A., & Edward, A. (2016). Associations between delayed completion of high school and educational attainment and symptom levels of anxiety and depression in adulthood. *BMC Psychiatry, 16*(64), https://doi.org/10.1186/s12888-016-0765-1

Mendoza, N. B., King, R. B. (2020). School contagion of student engagement in school. *School Psychology International, 41*(5), 454-474. DOI:10.1177/0143034320946803

Mendoza-Castejon, D., Fraile-Garcia, J., Diaz-Manzano, M., Fuentes-Garcia, J. P., & Clemente-Suárez, V. J. (2020). Differences in the autonomic nervous system stress status of urban and rural school teachers. *Physiology & Behavior*, *222*(1). DOI: 10.1016/j.physbeh.2020.112925

Mérida-López, S., & Extremera, N. (2017). Emotional intelligence and teacher burnout: A systemic review. *International Journal of Educational Research, 85*, 121-130. https://doi.org/10.1016/j.ijer.2017.07.006

Merriam, S. B. (2001). Andragogy and self-directed learning: Pillars of adult learning theory. *New Directions for Adult and Continuing Education, 89*(2001), 3-14. https://doi.org/10.1002/ace.3

Merriam, S. B., & Bierema, L. L. (2014). *Adult learning: Linking theory and practice. 1. ed*. Jossey-Bass.

Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation* (4th ed). John Wiley & Sons.

National Center for Education Statistics. (2024, May). *Status dropout rates.* Retrieved April 2025, from https://nces.ed.gov/programs/coe/indicator/coj/status-dropout-rates

National Center for Education Statistics. (2023, May). *Characteristics of public school teachers*. Retrieved April 2025, from https://nces.ed.gov/programs/coe/pdf/2023/clr_508.pdf

National Center for the Study of Adult Learning and Literacy (NCSALL, 2002). *Volume 3.* https://www.ncsall.net/index.php@id=576.html

North Carolina Community Colleges. (n.d.). *Finish high school*. https://www.nccommunitycolleges.edu/students/what-we-offer/finish-high-school/

North Carolina Community Colleges. (n.d.). *Our history: A journey of growth and innovation*. https://www.nccommunitycolleges.edu/about-us/system-office/history/

North Carolina Department of Public Instruction. (2025, February 5). *Consolidated data report shows decrease in school violence, dropouts*. https://www.dpi.nc.gov/news/press-releases/2025/02/05/consolidated-data-report-shows-decrease-school-violence-dropouts#:~:text=The%20North%20Carolina%20high%20school,of%20the%20COVID%2D19%20pandemic

Ng, S. L., Mylopoulos, M., Kangasjarvi, E., Boyd, V. A., Teles, S., Orsino, A., Lingard, L., & Phelan, S. (2020). Critically reflective practice and its sources: A qualitative exploration. *Medical Education, 54*(4), 312–319. https://doi.org/10.1111/medu.14032

Nguyen, J. M. (2018). Improving postsecondary outcomes for GED recipients: A comparative case study of adult education programs. [Doctoral dissertation, Northeastern University]. ProQuest Dissertations & Theses.

Nguyen, B.M.D., Noguera, P., Adkins, N., & Teranishi, R.T. (2019). Ethnic discipline gap: Unseen dimensions of racial disproportionality in school discipline. *American Education Research Journal, 56*(5), 1973-2003. DOI:10310200028312198339 19

Onwuegbuzie, A. J., & Collins, K. M. T. (2007). A typology of mixed methods sampling designs in social science research. *Qualitative Report, 12*(2), 281-316. DOI: 10.46743/2160-3715/2007.1638

Parker, A. (2019). *A futile feat? Funding public k-12 education in North Carolina*. [Master's thesis, Harvard Extension School]. ProQuest Dissertations &Theses.

Patton, M. Q. (2015). *Qualitative research and evaluation methods: Integrating theory and practice* (4th ed). Sage Publications.

Piaget, J. (1952). *The origins of intelligence in children*. International Universities Press.

Phillips, D. A. (2023). *Evaluation of a local adult general educational development (GED) program* [Doctoral dissertation, University of Nebraska, Omaha]. ProQuest Dissertations & Theses.

Piaget, J. (2008). Intellectual Evolution from Adolescence to Adulthood. *Human Development, 51*(1), 40-47. https://www.proquest.com/scholarly-journals/intellectual-evolution-adolescence-adulthood/docview/224016422/se-2

Podsakoff, P. M., Mackenzie, S. B., Lee, J. Y., Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(7), 879-903. http://dx.doi.org/10.1037/0021-9010.88.5.879

Qin, L., Bowen, D. H. (2019). The distributions of teacher qualification: A cross-national study. *International Journal of Educational Development*, *70*, https://doi.org/10.1016/j.ijedudev.2019.102084

Quinn, L. M. (2014). An institutional history of the GED. In J.J. Heckman, J. E. Humphries, & T. Kautz (Eds.), *The myth of achievement tests: The GED and the role of character in American life* (pp. 57-108). The University of Chicago Press.

Rayborn, I. J. (2015). Exploring factors that influence GED students to complete and matriculate to career and technical education certificate programs in community colleges. [Doctoral Dissertation, National Louis University] Digital Commons at National Louis University.

Riessman, C. K. (2007). *Narrative methods for the human sciences* (1st ed). Sage Publications.

Rifenbark, G.G., Lombardi. A., Freeman, J., & Morningstar. M.E., (2023) The adolescent behavioral index: Identifying students at risk for disengagement in high school. *Journal of Vocational Rehabilitation, 58*(1), 1-14. DOI:10.3233/JVR-230002

Ressa, T., & Andrews, A. (2022). High school dropout dilemma in American and the importance of reformation of education systems to empower all students. *International Journal of Modern Education Studies, 6*(2), 423-447. https://files.eric.ed.gov/fulltext/EJ1373357.pdf

Rifenbark, G. G., Lombardi, A. R., Freeman, J., & Morningstar, M. E. (2022). The adolescent behavioral index: Identifying students at risk for disengagement in high school. Journal of Vocational Rehabilitation, p. 1-14.

Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences, 4*(1973), 155-169. https://link.springer.com/article/10.1007/BF01405730

Sagna, S., & Vaccaro, A. (2023). "I didn't just do it for myself": Exploring the roles of family in adult learner persistence. *Journal of Continuing Higher Education, 71*(2), p.168-182. https://doi.org/10.1080/07377363.2021.2023989.

Saldaña, J. (2016). The coding manual for qualitative researchers (3rd edition). Sage.

Saldaña, J. (2009). The coding manual for qualitative researchers (1st edition). Sage.

Saleem, F.T., Howard, T.C., Langley, A.K. (2021). Understanding and addressing racial stress and trauma in schools: A pathway towards resistance & healing. *Psychology in the School, 59*(12). https://doi.org/10.1002/pits.22615

Salusky, I. R., Reed, J., Walker, T., Worthy, G., & Gordon, D. (2021). Exploring the soft side of success: Non-cognitive and social factors impacting attitudes towards adult education for GED students. *International Journal of Lifelong Education, 40*(5), 471-484. DOI: 10.1080/02601370.2021.1983881

Sanford, N. (1962). Higher Education as a Social Problem. In N. Sanford (Ed.), The American College: A psychological and social interpretation of the higher learning. p. 10–30. John Wiley & Sons, Inc.

Sanford, N. (1966). Self and Society: Social Change and Individual Development (1st ed.). Routledge.

Seelman, K. L., & Walker, M. B. (2018). Do anti-bullying laws reduce in-school victimization, fear-based absenteeism, and suicidality for lesbian, gay, bisexual, and questioning youth? *Journal of Youth and Adolescence, 47*(11), 2301-2319. https://doi.org/10.1007/s10964-018-0904-8

Seidman, I. (2019). *Interviewing as qualitative research: A guide for researchers in education and the social sciences* (5th ed). Teachers College Press.

Shaffer, B. (2015). *The changing landscape of high school equivalency in the U.S.: Options, issues, and improvement strategies.* Comprehensive Adult Student Assessment Systems (CASAS). Retrieved April 21, 2025, from https://www.casas.org/docs/default-source/ned/the-changing-landscape-of-high-school-equivalency-in-the-us.pdf?sfvrsn=d608235a_4%3FStatus%3DMaster&utm_source=chatgpt.com.

Shute, V. J., Hansen, E. G., Underwood, J. S., & Razzouk, R. (2011). A review of the relationship between parental involvement and secondary school students' academic achievement. *Education Research International, 2011*(1). https://doi.org/10.1155/2011/915326

Smith, M. C., & Locke, S. G., (1999). From GED to college: Perspectives, practices, and goals of GED students and GED recipients. *Research & Teaching in Developmental Education, 16*(1), 49-55.

Sweller, J. (2011). Cognitive load theory. *Psychology of Learning and Motivation, 55*(1), 37-76. https://doi.org/10.1016/B978-0-12-387691-1.00002-8

Strayhorn, T.L. (2023). Estimating differences in the effects of living–learning community participation on black students' sense of belonging at predominantly white and historically black colleges and universities. *Journal of College Student Development 64*(2), p. 225-230. https://doi.org/10.1353/csd.2023.0019.

Sticht, T. G. (2002). The rise of adult education and literacy system in the United States: 1600 – 2000. *Review of Adult Learning and Literacy, 3*(2000). https://files.eric.ed.gov/fulltext/ED508720.pdf

Strohl, J., Gulish, A., & Morris, C. (2024). *The Future of Good Jobs: Projections through 2031*. Georgetown Center on Education and the Workforce. Retrieved April 8, 2025 from https://cew.georgetown.edu/wp-content/uploads/cew-the_future_of_good_jobs-fr.pdf

Sue, D. W. (2015). *Race talk and the conspiracy of silence: Understanding and facilitating difficult dialogues on race* (1st ed.). Wiley.

Tempelaar, W. M., Otjes, C. P., Bun, C. J., Plevier, C. M., van Gastel, A. W., MacCabe, J. H., Kahn, R., & Boks, M. (2014). Delayed school progression and mental health problems in adolescence: a population-based study in 10,803 adolescents. *BMC Psychiatry, 14*(244), https://doi.org/10.1186/s12888-014-0244-5

Tennyson, R. D., & Rasch, M. (1988). Linking cognitive learning theory to instructional prescriptions. *Instructional Science, 17*(4), 369-385. https://doi.org/10.1007/BF00056222

Tiruneh, D. T., De Cock, M., & Elen, J. (2017). Designing learning environments for critical thinking: Examining effective instructional approaches. *International Journal of Science*

and Mathematics Education, 16(1), 1065-1089. https://doi.org/10.1007/s10763-017-9829-z

Toropova, A., Myrberg, E., & Johansson, S. (2020). Teacher job satisfaction: the importance of school working conditions and teacher characteristics. *Educational Review, 73*(8), 1-27. DOI:10.1080/00131911.2019.1705247

Turner, T. (1973). Piaget's structuralism. genetic epistemology. *American Anthropologist, 75*(2), 351-373. https://doi.org/10.1525/aa.1973.75.2.02a00010

Unnever, J. D., Cullen, F. T., & Barnes, J. C. (2015). Racial discrimination, weakened school bonds, and problematic behaviors: Testing a theory of African American offending. *Journal of Research in Crime and Delinquency, 53*(2), https://doi.org/10.1177/0022427815610794

Uretsky, M.C. & Henneberger, A.K. (2023a) Expanding the understanding of high school non-graduates through a comparison of high school dropouts and persisters, *Journal of Education for Students Placed at Risk (JESPAR), 28*(2), 236-257. DOI: 10.1080/10824669.2022.2064286

Uretsky, M.C & Henneberger, A.K. (2023b) Supporting late graduates, GED earners, and non-completers through the transition into postsecondary and the labor market: *Preventing School Failure: Alternative Education for Children and Youth, 67*(1), 68-77. https://doi.org/10.1080/1045988X.2022.2109003

U.S. Census Bureau. (2021, March 17). *2020 Census data: Redistricting data (Public Law 94-171) summary file* [Data set]. U.S. Census Bureau. https://www.census.gov/data/tables/2020/dec/2020-redistricting-data.html

Van Eck, K., Johnson, S. R., Bettencourt, A., Johnson, S. L. (2017). How school climate related to chronic absence: A multi-level latent profile analysis. *Journal of School Psychology, 61*(2017), 89-102. https://doi.org/10.1016/j.jsp.2016.10.001

Vervoort, M. H. M., Scholte, R. H. J., & Overbeek, G. (2010). Bullying and victimization among adolescents: The role of ethnicity and ethnic composition of school class. *Journal of Youth and Adolescence, 39*, 1- 11. https://doi.org/10.1007/s10964-008-9355-y

Virtue, E. E., Root, B., & Lenner, R. (2020). Appreciative advising as a mechanism for student development. *College Student Affairs Journal, 39*(2), 200-213. https://eric.ed.gov/?id=EJ1317818

Vygotsky, L. S. (1978). *Mind in Society: Development of Higher Psychological Processes* (M. Cole, V. Jolm-Steiner, S. Scribner, & E. Souberman, Eds.). Harvard University Press.

Wall-Wieler, E., & Roos, L. (2017). High school graduation – The impact of older siblings' educational achievement. *International Journal of Population Data Science, 1*(1), https://doi.org/10.23889/ijpds.v1i1.377

Watkins, K. E., Gilbertson, E., & Nicolaides, A. (2023). *The action research dissertation: Learning from leading change.* Myers Education Press.

Webber, K. C., (2018). A qualitative study of school social workers' roles and challenges in dropout prevention. *Children and Schools, 40*(2), 82-90. https://doi.org/10.1093/cs/cdy003

Weiss, R. S. (1994). *Learning from strangers: The art and method of qualitative interview studies*. Free Press.

White, H. D. (1996). *Factors of influence on GED recipients continuing postsecondary education.* [Doctoral dissertation, University of Mississippi] ProQuest Dissertations & Theses.

Wilson, D. F. (2016). *Factors influencing the persistence of GED students*. [Capstone, Hamline University]. School of Education and Leadership Student Capstone Theses and Dissertations Digital Commons.

Wu, G., & Su, Y. (2024). Parenting styles and adolescent misbehavior. *China & World Economy, 32*(6), 98-127. https://doi.org/10.1111/cwe.12559

Xia, J., & Butler, S. J. (2023). Exploring teacher leadership's effect on teacher burnout: Does school rurality make a difference? *Asia Pacific Journal of Educators and Education, 38*(2), 107–129. https://doi.org/10.21315/apjee2023.38.2.

APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board
Willis Building · Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834
Office **252-744-2914** Ca · Fax **252-744-2284** Ca · rede.ecu.edu/umcirb/

Notification of Exempt Certification

From:	Social/Behavioral IRB
To:	Arcelle Taylor
CC:	Crystal Chambers
Date:	9/3/2025
Re:	UMCIRB 25-001205 The Role of Supportive Learning Environments

I am pleased to inform you that your research submission has been certified as exempt on 9/3/2025. This study is eligible for Exempt Certification under category # 1.

It is your responsibility to ensure that this research is conducted in the manner reported in your application and/or protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

Document	Description
Arcelle Taylor Proposal 07 14 2025.pdf(0.01)	Study Protocol or Grant Application
Consent Form -Students(0.01)	Consent Forms
Consent Form-Teacher(0.01)	Consent Forms
Instructor Interview Questions.docx(0.01)	Interview/Focus Group Scripts/Questions
Post-Interview Questions.docx(0.01)	Interview/Focus Group Scripts/Questions
Pre-Interview Questions.docx(0.01)	Interview/Focus Group Scripts/Questions
Recruitment Email.docx(0.01)	Recruitment Documents/Scripts
Teacher Recruitment Email(0.01)	Recruitment Documents/Scripts

For research studies where a waiver or alteration of HIPAA Authorization has been approved, the IRB states that each of the waiver criteria in 45 CFR 164.512(i)(1)(i)(A) and (2)(i) through (v) have been met. Additionally, the elements of PHI to be collected as described in items 1 and 2 of the Application for Waiver of Authorization have been determined to be the minimal necessary for the specified research.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

IRB00000705 East Carolina U IRB #1 (Biomedical) IORG0000418
IRB00003781 East Carolina U IRB #2 (Behavioral/SS) IORG0000418

APPENDIX B: STUDENT INFORMED CONSENT FORM

Title of Research Study: Perceptions of academic abilities and the role of supportive learning environments: an action research study inside the GED classroom
Principal Investigator: Mrs. Arcelle Taylor
Institution, Department, or Division: Connections Community & Technical College (a pseudonym)

Contact Information: taylorar23@students.ecu.edu

Researchers at East Carolina University (ECU) and Connections Community & Technical College (CTCC) study issues related to society, health problems, environmental problems, behavior problems, and the human condition. To do this, we need the help of volunteers who are willing to take part in the research.

Why am I being invited to take part in this research?
The purpose of this study is to explore how training instructors in both cognitive learning theory and challenge and support theory influences the self-perception of academic ability among GED students enrolled at a rural community college.
You are being invited to take part in this research because you are enrolling in the morning GED course. The decision to take part in this research is yours to make. By doing this research, we hope to learn how to improve the GED program and support our students holistically.
If you volunteer to take part in this research, you will be one of 10 people to do so.

Are there reasons I should not take part in this research?
You should not participate in the present study if you are under 18 years of age.

What other choices do I have if I do not take part in this research?
You can choose not to participate. You are welcome to enroll in the GED morning course but choose not to participate in the study. There is **no** penalty for doing so. If you choose to participate, you may also withdraw from the study at any point for any reason with **no** penalty.

Where is the research going to take place, and how long will it last?
The research will be conducted at CTCC during orientation and in the morning GED course. The study components, interviews, and lessons will take place during the morning hours of the GED course (Monday through Thursday, 9:00 a.m. to 1:00 p.m.). The total amount of time you will be asked to volunteer for this study is approximately 2 hours during the week of 10/6/25 – 10/10/2025.

What will I be asked to do?
Participate in two in-person interviews with the researcher (Mrs. Arcelle Taylor) regarding your prior academic experiences, motivation for enrolling in the GED course, and expectations for the program. The first interview will take place after orientation. The second will take place during class time the week of 10/6/2025 – 10/10-2025. The interview will ask you questions about your experience in the GED course so far, your expectations for your success, and your future goals. Both interviews will last no longer than one hour each. The third component of the study is lessons taught in the GED course. Together, you can anticipate the study lasting 3-4 hours with up to 2 hours outside of the GED classroom.
Note: The interviews will be recorded and transcribed. You will receive a copy of those transcriptions/notes and will be invited to contribute and clarify any details.

What might I experience if I take part in the research?
We don't know of any risks (the chance of harm) associated with this research. Any risks that may occur with this research are no more than what you would experience in everyday life. We don't know if you will benefit from taking part in this study. There may not be any personal benefit to you, but the information gained by doing this research may help others in the future.

Will I be paid for taking part in this research?
We will not be able to pay you for the time you volunteer while being in this study.

Will it cost me to take part in this research?
It will not cost you any money to be part of the research.

Who will know that I took part in this research and learn personal information about me?
To do this research, ECU and the people and organizations listed below may know that you took part in this research. They may also see information about you that is normally kept private. With your permission, these people may use your private information to do this research:

- The research team, including the Principal Investigator, study coordinator, and all other research staff.
- The ECU University & Medical Center Institutional Review Board (UMCIRB) and the staff who have responsibility for overseeing your welfare during this research;
- ECU office staff who oversee this research.

Identifiers might be removed from the identifiable private information and, after such removal, the information could be used for future research studies or distributed to another investigator for future research studies without additional informed consent from you or your Legally Authorized Representative (LAR). However, there still may be a chance that someone could figure out the information is about you.

How will you keep the information you collect about me secure? How long will you keep it?
Recordings of the interviews will be saved only until the transcription has been completed and verified, after which they will be immediately and permanently deleted. All other data (observations, transcriptions, and notes) will be stored in a password-protected electronic format for three years, at which point they will be permanently deleted. Only the researcher (Mrs. Arcelle Taylor) will be able to access this data. The results of the present study will be used for research and scholarly purposes only. The final report will not disclose any personal identifiers of participants.
The researcher will take precautions to ensure confidentiality and privacy. As such, data will be collected and stored only after consent is granted. With permission of the participants, the interviews will be recorded and transcribed verbatim by the researcher. The transcripts and recordings will be analyzed by the researcher and stored in a password-protected electronic format.
The researcher plans to publish the results of this study. To protect participant privacy and the confidentiality of the research data, the researcher will not include any information that could identify participants in the published results. Other people may need to see the information the investigator collects about you.

What if I decide I don't want to continue in this research?
You can stop at any time after it has already started. There will be no consequences if you stop, and you will not be criticized. You will not lose any benefits that you normally receive.

Who should I contact if I have questions?
If you have any questions about the study or your participation, please feel free to contact Mrs. Arcelle Taylor at taylorar23@students.ecu.edu. You may also contact the Institutional Review Board (IRB) at Connections Community & Technical College if you have concerns about your rights as a research participant.
If you have questions about your rights as someone taking part in research, you may also contact the ECU University and Medical Center Institutional Review Board (UMCIRB) at phone number 252-744-2914 (days). If you would like to report a complaint or concern about this research study, you may call the Director for Human Research Protections at 252-744-2914.

Is there anything else I should know?
Identifiers might be removed from the identifiable private information or identifiable biospecimens, and, after such removal, the information or biospecimens could be used for future research studies or distributed to another investigator for future research studies without additional informed consent from you or your Legally Authorized Representative (LAR). However, there still may be a chance that someone could figure out the information is about you.

I have decided I want to take part in this research. What should I do now?

The person obtaining informed consent will ask you to read the following, and if you agree, you should sign this form:

- I have read (or had read to me) all of the above information.
- I have had an opportunity to ask questions about things in this research I did not understand and have received satisfactory answers.
- I know that I can stop taking part in this study at any time.
- By signing this informed consent form, I am not giving up any of my rights.
- I have been given a copy of this consent document, and it is mine to keep.

_____ _____

Participant's Name (PRINT) Signature Date

Person Obtaining Informed Consent: I have conducted the initial informed consent process. I have orally reviewed the contents of the consent document with the person who has signed above and answered all of the person's questions about the research.

_____

Person Obtaining Consent (PRINT) Signature Date

APPENDIX C: INSTRUCTOR INFORMED CONSENT FORM

Title of Research Study: Perceptions of academic abilities and the role of supportive learning environments: an action research study inside the GED classroom
Principal Investigator: Mrs. Arcelle Taylor

Institution, Department, or Division: Connections Community & Technical College (a pseudonym)

Contact Information: taylorar23@students.ecu.edu

Researchers at East Carolina University (ECU) and Connections Community & Technical College (CTCC) study issues related to society, health problems, environmental problems, behavior problems, and the human condition. To do this, we need the help of volunteers who are willing to take part in the research.

Why am I being invited to take part in this research?
The purpose of this study is to explore how professional development in both cognitive learning theory and challenge and support theory influences teaching practices and student success in Adult Basic Education classrooms.
You are being invited to take part in this research because you are an instructor in the GED program. The decision to take part in this research is yours to make. By doing this research, we hope to learn how to improve GED instruction and better support both instructors and students. If you volunteer to take part in this research, you will be one of 2 instructors and 10 students to do so.

Are there reasons I should not take part in this research?
You should not participate in the present study if you are under 18 years of age.

What other choices do I have if I do not take part in this research?
You may choose not to participate. Your employment and teaching responsibilities will not be affected in any way if you decide not to participate. You may also withdraw from the study at any point, for any reason, with **no** penalty.

Where is the research going to take place, and how long will it last?
The research will be conducted at CTCC. You will be asked to participate in a professional development workshop and then implement the training in your classroom. PI Taylor will

observe one of your lessons using an observation protocol, and you may also be asked to take part in one short interview.
Altogether, your participation will take approximately 2 hours during the week of 10/6/25-10/10/25.

What will I be asked to do?

- Attend a professional development workshop led by PI Taylor.
- Implement the strategies from the workshop in your GED classroom.
- Allow PI Taylor to observe one of your lessons using the attached observation protocol (shared with you in advance).
- Participate in one short interview (no more than 1 hour) about your teaching experience and reflections on the training.

Note: The interviews will be recorded and transcribed. You will receive a copy of those transcriptions/notes and will be invited to contribute and clarify any details.

What might I experience if I take part in the research?
We don't know of any risks (the chance of harm) associated with this research. Any risks that may occur are no more than those you experience in your normal teaching responsibilities. There may not be direct personal benefit to you, but the information gained by this research may help strengthen instructional practices and improve student support in the future.

Will I be paid for taking part in this research?
We will not be able to pay you for the time you volunteer while being in this study.

Will it cost me to take part in this research?
It will not cost you any money to be part of the research.

Who will know that I took part in this research and learn personal information about me?
To do this research, ECU and the people and organizations listed below may know that you took part in this research. They may also see information about you that is normally kept private. With your permission, these people may use your private information to do this research:

- The research team, including the Principal Investigator, study coordinator, and all other research staff.
- The ECU University & Medical Center Institutional Review Board (UMCIRB) and the staff who have responsibility for overseeing your welfare during this research;
- ECU office staff who oversee this research.

Identifiers might be removed from the identifiable private information and, after such removal, the information could be used for future research studies or distributed to another investigator for future research studies without additional informed consent from you or your Legally Authorized

Representative (LAR). However, there still may be a chance that someone could figure out the information is about you.

How will you keep the information you collect about me secure? How long will you keep it?
Recordings of the interviews will be saved only until the transcription has been completed and verified, after which they will be immediately and permanently deleted. All other data (observations, transcriptions, and notes) will be stored in a password-protected electronic format for three years, at which point they will be permanently deleted. Only the researcher (Mrs. Arcelle Taylor) will be able to access this data. The results will be used for research and scholarly purposes only. The final report will not disclose any personal identifiers of participants. The researcher will take precautions to ensure confidentiality and privacy. With your permission, interviews will be recorded and transcribed verbatim. Transcripts and recordings will be analyzed by the researcher and stored securely.
The researcher plans to publish the results of this study. To protect your privacy and the confidentiality of research data, no identifying information will be included in publications. Other people may need to see the information the investigator collects about you.

What if I decide I don't want to continue in this research?
You can stop at any time after it has already started. There will be no consequences if you stop, and you will not be criticized. You will not lose any benefits that you normally receive as an employee.

Who should I contact if I have questions?
If you have any questions about the study or your participation, please feel free to contact Mrs. Arcelle Taylor at taylorar23@students.ecu.edu. You may also contact the Institutional Review Board (IRB) at Connections Community & Technical College if you have concerns about your rights as a research participant.
If you have questions about your rights as someone taking part in research, you may also contact the ECU University and Medical Center Institutional Review Board (UMCIRB) at phone number 252-744-2914 (days). If you would like to report a complaint or concern about this research study, you may call the Director for Human Research Protections at 252-744-2914.

Is there anything else I should know?
Identifiers might be removed from the identifiable private information or identifiable biospecimens, and, after such removal, the information or biospecimens could be used for future research studies or distributed to another investigator for future research studies without additional informed consent from you or your Legally Authorized Representative (LAR). However, there still may be a chance that someone could figure out the information is about you.

I have decided I want to take part in this research. What should I do now?

The person obtaining informed consent will ask you to read the following, and if you agree, you should sign this form:

- I have read (or had read to me) all of the above information.
- I have had an opportunity to ask questions about things in this research I did not understand and have received satisfactory answers.
- I know that I can stop taking part in this study at any time.
- By signing this informed consent form, I am not giving up any of my rights.
- I have been given a copy of this consent document, and it is mine to keep.

_____ _____

Participant's Name (PRINT) Signature Date

Person Obtaining Informed Consent: I have conducted the initial informed consent process. I have orally reviewed the contents of the consent document with the person who has signed above and answered all of the person's questions about the research.

_____

Person Obtaining Consent (PRINT) Signature Date

APPENDIX D: INITIAL INTERVIEW PROTOCOL

Details: The protocol below will be administered during the onboarding orientation experience of GED students. The purpose is to understand how new GED students perceive their academic ability before beginning the course. As such, it addresses Research Question 1.

Prior Educational Experiences

1. Can you tell me about your past experiences in school before deciding to enroll in the GED program?
2. What were some of the challenges you faced in school?
3. Were there academic subjects that you excelled in? Any that you struggled with?

Perception of Academic Ability

4. How would you describe yourself as a student? What words would you use to describe your academic ability?
   Do you see yourself as someone who succeeds in school? Why or why not?
5. What factors influenced how you've seen yourself as a student in the past?
6. Were there people (teachers, family, or friends) who have influenced how you see your academic abilities?

Expectations and Motivations

7. What motivated you to enroll in the GED course?
   What challenges do you anticipate you will face as you complete the GED?
8. What form of support would you like to see from the GED program to ensure you succeed?
9. What do you hope to achieve by earning your GED?

APPENDIX E: POST-INTERVENTION PROTOCOL

Details: The protocol below will be administered after the intervention. Its purpose is to understand how GED students perceive their academic ability after engaging in the intervention. As such, it addresses Research Question 2.

Reflecting on the Past

1. Think back to when you came to orientation. How were you thinking about your academic ability back then?
2. How would you describe yourself as a student now? Has it changed?
   Change in Self-Perception
3. Do you feel more or less confident in your academic abilities now? Why?
   Have you noticed any changes in how you approach learning or academic challenges?

Influence of the Intervention

4. What aspects of the GED course have influenced how you see yourself as a student?
   Were there specific people, activities, or moments in the GED course that made you feel like you would succeed in completing the credential?

The Future

5. How do you see your academic future now compared to before you started the GED course? Has that vision changed?
   Do you see yourself pursuing other academic goals? Why or why not?
6. What's next for you after earning the GED credential?

APPENDIX F: INSTRUCTOR INTERVIEW PROTOCOL

Details: The protocol below will be administered after the intervention. Its purpose is to understand how GED instructors conceptualize the value of incorporating cognitive learning and challenge and support theory into planning and instruction. It addresses Research Question 3.

Instructional Approaches/Philosophy

1. How would you describe your approach to teaching GED students before you heard about cognitive learning theory and challenge and support theory?
2. Can you describe your philosophy on teaching GED students? Has your philosophy changed since learning how to incorporate educational theory into instruction?

Perception of the Intervention

3. What was your initial reaction to the professional development series? Did you see the value of incorporating theory-based strategies with GED students?
4. Can you describe your experience incorporating cognitive learning and challenge and support theory in your lesson planning and instruction?

The Impact

5. Did you notice a change in student engagement when you incorporated theory-based strategies in your instruction? What did those changes look like?
   Have you noticed any change in students' confidence or self-perception of academic ability? What did this look like in your classroom?
6. Can you describe any specific instance when you saw a student's self-perception shift after applying cognitive learning and challenge and support theory?

Reflection

7. Has learning about these two theories – cognitive learning and challenge and support – influenced how you think about your role as a GED instructor?
8. What, if any, were some of the challenges you faced when incorporating theory-based strategies in your lesson planning and instruction?
9. Will you continue to incorporate these theories into your work? Why or why not?
10. Is there anything you would like to see modified or expanded in the professional development series to feel better equipped to implement theory-based strategies?
11. Is there anything else you would like to share with me about your experience?

APPENDIX G: GED CLASSROOM OBSERVATION PROTOCOL

Section I: Basic Information	
Date	
Time	
Instructor Name	
Topic/Focus of Lesson	
Number of Students Present	

Section II: Instructional Style
Check all that apply and elaborate as needed:
• [ ] Lecture-style instruction • [ ] Discussion-based instruction • [ ] Group activity or pair work • [ ] Hands-on or experiential learning • [ ] Use of multimedia or visuals • [ ] Use of real-world examples or relevance
Relevant Notes:

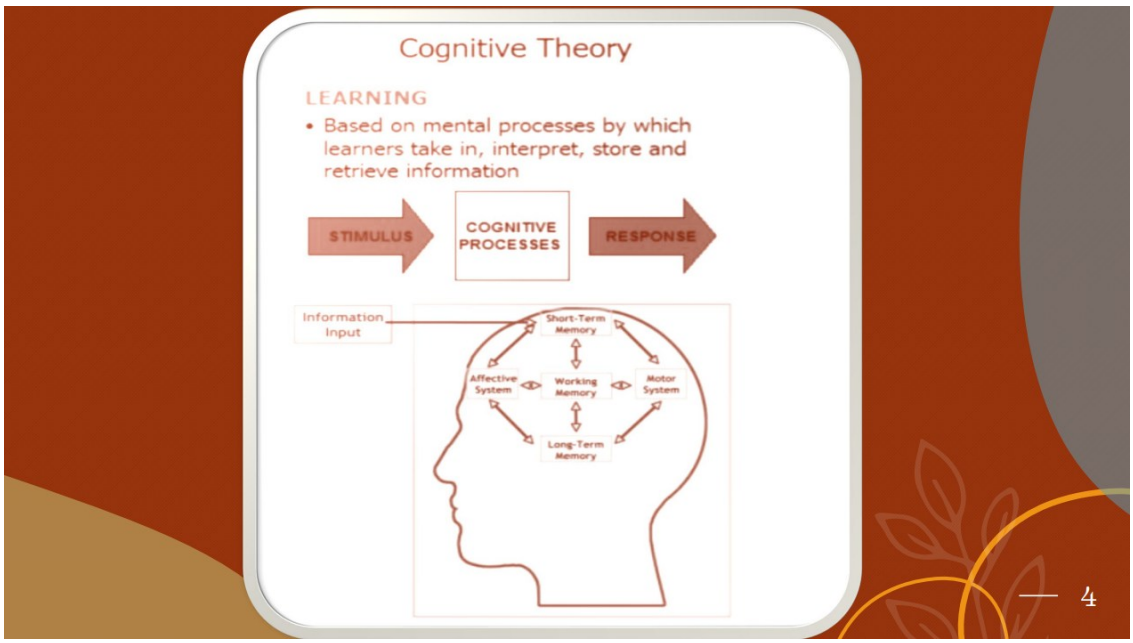
Section III: Student Engagement				
Indicator	**High**	**Medium**	**Low**	**Notes/Examples**
Eye contact with instructor				
Note-taking or task focus				
Volunteering answers or questions				
Participation in group activities				
Peer-to-peer interaction				
Off-task behavior (e.g., phone)				

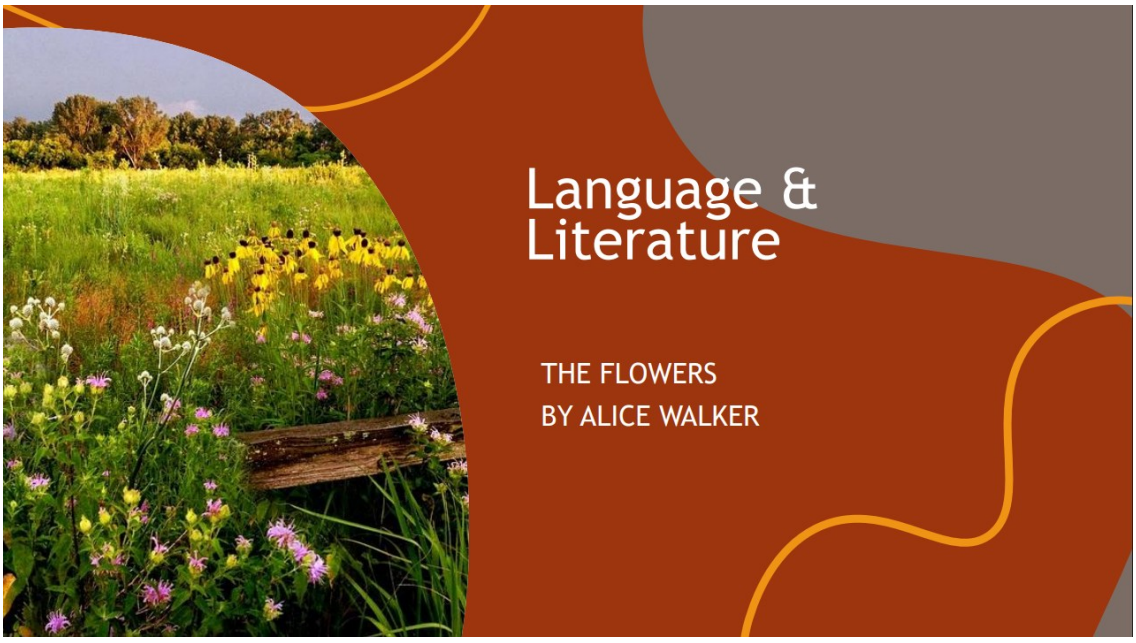
Section IV: Student Emotional Response (If observable)
Check and describe any of the following emotional cues seen during the lesson:
• [ ] Interest / Enthusiasm • [ ] Frustration / Confusion • [ ] Boredom / Disengagement • [ ] Confidence / Pride • [ ] Uncertainty / Hesitancy
Relevant Notes:

Section V. Student-Instructor Interactions			
	YES	**Not observed**	**Notes/ Examples**
Were student questions encouraged and addressed?			
Did the instructor check for understanding?			
Was feedback specific or general?			
Did students appear comfortable engaging?			

Section VI: Final Observations
Use this space for any other details not captured above—interesting student reactions, changes in classroom mood, surprises, etc.

APPENDIX H: PROFESSIONAL DEVELOPMENT SLIDE DECK


Cognitive Theory
LEARNING
• Based on mental processes by which learners take in, interpret, store and retrieve information
STIMULUS
COGNITIVE PROCESSES
RESPONSE
Information Input
Short-Term Memory
Affective System
Working Memory
Motor System
Long-Term Memory
4


Language & Literature
THE FLOWERS
BY ALICE WALKER

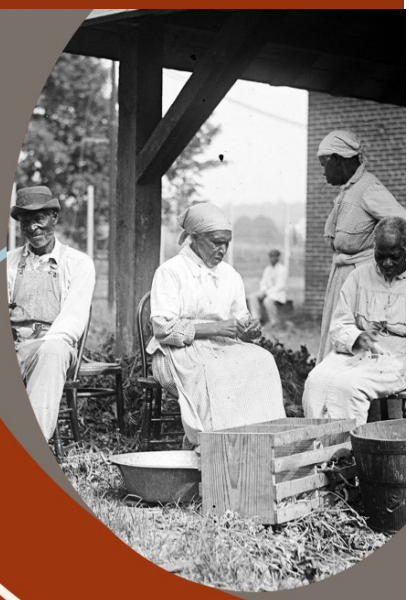
Cognitive Learning delivery techniques

1. Activate Prior Knowledge
2. Make a connection
3. Use repetition
4. Employ interweaving
5. Encourage elaboration
6. Model thinking
7. Utilize visuals
8. Promote metacognition
9. Foster the transfer of knowledge
10. Provide scaffolding approach.
11. Integrate assessment.

— 6

A lesson plan based on cognitive learning theory focuses on activating students' prior knowledge, making connections between new and old information, and promoting active processing and reflection through activities like concept mapping, guided discussion, and metacognitive strategies such as journaling.

The plan should incorporate various strategies like spaced repetition and interleaving, utilize visual aids and interactive tools, and build towards student independence in problem-solving.



Challenge and Support Learning Theory

Challenging and Supporting Adult Learners

A challenge and support theory lesson plan focuses on fostering student growth by balancing tasks that are appropriately difficult (challenge) with the necessary resources, strategies, and encouragement (support).

The goal is to create an optimal environment where students are pushed beyond their comfort zones but also feel safe and have the tools to succeed. This can be achieved by designing activities that are neither too easy (leading to stagnation) nor too difficult (leading to frustration), and by providing targeted assistance and guidance to help students navigate and overcome obstacles to learning.

9

Challenge & Support delivery techniques

Identify Learning Objectives:

Clearly define what you want students to learn or be able to do, which will form the basis for both the challenge and the support.

Design the Challenge:

- Complex problem-solving.
- Exploring new concepts.
- Applying knowledge in novel situations.
- Tasks that are slightly beyond their current skill level, but not overwhelmingly so.

Create tasks that require students to extend their current abilities. This might involve:

— 10

Intellectual Support: Providing clear instructions, offering models, breaking down complex tasks, or giving hints.

Emotional Support: Fostering a safe, supportive, and encouraging classroom environment where students feel comfortable taking risks.

- **Social Support:** Encouraging peer collaboration and providing opportunities for students to learn from each other.
- **Resources:** Ensuring students have access to the necessary tools, materials, and information.

Differentiate Instruction:

Recognize that students are at different levels of preparedness and may require varying degrees of challenge and support.

Provide Feedback:

Offer constructive and timely feedback that helps students understand their progress and identify areas for improvement.

— 11

Social Studies & History

THE FOURTH OF JULY
BY AUDRE LORDE

Examples of Activities

JIGSAW ACTIVITIES:

- Students first become experts on a part of a topic and then teach it to a group. This provides both the challenge of mastering a concept and the support of group learning.

PROJECT-BASED LEARNING:

- Students work on complex projects over a period, facing challenges that require both individual effort and collaborative support.

PROBLEM-BASED SCENARIOS:

- Present students with complex, real-world problems that require critical thinking, creativity, and teamwork to solve, with educators providing guidance and resources.

MENTORING PROGRAMS:

- Pair students with more experienced peers or mentors who can offer guidance and support as they tackle more challenging academic tasks.

13

Slides created and designed by Alecia N. Gaines. Reproduced here with permission.

APPENDIX I: ANTICIPATION GUIDE

GRAPHIC ORGANIZER

Student: _____ Date: _____

Teacher: __Alecia Gaines_____ Class: _____

Anticipation Guide

1. **Evaluate a Claim:** In the Claim column, write the claim that your teacher gives you. Think about the claim.
2. **Before Reading:** Before you read the text, indicate whether you agree or disagree with the claim.
3. **After Reading:** Based on what you read in the text, indicate whether you agree or disagree with the claim.
4. **Cite Evidence:** In the Evidence column, write evidence from the text that either supports or refutes the claim. Explain why you agree or disagree.

Claim	Before Reading (Agree/Disagree)	After Reading (Agree/Disagree)	Evidence
1.			
2.			

ACHIEVE3000 believe The Leader in Differentiated Instruction

APPENDIX J: STANDARDS RELATED TO THE CIVIL RIGHTS ACT OF 1964

Standards Correlated to The Civil Rights Act of 1964

North Carolina Standard Course of Study

Grade 5

Social Studies

CONTENT AREA / STRAND		American History and Geography
STRAND / ESSENTIAL STANDARD		History
ESSENTIAL STANDARD / CLARIFYING OBJECTIVE	5.H.1.	Understand the role of various people, events, and ideas in shaping the United States.
CLARIFYING OBJECTIVE	5.H.1.2.	Summarize the changing roles of women, indigenous, racial and other minority groups in the United States.

Grade 8

Social Studies

CONTENT AREA / STRAND		NC and American History
STRAND / ESSENTIAL STANDARD		History
ESSENTIAL STANDARD / CLARIFYING OBJECTIVE	8.H.1.	Understand the role of conflict and cooperation in the development of North Carolina and the nation.
CLARIFYING OBJECTIVE	8.H.1.3.	Explain how slavery, segregation, voter suppression, reconcentration, and other discriminatory practices have been used to suppress and exploit certain groups within North Carolina and the nation over time.

Grade 9

Social Studies

CONTENT AREA / STRAND		Founding Principles of the United States of America and North Carolina: Civic Literacy (4318)
STRAND / ESSENTIAL STANDARD		History
ESSENTIAL STANDARD / CLARIFYING OBJECTIVE	CL.H.1.	Understand how individual rights and the American system of government have evolved over time.
CLARIFYING OBJECTIVE	CL.H.1.6.	Exemplify ways individuals have demonstrated resistance and resilience to inequities, injustice, and discrimination within the American system of government over time.

Grade 10

Social Studies

CONTENT AREA / STRAND		Founding Principles of the United States of America and North Carolina: Civic Literacy (4318)
STRAND / ESSENTIAL STANDARD		History
ESSENTIAL STANDARD / CLARIFYING OBJECTIVE	CL.H.1.	Understand how individual rights and the American system of government have evolved over time.
CLARIFYING OBJECTIVE	CL.H.1.6.	Exemplify ways individuals have demonstrated resistance and resilience to inequities, injustice, and discrimination within the American system of government over time.

Grade 11

Social Studies

CONTENT AREA / STRAND		Founding Principles of the United States of America and North Carolina: Civic Literacy (4318)
STRAND / ESSENTIAL STANDARD		History
ESSENTIAL STANDARD / CLARIFYING OBJECTIVE	CL.H.1.	Understand how individual rights and the American system of government have evolved over time.
CLARIFYING OBJECTIVE	CL.H.1.6.	Exemplify ways individuals have demonstrated resistance and resilience to inequities, injustice, and discrimination within the American system of government over time.

Grade 12

Social Studies

CONTENT AREA / STRAND		Founding Principles of the United States of America and North Carolina: Civic Literacy (4318)
STRAND / ESSENTIAL STANDARD		History
ESSENTIAL STANDARD / CLARIFYING OBJECTIVE	CL.H.1.	Understand how individual rights and the American system of government have evolved over time.
CLARIFYING OBJECTIVE	CL.H.1.6.	Exemplify ways individuals have demonstrated resistance and resilience to inequities, injustice, and discrimination within the American system of government over time.