Perceptions of Student-Teacher Relationships and GED Completion:

A Correlational Study

by

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Liberty University

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PERCEPTIONS OF STUDENT-TEACHER RELATIONSHIPS AND GED COMPLETION: A CORRELATIONAL STUDY

ABSTRACT

This study took an in depth look at student-teacher relationships as one institutional barrier affecting GED completion among adults. The purpose of this study was to examine the perceptions of student-instructor relationships, specifically Instructor Connectedness and Instructor Anxiety, and its effects on adults seeking GED completion. Data from approximately 120 students who attended classes for at least 20 hours at the Regional Learning Center were surveyed using the Student-Instructor Relationship Survey in Portsmouth, Virginia. A quantitative design utilizing correlational statistics to produce Pearson’s r was used to determine if correlations existed among Instructor Connectedness and Instructor Anxiety with the following variables: test completion, age, gender, and returning students. Data analysis demonstrated significant correlations among age and test completion with Instructor Connectedness and Instructor Anxiety.

Descriptors: institutional barriers, perception of student-teacher relationships, GED, adult learners, instructor connectedness, instructor anxiety, education, academic success
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# Table of Contents

ABSTRACT ........................................................................................................................................... 3

ACKNOWLEDGEMENTS ...................................................................................................................... 4

List of Tables ...................................................................................................................................... 9

List of Figures .................................................................................................................................... 10

CHAPTER ONE: INTRODUCTION ........................................................................................................ 11

  Background .................................................................................................................................... 11

  Problem Statement .......................................................................................................................... 13

  Purpose Statement .......................................................................................................................... 14

  Significance of the Study ................................................................................................................ 15

  Research Question and Null Hypothesis ....................................................................................... 16

  Research Sub-Questions and Null Hypotheses ............................................................................ 17

  Identification of Variables ............................................................................................................. 18

  Definition of Core Terms ............................................................................................................... 18

  Assumptions and Limitations ........................................................................................................ 19

    Assumptions .............................................................................................................................. 19

    Limitations ............................................................................................................................... 20

  Research Plan ............................................................................................................................... 21

CHAPTER TWO: LITERATURE REVIEW ............................................................................................ 22

  Introduction .................................................................................................................................... 22

  Conceptual Framework .................................................................................................................. 22

    Perceptions ............................................................................................................................... 22

    Anxiety ....................................................................................................................................... 23

    Adult Learners ........................................................................................................................... 24
APPENDIX D: Original Survey with Demographics and Scoring.................................107
APPENDIX E: Participant Copy of Survey..................................................................109
APPENDIX F: Liberty IRB Approval...........................................................................112
APPENDIX G: RLC District Approval........................................................................114
APPENDIX H: Correlation Tables.............................................................................115
List of Tables

Table 3.1: RLC Participant Enrollment Status.................................................................34
Table 4.1: GED Candidates Ethnicity by Age Group Surveyed.......................................44
Table 4.2: Percentage of GED Candidates by Age Group and Mean Age........................45
Table 4.3: Percentage of GED Candidates by Ethnic Groups.........................................46
Table 4.4: Gender within Age Groups Represented..........................................................47
Table 4.5: Gender of Tests Passed....................................................................................47
Table 4.6: Ethnicity of Returning Students and Passed Test.............................................48
Table 4.7: Correlations for Instructor Connectedness and Instructor Anxiety with Tests Passed ..........................................................................................................................49
Table 4.8: Correlation Results for of Number of People Within Age Groups With Instructor Connectedness and Instructor Anxiety ............................................................66
Table 4.9: Correlation Results for Age with for Instructor Connectedness and Instructor Anxiety ....................................................................................................................................67
Table 4.10: Correlation Results for Instructor Connectedness and Instructor Anxiety by Gender..................................................................................................................68
Table 4.11 Correlations of Instructor Connectedness and Instructor Anxiety with Returning Students ..................................................................................................................69
List of Figures

Figure 4.1: Percentage of GED Candidates by Gender..................................................46
CHAPTER ONE: INTRODUCTION

Background

Research from the U.S. Department of Education 2010 National Center for Education Statistics (NCES) shows that the outcome of adults dropping out of high school is generally negative. It is reported that high school dropouts earn significantly less than those with a high school diploma or General Education Development (GED) certificate. The 2010 NCES research also reports that high school dropouts have more health concerns and have higher unemployment rates than adults with high school credentials. High school dropouts also account for a disproportionate amount of the inmates in prison and on death row. To working citizens, these negative outcomes are an emotional and fiscal burden, including increased tax burden, increased crime rates and a higher dependence upon state resources (i.e. welfare, Medicaid, and Medicare) (NCES, 2010).

Regional Public Schools (RPS) has an initiative that is used throughout the state of Virginia, called Race to GED. The focus of Race to GED is to meet or exceed 20,000 Virginians passing the GED annually. This workforce initiative targets working adults, ages 18-64, who want to work and can demonstrate academic readiness to pass the English versions of the GED test. This program has two approaches, GED Fast Track and GED Prep, which allow students to prepare and attain their GED in three to six months (Race to GED, 2010).

Researchers have already uncovered the contributing factors that explain why adults drop out of ABE (Adult Basic Education)/GED programs: lack of support, lack of confidence, family responsibilities, institutional encouragement, illiteracy, and time (Perin, Flugman, & Spiegel, 2006; King, 2002; Rubenson & Desjardins, 2009). Through case studies and interviews, Brouillette (1999) identified feelings of hopelessness, lack of income, violent threats, and
unplanned births as additional reasons why students drop out. Others external factors that attribute to academic failure include unclear questions, inadequate resources, incompetent lecturer, too strict lecturer, lecturer’s grudge, and biased lecturer. As reported by Chireshe, Shumba, Mudhovazi and Denhere (2009), students may also assume personal responsibility for failure and note that lack of preparation, an internal factor, as a reason for academic failure. Negative feelings of failure were age and gender neutral. This study also revealed that “students who failed felt disappointed, embarrassed, depressed, disillusioned, felt cheated, hated the lecturer while some felt the need to take remedial action” (p. 874). Women with these feelings are more likely to engage in expressive dissent. This is perhaps because women are innately emotionally expressive beings. When males chose to verbalize their emotions, they would retaliate with negative comments in a vengeful manner or with rhetorical dissent (Dindia, Allen, 1992; Langer, 2010; Goodboy, 2012).

There has also been research that concludes that healthy relationships with teachers, tutors, and other students will aid in GED completion (Appleby, 2004). This can be achieved through transformative classrooms with relevant topics chosen to meet students’ needs and relating topics to the experiences of the students (Galanaki & Vassilopoulou, 2007; Gom, 2009). This does not mean that minimum standards are not being taught; conversely, it means that concepts are taught in a way that students can make immediate connections to their jobs and their daily activities. This method of teaching encourages participation, GED completion, retention, and a deeper feeling of community among students and teachers (Kefallinou, 2009). Student teacher relationships are helpful in rebuilding insecure student-teacher relationships and securing relational bonds that aid in student retention.
Ainsworth’s definition of attachment relationships has three parts which include (1) a secure base that provides comfort; (2) proximity seeking; (3) distress at involuntary or unexpected separation (as cited in Kennedy, 2008, p. 221). While Ainsworth’s attachment theory focused on the relationship between infant/child and mother, it is certainly applicable to the relationship between student and instructor. This is true because teachers can be viewed as attachment figures, and the bonds that were created during infancy affect all future relationships, including those between student and instructor (Marcus & Sanders-Reio, 2001).

The greater the attachment bond (relationships or connections) between instructor and student, the greater the promise of academic achievement (Kennedy, 2008). Kennedy (2008) concluded that the students’ insecure attachments to their teachers can affect their academic careers. A student’s insecure attachments can be mended through the development of new and healthy relationships with peers and instructors. Attachment bonds are continually changing and can be affected by stress as well as one’s relationships with peers, family members, teachers, and significant others; thus, teachers and school personnel can help to mend these insecure relationships with the development of new relationships that are nurturing and caring. Kennedy (2008) also stated that significant relationships with teachers have a positive impact on student motivation, school engagement, and sense of belongingness. The teacher’s role in this relationship is to help and comfort students when upset and to be available when the student needs help by having meaningful personal interactions with individual students during the school day.

**Problem Statement**

Participants enrolled in Adult Basic Education (ABE) and GED classes at Regional Learning Center (RLC) have high attrition rates and reenter the program numerous times without
notice or reason before completing the requirements for their GED. This is a common trend of all ABE programs; however, these programs are not exempt from accountability measures and must have students that are committed to their programs in order to ensure future annual funding. Thus, it is critical that administrators improve retention rates and submit improvement plans (Quigley, 2000). However, Martin & Meyer (2010) suggests an alternative approach in which both quantitative and qualitative data collection and analysis are used to determine participant needs and guide program development and enhancement. Siegel (2011) suggests that colleges cater to their students and “create a culture of intentionality with purposeful curricular and co-curricular activities (p. 11).”

Student-teacher relationships are one area of study that could assist with student retention. The study of these perceptions as institutional barriers to completion as it relates to adult learners is critical to both program and individual success. The identification of Instructor Connectedness and Instructor Anxiety as barriers to GED completion will positively impact GED attainment which could decrease unemployment, crime, and welfare rates nationally. This research will also be useful to educational practitioners who strive to improve student engagement, learning, and achievement in adult learners.

**Purpose Statement**

There are many external factors and perceived reasons why adults do not succeed in their educational goals. External factors include lack of confidence, family responsibilities, institutional encouragement, time and goal orientation. Perceived barriers include adults’ self-perceptions and feelings of how others perceive them (King, 2002). An example of a perceived barrier is goal orientation. “Goal orientation has a positive linear relationship with academic success, thus indicating that student with higher goal orientations scores are more successful
academically” (Lemmens, du Plessis, Maree, 2011, p. 619). Students with high goal orientation scores are better equipped to plan academic paths, self-evaluate and monitor goals and provided feedback toward academic achievement and goal success.

The purpose of this study is to explore possible correlations between perceived student-teacher relationships and GED completion rates in adults who have dropped out of high school and are enrolled in and have completed at least 20 hours of course work in a day and/or evening ABE /GED program at the RLC located in the Tidewater Region of Virginia. The findings of this study will assist educators in identifying Instructor Anxiety and Instructor Connectedness as institutional barriers to GED completion. Findings will also assist program developers in making program modifications to retain adult students, thus increasing GED completion rates.

**Significance of the Study**

Many studies have been conducted that focus on the reasons why GED students are not successful. Salinas and Llanes (2003) suggest that students discontinue their programs because they do not value them and have not transitioned well into the adult school setting. Salinas and Llanes (2003) also believe that building relationships will help students integrate into the school setting and increase their chances of program completion. Relationships with tutors, teachers, and classmates are important to adult learners. Appleby’s (2004) research on adult learners found that while students found value in meeting national standards, they also appreciated the increased self-confidence and development of new life opportunities. Students in this study responded well to a holistic learning approach that linked learning to their individual everyday life skills and helped them to better cope with physical and mental health barriers to success.

GED students appreciate programs that are a combination of learner-centered and teacher directed (Donaldson, Flannery, & Ross-Gordon, 1993). Successful programs are those that cater
to the needs of its participants. For example, some programs offer babysitting, and have small
groups for its at-risk participants (Quigley, 2000). The demographics of each GED program
differ across the country. It is important for administrators to study their demographics and
design programs that are appropriate for the communities they serve.

The population of adult learners seeking their GED should continue to be studied to
determine and alleviate the known and unknown factors contributing to economic, educational,
and social disparities. The Virginia Association for Adult and Continuing Education reported
that working-age residents with college degrees are 37% more likely to participate in the
workforce than those with less than a high school diploma (Virginia Association for Adult and
Continuing Education Fact Sheet, 2010). Their earnings over a lifetime usually double, which is
a substantial personal benefit as well as a benefit to the state with respect to more taxable
resources, fewer health problems, lower rates of crime, and greater levels of civic engagement
(Virginia Association for Adult and Continuing Education Fact Sheet, 2010).

Francese (2004) contends that adults who fail to advance beyond high school are shut out
of upcoming high-growth and high paying jobs. Francese goes on to say that adults who do not
obtain skills beyond high school diploma can expect a “lifetime of periodic employment and
annual earning that may or may not even keep up with inflation” (p. 41).

**Research Question and Null Hypothesis**

Research Question 1: Does a relationship exist among the perception of student-teacher
relationships and GED completion of adult learners pursuing their GED? The relationship
between instructor connectedness and instructor anxiety and GED completion will be examined
for correlation.
Null Hypothesis (H₀₁): There will be no relationship between the perception of student-teacher relationships and GED completion rates of adults seeking their GED. Rejection of the null hypothesis would suggest that perceptions of student-teacher relationships are related to GED completion rates.

**Research Sub-Questions and Null Hypotheses**

In addition to the stated hypothesis, survey data will also be collected and analyzed for the following sub-questions:

A. Is there a relationship between age and the perception of student-teacher relationships among adults seeking GED test completion? The relationship between instructor anxiety and instructor connectedness and age will be examined for correlation.

   Null Hypothesis (Ho₁) for research sub-question A: There will be no relationship between age and the perception of student-teacher relationships among adults seeking GED test completion. Rejection of the null hypothesis would suggest that perceptions of student-teacher relationships are related to age.

B. Is there a relationship between gender and the perception of student-teacher relationships among adults seeking GED completion? The relationship between instructor anxiety and instructor connectedness and student gender will be examined for correlation.

   Null Hypothesis (Ho₂) for research sub-question B: There will be no relationship between the perception of student-teacher relationships and gender of adults seeking their GED. Rejection of the null hypothesis would suggest that perceptions of student-teacher relationships are related to gender.

C. Is there a relationship between returning students and the perception of student-teacher relationships among adults seeking GED completion? The relationship between
instructor anxiety and instructor connectedness and returning students will be examined for correlation.

Null Hypothesis (Ho3) for research sub-question C: There will be no relationship between the perception of student-teacher relationships and returning students seeking their GED. Rejection of the null hypothesis would suggest that perceptions of student-teacher relationships are related to returning students.

**Identification of Variables**

Returning students, GED completion, age and gender are the independent variables. Participants will indicate these demographics on the survey. GED completion will be achieved when students have attained a standard score of 410 on each of the individual GED tests (science, math, reading, writing, and social studies) and an overall average score of 450 for all individual tests. To achieve this, students need to correctly answer 60 to 65 percent on the individual tests in order to receive a 410 standard score on an individual GED test (Race to GED, 2010). The dependent variable in this study was perception of student-teacher relationships, specifically Instructor Connectedness and Instructor Anxiety.

**Definitions of Core Terms**

For the purposes of this study, the following terms are defined as follows:

**Adult Learners** – persons 18 years old and older who participate in GED programs.

**Attachment** – enduring tie with a person who provides security; as defined by Instructor Connectedness and Instructor Anxiety.

**Barriers** – obstacles limiting the continuous enrollment and completion in an educational program.
GED – (General Educational Development) a battery of five individual tests (reading, math, writing, science, and social studies) that, when passed, stand as equivalent to a high school diploma. It is often referred to as the General Education Diploma, or the General Education Degree. The GED is not only testing, but a program that offers teaching and preparation in basic academic subjects for adults who did not finish high school.

GED Completion – a cumulative passing score of 1100 on all five sections of the test or passing at least one of the five tests with a 410 or better.

Instructor Anxiety – a student’s perceived sense of unsupportiveness and/or threatening behavior from an instructor.

Instructor Connectedness – a student’s perceived closeness and/or sense of support behavior from an instructor.

Motivation – an influence or stimulus that drives one towards meaningful achievement.

Student-Teacher Perception – an individual student’s feeling of perceived likeness or closeness to their instructor.

RLC – Regional Learning Center

Returning Students – students who have been enrolled in a GED program more than once.

Tests Passed – passing one or more of the five GED tests with a 410 or better.

Assumptions and Limitations

Assumptions

This research will expand upon existing research examining adult attachment theory (Kennedy, 2008) and motivation as it applies to adult learners. A formal literature review will be conducted to connect the theory to the hypothesis. It is assumed that the sample instrument used has validity to measure the student-teacher relationships. Another assumption is that pupil
perception of teacher interactions and reactions toward pupils will either encourage or discourage student participation of adult learners and that good rapport for extrinsically motivated students is needed for program completion. Intrinsically motivated learners, unlike extrinsic learners, are not concerned with perception and learn for personal reasons. Extrinsic learners would want outward praise and recognition for positive performance.

Limitations

Teachers in the adult education setting typically work part-time and may feel that because of the few hours they spend with students, rapport is not necessary. It may also be assumed that teachers may not know how to build rapport with adult learners because they have not had adequate preparation to teach adult learners. From personal observations and knowledge of the teaching staff at RLC, it is known that most of the teachers’ educational experiences come from working with children and completing an educational program that did not focus on adult learners. Inadequate preparation to teach adult learners may directly correlate to teachers not identifying the needs and motivation factors of adult learners. Adequate preparation of teachers could enhance student retention and increase GED pass rates.

Data on student-teacher relationships will be collected under the following limitations: (1) participants may have difficulty reading or understanding the questions and answer inaccurately; (2) participants may not complete entire survey; (3) the accuracy of information provided on each survey is not verifiable.

The exclusion of class size, teacher gender and teacher and student academic preparedness from the survey data also limits further analysis and possible correlations. If these items had been included on the survey, I could have analyzed the data and more comprehensive
results would have been found to add to the body of literature regarding student-teacher relationships.

In addition, the lack of randomization, manipulation, and control factors are all sources of weakness in a causal-comparative study, which will be inherent to this study, making it difficult to establish cause-effect relationships with any degree of confidence. Since the student-teacher perception (dependent variable) has already occurred, the same kinds of controls cannot be exercised as in an experimental study. Caution must be applied in interpreting results, as the alleged cause of an observed effect may in fact be the effect itself, or there may be a third variable. Thus, all conclusions from this study can only be considered as inferences and suggest that positive student-teacher relationships can be a motivational factor used to increase GED completion in adult learners. This study makes the case for further experimental research designs to explore the student-teacher relationships as a motivational factor in adult learners (Gall, Gall, & Borg, 2007).

**Research Plan**

This quantitative study uses correlational statistics, to determine if student-teacher relationship perceptions impact GED completion rates. This design was chosen because it shows if statistically significant relationships exist between the dependent variable and student-teacher relationship perceptions (Gall, Gall, & Borg, 2007; Peng, Lee, & Ingersoll, 2002). Surveys were handed out in class by the instructors to willing participants with at least 20 hours of attendance of the 2012-2013 school year. This included participants who were currently enrolled, and who may have passed one or more GED tests.
CHAPTER TWO: LITERATURE REVIEW

Introduction

School dropout rates attract the attention of national policymakers because they are developmental events and unachieved milestones, which place an individual on a path extending beyond the school years that too often leads to social problems such as unemployment, teenage parenthood, addiction, and crime (Marcus & Sanders-Reio, 2001). According to NCES (2010), there is at least one city in every state that has a program specifically dedicated to assist adults in obtaining their GED. Though national high school dropout rates are declining, adults enrolled in GED programs continue to have a high dropout rate. This literature review examines institutional barriers, specifically perceptions of student-teacher relationships (Instructor Connectedness and Instructor Anxiety) as a contributing reason of lack of GED attainment.

Conceptual Framework

Perceptions

Academic self-concept, as defined by Bong & Skaalvik (2003), is the self-perception of one’s abilities in an academic or learning setting. Academic self-concept can be positively altered by integrating into a higher performing group (Huget, Dumas, Marsh et al., 2009). When this happens a student can judge their own self-concept from several different reference groups, both local and distant, that varies in importance. A study focusing on academic self-concept as a predictor of academic success and adjustment was conducted by Wouters, Germeijs, Colpin & Verscheuren in 2011. The results of this study indicate that students with positive academic self-concepts in high school carry those perceptions with them into college and are more successful
in coping with new academic rigor of college and have increased their chances of success in the first year.

The perception of positive relationships with peers, both same-sex and opposite-sex, are predictors in determining student success. Perceived peer perception by same-sex peers, not opposite-sex peers, was a predictor of academic performance. Same-sex and opposite-sex peers directly predict general self-esteem while same-sex and opposite-sex peers significantly predict school engagement. This study conducted by Liem & Martin (2011) concludes that school engagement is the link to academic and non-academic outcomes for same-sex peers more so than opposite-sex peers. Though different, both same-sex peers and opposite-sex peers have a positive impact and play a vital role in youth’s capacity to grow academically and non-academically.

Anxiety

Anxiety has been defined as a pervasive reaction to stress (Sarason & Sarason, 1990); “a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her well-being” (Lazarus & Folkman, 1984, p. 21). The perception of encountered and experienced stress is dependent on the degree to which a situation is viewed as emotionally threatening (Zeidner, 1998). The academic environment is enriched with situations that could be perceived as anxious.

According to Cheng, (2004) anxiety may have various effects on individuals including behavioral, cognitive and physiologically. Physiological reactions to anxiety include: unpleasant feelings, nervousness, and tension while behavioral effects include avoidance, withdrawal, and procrastination in completing assignments. Anxiety can also be experienced as a result of
external factors such as concern for others’ perception of their writing, teachers’ negative expectations and preoccupation with their writing ability.

Chamber and Curral (2005) reported that anxiety/depression had a significant positive correlation with work demands, and significant negative correlations with control and peer support. Performance was found to have no correlation with satisfaction and was more strongly linked to job satisfaction than to work dimensions. In this study, levels of well-being in a job satisfaction were linked with work environment. High job demands, low control, and low peer support appeared to have a negative impact on students’ well-being. This study aligned with results of Cotton et al.’s (2002) study which found that students who were satisfied with their academic life and had low levels of anxiety and depression had higher academic achievement results because they were actively engaged in school and actively contributing to its effectiveness.

Teachers are not trained to focus on aspects outside of academic achievement, thus they do not know which students are in need of emotional support because of their anxiety. Teachers use academic progress to question motivational affective traits only when grades decline (Urhahne et al. 2011). While no correlations were found with intelligence and gender, correlations were found among less intelligent students and anxiety (Kanekar, 1997). In this study, correlations were found in positive direction between anxiety and academic performance for more intelligent than for less intelligent students.

Adult Learners

Who are adult learners? Lorenzetti (2003) characterized adult learners in a college setting as self-directed learners who prefer assignments and studies that are meaningful and goal-
oriented. They also require respect and wish to connect their life experiences with studies. In a study of older adults and reciprocity of learning, Chené & Sigouin, (1997) found that in addition to fulfilling cognitive demands, learners also expected instructors to genuinely like and respect them, maintain an inviting classroom environment, and establish a friendly climate. However, reciprocity was not expected from the learner or instructor. Adult learners enter classrooms expecting competent teachers to impart their theoretical and practical knowledge to them. The adults in this study seemed to have a secure base of attachment and sought to enhance the learning process through participative discourse and cooperation.

**Expectations of Adult Learners**

Finn et al. (2009) discovered that from a learner’s perspective, teacher credibility encompasses a variety of traits including age, ethnicity, sexual orientation, humor, technology, power, classroom justice, and inherent views about education, respect, and student outcomes. With this much variety present, it is suggested that teacher credibility has its place in fostering successful student-teacher relationships and classroom learning. However, the Finn et al. analysis did not confirm a significant statistical relationship between student outcomes and teacher credibility. There was evidence to confirm that teachers who communicate understanding and engage in caring and empathetic relationships are favorably perceived by learners. Students perceive this positively and it strengthens their interest and involvement in course activity. Teven’s (2007) research studied student perceptions and found that these student perceptions are greater of their teachers when teachers are perceived to be caring, trustworthy, and competent. Teachers who behave inappropriately were perceived as less credible than a teacher displaying appropriate classroom behaviors as well as the teacher who is caring but displays inappropriate behaviors.
Theory of Adult Learning

While similarities exist between adults and children (they are both motivated by good grades and dislike bad grades) they do learn differently. Andragogy, a theory of adult learning developed by Malcolm Knowles, is grounded in the humanistic learning theory (Moberg, 2006). This model assumes that (1) Adults need to know the purpose of their lessons (2) Adults learn experientially, (3) Adults use a problem-solving approach to learning, and (4) Adults learn best when the instruction is meaningful to them (Cercone, 2008). The theory of adult learning continually evolves because all adults are different and are each an individual. Adult learners are diverse, each coming to the classroom with prior experiences, beliefs, and feelings. Each learner has been influenced by society and culture in a different manner. The learning process of an adult learner involves students not only learning about themselves and transforming their knowledge, but also transforming the way they learn. Some adult learners are self-directed. These students are independent, self-confident, organized, goal-oriented and take responsibility for their learning. This concept may not be innate in all learners based on negative academic histories, personal interactions, or beliefs about learning.

Grounded in Knowles’ adult theory is research conducted by Gigliotti & Gigliotti (1998). In this study of adult self-concept on academic ability in college students, results indicate that whites, females, and higher socioeconomic students would have a higher concept of self-concept of ability was unfounded. Partially supported was the prediction that younger adult students would have higher self-concepts due to their more recent experiences. Self-concept was found to increase for students up to age 36 to 40 and then significantly decline. As student age increased, a decline was seen in self-concept of reading and study skills. Students who had a successful school experience in their coursework saw a significant rise in their self-concept that leveled off
after their junior year. Self-concept was assessed using the Self-Concept of Academic Ability survey. While no gender differences appeared in overall self-concept of ability, there were significant gender differences for females on two of the five components. Females had higher self-concepts of comprehension and lower self-concepts of test-taking skills than males. Income had no significance in the overall study; however, students who classified themselves as high income earners also had high self-concept of study skills. Self-concept of academic ability is predictive of one’s academic perception of academic progression and the perception of whether individual goals are being met by the school experience. It would also seem that self-concept of academic ability is a predictor of credits per semester, and it is until gender, year in school, and job hours are accounted for. Indirectly, a positive self-concept of academic ability allows students to feel satisfied which leads them to take more credit course and perform better. Of interest was the finding that self-concept of interaction skills, being able to communicate with instructors, is seen as critical to academic success.

**Transformative Learning**

Mezirow (1997) states that transformative learning, a constructivist theory of learning, involves learners moving beyond instrumental learning where truths are empirically tested, and towards communicative learning where critical and reflective discourse allows for the examination of feelings, values, purposes, and beliefs. In this way, individual frames of reference are transformed and new truths emerge. It should be the goal of adult learning programs to facilitate and encourage autonomous learning. Even though adult learners may enter the program with a short term goal of passing the GED test, it is the responsibility of the teacher to help learners expand those goals into long term goals that promote autonomous, responsible thinkers. Autonomy is defined as “the understanding, skills, and disposition necessary to
become critically reflective of one’s own assumptions and to engage effectively in discourse to validate one’s beliefs through the experiences others who share universal values” (Mezirow, 1997, p. 9).

In a transformative classroom, teachers are social agents, investing time in companionship, emotional support and affections, while being genuinely interested and facilitating peer acceptance and friendships with their students (Galanaki & Vassilopoulou, 2007). Through these relationships teachers can be catalysts in promoting motivation by ensuring that academic concepts are relevant and valuable to students. Teachers need to teach with connections, generalizing content into the lives of their students (workplace, families, and everyday activities), in hopes that the student will internalize and make personal connections with the subject matter (Gom, 2009).

Cranton (2006) suggests that teachers foster authentic relationships by keeping a journal and critically reflecting upon relationships with students, engaging in a peer blog to share interests in understanding and promoting healthy relationships with students, using creativity to express feelings about students, reflecting on daily interactions in the classroom to better understand happenings, and conversing with students regarding their feelings and perceptions about class activities. For transformational classrooms to exist, teachers must view students individually and rid themselves of traditional student-teacher roles and boundaries that are void of relationships and personal connections. This will enable teachers to form genuine relationships where teacher impact transcends academic knowledge, creating a trusting learning experience built upon mutual connections (Cranton, 2006).

Adult students prefer programs that cater to the needs of the participants. Some programs offer babysitting, and have small groups for its at-risk participants (Quigley, 2000). Jacobson
(2009) described an example of adult education in Japan where students and teachers ignored traditional curricula ideals and formative assessment, and instead concentrated on building strong empathetic relationships among teachers and students. Jacobson (2009) points out that “Japanese teachers and students are attempting to place developing relationships and learning from one another at the center of the ABE experience” (p. 167). At the conclusion of this study, Jacobson found that students valued relationships with their teachers and the sense of community surrounding the school. Students at this site enjoyed lessons that were planned with the student in mind, not an educational objective.

The catchphrase “personalized education” has been used as an educational promise to attract university students. It is built on the premise that universities are large enough to provide quality and challenging programs while also providing students with close faculty-student interactions with the goal being to increase positive student-teacher relationships. Research by Waldeck (2006), indicates that college students who had a high perception of personalized education had professors who share their time outside of class through in depth counseling on various topics, increased availability outside of office hours, sharing personal information, using personalized communication and being flexible with assignments. These personalized efforts allow students to feel a personal connection with their instructors and aid in creating a transformative classroom where the traditional power imbalance is deemphasized.

If a classroom is viewed in a broad perspective as both a social and academic developmental context, it can allow students to express themselves, become engaged and flourish (Urdan & Schoenfelder, 2006). Students should be allowed to express their curiosities in a supportive learning environment that is nontoxic and stimulating. This is extremely true of adolescents who seek autonomy.
Autonomy has been identified as the key to development and growth (Allen and Land, 1999; Steinberg & Silverberg, 1986). The feeling of control over their surroundings allows them to feel more connected to what they are learning. As stated in Hafen, Mikami, & Hamre (2012), “autonomous environments promote increased engagement through increased cognitive involvement, increase effort, and decreased boredom” (p. 351).

Healthy levels of student autonomy are directly related to increased level of intrinsic motivation and learning. When student autonomy occurs, students have influence over individual learning goals. Such goals cannot be set and accepted without appropriate teacher influence, clear classroom expectations, and appropriate regulations. These regulations are in place and known to the student to help establish the motivational climate of the classroom. To obtain results to partly explain the impact on student autonomy on motivational climates, Stornes, Bru, & Idsoe (2008) surveyed 8th grade Norwegian students. This study also found that the perception of disinterested in students by teachers was associated with a performance motivation climate. The support of autonomous goals is “associated with a mastery motivational climate, whereas perceptions of low levels of these dimensions are associated with a performance motivational climate” (p. 319).

Attachments

This research study also uses frameworks from Hirschi’s (1969) sociological control theory which describes how children’s and adolescents’ parental attachment affects other relationships, and the attachment theory which helps to understand how attachment is involved in developing friendships, managing stress, and regulating one’s emotions and self-esteem (Reio, Marcus, & Sanders-Reio, 2009). This theory extends parental relationships and includes groups, society, and social institutions (schools). Hirschi (1969) found that youth with strong attachment
bonds to parents, peers and school were less likely to become delinquent and commit delinquent acts. In essence, this theory states that deviance or delinquency is a natural tendency only limited by internal conflicts (morals and guilt) and external conflicts (social bonds, law, and consequence). When social bonds are strong and set to conventional societal norms, youth will be more committed to traditional activities and make plans for success. The adverse is true when attachment bonds are not strong.

“Attachment to teachers, as indicated by teacher caring, as well as teacher appraisal and expectations, also affects academic motivation, behavior, and school dropout” (Marcus & Sanders-Reio, 2001, p. 430). Ainsworth’s attachment theory focused on the development and quality of relationships between infant/child and mother. Ainsworth’s work identified three key emotional elements: (a) each person seeks proximity to the other in times of stress; (b) the relationship typically involves affection, security, and mutual pleasure; and (c) the relationship offers one or both individual’s care and protection. Strong bonds between an infant and its mother translate into strong bonds in the child’s later relationships, whereas insecure bonds generally lead to unfavorable future relationships (Marcus & Sanders-Reio, 2001).

Attachment has dual functions in the classroom. It allows children to explore their environment freely while providing a feeling of security. It also is the foundation for socializing children. Interactions with adults allow children to adopt behaviors and values of other adults. Attachment spans across all ages. Toddlers need attachment for security from their attachment figure. Adolescents may not need the same physical attachment but the availability (awareness of needs, communication, and responsiveness to requests of help) of the attachment figure remains important (Bergin & Bergin, 2009).
Research exists that says that security of attachments is a predictor of academic success. For example, insecure toddlers may exhibit shorter attention spans than secure toddlers (Frankel & Bates, 1990), upon entering school, insecure children are less inquisitive, and have lower verbal and math abilities, reading comprehension and overall academic achievement when compared to securely attached children (Granot, & Mayseless, 2001). In high school, insecure attachment surfaced as feared failure, poorly prepared for exams, lacked concentration, and sought less help from teachers than secure students (Larose, et al., 2005).

Insecure children are more likely to have difficulties with social competencies such as friendships (Grossman & Grossman, 1991), and behavior problems (Lyons-Ruth et al., 1993). Socializing with peers and teachers is expected throughout a student’s school day. Children who are antisocial and rejected earn lower grades, attain lower test scores, have more learning disabilities and cognitive problems, and are at a greater risk for dropping out than their prosocial peers (Zettergren, 2003, Bub et al., 2007, Trzesniewski et al., 2006).

Emotion regulation is founded in attachment. Emotion regulation allows children to accept challenges at school and have disagreements without anger (Sroufe, 1996, Cassidy, 1994). Secure children cope with stress and handle change more favorably than students with insecure attachments (Cassidy, 1994). Insecure children allow their anxiety regarding school performance to hinder academic achievement (Hunsely, 1987; Perry, 1997). Insecure students also tend to express more negative emotions which results in poor social competence. Insecure students are not well liked or socially accepted by peers and teachers (Eisenberg et al., 1995, 1997).

When emotional abuse happens in early infancy and early childhood, without intervention, by an attachment figure (parent/guardian) it helps to foster insecure attachment organization which in turn impairs emotional regulation, and contributes to negative internal
working models of self and others that may cause negative coping responses. As the child grows and develops, these deficits contribute to poor peer relations and later, insecurity in the adult romantic attachment system (Taussig & Culhane, 2010). The attachment system itself provides protection and safety from harmful entities. The attachment system is automatically activated when perceived threatening stimuli arrive. Behaviors then manifest to achieve proximity of the attachment figure, which then restores a sense of calmness through sensitive and caring behaviors (Bowlby, 1973).

Children with insecure attachment bonds have internalizing and externalizing problems. They also display social deficits with peers. These issues affect the development of interpersonal competencies (Riggs, 2010). Adults with insecure attachments have difficulty managing powerful emotions activated in close relationships. Without intervention, these adults develop biased interpretations and maladaptive coping strategies based on negative models of self or others. This creates an imbalance as they seek connections and try to maintain their autonomy (Blatt & Levy, 2003), all of which is necessary for a healthy intimate relationship. However, these maladjustments are not confined to intimate relationships and can be seen in work, social, and school environments.

According to Kennedy (2008), students that enter GED with insecure attachments have hope. Their insecure attachments can be repaired through new relationships with peers and teachers. Attachment experiences shape students’ behavior and internal memory throughout their entire lives. Fortunately, the brain continues to develop throughout one’s life as well, and with positive modeling of appropriate behaviors and relationships teachers are able to repair brain pathways and provide healthy attachment experiences. Schools should work to provide
experiences that override negative internal working models by developing nurturing and supportive relationships with students.

Secure teacher-student bonds may be a predictor of long-term school well-being. In first grade, positive teacher-student relationships have been linked to engagement, effort and attention in second grade. There is also research evidence to suggest that positive teacher-student relationships are linked to higher test scores in third grade among low SES children (Hughes et al., 2008). Research on teacher-student relationships is correctional. Thus, it would be entirely misleading to assume that a negative relationship causes later problems.

Feather (1982) developed the expectancy x value theory which is based upon effort investment. This theory describes the value people place on goals and what effort and behavior they use to accomplish those ambitions. Feather (1982) wrote that motivation is determined by the individual values of the goal and whether a person expects to succeed at that goal. Thus, if students have low expectations, their motivation will also be low. This will happen even if the students find value in the goal. If this should happen, the teacher should try to engage students and try to help build up their perceptions of their own abilities while clarifying perceptions of value on activities and building expectations for their students’ future successes (Feather, 1982).

Marshall and Brown (2004) studied college students and discovered that their expectancies did not affect task performance when tasks were individually assessed as easy. Conversely, expectancy did affect performance when difficult problems were encountered. Their study concluded that students with low expectancy performed worse than those students with moderate and high expectancies (these groups performed at comparable levels).
Relationships

While it is important for students to have a positive perception of their relationships with their teachers, it is equally important that their teachers have a good relationship within themselves and their schools. Choi and Chang (2011) study concluded that “teachers who feel satisfied with their job, with the level of parental support, and with the school’s high academic emphasis, are more likely to create a positive and healthy learning environment that enhances middle school students’ middle school mathematics achievement” (p. 25). This study also supported research (Lui, 2009, Hammouri, 2004, House & Telese, 2008) that says that there is a relationship between math attitudes and math achievement. Female students in this study were assessed with a standardized test and performed lower than males. Thus, it is implied that if female students perform poorly they will have lowered motivation and be less likely to participate in math courses throughout their scholastic careers.

Studies have been conducted that focus on the reasons why adult GED students are not successful. Salinas and Llanes (2003) suggest that students discontinue their programs because they do not value them and have not transitioned well into the adult school setting. They contend that building positive, healthy relationships will help students integrate into the school setting and increase their chances of program completion. Relationships with tutors, teachers, and classmates are important to adult learners. Adult learners value the social aspects of learning and consider it a form of structure (Appleby, 2004).

Appleby (2004) found that positive relationships with teachers and peers are important to adult learners. The learners in this study appreciated the safe learning environment created by the teacher and valued their experiences with new people and structure. These learners responded well to classes designed with learning objectives linked with transferable skills to
their everyday lives. A holistic approach was used that catered to individual achievement, goals, as well as health barriers. Learners in this study helped devise individual learning plans. Incorporating students into their learning allows learners to increase their confidence and provides a sense of self-respect and achievement.

A 2007 study on high school students by Montalvo, Mansfield, and Miller concluded that students who perceived their teachers as warm, caring, and supportive, exerted more effort, had higher grades, and more persistence than students who had a negative perception of teacher feelings towards them. Montalvo et al. (2007) describe the positive effect that can take place when students perceive their teachers as supportive:

- liked teachers respond better to individual students’ perceived needs, such as the need for support in learning, thus impacting the student’s perception of the classroom environment, the goals the student adopts for the class, the student’s perception of ability and subsequent achievement. (p. 154-155)

It is also beneficial to students when they are able to form positive relationships with other learners. Reio and Sanders-Reio (2005) concluded from their study on adult learners that safe relationships between people who share similar interests encourage those interests. Thus, adult learners who have secure relationships with other adults who are committed to learning will develop similar interests. Positive peer relationships have been known to foster a strong attachment with school. While this study did not specify which friendships (peer or teacher) impact the adult learners desire to learn, friendship was found as a predictor of secure or non-secure attachment.

Reio, Marcus, and Sanders-Reio (2009) continued to study relationships and their connection to GED attainment. From this study, it was concluded that students receiving
instruction with relationships and connections to teachers and other students had a more stable attachment base. These researchers concluded that students who formed meaningful and satisfying relationships with others in the program would increase their chances of successfully completing their GED. Reio et al. (2009) also held evident that adolescents with a secure attachment style are more likely to be successful and complete requirements for a high school diploma or obtain their GED.

The perception of teachers, administrators and counselors was studied in students attending an alternative school (Pourazil, et al. 2008). Results found correlations between school membership and students’ perceptions of their teacher, administrators, and counselors. These results indicated that students with a more positive perception of school leaders had a greater sense of school membership.

School underachievement in school aged children may be attributed to negative attitudes, beliefs, and experiences regarding school. Brier (1995) found that negative attitudes towards school are linked with lower achievement, lower expectations of future success, and antisocial behaviors. Zullig, Huebner and Patton (2011) found a correlation between school satisfaction and academic support that suggests that perceived support from teachers is related to school satisfaction. Their research also found that students do not appreciate favoritism towards other students; a negative correlation was found. Sullivan, Riccio, and Reynolds (2008), studied adolescents ages 12-18 to determine if school and teacher-related attitudes were associated with negative attitudes towards school and teacher with respect to gender, ethnicity, and age as variables. Results indicated that males report more negative attitudes towards school than females. Hispanics reported more negative attitudes than African Americans. African American and white males had more negative attitudes than females across all ages compared. In this
study, age was not significant variable. Pourazil, et al (2008) adds value to these finding with the results of their study. Their study also revealed male and older students held a more negative perception of school administrators than female or younger students.

**Demographic Characteristics**

Demographic characteristics (i.e. age, race, gender, socioeconomic status, etc.) have been studied, in various age groups and across ethnicities, as predictors of math achievement and found contradicting evidence that supports and negates the presence of a gender gap in math achievement. Research conducted by Martin et al., 2008; Mullis et al., 2004; Mullis et al., 2006b found no significant gender gap for fourth and eighth graders in 1999. However, their 2007 study found a significant gender gaps for fourth graders but not eighth graders. Ma (2008) studied U.S. fifteen year olds and found no significant mean difference in math achievement for either gender, but did find gender differences at the school level where sometimes boys out performed girls in some schools and girls our performed boys in other schools. Contradicting

The results of Ma’s 2008 study were used in the work of Marks (2008). Marks used the same data as Ma (2008) but used an alternate statistical method with different predictors. The Marks (2008) study found no significant difference between genders and math achievement and only when student and school-context variables were introduced did a significant gender gap in math occur.

Sheard (2009) conducted a two-year correlational study to examine if hardiness, age and gender had an impact on academic performance. Results indicated that female students earned a significantly higher mean final degree GPA, and dissertation mark. While, mature age students earned a significantly higher GPA than young students. Females scored higher in commitment and total hardiness than males. Gender was found to be a significant correlate of academic
achievement. Results from this study were in direct contrast with the findings for sub research questions A and B of this study in which no significant correlations were found with age and gender.

Cheema & Galluzo, 2013, used race, gender, and socioeconomic status as predictors to determine if a gender gap existed in math and found that after controlling for race and socioeconomic status found an achievement gap between Blacks and Whites, and boys and girls. When they controlled for gender and socioeconomic status, a gap was found between Hispanics and Whites. When math anxiety and math self-efficacy were introduced as predictors to this study, the gender gap disappeared, and both the Hispanic-White and Black-White gap lessened. Results showed that both anxiety and self-anxiety help explain variations in math achievement and that the gender gap disappears once other variables of math achievement (self-efficacy and anxiety) are controlled for. However, math anxiety can lead students to avoid math situations and lead them to take fewer math-related courses (Ma, 1999; Preis & Biggs, 2001; Tobias, 1991).

The gender gap in achievement has been studied abundantly and while gaps are still said to exist, there is research to state that the gap is lessening. While differences are usually small, women tend to score higher on tests of verbal ability than men, while men tend to score higher on math and spatial ability tests. Both genders score comparatively evenly on retrieval tasks, however, women seem to score higher in situations requiring them to learn new information (Stumpf & Jackson, 1994; Herlitx et al., 1997; Meinz & Salthouse, 1998).

Females, as well as Hispanics, Native and African Americans are underrepresented in the fields of science and math. This may be due to inability, academic preparedness, and or interest in these fields. To combat this, and increase the presence of women in math and science it has been suggested by Hoffman and Oreopoulous, (2007) that females who have a female instructor
will have an increase in course completion when taught by a woman. It was also suggested that female students will complete technical or quantitative course work when their introductory instructor is also a female. Study results reported by Cotner, Ballen, Brooks, and Moore (2011) state that males exhibit higher academic ability in confidence than females. Throughout this study, the level of confidence in both genders grew, with female confidence being more significant than that of males. Female students’ confidence improved significantly with a female instructor. Of interest is that when females had a male instructor, confidence decreased significantly. The gender of an instructor did not impact the confidence level of men in this study.

Mickelson & Greene (2006) explored the gender gap in middle school African Americans. Their findings suggest that there is no evident gender gap in 2nd grade for math or reading but by 8th grade, the gap is quite evident. The researchers were unable to specify a time frame when the gap became distinct. Females in this study, achieved higher scores than males on the End of Grade reading tests and no difference was found in the End of grade math test with respect to gender. Females in this study had significantly higher educational expectations than males. Males had a cynical oppositional attitude, while females remained more positive toward education. The negative attitude by males depressed their achievement results which are influenced by individual factors and experiences not expressly family forces, whereas, female student achievement was linked to their family background (cultural capital, socioeconomic status, and parental involvement).

Not surprisingly, significant statistical differences in GPA were found by Cokley, McClain, Jones and Johnson (2011) with female African American students having higher GPAs than males African American Students, however, no significant differences in racial identity,
academic self-concept, or devaluing academic success were found. The purpose of this study was to examine academic disidentification (lack of significant relation between one’s perception of individual academic abilities in comparison to peers and individual academic outcomes) with demographic and psychological variables as predictors bearing an impact on the academic success of African Americans. Results indicated that African American male students experienced academic disidentification and were unable to establish a relationship between themselves and their academic success. Conversely, African American females in this study were able to compare their individual perceptions of academic abilities and academic performance.

To further explore the phenomenon that girls earn better grades in school, 2008 study of predictors of student achievement in boys and girls, Freudenthaler, Spinath, and Neubaur used intelligence, the Big Five of personality, self-esteem, school anxiety, school-related intrinsic motivation and achievement goals as predictors and GPA as achievement the criterion to determine that personality and motivation are factors in school achievement that contribute differently to the school achievement of girls and boys. These Austrian students were given surveys that through analysis revealed consistencies that are widespread across the educational community; girls did earn higher levels of school achievement than boys and intelligence was the strongest predictor of school achievement for both genders (Gottfredson, 2002; Gustafsson & Undheim, 1996). Cognitive ability could not account for gender differences in school achievement. Girls also earned higher scores on school interest, on four Big Five personality attributes and in school anxiety. Boys tended to prefer performance-approach goals, performance-avoidance goals and self-esteem. Girls were more aware of their cognitive potential than boys. Gender differences in personality and motivational factors accounted for gender differences in school achievement. These findings add to the current body literature showing that
test anxiety is more strongly related to test performance for boys than for girls (McCarthy & Goffin, 2005). While differences amongst genders were found to exist in this study, the influence of gender on school achievement cannot be concluded.

To include socioeconomic status as a predictor in academic achievement may be misleading. In some instances, it is true that students from more educated homes fared significantly better than children from less education homes in Australia, England, and France. However, this phenomenon did not hold true when compared to other countries like India, Thailand, and Columbia. If fact, in 1983, Heyneman and Loxley contended that school quality was a more important predictor of achievement in poorer countries than home background.

Children are resilient and are capable of overcoming the circumstances of their social status. This was seen in the marginal differences in performance levels of student in low-income countries when compared to student who came from wealthy households in high income countries (Heyneman, 2005).

Program Specifics

The demographics of each GED program differ across the country. It is important for administrators to study their specific demographics in order to design programs that are appropriate and specific to the community they serve. This concept of designing programs to meet detailed needs of the community was echoed by Prins (2009). In this study, Prins examined the entire community surrounding a GED program to determine the types of interpersonal problems that students encountered and what role their surroundings had in interpersonal dynamics. This quantitative study examined written accounts by staff members, field notes, and critical geography literature, as well as census data, newspaper articles on immigration, and labor studies to unearth the socio-cultural and geographical contexts and history of the community.
Prins (2009) concluded that relationships are more than individual differences (personalities and attitudes). Relationships are also impacted by socioeconomic status or immigration status and the obvious connections of race or gender do not necessarily suppose a healthy relationship.

One successful program of mention is the Learner Persistence Project. Through grant funding, adult learners in this project benefited from flexible teachers who individualized materials in order to make learning accessible and continuous. Weekly phone calls increased student motivation and enhanced connections to the program. The Learner Persistence Project differed from traditional ABE programs because it catered to the barriers of non-participation. This program gave students the option of borrowing books and VHS tapes for home use, home study schedules, homework, distance learning options, and tutoring (Kefallinou, 2009).

Instructional delivery and curricular format of adult education needs revision. Studies conclude that an establishment of new norms that reflect and cater to the individual goals and needs of adult learners in the ABE/GED setting is warranted. Students do not want nor do they appreciate programs that teach “at” them. Instead, Cervero and Wilson (1999) suggest that teachers of adult learners should involve students in identifying their needs. Such programs are adult-learner centered, flexible and individualized for self-directed, empowered adults who are ready to learn (Mancuso, 2000). Students want to be an integral part of the curricula process. They also desire structured, meaningful learning experiences that can be generalized into their lives with empathetic teachers who are invested in their goal development and progress.

**Summary**

To move in this student-centered direction, teachers will have to be deprogrammed of their empowered positions as teachers, and develop personal relationships with their students beyond the academic realm and confines of traditional work hours and requirements. Teachers
will need to teach the “whole student” while being mindful of student’s past learning experiences, cultural and demographic differences that make each student unique. This includes addressing emotional concerns and providing venues of help for matters beyond their levels of expertise (health, legal, governmental aid). Included in this also, should be opportunities for students to share personal experiences and learn from one another. Program administrators and other officiates will need to devise alternative learning assessments that assess individual learner goals and overall progress to maximize student test performance. Program content should also be student centered. This does not mean that the programs are catered to the student but rather that the programs have student input and include content that students deem valuable to their daily lives.
CHAPTER THREE: METHODOLOGY

There are external factors and perceived reasons why adults do not succeed in their educational goals. External factors include lack of academic confidence, family responsibilities, institutional encouragement, and time. Perceived barriers preventing students from academic success include perceptions of self-image and their feelings of how others perceive them (King, 2002). The purpose of this study is to explore possible correlations between student-teacher relationships and GED completion rates in adults who have dropped out of high school and are enrolled in day and/or evening ABE/GED programs at the RLC in the Tidewater Region of Virginia. The findings of this study will assist educators and program developers to better understand the impact of student-teacher relationships and its impact on retaining adult students, thus increasing GED completion rates.

This chapter describes the methodology used to gather data from GED students enrolled in evening ABE classes from September 2012 through December 2012. This study was designed to determine if correlations exist between the perceptions of student-teacher relationships and GED completion rates in adults attending GED classes. This chapter will provide the reader with knowledge regarding (a) research questions, (b) research hypotheses, (c) research variables, (d) research design, (e) participants, (f) setting, (g) instrumentation, (h) procedures, and (i) data analysis.

Research Design

This quantitative, correlational research study utilized a non-experimental design to reveal possible relationships among GED completion rates and student-teacher relationships. Additionally, relationships between returning student age, gender, and test completion were examined to determine if correlations exist among these three variables. The purpose of
correlational research is to discover possible relationships among variables via correlational statistics without the manipulation of variables. It involves collecting data on two or more variables for each participant in the sample and computing a correlation coefficient. Though only true experimentation can offer definitive evidence for causal inferences, correlations provide definitive correlations and are the first step in determining causation. Evidence from correlational studies can be experimented upon to determine cause and effect (Thompson, Diamond, McWilliam, Snyder, & Snyder, 2005). The level of significance for this study was set at .05.

**Primary Research Question**

Research Question 1: Does a relationship exist among the perception of student-teacher relationships and GED completion of adult learners pursuing their GED?

Null Hypothesis (H₀₁) for primary research question 1: There will be no relationship between the perception of student-teacher relationships and GED test completion rates of adults seeking their GED. Rejection of the null hypothesis would suggest that perceptions of student-teacher relationships are related to GED test completion rates. The relationship between instructor anxiety and instructor connectedness and GED test completion will be examined for correlation.

**Research Sub-Questions**

A. Is there a relationship between age and the perception of student-teacher relationships among adults seeking GED test completion? The relationship between instructor anxiety and instructor connectedness and age will be examined for correlation.

Null Hypothesis (H₀₁) for research sub-question A: There will be no relationship between age and the perception of student-teacher relationships among adults seeking GED test
completion. Rejection of the null hypothesis would suggest that perceptions of student-teacher relationships are related to age.

B. Is there a relationship between gender and the perception of student-teacher relationships among adults seeking GED completion? The relationship between instructor anxiety and instructor connectedness and student gender will be examined for correlation.

Null Hypothesis (Ho$_2$) for research sub-question B: There will be no relationship between the perception of student-teacher relationships and gender of adults seeking their GED. Rejection of the null hypothesis would suggest that perceptions of student-teacher relationships are related to gender.

C. Is there a relationship between returning students and the perception of student-teacher relationships among adults seeking GED completion? The relationship between instructor anxiety and instructor connectedness and returning students will be examined for correlation.

Null Hypothesis (H$_{03}$) for research sub-question C: There will be no relationship between the perception of student-teacher relationships and returning students seeking their GED. Rejection of the null hypothesis would suggest that perceptions of student-teacher relationships are related to returning students.

**Identification of Variables**

Returning students, age, and test completion, and gender were the independent variables.

The dependent variables in this study were the perceptions of student-teacher relationship, specifically Instructor Connectedness and Instructor Anxiety. All variables were measured in all subjects. Student-teacher perceptions were measured using the Student-Instructor Relationship Scale. Returning student status, test completion, age, and gender data were provided by the participant on the survey.
Description of Research Setting

RLC is located in the Hampton Roads Region of Virginia. This region is comprised of seven cities, Norfolk, Suffolk, Chesapeake, Virginia Beach, Newport News, Hampton, and Portsmouth, Virginia. The RLC is operated by Regional Public Schools and operates on the public school calendar. It offers day and evening classes to adult learners who seek to learn new skills, earn a certificate, and obtain personal goals in non-college credit courses within a variety of community education and career training programs. The RLC employs a total of 12 part-time teachers and no full-time teachers between its main and satellite site to assist students in completing their GED. The RLC operates seven sites to assist students with academic and personal goals. Between their sites, students could attend a maximum of 14 hours and a minimum of six hours depending on which location those choose to attend. This setting was chosen because I currently live in a neighboring district. I have never taught nor have any known affiliates with this site before research began. I have not knowingly had any contact with any of the participants or prospective participants.

During the fall semester of the 2012-2013 school year, students ranged in age from 16 to over 60 years old. Ethnicities served during this time included White, Black or African American, Hispanic or Latino, and Non-Hispanic two or more races. Table 3.1 displays the enrollment status during the fall 2012 semester at RLC.

There are no educational requirements necessary to test for the GED in Virginia for those 18 years of age and older. However, participants under 18 years old need waivers. The test is offered, upon request, in French, English, and Spanish. A GED certificate is awarded to students with a minimum score of 410 on each subtest or an average score of 450 on all tests.
Participants

To determine if a correlation existed between students’ perceptions of their relationships with their teachers and GED completion, it was important to obtain a sample of former and current GED students. The population studied were adults ages 16-60+ enrolled or previously enrolled in day and/or evening ABE/GED classes at RLC during the 2012-2013. Enrollment in ABE/GED classes at the RLC indicates that students need or perceive the need for academic assistance in order to complete their GED and are working toward GED completion. The RLC has a rolling enrollment which means that students can enroll in or drop an ABE class at any time during the school year. It is possible for students to begin, dropout, and reenroll within the same school year. Students could attend two classes per week for a total of five hours per week. Convenience sampling was used to obtain at least 115 participants who participated in day and/or evening ABE/GED classes for at least twenty hours from September 2012-December 2012. Students are allowed to take the GED in its entirety or in individual subjects (Math, Science, Reading, History, and Writing) when they feel they possess the skills necessary to pass their desired portion(s) of the exam. GED testing is offered bi-monthly on Saturdays to all students at RLC.

The total population of enrolled students from August 2012 – December 2012 was 146. In order to find statistical significance with a power of 0.80, level of significance of .05, and a medium size effect, this study needed a sample size of at least 115 participants.
Table 3.1

**RLC Participant Enrollment Status**

<table>
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<tr>
<th>Participant Status on Entry into the Program</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
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</thead>
<tbody>
<tr>
<td>Disabled</td>
<td>11</td>
<td>7.5</td>
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<tr>
<td>Employed</td>
<td>42</td>
<td>28.76</td>
</tr>
<tr>
<td>Unemployed (In Labor Force)</td>
<td>78</td>
<td>53.42</td>
</tr>
<tr>
<td>Unemployed (Not in Labor Force)</td>
<td>31</td>
<td>21.23</td>
</tr>
<tr>
<td>On Public Assistance</td>
<td>21</td>
<td>14.38</td>
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<tr>
<td>Living in Rural Areas</td>
<td>1</td>
<td>0.6</td>
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</table>

<table>
<thead>
<tr>
<th>Highest Degree or Level of School Completed</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 1-5</td>
<td>2</td>
<td>1.36</td>
</tr>
<tr>
<td>Grades 6-8</td>
<td>37</td>
<td>25.34</td>
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<tr>
<td>Grades 9-12 (no diploma)</td>
<td>111</td>
<td>76.02</td>
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<tr>
<td>High School Diploma or alternate credential</td>
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<td>0.6</td>
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</table>

<table>
<thead>
<tr>
<th>Secondary Status</th>
<th>Frequency (N)</th>
<th>Percentage (%)</th>
</tr>
</thead>
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<td>11.64</td>
</tr>
<tr>
<td>Displaced Homemaker</td>
<td>3</td>
<td>2.05</td>
</tr>
<tr>
<td>Single-parent Status</td>
<td>18</td>
<td>12.32</td>
</tr>
<tr>
<td>Dislocated Worker</td>
<td>2</td>
<td>1.36</td>
</tr>
<tr>
<td>Learning Disabled Adult</td>
<td>5</td>
<td>3.42</td>
</tr>
</tbody>
</table>
**Instrumentation**

The Student-Instructor Relationship Scale (SIRS) developed by Patricia Jarvis and Gary Creasey was used to assess student-instructor relationships, specifically instructor connectedness and instructor anxiety (Creasey, Jarvis, & Knapcik, 2009). The instrument consists of 36 questions that assess student-instructor relationships from a student perspective on a seven-point Likert scale. This instrument was developed out of the need to have a reliable and valid tool to measure variables that influence relationships between students and instructors.

SIRS has two distinct domains, connectedness and anxiety. Eleven of the 36 questions directly measure instructor connectedness. Participants scoring high in this domain are reported as having stronger feelings of connectedness towards their instructor. Conversely, those who scored low in this domain avoided close relationships with their instructors. Eight items on this scale focused primarily on anxiety toward the instructor. These items addressed instructor acceptance and student perception of individual self-worth. Students scoring low in this area reflected less threatening perceptions of their perceived instructor relationship. Higher scores in the domain of instructor anxiety are reflective of an increase in their perception of instructor anxiety.

SIRS was found to be appropriate for this study because it was designed for use with adults. Reliability was established by test-retest reliability with bivariate correlations between the college students and their relationships with college instructors (n=94). Both Pearson Correlations were significant (p = .01). The Cronbach alphas were also calculated Instructor Anxiety and Instructor Connectedness (0.89). Validity was determined by the Instructor Connectedness and Anxiety factors being negatively correlated (r = -.31, p < .0001) (Creasey, Jarvis, & Knapcik, 2009).
Procedures

Upon obtaining permission from SIRS creators and both Liberty University Institutional Review Board and Regional City Public Schools, participant consent was obtained. Participants were given the consent, survey and answer forms by their classroom teachers. Teachers were available to read unknown words or answer questions regarding the survey and survey participation.

Before surveys were administered to students, I held a short in-service with participating teachers. During this in-service, teachers were given the following oral and written expectations:

1. Explain that survey participation is voluntary and is meant to guide future GED instruction.
2. Due to varied reading levels within this population, surveys can be given whole group or individually with and without read-alouds. Please read all items verbatim.
3. Time to complete surveys will vary based on reading and comprehension skills. Surveys will take a maximum of 10 minutes to complete.
4. Students may keep yellow Consent Form but must return survey (blue) and bubble sheet (salmon or white).
5. Surveys can be completed in pen or pencil.
6. Please reiterate that surveys are anonymous and participants should not include their names or other identifying information.
7. Please visually scan completed surveys prior to collecting them to ensure that they are completed and place completed surveys in blue folder.
8. When blue folder is full, you should be able to use one of the empty green folders for storage until I come to collect them.
9. It may be necessary to remind students that all questions are to be answered regarding
only 1 instructor.

10. This survey was created for returning or current students but is applicable to all students when they mentally refer to their most recent teacher (only 1), even if that was a high school teacher.

11. Call me or email me if you need extra copies of anything.

Teachers were given minimal background information about me, such as that I am degree-seeking, and have previous and current teaching experience. I asked if they had any additional questions, thanked the teachers in advance for their cooperation, and did not have any further contact with them.

This study complied with FERPA regulations. The survey was an identical replica of the SIRS created by Creasy and Jarvis (2009) and included a bubble sheet, demographic questions, and an informed consent form. The purpose of the informed consent form is to advise participants and would-be participants that all supplied information is kept confidential, secure, and used solely for the purpose of this study, and would be properly destroyed at the conclusion of the study. Students could stop participating at any time during the study.

In addition to the SIRS questions, each student was also asked their gender, race, age, if they were a returning student, and which GED tests, if any, they had passed. Teachers administered the survey to students with 20 or more hours during the fall 2013 semester.

The informed consent document (see Appendix C) was reviewed by the teacher before surveys were administered. Students were allowed to keep or return the informed consent document at their discretion before completing the survey. Surveys were administered during class time and took a maximum of 10 minutes to complete.

Upon completion of surveys, teachers collected them and placed them in an envelope to
be delivered to the RLC administrator who then phoned to let me know of their availability. Upon survey pickup, data was organized into a spreadsheet with the following columns: 1. Student number, 2. Instructor Anxiety questions, 3. Instructor Connectedness questions, 4. Gender, 5. Race, 6. Returning students, 7. Tests passed.

The data were then further divided into subgroups to be analyzed. Student survey responses for questions 3, 6, 11, 12, 17, 21, 23, 29, 30, 35, and 36 were analyzed to determine instructor anxiety. Student survey responses for questions 4, 5, 7, 8, 22, 25, 31, and 34 were analyzed to determine instructor connectedness. Age was divided into the following subgroups: 16-18, 19-24, 25-29, 30-34, 35-39, 40-49, 50-59, and 60 and over and coded as below 18 “1” yes, “2” no, below 25 “1” yes, “2” no, below 30 “1” yes, “2” no, below 35 “1” yes, “2” no, below 40 “1” yes, “2” no below 50 “1” yes, “2” no and below 60 “1” no, “2” yes. Race was divided and coded as White “1” yes, “2” no, Asian “1” yes, “2” no, Black or African American “1” yes, “2” no, Hispanic or Latino “1” yes, “2” no, Native Hawaiian or Pacific Islander “1” yes, “2” no, American Indian/Alaskan Native “1” yes, “2” no and Other “1” yes, “2” no. Returning students were coded as “1” yes, “2” no while gender was subdivided into male “1” and female “2”. Tests passed were divided and coded by individual tests (Math “1” yes, “2” no, Science “1” yes, “2” no, Writing “1” yes, “2” no, History “1” yes, “2” no, and Reading “1” yes, “2” no).

The following correlational tests were conducted using Pearson’s r:

1. Instructor anxiety and age subgroups
2. Instructor anxiety and returning student
3. Instructor anxiety and tests individual and collective passed
4. Instructor anxiety and gender subgroups
5. Instructor connectedness and age subgroups
6. Instructor connectedness and returning student

7. Instructor connectedness and individual and any tests passed

8. Instructor connectedness and gender subgroups

Procedural study strengths included:

- Gathering data after students have been in class at least 20 hours allows students to get familiar with school procedures and staff.
- Arranging and analyzing data in multiple ways strengthens correlations and suggestion(s) of the study.

**Data Analysis**

This study included at least 100 subjects. A $p < .05$ level of significance was used for all analyses to determine if the null hypothesis was to be rejected. If the difference between groups exceeded .05, I rejected the null hypothesis. Each data set was analyzed using Pearson’s $r$. This determined the degree and direction of relationship between age, gender, test completion, and student-teacher perception variables. Pearson’s $r$ is a precise method of determining how student-teacher perceptions impact GED completion rates (Gall, Gall, & Borg, 2007).

Correlational data analysis could be interpreted as positive, negative/inverse, or no correlation could be found to exist. Positive correlations exist when both variables increase or decrease together. Negative correlations occur when one variable increases as the other decreases, thus producing an inverse relationship. When no correlation is present the variables occur randomly and no relationship is present. Data are presented with tables corresponding to each independent variable. Descriptive statistics data ($N, M, SD$) were used to describe the findings. Data were analyzed using the JMP version 8.0 software (SAS Institute, Inc., Cary, NC).

For each data set, a correlational analysis was applied to the entire sample. For this -
study, the following data were collected:

1. Collective sample data showing positive, negative, or no significant correlation between perception of student-teacher relationships and test completion rates of adults seeking their GED.

2. Data on gender showing positive, negative, or no significant correlation between perception of student-teacher relationships and gender subgroups.

3. Data on age showing positive, negative, or no significant correlation between perception of student-teacher relationships and age subgroups.

4. Data on returning students showing positive, negative, or no significant correlation between perceptions of student-teacher relationships and returning students.

The results discussed in chapter four indicate whether a positive, negative, or no significant correlational relationship was found between the perception of student-teacher relationships and GED completion of adult learners pursuing their GED. Tables and figures are presented and explained.
CHAPTER FOUR: RESULTS

Introduction

The purpose of this study was to reveal and explore Instructor Anxiety and Instructor Connectedness as institutional barriers to GED completion while exploring possible correlations between perceptions of student-teacher relationships and GED completion. Chapter Four reveals the findings which are based on the following research questions that initiated this study:

Research Question 1: Does a relationship exist among the perception of student-teacher relationships and GED completion of adult learners pursuing their GED?

Research Sub-Questions:

A. Is there a relationship between age and the perception of student-teacher relationships among adults seeking GED test completion?

B. Is there a relationship between gender and the perception of student-teacher relationships among adults seeking GED completion?

C. Is there a relationship between returning students and the perception of student-teacher relationships among adults seeking GED completion?

Review of Procedures

The study proceeded as follows

1. SIRS creators were contacted for permission to use survey. With creator permission granted, IRB and RLC permission was then sought.

2. Upon IRB and RLC approval, a teacher in-service was conducted by the researcher and surveys were distributed and collected by onsite teachers and made available for pick up by site administrator.

3. All collected data was entered and information was validated into Excel spreadsheets.
4. Data was analyzed using JMP version 8.0.

The survey included an Informed Consent document which complied with FERPA regulations. The survey was an identical replica of the SIRS created by Creasy and Jarvis (2009) and included a bubble sheet, demographic questions, and an informed consent form. The purpose of the informed consent form was to advise participants and would-be participants that all supplied information would be kept confidential, secure, and used solely for the purpose of this study, and would be properly destroyed at the conclusion of the study. Students could stop participating at any time during the study.

In addition to the SIRS questions, each student was asked their gender, race, age, if they were a returning student, and which GED tests they had passed. Teachers administered the survey to students with 20 or more hours of instruction during the fall 2012 semester.

The Informed Consent document found in Appendix C was discussed and reviewed by RLC teachers before surveys were administered. Students were allowed to keep or return the Informed Consent document at their discretion before completing the survey. Surveys were administered during class time and took a maximum of 10 minutes to complete.

Upon completion of surveys, teachers collected them and placed them in an envelope to be delivered to the RLC administrator who then phoned to let me know of their availability. Upon survey pickup, data was organized and entered into EXCEL spreadsheets and analyzed with JMP.

**Correlational Analysis**

Correlation coefficients were used to determine the degree to which two variables are related to each other in terms of degree of association and whether the relationship is negative or positive. Correlation coefficients range between -1 and 1 with coefficients closer to 0 indicating
weak or absent relationships. Negative coefficients indicate variables that move in opposite
directions, while positive coefficients indicate variables that move in the same direction.
Correlation coefficients among the variable in this study are presented in Appendix H.
Correlation analysis measures the significant presence between the variables, it does not measure
the power of the relationship.

**Collected Data**

**Student demographics.** Of the 121 participants 100% gave their age. The group ranged
from 17-67 years in age. Students aged 19-24 comprised the majority of survey participants
(N=36, 29.75%). Students aged 25-29 were the second largest group 14.8% (N = 18), followed
by students aged 40-49 and 50-59 (both with N = 14, 11.5%). Students aged 16-18 and 35-39
both had 9.9% (N= 12). Students aged 30-34 comprised 6.6% (N = 8) of those surveyed, while
students over age 60 accounted for 5.7% (N = 7) of those surveyed. Age groups and subgroups
analyzed in this study were identical to those found in the 2011 Annual Statistical Report on the
GED Test (2012). No other age groups were analyzed. See Table 4.1 for illustrated results.

The mean age for the entire participant group was 33.6 years of age with a standard
deviation of 13.19. This mean age is higher than both the Virginia (27.4 years with a standard
deviation of 11.0) and National (26.3 with a standard deviation of 9.6) mean ages. Table 4.2
illustrates these figures.

Of the 121 students surveyed, 70.24% identified themselves as African American/Black
(32 males, 52 females), 18.18% as White (nine males, 13 females), 1.65% as Hispanic/Latino
(three males, zero females), Asian (one male, two females), and American Indian/Alaskan Native
(one male, one female), and 3.30% as Other (two male, two females) and Pacific
Islander/Hawaiian (one male, three females). Table 4.3 illustrates the percentage of GED
candidates by ethnic groups. From this table it is concluded that surveyed responses were higher than state and national averages for Other, African Americans and Pacific Islander/Hawaiians. White, Hispanic/Latino, and Asian ethnic groups were underrepresented when compared with national and state averages. The surveyed response percentage rate for American Indian/Alaskan Native was 1.65% which is in the middle of both national and state rates. Considering the population, the discrepancies in compared percentages is not alarming.

All participants responded to the question of their gender. Seventy-two of the 121 participants were female, or 59.5% were female, and 49, or 40.49%, were male. These gender percentages are closely aligned with both Virginia (Male = 56.9% Female 43.1%) and National (Males = 55.6, Female 44.4) percentages. See Figure 4.1 for visual comparisons.

Of the 121 participants surveyed, 96% of them answered which and how many tests they had completed. Participant answers that were left blank were coded with the series mean 0 to complete the data set. Fifty-nine percent had passed at least one test while 38% had not passed any tests. Data analysis of individual tests revealed that 20.7% passed writing, 27.9% passed reading, 6.3% passed math, 22.5% passed science and history. Due to the lack of diversity within the surveyed population, it was expected that African Americans and Whites have the most returning students (54.1% and 47.8%) as they comprised the majority of this study’s participants. See Table 4.4 and 4.5 for visual illustrations.
Table 4.1

GED Candidates Ethnicity by Age Group Surveyed

<table>
<thead>
<tr>
<th>Ethnic Groups</th>
<th>16-18 (N)</th>
<th>19-24 (N)</th>
<th>25-29 (N)</th>
<th>30-34 (N)</th>
<th>35-39 (N)</th>
<th>40-49 (N)</th>
<th>50-59 (N)</th>
<th>60+ (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>10</td>
<td>19</td>
<td>14</td>
<td>6</td>
<td>11</td>
<td>7</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>White</td>
<td>0</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pacific Islander/</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hawaiian</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian/</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Alaskan Native</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
<td><strong>36</strong></td>
<td><strong>18</strong></td>
<td><strong>8</strong></td>
<td><strong>12</strong></td>
<td><strong>14</strong></td>
<td><strong>14</strong></td>
<td><strong>7</strong></td>
</tr>
</tbody>
</table>

Table 4.2

Percentage of GED Candidates by Age Group and Mean Age

<table>
<thead>
<tr>
<th>GED Candidates</th>
<th>16-18 (%)</th>
<th>19-24 (%)</th>
<th>25-29 (%)</th>
<th>30-34 (%)</th>
<th>35-39 (%)</th>
<th>40-49 (%)</th>
<th>50-59 (%)</th>
<th>60+ (%)</th>
<th>Mean Age</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Candidates</td>
<td>23.4</td>
<td>36.7</td>
<td>13.7</td>
<td>9.6</td>
<td>5.9</td>
<td>7.3</td>
<td>2.9</td>
<td>0.5</td>
<td>26.3</td>
<td>9.6</td>
</tr>
<tr>
<td>Virginia Candidates</td>
<td>25.0</td>
<td>31.2</td>
<td>13.6</td>
<td>9.5</td>
<td>6.0</td>
<td>9.0</td>
<td>4.5</td>
<td>1.1</td>
<td>27.4</td>
<td>11.0</td>
</tr>
</tbody>
</table>
Table 4.3

*Percentage of GED Candidates by Ethnic Groups*

<table>
<thead>
<tr>
<th>Ethnic Groups</th>
<th>National GED Candidates (%)</th>
<th>Virginia GED Candidates (%)</th>
<th>Surveyed Responses (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>25.6</td>
<td>42.7</td>
<td>70.24</td>
</tr>
<tr>
<td>White</td>
<td>48.7</td>
<td>46.71</td>
<td>18.18</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>20.4</td>
<td>7.7</td>
<td>1.65</td>
</tr>
<tr>
<td>Asian</td>
<td>1.9</td>
<td>1.9</td>
<td>1.65</td>
</tr>
<tr>
<td>Pacific Islander/Hawaiian</td>
<td>0.7</td>
<td>0.3</td>
<td>3.3</td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>2.5</td>
<td>0.7</td>
<td>1.65</td>
</tr>
<tr>
<td>Other</td>
<td>0.3</td>
<td>0.1</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Figure 4.1

*Percentage of GED Candidates by Gender*
Sixty-nine students indicated that they were returning students (57%). African Americans represented the majority of returning students, (N= 50) 41.3% followed by Whites (N=12, 9.9%), Hispanic/Latino and Other (N=2, 1.6%), then Asian, Pacific Islander/Hawaiian, American Indian/Alaskan Native (1.4%). One hundred twelve students had passed at least one test. African Americans had the highest number of tests passed among all ethnicities surveyed (N = 86, 76.7%). Whites had the second highest number of tests passed (N = 12, 10.7%). American Indian/Alaskan Natives accounted for 3.5% of tests passed (N=4), Asians 1.7% (N=2),
Hispanic/Latino 0.8% (N=1), while Other and Pacific Islander/Hawaiian had not passed any tests (N= 0, 0%). Table 4.6 visually represents these percentages.

Table 4.6

Ethnicity of Returning Students and Passed Test

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>50</td>
<td>27</td>
<td>17</td>
<td>5</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>White</td>
<td>12</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pacific Islander/Hawaiian</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>35</td>
<td>22</td>
<td>8</td>
<td>24</td>
<td>23</td>
</tr>
</tbody>
</table>

Research Questions and Hypotheses Considered

Research Question 1

RQ1: Does a relationship exist among the perception of student-teacher relationships and GED completion of adult learners pursuing their GED? This question was answered by conducting correlational analysis to determine if relationships exist between student-teacher relationships and GED test completion. A statistical difference was found in correlated values for Instructor Connectedness and Instructor Anxiety and GED completion. Some of the
relationships for tests completed correlated with Instructor Connectedness and Instructor Anxiety were significant, indicating that the null hypothesis is rejected. Both positive and negative statistically significant correlations where revealed for p < .05. This suggests that GED test completion is a predictor of Student Teacher Relationships. See Table 4.7.

Null Hypothesis (Ho1): There will be no relationship between the perception of student-teacher relationships and GED completion rates of adults seeking their GED. The null hypothesis was rejected showing that test completion is significantly correlated with student-teacher relationships when p < .05.

Table 4.7
Correlations for Instructor Connectedness and Instructor Anxiety with Tests Passed

<table>
<thead>
<tr>
<th>Variable</th>
<th>Reading</th>
<th>Math</th>
<th>Writing</th>
<th>Science</th>
<th>History</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor Connectedness</td>
<td>0.0257</td>
<td>-0.0473</td>
<td>0.0526</td>
<td>-0.0091</td>
<td>0.0784</td>
</tr>
<tr>
<td>Instructor Anxiety</td>
<td>-0.0483</td>
<td>0.0355</td>
<td>-0.0742</td>
<td>-0.0512</td>
<td>0.0012</td>
</tr>
</tbody>
</table>

*p < .05

Further analysis of each of the five tests by subject area and the perception of student-teacher relationships revealed a positive statistical correlation between Instructor Connectedness and reading (0.0257) and when Instructor Anxiety was correlated with math (0.0355) and history (0.0012). Negative correlations were found amongst Instructor Anxiety and reading (-0.0483) and when Instructor Connectedness was correlated with math (-0.0473), and science (-0.0091). These statistically significant findings allowed the null hypothesis to be rejected. See Table 4.8 for visual results.
Table 4.8

*Significant Correlations for Instructor Connectedness and Individual GED Test Completion*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Reading</th>
<th>History</th>
<th>Math</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor</td>
<td><em>0.0257</em></td>
<td><em>-0.0473</em></td>
<td><em>0.0473</em></td>
<td>-0.0091</td>
</tr>
<tr>
<td>Connectedness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor</td>
<td><em>-0.0483</em></td>
<td><em>0.0012</em></td>
<td><em>0.0355</em></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < 0.05

**Research Sub-Questions and Hypotheses Considered**

SQ1. Is there a relationship between age and the perception of student-teacher relationships among adults seeking GED test completion? This question was measured by correlational analysis between Instructor Anxiety and Instructor Connectedness and age subgroups (16-18, 19-24, 25-29, 30-34, 35-39, 40-49, 50-59, and 60 and over). Relationships were found to exist when correlations between age and the perception of student-teacher relationships among adults seeking GED test completion were analyzed.

SQ1: A statistically significant positive correlation between Instructor Anxiety and Instructor Connectedness and two of the defined age groups did exist. Thus, the null hypothesis was rejected. A Pearson Product Moment Coefficient showed significant positive correlations to exist with persons in age group 30-34 (0.0046) and Instructor Connectedness, 35-39 and Instructor Anxiety (0.0348), 40-49 and Instructor Anxiety (0.0453), 50-59 and Instructor Connectedness (0.0459) and with persons over 60 and Instructor Connectedness (0.0427). Significant negative correlations were found to exist with persons in age group 16-18 and Instructor Anxiety (-0.0125), 19-24 and Instructor Connectedness (-0.0464), 25-29 and Instructor Connectedness (-0.0427), and 30-34 and Instructor Connectedness (-0.0427).
Connectedness (-0.0232) and Instructor Anxiety (-0.0090), 30-34 and Instructor Anxiety (-0.0095), 35-39 and Instructor Connectedness (-0.0385).

The results of the Pearson r were significant, indicating that the null hypothesis is rejected. There is a statistically significant correlation where p < .05 when determining if correlations exist among age and Instructor Connectedness and Instructor Anxiety. This suggests that GED participant age is a predictor in student-teacher relationships. See Table 4.9 for a visual illustration of these results.

Table 4.9

| Correlation Results for of Number of People Within Age Groups With Instructor Connectedness and Instructor Anxiety |
|---|---|---|---|
| Age Groups | N | Instructor Connectedness | Instructor Anxiety |
| 16-18 | 12 | -0.0617 | *-0.0125 |
| 19-24 | 36 | *-0.0464 | 0.0914 |
| 25-29 | 18 | *-0.0232 | *-0.0090 |
| 30-34 | 8 | *0.0046 | *-0.0095 |
| 35-39 | 12 | *0.0385 | *0.0348 |
| 40-49 | 14 | 0.0982 | *0.0453 |
| 50-59 | 14 | *0.0459 | -0.1189 |
| 60+ | 7 | *0.0427 | -0.1268 |

*p <.05

SQB: Is there a relationship between gender and the perception of student-teacher relationships among adults seeking GED completion? This question was measured by analyzing
correlations between Instructor Anxiety and Instructor Connectedness and student gender. There was no significant relationship found between gender and the perception of student-teacher relationships among adults seeking GED completion.

SQB1: Statistical differences were not found when gender correlations were evaluated with Instructor Anxiety and Instructor Connectedness. Instructor Anxiety and males had a p-value of 0.2011, while females had a p-value of 0.1727. Instructor Connectedness had a p-value of 0.0985 for males and 0.1133 for females. The results of the Pearson r were not significant. The null hypothesis was retained showing that gender had no significant effect on the perception of student-teacher relationships among adults seeking GED completion. There is no statistically significant correlation where, p < .05. This suggests that GED participant gender is not a predictor in student-teacher relationships. See Table 4.10 for a visual representation of these results.

Table 4.10

<table>
<thead>
<tr>
<th>Variable</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor Connectedness</td>
<td>0.0985</td>
<td>0.1133</td>
</tr>
<tr>
<td>Instructor Anxiety</td>
<td>0.2011</td>
<td>0.1727</td>
</tr>
</tbody>
</table>

*p <.05

SQC: Is there a relationship between returning students and the perception of student-teacher relationships among adults seeking GED completion? This question was measured by analyzed correlations between Instructor Anxiety and Instructor Connectedness with returning students. There was no significant relationship found between returning students and the perception of student-teacher relationships among adults seeking GED completion.
SQC1: No significant statistical differences were found by comparing returning students with Instructor Connectedness. Instructor Connectedness and returning students had a correlation of 0.0893 while Instructor Anxiety and returning students had a correlation of -0.0910. The results of the Pearson r were not significant showing that returning students did not significantly correlate to the perception of student-teacher relationships among adults seeking GED completion. There is no statistically significant difference where for $p < .05$. This suggests that returning GED student status is not a predictor in student-teacher relationships. Table 4.11 displays these results.

Table 4.11

Correlations Results for of Instructor Connectedness and Instructor Anxiety with Returning Students

<table>
<thead>
<tr>
<th>Variable</th>
<th>Returning Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor Connectedness</td>
<td>0.0893</td>
</tr>
<tr>
<td>Instructor Anxiety</td>
<td>-0.0910</td>
</tr>
</tbody>
</table>

*p < .05

Summary

The results of this data analysis were able to yield both significant and insignificant correlations concerning possible relationships between student-teacher relationships and test completion, age, gender, and returning students. Positive statistical correlations were found to exit when correlating Instructor Connectedness with reading and when Instructor Anxiety was correlated with math and history. Negative correlations were found amongst Instructor Anxiety and reading and when Instructor Connectedness was correlated with math and science (-0.0091). Pearson correlation coefficients did find positive correlations among age group 30-34 and
Instructor Connectedness, 35-39 and Instructor Connectedness, 40-49 and Instructor Anxiety, 50-59 and Instructor Connectedness and with persons over 60 and Instructor Connectedness (0.0427). Negative correlations were found to exist with persons in age group 16-18 and Instructor Anxiety (-0.0125), 25-29 and Instructor Connectedness (-0.0232) and Instructor Anxiety (-0.090), 30-34 and Instructor Anxiety (0.0252), 35-39 and Instructor Anxiety (-0.0385). Correlations were not found when gender and returning students were correlated with Instructor Anxiety and Instructor Connectedness. Positive correlations suggest a direction relationship between the correlated variables. Negative correlations suggest that an inverse relationship is occurring between the variables. The absence of a correlation suggests that no relationship is found among the variables.

The following chapter presents a discussion of the findings, implications for practice and recommendations for future research.
CHAPTER FIVE: DISCUSSION

Introduction

This quantitative research project was designed to explore possible correlations among institutional barriers to GED completion (Instructor Connectedness and Instructor Anxiety) and GED test completion. Sub-research questions also explored possible correlations among student-teacher relationships and age, gender, test completion and returning students. The findings of this project support the hypothesis for Research Question 1, that a relationship does exist between student-teacher relationships and GED test completion. In this chapter a statement of the problem, summary of the findings, discussion of the findings and implication for educational practice are discussed. This chapter also discusses delimitations and limitations of the current study and presents recommendations for future research.

Statement of the Problem

Students pursuing a GED drop out of school for a number of situational and/or institutional reasons. Regardless of their reasoning, attrition that leads to GED incompletion can adversely affect site funding and program facilitation. The findings of this study will assist educators and program developers with the institution of best practices as it relates to retaining adult students, thus increasing GED completion rates and GED funding. The research question asks, “Does a relationship exist among the perception of student-teacher relationships and GED completion of adult learners pursuing their GED?” The research hypothesis states, “There is a relationship between perception of student-teacher relationships and GED completion of adult learners pursuing their GED.” The null hypothesis states, “There is no relationship between perception of student-teacher relationships and GED completion of adult learners pursuing their GED.”
In addition to the question and hypotheses stated above, research sub-questions were added from demographic information provided by participants. Statistical data were collected to compare gender, age, returning students, and test completion with Instructor Connectedness and Instructor Anxiety. The research sub-questions asked were A) Is there a relationship between age and the perception of student-teacher relationships among adults seeking GED test completion? B) Is there a relationship between gender and the perception of student-teacher relationships among adults seeking GED completion? C) Is there a relationship between returning students and the perception of student-teacher relationships among adults seeking GED completion?

Summary of Findings and Discussion

Research Question 1

The Research Question 1 asked: Does a relationship exist among the perception of student-teacher relationships and GED completion of adult learners pursuing their GED? As illustrated in Table 4.7 and 4.8, results of Pearson r data analysis for the research question revealed both positive and negative correlations. A positive statistical correlation was found when correlating Instructor Connectedness with reading (0.0257) and when Instructor Anxiety was correlated with math (0.0355) and history (0.0012). These positive correlations suggest a direct relationship between the correlated variables. Negative correlations were found amongst Instructor Anxiety and reading (-0.0483) and when Instructor Connectedness was correlated with math (-0.0473), and science (-0.0091). Negative correlations suggest that an inverse relationship is occurring between the variables. Correlational analysis using aggregate data did yield a statistically significant relationship between Instructor Connectedness and Instructor Anxiety when each of the five GED tests were analyzed individually. The null hypothesis was rejected
since there was a statistically significant relationship found between GED completion and the perception of student-teacher relationships. However, it is important to note that correlation does not imply causation; it is unclear whether test completion contributes to student teacher relationships or if student teacher relationships contribute to test completion. Further research is needed to better understand the relationship between test completion and student-teacher relationships.

I expected to find significant statistical correlations for Instructor Connectedness and tests passed. This expectation was upheld and supported through the literature. Research by Johnson (2009) emphasized the importance of student-teacher relationships in both qualitative and quantitative data. The data indicated that “students at the non-traditional school appear to be feeling personally accepted, respected, included, and supported by others in the school environment” p.107). Students in Johnson’s 2009 study reported feeling comfortable with and supported by their teachers. Students were motivated both intrinsically and extrinsically to actively participate in class. Another factor that could be a predictor in significant is overall test anxiety. Test anxiety-the lack of self-efficacy as it relates to content could have attributed to significant correlations. Further research is needed to ascertain if test anxiety can lead to poor exam performance and that it is inversely related to a student’s self-esteem (Hembree, 1988, Lam & Hong, 1992). While test anxiety was not a predictor of Instructor Anxiety and Instructor Connectedness in this study, it could have been a contributing factor in student-teacher relationships.

As cited in Zin and Rafik-Galea (2010) “anxiety, characterized by worry, hinders comprehension ability which interferes with readers’ working memory, an important component in reading which is responsible for processing and storing information” (p. 43). Both the science
and history tests require students to interpret and analyze graphs and charts and textual information. It does not rely on memory, thus, like reading; an anxious student would be unable to process information in the text and to store the information in the short-term memory. This occurrence would increase anxiety and decrease test performance.

A clear relationship between writing anxiety student teacher relationships has not been established, however, there is literature to support that writing anxiety is a result of unpreparedness and a lack of organizational skills (Sawkins, 1971, Thompson, 1981). Instruction in the writing process has shown that improvements in writing can be achieved in both older and younger students (Sandoski et al., 1997, Sadoski et al., 1997). Students writing improvement in Schweiker-Marra & Marra’s (2000) study was attributed to peer review and publication of writing materials. In the 2009 study of highs school students, Tsai and Cheng found that students with low anxiety performed significantly better than high anxiety students on written assignments. Research contradicts the presence of writing anxiety due to gender differences. Wynn (2000) found no significant differences, Martinez, Kock, and Cass (2011) found significant correlations while Larson (1985) contends that situational demand, not individual characteristics, lead to writing anxiety. The results of this research substantiate the findings of the present study that concluded that Instructor Anxiety and Instructor Connectedness were not predictors of student success in writing assessments.

Math anxiety as defined by Ravi and S. (2013) is “caused by poor test grades, inability (or unwillingness) to complete difficult assignments, negative predispositions of parents, and even the mathematics teacher” (p. 2). Students who avoid math have decreased competency, exposure, and math practice. This leads students to be mathematically unprepared to progress in math and anxious toward further developing their mathematical skills and competencies. The
presence of a math anxiety could have accounted for the significant results found for both Instructor Connectedness and Instructor Anxiety and math test completion.

**Research Sub-Question A**

Sub-question A asked: Is there a relationship between age and the perception of student-teacher relationships among adults seeking GED test completion? Figure 4.9 illustrates both positive and negative relationships between the variables. A Pearson Product Moment showed significant positive correlations were found to exist with persons in age group 30-34 (0.0046) and Instructor Connectedness, 35-39 and Instructor Anxiety (0.0348), 40-49 and Instructor Anxiety (0.0453), 50-59 and Instructor Connectedness (0.0459) and with persons over 60 and Instructor Connectedness (0.0427). These positive correlations suggest a direction relationship between the correlated variables. Significant negative correlations were found to exist with persons in age group 16-18 and Instructor Anxiety (-0.0125), 19-24 and Instructor Connectedness (-0.0232) and Instructor Anxiety (-0.0090), 30-34 and Instructor Anxiety (-0.0095), 35-39 and Instructor Connectedness (-0.0385). Negative correlations suggest that an inverse relationship is occurring between the variables. See Table 4.9 for a visual illustration of these results.

Lack of statistical significance between variables led me to fail to reject the null hypothesis since there was no significant relationship found between age and the perception of student-teacher relationships. However, it is important to note that correlation does not imply causation; it is unclear whether age contributes to student teacher relationships or if student teacher relationships contribute to age. Further research is needed to better understand the relationship between age and student-teacher relationships.
The findings of this study do not align with those of a study conducted by Whannell, Allen, and Lynch (2010) of 18-22 year old non-traditional students using a Likert style questionnaire in which resiliency, or the capacity to cope, was found to demonstrate the importance of positive peer relationships for students not actively engaged in their education and the importance of teacher relationships. This current study found statistically significant relationships to exist with all age groups examined. Poor student-teacher relationships were found to have an adverse effect on academic engagement and success as well as student resiliency (Docan-Morgan & Manusox, 2009).

**Research Sub-Question B**

Sub-question B asked: Is there a relationship between gender and the perception of student-teacher relationships among adults seeking GED completion?

Instructor Anxiety and males had a p-value of 0.2011, while females had a p-value of 0.1727. Instructor Connectedness had a p-value of 0.0985 for males and 0.1133 for females. The null hypothesis was retained showing that gender had no significant effect on the perception of student-teacher relationships among gender. A Pearson product-moment correlation was computed in order to assess the relationship between gender and Instructor Anxiety and Instructor Connectedness. Correlations between gender and Instructor Anxiety and Instructor Connectedness were not significant. These results suggest that gender has no implication on student-teacher relationships.

Gender has been found to have an impact on high school completion. A greater number of female students are reported to complete school than male students (Suh, 2008; Saunders, Davis, Williams, & Williams, 2004). In the context of student-university relationships in higher
education, Bowden and Wood (2011), found that both males and females want affective bonds with their institution and a sense of closeness to their school. Both males and females desired to be connected and form emotional bonds with their institutions of learning. When this is achieved, students earn higher grades, have an increase in school satisfaction, and are more likely to return to school in later years (Wasley, 2006). However, the results of this study do not indicate that gender is correlated with student-teacher relationships. The lack of correlations in this study could be attributed to a students’ perceived competence which has been significantly related to reading and math achievement (Bouffard, Marcoux, Vezeau, & Bordeleau, 2003).

**Research Sub-Question C**

Sub-question C asked: Is there a relationship between returning students and the perception of student-teacher relationships among adults seeking GED completion? The Pearson correlation for Instructor Connectedness and returning students had a correlation of 0.0893 ($\alpha$ =0.05) while Instructor Anxiety and returning students had a correlation of -0.0910. The null hypothesis could not be rejected since there was no significant relationship found between returning students and the perception of student-teacher relationships. A Pearson product-moment correlation was computed in order to assess the relationship between returning students and Instructor Anxiety and Instructor Connectedness. Correlations between returning students and Instructor Anxiety and Instructor Connectedness were not significant. These results suggest that returning students are not a predictor on student-teacher relationships. Table 4.11 displays correlated data of the variables.

In reference to academic performance, traditional-entry students (under 21) had similar results to mature students (21-50 years old) but, after age 50, performance by mature adults began to decline (Richardson & Woodley, 2003). In this study, it was also noted that mature
women performed better than men in all age groups. A replication of this study by Larkin and Hartley (2008) revealed similar results. Their results indicated that mature students performed as well as traditional-entry student on most assessments and sometimes better, however, on written exam they scored significantly worse than traditional students. Cantwell, Archer and Bourke (2001) examined mature students who had non-traditional college entrances (through enabling school programs) and found age to be a significant predictor of academic achievement with older students out performing younger students. Socioeconomic status was not an influential factor in this study.

This study aligns with the findings from Dill and Henley (2008) that anxiety was not a factor in academic performance. Richardson (1994, 1995) concluded that academic persistence and academic performance of mature students as measured by completion rates and graduation rates of mature students is comparable to that of younger students. The lack of correlation among returning students and student-teacher relationships could be attributed to the students themselves and their deeper approach to learning (Richardson, 1994), an intrinsic factor that negates the need for perception of external relationships to influence performance. Absence of correlations among returning students could also be attributed to an increased confidence with roles outside of college (Yarbrough & Schaffer, 1990) or an increased in self complexity with more varied roles than a traditional student or high self-appraisal in roles like spouse, parent, or employee (Linville, 1987).

**Discussion of the Findings**

The findings within this study align with the results of Gillespie’s (2005) research of student-teacher relationships. Gillespie (2005) contends that knowing, trust, respect and mutuality are necessary requirements of a successful student-teacher relationship. Teachers and
students both desire a classroom that promotes prosocial skills “such as attentive listening, mutual respect, and working together creatively” (p.215). Researchers Poulou, 2009; Johnson, 2008; and Shepard et al., 2012 are of the same accord, however the findings of this study contradicted these findings. While research by Terry (2006) reports that students appreciate teachers who regard them positively, provide emotional support and have “unwavering faith in their abilities to learn” these results were not found within this study (p. 36).

Through research and prior knowledge, I was prepared to find statistically significant results amongst variables and was pleased with the overall results from this study. However, this study was unique from all studies reviewed in the literature review section in that the participants were current GED students and not children (under 18) or adults in higher education. The instrument itself was pre and post tested with college students. The participants of this study were not pre and post tested. These differences could account for the lack of correlations found amongst variables.

My expectations were rooted in my personal belief that teachers do make a difference. However, due to personal bias, I may have weighted a teachers’ impact on academic performance too heavily and did not weight other internal and external variables accordingly. Nonetheless, I still hold that belief to be true. This research has enlightened and led me to pause and reflect upon other constructs that may have a larger impact on overall student academic success and has caused me to alter my teaching methods and apply more emphasis on the quality of relationships that I have and will have with current and future students.

Implications for Practice

Sharing the results of this study with educational leaders is intended to help them better understand contributing factors of GED test completion and GED program success. This study
also adds to the body of literature pertaining to educational institutional barriers to school completion and will aid future research in determining and limiting Instructor Anxiety and Instructor Connectedness as contributing factors to school completion. There is room for more in-depth research, both quantitative and qualitative on teacher-student relationship as a barrier to school success.

**Delimitations**

Participants of this study included 121 students seeking GED completion from a neighboring school district in Portsmouth, Virginia. This site was selected because of the convenience of the location to my home and the willingness of the school district to participate. Participants who met the inclusionary criteria of 20 hours of instruction were included in this study. All participants were accepted and were not denied participation based on gender, race, test passed, returning student status, or age. Participants were not compensated for participation.

**Limitations**

All research is subject to limitations. The limitations within this study include the number of districts that participated (one) and the lack of adult education preparedness of GED instructors. The site contact noted that although all teachers held a current teaching license, none of the teachers were endorsed in Adult Education. This suggests that recruitment of GED teachers is difficult to attain, thus, possessing a teaching license is the primary requirement of a GED instructor. Self-reporting measures, another limitation of this study, can be influenced by social desirability and though students were ensured confidentiality and anonymity, they could have answered dishonestly.

Bias is another limitation of this study. Surveys were administered to GED students by their teachers. This could have been perceived as pressure, causing a student to possibly feel
compelled to complete the survey. Also, initial survey responses were slow, and upon conversation with site contact regarding the importance of survey completion, I was ensured that responses would increase. This suggests that GED teachers may not have been requesting survey participation without administrative encouragement and reminders. Even though I held an in-service with the teachers asking for their cooperation, teachers could have negatively perceived this administrative encouragement and reminders as extra, time-consuming work that was irrelevant to their current teaching objectives.

One further limitation is the use of paper pencil surveys. Participants who complete paper pencil surveys are more likely to submit incomplete information and have been more sensitive to the presence of the survey administrator when answering questions that are of a sensitive nature. Sensitivity to the presence of the survey administrator is limited with online surveys (Wood, et al., 2006). Double data entry was performed to limit human error during manual entering of responses into a data file. An increased response rate may have been obtained with the use of an online survey instrument.

This sample was drawn from only one district whose population is not closely representative of the state or national demographics, thus the ability to generalize the reported findings to another population is limited. Despite these limitations, this study makes a valuable contribution by examining student-teacher relationships and their impact on GED completion using a correlational research approach. The limitations revealed in the current study address the perception of student-teacher relationships and their impact on GED completion, and validate the need for more research in this field.

**Recommendations for Future Research**

The primary findings of the study showed that student-teacher relationships do
significantly impact GED test completion. Quantitative analysis of the data showed significant difference when perception of student-teacher relationships were correlated with all age groups and tests completed. No significant correlations amongst gender and returning student status when correlated with student-teacher relationships. Recommendations for future research include pre and post assessments as well as validation of survey responses via interviews and/or record reviews. The survey itself may also be amended to include educational attainment of teachers and students as well as identification of receipt of special education services of students. This would allow future researchers to determine if educational preparation is relevant to GED success while focusing on both teacher preparation and a student’s time in a GED program and high school. The survey could also be revised to include the gender of the teacher as well as the class size. The inclusion of these variables will allow researchers to better determine other variables that are predictors of GED completion.

An inclusionary factor of this study was that students receive at least 20 hours of instruction before completing the survey. Ideally, this number would increase, allowing more time for relationships to be developed between students and teachers. However, due to the nature of the problem, student attrition, this is a lofty goal. Extending this study from the fall 2012 semester to the entire school year would have potentially increased the sample size and validated results. The identification of contributing factors of GED success will provide GED teachers, students, and program administrators with more ways to improve their chances of GED success.

Summary and Conclusions

This study sought to determine if correlations existed between the perception of student-teacher relationships and GED test completion. It considered age, gender, and test completion as
additional predictive factors. The varied finding of no correlation, negative, and positive correlations found among variables clearly denotes a need to further study these correlations as predictors of student-teacher relationships. Alternate variables include lack of support, lack of confidence, family responsibilities, institutional encouragement, illiteracy, and time (Perin, Flugman, & Spiegel, 2006; King, 2002), healthy relationships with teachers, tutors, and other students (Appleby, 2004) or transformative classrooms with relevant topics chosen to meet students’ needs and relating topics to the experiences of the students (Galanaki & Vassilopoulou, 2007; Gom, 2009), and perception (King, 2002).

This study used the 36 item Student Instructor Relationship Scale (SIRS) developed by Patricia Jarvis and Gary Creasey to assess student-instructor relationships, specifically Instructor Connectedness and Instructor Anxiety (Creasey, Jarvis, & Knapcik, 2009) from a student perspective on a seven-point Likert scale. This valid and reliable instrument was developed out of the need to have a tool to measure variables that influence relationships between students and instructors. Students who scored high in the eleven question connectedness domain are reported as having stronger feelings of connectedness. Conversely, those who scored low in this domain avoided close relationships with their instructors. Anxiety items, which consisted of eight questions, addressed instructor acceptance and student perception of individual self-worth. Students scoring low in this area reflected less threatening perceptions of their perceived instructor relationship. Higher scores in the domain of instructor anxiety are reflective of an increase in their perception of instructor anxiety.

Findings from this study vary in statistical significance, yet literature was supportive of the hypothesized results that there is a relationship between the variables test completion and age when correlated with student teacher relationships, specifically Teacher Connectedness and
Teacher Anxiety. This body of research is significant to teachers and administrators of GED programs who seek ways to increase program attendance, retention, and GED completion rates in order to sustain and increase program funding and over site and teacher performance. This study increases awareness of the impact of student-teacher relationships on student experiences and interactions. Teachers and administrators must endeavor to understand the external, internal, and institutional barriers that prevent their students from acquiring a GED. In doing so, they can offer motivation and support to assist students in developing healthy student-teacher relationships while promoting academic resilience to enrich academic results.
REFERENCES


APPENDIX A

Approval Letter from SIRS Creators

Re: Permission to use survey

Gary Creasey
Sent: Sunday, April 03, 2011 7:00 PM
To: Melissa Hairston

Melissa, fine, hope you get some good data!

On Mar 27, 2011, at 7:08 PM, Hairston, Melissa Tynetta wrote:

Greetings,

My name is Melissa Hairston and I am a doctoral candidate at Liberty University. My dissertation topic explores student-teacher relationships among adult learners seeking to obtain their GED and their instructors and the impact of such relationships upon GED completion and attendance. I would like permission to use your survey as a measure of the student's perceptions of their relationships with their instructors.

You may contact me at xxx-xxx-xxxx or respond to this email with any questions or concerns.

Respectfully,

Melissa Hairston

Gary Creasey, Ph.D.
Professor of Psychology
Chair, Institutional Review Board
Assistant Director, US Department of Education, TEACHER+PLUS PROJECT

From: Patricia Jarvis
Sent: Sunday, March 27, 2011 8:16 PM
To: Hairston, Melissa Tynetta
Subject: Re: Permission to use survey

Interesting research! You may use the measure but please cite our work published in the ISSoTL journal where we describe the measure. Let me know if you need more info on that ref. We also published a paper using the measure in the Journal of College Student Development. You mind find that useful too. I will send complete refs tomorrow. Best wishes with your work.

Sent from my Verizon Wireless BlackBerry
APPENDIX B

Student Instructor-Relationship Scale Administration Procedures

1. Explain that survey participation is voluntary and is meant to guide future GED instruction.

2. Due to varied reading levels within this population, surveys can be given whole group or individually with and without read alouds. Please read all items verbatim.

3. Time to complete surveys will vary based on reading and comprehension skills. Surveys will take a minimum of 5 minutes to complete.

4. Students may keep yellow Consent Form but must return survey (blue) and bubble sheet (salmon or white).

5. Surveys can be completed in pen or pencil.

6. Please reiterate that surveys are anonymous and participants should not include their names or other identifying information.

7. Please visually scan completed surveys prior to collecting them to ensure that they are completed and place completed surveys in blue folder.

8. When blue folder is full, you should be able to use one of the empty green folders for storage until I come to collect them.

9. If may be necessary to remind students that all questions are to be answered regarding only 1 instructor.

10. This survey was created for returning or current students but is applicable to all students when they mentally refer to their most recent teacher (only 1), even if that was a high school teacher.

11. Call me (Melissa Hairston at 409-0705) or email me at lissahairston@gmail.com if you need extra copies of anything.
APPENDIX C

Consent Form

PERCEPTIONS OF STUDENT-TEACHER RELATIONSHIPS AND GED COMPLETION:
A CORRELATIONAL STUDY

Student-Teacher Relationships
Melissa Hairston
Liberty University
Education Department

Dear Participant,

You are invited to be in a research study of the importance of teacher relationships with students and the impact these relationships have upon GED completion. You were selected as a possible participant because you have enrolled in ABE/GED classes for the 2012-2013 school year. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Melissa Hairston, Liberty University.

Background Information:

The purpose of this study is to explore (via survey) possible relationships between student-teacher relationships and GED completion rates in adults who have dropped out of high school and are enrolled in a day and/or evening ABE/GED program at the Stephen H. Clarke Center. The findings of this study will assist educators and adult education program developers in retaining adult students thus increasing GED completion rates.

Procedures:

If you agree to be in this study, we would ask you to do the following things: answer the following questions and return the survey to the instructor before leaving today. This survey should take approximately 5 minutes to complete.

Risks and Benefits of being in the Study:

There is minimal risk involved in this study. As a participant, you need only to read and indicate you responses on the survey sheet.

Potential Benefits:

Your responses are important because they may help guide the direction of future programs and ultimately help other students to reach their goal of obtaining their GED.
Compensation:
Participants will not be compensated for their participation in this survey.

Confidentiality:
The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records.

Upon data analysis, both a digital and hard copy will be kept in a locked fireproof container for three years. All data will be shredded at the end of the three years. The data contains no identifying personal information.

Voluntary Nature of the Study:
Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University and Stephen H. Clarke Center. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:
The researchers conducting this study are: Melissa Hairston and her advisor Dr. Gary Kuhne. If you have any questions now or later, you are encouraged to contact them. If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), you are encouraged to contact the Institutional Review Board, Dr. Fernando Garzon, Chair.

You will be given a copy of this information to keep for your records.
APPENDIX D

Original survey with demographics and scoring information

Student Instructor-Relationship Scale (SIRS)

The following statements concern how you feel about your relationship with your instructor. Respond to each statement by indicating how much you agree or disagree with it. Fill in the corresponding number on the Optical scan form using the following rating scale:

<table>
<thead>
<tr>
<th>1</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
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<tbody>
<tr>
<td>Disagree</td>
<td>Neutral/</td>
<td>Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly</td>
<td>Mixed</td>
<td>Strongly</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

1. I wish the instructor were more concerned with the welfare of the students.
2. I find it difficult to allow myself to depend on this instructor.
3. The instructor is concerned with the needs of his or her students.
4. I’m afraid that I will lose this instructor’s respect.
5. I worry a lot about my interactions with my instructor.
6. It’s not difficult for me to feel connected to this instructor.
7. This instructor makes me doubt myself.
8. I am nervous around this instructor.
9. I find that the instructor does not connect well with the students.
10. The instructor only seems to appreciate certain students.
11. I feel comfortable sharing my thoughts with this instructor.
12. I find it relatively easy to get close to this instructor.
13. Sometimes this instructor’s mood is unpredictable.
14. The instructor shows favoritism to some students.
15. The instructor seems uncomfortable interacting with students.
16. I prefer not to show this instructor how I truly think or feel.
17. It is easy for me to connect with this instructor.
18. I get uncomfortable when instructors try to get too friendly with students.
19. I rarely worry about losing this instructor’s respect.
20. It makes me mad that this instructor does not seem to pay attention to the needs of his or her students.
21. I am very comfortable feeling connected to a class or instructor.
22. I am scared to show my thoughts around this instructor. I think he or she will think less of me.
23. I usually discuss my problems with this instructor.
24. I don’t feel comfortable opening up to this instructor.
25. I’m afraid that if I share my thoughts with this instructor that he or she will not think very highly of me.
26. I do not often worry about losing the respect of this instructor.
27. I find it easy to depend on this instructor for help.
28. If I were to get into trouble in this class, I do not think this instructor would be very motivated to help me.
29. I could tell this instructor just about anything.
30. I feel comfortable depending on this instructor.
31. I worry that I won’t measure up to this instructor’s standards.
32. I worry that this instructor does not really care of his or her students.
33. I prefer not to get too close to instructors.
34. I often worry that my instructor doesn’t really like me.
35. If I had a problem in this class, I know I could talk to the instructor.
36. I know this instructor could make me feel better if I had a problem.

37. Which GED tests have you passed? 
   A) Writing  
   B) Math  
   C) Science  
   D) Social Studies  
   E) Reading  
   F) None

38. Please indicate your ethnicity
   A) American Indian/Alaskan Native American  
   B) Asian  
   C) Black or African American  
   D) Hispanic or Latino  
   E) Native American or Pacific Islander  
   F) White  
   G) Other

39. Please indicate your age.
40. Are you a returning GED returning GED student? Yes or No
41. Please indicate your gender. Male or Female

Scoring:
**Instructor Connectedness Items: Add items 3, 6, 11, 12, 17, 21, 23, 29, 30, 35, and 36.** Higher scores denote stronger feelings of connectedness and low score on this scale communicate avoidance or a tendency to eschew a close relationship with the instructor.

**Instructor Anxiety Items: Add items 4, 5, 7, 8, 22, 25, 31, and 34.** Higher scores reflect a generalized anxiety regarding a relationship with the instructor, whereas lower scores reflect less threatening perceptions of this affiliation.
APPENDIX E

Participant copy of survey

DO NOT SIGN YOUR NAME TO THIS FORM

Student Instructor-Relationship Scale (SIRS)
The following statements concern how you feel about your relationship with your instructor. Respond to
each statement by indicating how much you agree or disagree with it. Fill in the corresponding number on
the Optical scan form using the following rating scale:

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<th></th>
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<th>2</th>
<th>3</th>
<th>4</th>
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<tr>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Strongly Neutral/Agree

1. I wish the instructor were more concerned with the welfare of the students.
2. I find it difficult to allow myself to depend on this instructor.
3. The instructor is concerned with the needs of his or her students.
4. I’m afraid that I will lose this instructor’s respect.
5. I worry a lot about my interactions with my instructor.
6. It’s not difficult for me to feel connected to this instructor.
7. This instructor makes me doubt myself.
8. I am nervous around this instructor.
9. I find that the instructor does not connect well with the students.
10. The instructor only seems to appreciate certain students.
11. I feel comfortable sharing my thoughts with this instructor.
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13. Sometimes this instructor’s mood is unpredictable.
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19. I rarely worry about losing this instructor’s respect.
20. It makes me mad that this instructor does not seem to pay attention to the needs of his or her
   students.
21. I am very comfortable feeling connected to a class or instructor.
22. I am scared to show my thoughts around this instructor. I think he or she will think less of me.
23. I usually discuss my problems with this instructor.
24. I don’t feel comfortable opening up to this instructor.
25. I’m afraid that if I share my thoughts with this instructor that he or she will not think very highly
   of me.
26. I do not often worry about losing the respect of this instructor.
27. I find it easy to depend on this instructor for help.
28. If I were to get into trouble in this class, I do not think this instructor would be very motivated to
   help me.
29. I could tell this instructor just about anything.
30. I feel comfortable depending on this instructor.
31. I worry that I won’t measure up to this instructor’s standards.
32. I worry that this instructor does not really care of his or her students.
33. I prefer not to get too close to instructors.
34. I often worry that my instructor doesn’t really like me.
35. If I had a problem in this class, I know I could talk to the instructor.
36. I know this instructor could make me feel better if I had a problem.

37. Which GED tests have you passed?
A) Writing
B) Math
C) Science
D) Social Studies
E) Reading
F) None

38. Please indicate your ethnicity
A) American Indian/Alaskan Native American
B) Asian
C) Black or African American
D) Hispanic or Latino
E) Native American or Pacific Islander
F) White
G) Other

39. Please indicate your age.

40. Are you a returning GED student? Yes or No

41. Please indicate your gender. Male or Female
PERCEPTIONS OF STUDENTS - TEACHER RELATIONSHIPS AND GED COMPLETION:

Thank you for taking the time to complete this survey!!!
DO NOT WRITE YOUR NAME ON THIS FORM.

1. □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ ^
August 23, 2012

The Graduate School at Liberty University

Melissa T. Hairston IRB Exemption 1304.082312: Perceptions of Student-Teacher Relationships and GED Completion: A Correlational Study

Dear Melissa,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and that no further IRB oversight is required.

Your study falls under exemption category 46.101 (b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:

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

Please note that this exemption only applies to your current research application, and that any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption, or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
Fernando Garzon, Psy.D.
Professor, IRB Chair
Counseling

Liberty University | Training Champions for Christ since 1971
August 21, 2012

Gary Kuhne
Internal Review Board
Liberty University
Lynchburg, VA
August 21, 2012

I have granted permission to Melissa Hairston to conduct a research project with the adult education students who are enrolled in the Adult Basic Education and General Educational Development (GED®) classes offered through Portsmouth Public Schools. The teachers and students will be made available to Ms. Hairston beginning in September, and students will be allowed to opt out of the research if they do not choose to participate. I look forward to working with Ms. Hairston, and please feel free to contact me if additional information is needed.

Sincerely,

Judith M. Eure, Coordinator
Department of Adult Education
Appendix H

Correlation Tables

CORRELATIONS BY AGE GROUP

* Indicates positive correlation at p < 0.05

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<tr>
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<td>*0.0893</td>
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<td>Female</td>
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<td>Science passed</td>
<td>0.0278</td>
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<td>Age Group</td>
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<td>50-59</td>
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<tr>
<td>60+</td>
<td>0.0006</td>
<td>0.0427</td>
<td>-0.1268</td>
</tr>
</tbody>
</table>

* Indicates positive correlation at p < 0.05
**p-VALUES of TESTS COMPLETED**

* Indicates positive correlation at $p < 0.05$

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<tr>
<th></th>
<th>Reading</th>
<th>Math</th>
<th>Writing</th>
<th>Science</th>
<th>History</th>
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<tr>
<td>Male</td>
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<tr>
<td>Female</td>
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<td>Return Student</td>
<td>*0.2418</td>
<td>*0.0721</td>
<td>*0.2504</td>
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<td>*0.0978</td>
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<td>0.0358</td>
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