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Adult Literacy in Tennessee: An Analysis by Gender, Age, and Race

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A dissertation

presented to

the faculty of the Department of Educational Leadership Policy Analysis

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Doctor of Education in Educational Leadership

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by

Amy R. Keesler

May 2014

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Dr. Don Good

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Keywords: andragogy, GED, adult education, social justice, lifelong learner, pedagogy, adult basic education

## ABSTRACT

Adult Literacy in Tennessee: An Analysis by Gender, Age, and Race

by

Amy R. Keesler

The purpose of this study was to investigate the state of adult literacy in Tennessee. The field of adult education underwent a transition as the testing procedure and the test changed to correlate with the induction of the Common Core standards in public schools. Adult students face many barriers to overcome to be successful. The research questions posed guided the analysis of demographic data on student who completed the GED prior to the changes.

Data were provided from the Tennessee Department of Labor and Workforce Development database. The demographics and scores included those of adults who had passed the GED test from 2008 through 2013. A series of 2-way chi square analysis were used to examine pass rates using the characteristics of race and ethnicity, gender, and age. A sample of 2,000 was randomly selected from a population of 60,000.

The data showed that in the state of Tennessee there are significantly more males than females who pass the test each year. Although all ethnicities are permissible to take the GED, more Caucasians and African Americans take and pass the test in this state. Takers of the GED in the state of Tennessee are to identify their age while completing the exam. The majority of adults taking the GED from 2008 through 2013 were in the age group of 19 to 24.

Many test takers only need to attempt to pass the test the first time. Out of 2,000 randomly sampled males and females, the data showed that a higher proportion of males than females pass the test in the first attempt. There was no significant difference between the randomly sampled age groups on number of attempts. The data did indicate that Caucasian testing candidates pass the GED significantly more often on the first try than African American candidates.

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## DEDICATION

To God be the glory for allowing me to accomplish this dream! I know that all I have and all that I am comes from You. I am thankful for this experience and the blessings that have come from it.

To my parents Bill and Natalie Keesler, you were my first and always have been my best teachers. You instilled a work ethic in me that I deeply value. You have consistently spoken with words and actions, thus being wonderful role models.

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Lastly, to Rebecca, my treasure on this earth, I could not be more proud to be your mom! Thank you for being my cheerleader during this process. I hope this experience has shown you the meaning of persistence and determination. Remember no knowledge to be obtained is more important than knowing our Heavenly Father. I love you more than you will ever know.



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## CHAPTER 1

### INTRODUCTION

Adult education is basic skills, technical training, career training, and updating programs training. Adult learners engage in both formal and informal programs; these can encompass everything from respect for human rights to learning how to text on a cell phone. The idea of adult education dates back to the early times of our country, whether someone needed to learn how to farm or how to read the *Bible* (Frimpong Tiwaah Adwoa, 2009).

Currently the United States is home to over 4,000 adult education programs. The quality of the program fluctuates with the depth of instruction that is provided. There is not a consistency to the adult education teachers; some centers have part-time instructors; others only have volunteers (Rose, 2013). Although adult education has changed with the times and with the needs of the learners, it has always been a privilege of all citizens to have basic skills (Fimpong Tiwaah Adwoa, 2009).

Recently it has been advocated that adult education should do a better job for its clients (Rose, 2013). The following story is a prime example of a client who needed assistance. Tivnan (2011) interviewed an adult learner who had dropped out at the age of 16. The adult learner recalled being put in the lowest classes because she could not read well. This situation seemed to encourage her to stop going to class. Instead she went to work. She became very good at hiding her inabilities and if she could not hide it, she would quit. She eventually made her way up the ladder to a sales director of a company and hired people to read and write for her. She described her belief as she became adept at evading the truth but was always embarrassed.

Studies have shown that low-income students are twice as likely to drop out of high school compared to middle income students and six times as likely as higher income students. It also has been demonstrated that minority races have a higher potential of dropping out of high school. For example graduation rates for African American, Latino, and Native Americans are 60% to 70% lower than Caucasian students (Tuck, 2012). Dropping out of high school has numerous negative effects. A California study reported that the lifetime cost of one class of dropouts is \$24,212,395,755. In 2012 there were 2.5 million people in jail in America and 70% of them dropped out of school (Wilson, 2012). In Tennessee 29,000 students dropped out in 2012. This added to the total of 900,000 to one million people in the state without any diploma (Phillips, 2013). The Institute of Education Sciences (2008) maintained with lower education comes lower skills and less motivation to enroll in any type of degree or certificate course. Basic skills are so low with some adults that when given a survey by the National Center for Education Statistics, supplemental assessments for letter recognition were required (Baer, Kutner, & Sabatini, 2009) In fact prisoners behind bars had higher literacy and computer skills while in jail than adults in some households (Greenberg, Dunleavy, & Kutner, 2007)

By providing quality adult education programs to low income and limited English citizens the quality of living for the whole population increases. High school graduates have less dependency on public assistance, have a higher income, and have more consistent employment. They are less likely to be a part of or a victim of a violent crime. These graduates also are less likely to become young parents and less likely to have bad health (Dicksteen, 2012).

In 2009 40% of adults desiring a General Education Diploma (GED) were in pursuit of higher pay or a better job (Tuck, 2012). Earning a GED can be an overwhelming task for some students (Rose, 2013). In 2014 in conjunction with the implementation of the Common Core

curriculum the GED test will be changed. The test will reflect changes in two ways: the questions will be more rigorous and it will be taken on the computer. (GED Testing, 2012). Lack of funding and inconsistent teaching methods are hurdles that must be addressed (Rose, 2013). Highlighting the need for more GED graduates to help the economy and the greater good should be emphasized to all those in charge of funding (Rose, 2013; Tuck, 2012).

With the state of the current economy and businesses having to close, quality of life is an issue nationwide. In the state of Tennessee there are many adults without a high school diploma (Phillips, 2013). This lack affects their children's education, the unemployment rate, the crime level, and other far-reaching aspects of the state's welfare. Achieving a high functioning adult education program would be beneficial for the state.

### **Statement of the Problem**

The purpose of this study was to look at the test scores of the adult learners who took the GED in the state of Tennessee and analyze the pass rates by gender, age, and ethnicity. The number of attempts to pass the test was analyzed by gender, age, and ethnicity.

### **Research Questions**

The researcher used the following research questions to guide the analysis of the current adult education programs.

RQ1 Is there a significant difference in the number of males and females who earn GEDS in Tennessee?

RQ2 Is there a significant difference in the number of adults who successfully complete their GED in Tennessee as compared by age group?

RQ3 Is there a significant difference in the number of adults who successfully complete their GED in Tennessee as compared by racial groups?

### **Significance of the Study**

The researcher assembled the information from the state database. The researcher evaluated the graduates of the current GED programs in the state of Tennessee by the factors gender, ages, and race. This information has not been previously analyzed in this manner and provides a cohesive presentation of the data. There is limited access to the collected data and they are not being used for decision-making purposes.

### **Definition of Terms**

The following terms are common in this field, as well as referred to in this paper: andragogy, GED, adult education, literacy, social justice, lifelong learners, pedagogy, adult basic education, and postsecondary education.

Adult Basic Education – educational courses for adults in reading and writing (Jacobs & Hundley, 2010)

Adult Education – educational programs or courses for adults who are out of school or college  
(New Oxford American Dictionary, 2001)

Andragogy – the art and science of helping adults learn (Henschke, 2009)

GED – an abbreviation for the General Equivalency Diploma; a diploma signifying high school graduation awarded to those who successfully complete a required examination (New Oxford American Dictionary, 2001).

Lifelong Learners – a person who remains in a learning state throughout a life (Jacobs & Hundley, 2010)

Pedagogy – the method and practice of teaching, especially as an academic subject or theoretical concept (Henschke, 2009)

Social Justice – the quality of being fair or reasonable when related to society (New Oxford American Dictionary, 2001)

### **Delimitation and Limitations**

This study was limited to a selected sample of individuals and the data were analyzed by the basic demographics reported to the Tennessee Department of Vocational Education. The researcher requested permission to use data that included socioeconomic status, gender, ethnicity, the number of attempts to take the GED, and a breakdown of scores by subject area test. After gaining permission from the Tennessee Department of Labor and Workforce Development, the researcher was directed to the holders of the data. The holders of the data were unaccustomed to outside sources needing access to the data. This caused a hardship for them and limited the scope of the original plan.

Archival data that had been collected from a sample of those students who had participated in the GED testing program from 2008 through 2013 were analyzed (Tennessee Department of Vocational Education, 2013). The data included gender, age, ethnicity, and attempts to take the GED. The data do not break down the scores by subject area. The data do not include the socioeconomic level of the adult student. In addition, the data do not define the motivation behind getting a GED or the outcomes after receiving a diploma. The data also do not represent the adult students who have attempted, but not yet completed the GED testing.

### **Chapter Summary**

Historically, adult education has been around for 7 decades, yet it gained popularity in the United States in the 1960s and 1970s (Cercone, 2008). Adult education programs vary from site to site. Some sites have volunteers, while other sites use paid employees. The employees do not all necessarily have an education background. This lack of teaching experience decreases the chance of appropriate pedagogical techniques being presented (Rose, 2013). There is a need to increase the number of people, specifically in the state of Tennessee, who earn degrees (Phillips, 2013). There is a correlation between not graduating from high school and earning lower wages as well as participating in more crimes and enduring health issues (Dicksteen, 2012). There are a variety of people from different age, social, and racial groups that are lacking this certification (Tuck, 2012). Achieving higher functioning, consistent adult education programs for the state would be quite beneficial (Roehrig, 2012).

## CHAPTER 2

### LITERATURE REVIEW

#### **What is Adult Education?**

Adult education migrated to and evolved in the United States in the 1920s. Cercone (2008) found that adults who have participated in adult education classes are some of the most motivated and task-oriented individuals. These adult students bring with them life experiences as well as the many outside burdens that weigh down their daily life: family obligations, work expectations, and the necessity of income. Therefore, each adult who participates in adult education is unique (Cervero & Wilson, 2006).

Historically, adult education has had predictable clients such as those needing skill development or employee preparation. Generally adult education has catered to this type of student (Wortham, 2008). In recent years the face of adult education has changed. Goddu (2012) stated that many older adults are entering the adult education arena. In addition, Grace and Rocco (2009) reported that adults are reentering the field of education for more marketable skills. The ability to express oneself in writing is important. Math skills must be refreshed and updated to make these adults more marketable. Grace and Rocco (2009) further stated that some adults are in pursuit of social justice. These adults wish to end the cycle of poverty and decline in their community and would like to give back. Sandlin, Wright, Robin, and Clark (2013) found that there was an influx of adults who want to know new things and learn for themselves. Some people are in search of a new technological lesson; others need help to better understand new healthcare trends; and there are those that are even embarking on a new hobby. Kenner and



Weinerman (2011) recorded three expanding groups in adult education: those who have lost jobs, veterans returning to the workforce, and those finishing their GEDs.

With the plethora of adults reentering the learning environment, there is a need for modifications (Grace & Rocco 2009). Adults learn in a variety of ways and have experienced the world from multiple perspectives; differentiation is pertinent (Falasca, 2011). Online learning and self-directed learning may be appropriate for one group, while learning in the moment may be applicable to another (Cercone, 2008; O'Toole & Essex, 2012). The educators of adults must focus on constructing lessons that are relevant to the learners' needs (Cercone, 2008).

### **History of Andragogy**

Adult education is commonly associated with the term “andragogy.” Henschke (2008) defined andragogy as the art and science of helping adults learn. The history of the theory of andragogy dates back to 1833 when Alexander Knapp was describing Plato’s theory of education to a group of young adults. Plato’s “Allegory of the Cave” somewhat mirrored the andragogy concepts (Plato, trans. 2010). In Plato’s story a human must have a certain bit of light in the cave to receive knowledge, as with andragogy, an adult’s experiences give more light to a subject than a child’s experiences would. The strategies of andragogy basically disappeared until 1921 when Rosenback revisited these concepts in the academic world. Andragogy helps to improve adults’ growth as they learn from their mistakes and practice being self-directed (Henschke, 2008). Chan (2010) agreed with this idea, and he also stated that andragogy allows adults to be creative, adapt to changes, compete in the world, and become lifelong learners. He further discussed that this theory could be used in social, political, and cultural contexts. Henschke (2011) proposed that

andragogy could be used as a tool in counseling if the client is willing. The essence of this experience would help the adult recognize steps to expand the repertoire of solutions.

Thorndike added to this theory in the 1950s by insisting that an adult's ability to learn could improve the world's condition. The formal adult education theory, originated by Linderman in 1960, suggested it made adults more effective citizens. The citizens were able to contribute more to the economic and political aspects of the nation. The next marked event was in 1966 when Savicevic stated that it was imperative to have a different approach in the way children are educated, pedagogy, versus adults, andragogy (Kroth & Taylor, 2009).

Although, Malcolm Knowles is credited with the theory of andragogy in current times, he assuredly got his information from Savicevic (Henschke, 2010). There is a split in the support and opposition of the theory of andragogy. This stemmed from Knowles declaring it was the opposite of child pedagogy. The andragogy theory seemed to succeed only due to the timing: an increase in adult education in the United States in the 1970s. This theory has been questioned because there was no research to establish validity. Regardless, there are almost 300 studies to date supporting andragogy (Henschke, 2009). The theory has been bolstered by the self-determination theory that teaches actions relate to goals and the socio-emotional theory that adults learn differently than children.

Knowles's theories and strategies presented as andragogy continue to prove effective in industry, business, healthcare, government, higher education, and religious education (Henschke 2010). Many companies recognize that learning is a process and have embraced this idea by having all employees involved in group learning situations (Sakai, 2013). With the increase in distance education, new branches of adult education appeared: foreign language, online, emotional intelligence, and brain research (Henschke, 2009). Andragogy has become more than

adult education or the learning of adults. It has evolved into educating adults with specific teaching methods and has become a discipline to itself (Reischmann, 2009).

### **Adult Learners**

Dionissi, Dunne, and Fee (2011) researched many issues related to adult literacy that are not unique to the United States. They discovered that more education equates to more money for the learner. There is a large gap in wages between skilled and unskilled laborers. Companies recognize that workers are more efficient when they have higher quality skills. More women graduate from college than men, likewise, women participate in schooling incentives sponsored by workplaces more often than men. This is ironic because most women do not make more money than men. Dionissi et al. (2011) speculated that men go through different stages in their lives than women, and it costs more for men to stay in school. In fact, 43% of men had no higher education compared to the 32 % of women.

The United States is not alone in its quest for more educated adults. Canada acknowledges there are a large number of citizens who lack basic skills. In 2009 only 30% of the citizens of Canada were involved in adult education. Of the adult citizens in Germany and Sweden who are lacking in basic education, only 50% are involved in educational endeavors (Hrimech, 2009). The United Kingdom views adult education as a community effort and encourages work-based learning providers (Holloway, 2009). Officials in Portugal have researched a model by Carre. Portugal attributes much of adult education in two categories: intrinsic and extrinsic motivation. Intrinsic motivators include liking to learn, building new contacts and relationships, and becoming more content. Extrinsic motivators are to get out of

certain situations, to receive a promotion, to get a job, or for a social image (de Oliveria Pires, 2009). Both motivators contribute to the adult learning community's success. Australia offers a second chance to dropouts who are not employed so they can find work. They offer flexible scheduling, individual pacing, and many freedoms not offered in public schools to promote graduation. These freedoms include fewer rules, allowing students to come, and not correcting behavior outbursts (Murray & Mitchell, 2013). After the World Education Forum, Pakistan's government made adult education a top priority. The Minister chose to use a holistic approach to combat illiteracy ("Higher Education Will," 2013).

Roehrig (2010) reported that the United States has 93 million adults who are at basic or below basic literacy skills. This predicament makes it more difficult for these people to find a job, especially because a minimum of a high school diploma is necessary. Of the recently created jobs, 34% require a college degree. Employers are seeking candidates who are problem solvers and critical thinkers. Potential employees need to have high communication and technological skills. They must desire to be resilient, lifelong learners (Ritt, 2010).

Adults who have higher literacy skills affect the literacy level of the whole family. Adult literacy improves all aspects of life and can bring improvement to family situations (Crutcher, 2013). In fact, early childhood educators are encouraging literacy projects that include parents to promote education (DeBruin-Parecki, 2007). A study was conducted through the Even Start program that hypothesized family literacy programs help early childhood students (St. Pierre, Riccuiti, & Rinddzuis, 2005). After conducting the study, it was posed that the curriculum content of the program was ineffective or the families did not cooperate fully. The program was identified to be successful compared to no program, but a need to strengthen it and continue the education was recognized. Public libraries can help in the fight against literacy by providing

more high interest, low-level books for family use (Roehrig, 2010). School systems have been rewarding teachers and students for literacy growth (Naithai, 2013). This use of Skinner's theory of reward and punishment shows success when used with adult learners in these families (Moberg, 2006). Literacy is still low in the United States even with a large number of programs offered (Lynch, 2009).

Holyoke and Larson (2009) studied four different techniques adult educators could use in their classroom. The teacher must find out why the students are there and what they need to accomplish or know. Getting to know each individual sheds light on the experiences that are being brought to the learning environment. It also gives the teacher an idea of the student's self-concept. Each of these factors plays a part in the student's willingness and readiness to learn (2009). This knowledge will also help the teacher while trying to maintain the student's interest in learning (Dirkx, 2008). The information gleaned will help the educator walk in the student's shoes to understand his or her perspective better (Aspin & Chappman, 2007). Glasser (1993) suggested that teachers should emphasize learning any skill through how it will apply to the student's life. Reminding the adult students of the role of literacy in the real world and the hardships that can be avoided by becoming literate is an effective discussion to have (Burke, 2000)

After spending time with the class, the instructor will determine which students desire independent work and which excel from one-on-one tutoring (Beder, Tomkins, & Medina, 2006). Using the strategies of andragogy, different techniques and methods will be used for different students (Moberg, 2006). Technology will be an essential part of the instruction. Adult students need to increase their use of technology through real-life learning experiences (Bear, 2012). It is still important for teachers of adults to model literacy frequently in the classroom (Layne, 2009).

Finally, teachers should encourage postsecondary education for all students. (Dionissi et al., 2011; Wilson, 2006).

### **The Golden Years**

An expanding group of learners in adult education fit into the category of vibrant patriachs. Older adult learners are venturing back to school to learn for self-fulfilling reasons. These learners are conscious of what they need to know and are responsible for their own learning. In fact, the Pakistani citizens believe that education assists in aging, and this may be true according to the research of the changes in cognitive decline. Topics that interest seniors are those such as health, family, community life, safe environments, and how to keep active. The older learners recognize the need to learn more about the ever-changing world of technology (Boulton & Lewis, 2010). It has been noted that there is not as much mental decline as previously reported. Long- and short-term memory are needed in the learning process, so the quality of life advances with more use. Keeping the mind active is an important deterrent to cognitive decline (Jacobs & Hundley, 2010).

As institutions see increases in the older adult population –42% gains from 2000-2010 and a prediction of another 20% by 2020 – focus must be shifted to the classroom (Goddu, 2012). Adult learners are usually put together in one category, but senior learners bring generational differences. These differences should influence what is taught and the preferred method of teaching. Older adults know their own learning styles and value education in the way that they and their counterparts were taught in earlier years (Holyoke & Larson, 2009). Therefore, geriatrics are less likely to be similar to others in the adult learner group (Moberg,

2006). They may need more time and practice than younger adults (Boulton & Lewis, 2010). Overall, geriatrics bring value to the classroom and their experience needs to be honored (“Adults, Nontraditional Students,” 2013).

### **Postsecondary Adult Students**

Nearly half of all students in postsecondary institutions are over the age of 24 (Merriam, Caffarella, & Baumgartner, 2007). This growing presence of adults is an under researched aspect of collegiate life. These new members have had their interests and learning styles neglected. They have little voice on campus and are denied opportunities due to the unusual times their classes occur. Data are needed by administration and student services to address these needs. Adults should be viewed as worthy enough to participate in on-campus activities (Sissel, Hansman, & Kasworm, 2001).

A majority of adult learners are part-time or e-learners, other areas the universities were not as well versed in a decade ago (Ausburn, 2004). These students were not part of the social aspect of the college. They usually came to campus only for a specific purpose (Fairchild, 2003). These students liked the way the syllabus and projects were explained online. Some preferred a blended atmosphere with a few face-to face meetings (Ausburn, 2004). Most of these students had dispositional issues like conflicts from work and home, stress, and the feeling of being overloaded. Adult students also had institutional issues with universities that were not ready to deal with them. Fairchild suggested that student services would benefit from a revisiting of these points (2003). Over the past decade universities have strived to make these adult students more

responsive to their needs. This adaptation has played an important role in making a supportive learning environment (Ross-Gordon, 2011).

Brookfield and Hoist advise adult learners would also profit from a different style of teaching at the college level (2011). Transformative lessons would allow the students to get broader perspectives; incorporating critical reflection would assist the students in finding deeper meaning in their studies. Placing the learners in charge through self-directed learning gives them ownership of their learning. The epistemological approach interconnects reality with learning (Brookfield & Hoist, 2011). A system of education that improves the whole person is important at the postsecondary level (Hyland, 2010). Basically, with the changes in clientele colleges should become more adult-centric (Jacobs & Hundley, 2010).

Furthering the problematic nature of adults and postsecondary education is that of low-income adults. Less than 11% of freshmen are from the bottom quartile of income level. These students are underrepresented and overwhelmed, needing extra help with financial aid and academic preparation. Schools should have an outreach program to specifically help adults in this category (Pallais & Turner, 2006). The majority of these students must be enrolled in noncredit remediation classes, which lengthens their time at the university (Jacobs & Hundley, 2010). This group of students could benefit from collaborative service learning classes (Kelly, 2013). The students may also be in need of strategies to help them navigate online classes and the classes' subject matter ("Childcare Education Institute", 2012). There are obstacles for adult learners to overcome at the university level that are specific to them, and colleges should be receptive to those challenges.



## **Adult Basic Education**

Adult Basic Education (ABE) is provided for adult citizens who are at a low literacy level and would ultimately like to improve. McGrath (2009) examined reasons people dropped out of school, finding that students reported a lack of interest or motivation was a factor. The way the teacher taught, the style, often made people drop out. Several students cited negative childhood experiences with school and difficulty in reading as their reasons for leaving (Greenberg, Rodrigo, Berry, Brinck, & Joseph, 2006). Finally, having family or employment obligations was listed as a necessity for leaving school (Rospog, 2006). The majority of GED students are 24 and older, and they confessed to not finishing the 10th grade. Payne (2005) differentiated between situational and generational poverty. She noted that students who came from generational poverty had a hard time fitting in to the middle class idea of school. The majority of adult students are unemployed, but the one third who are employed earn approximately \$5,800 a year. (VanHorn & Kassab, 2011).

Many students who return for adult education and come from undereducated families lack helpful motivation from home. Other students credit parents, grandparents, siblings, and spouses as motivating reasons to continue schooling. Studies show that the biggest motivator for adults in returning for more education is their own children (Terry, 2007). Payne (2005) stated there are four defined reasons for the generational poor to leave their poverty status: a goal, a relationship, it is too painful to stay, or a special talent or skill. Because these students must disconnect from longtime relationships, it is very difficult to transition (Payne, 2005). There is a positive correlation between parents with less than a high school education and their children's

poor reading skills. It is a cycle that tends to be perpetuated. Adult education programs are important for adults and children likewise (Lynch, 2009).

Motivating these adults to continue their quest for literacy is important. The adult learner must focus on his or her potential self, desire for material items, or a better job rather than focusing on his or her fears (Lee, 2007). Lynch (2009) relayed success with retention in adult programs through relating their programs to daily life. McGrath (2009) suggested that while building a relationship with these students, reiterate all of the changes that have occurred in education and how that will assist them. Glasser (1990) informed instructors to build relationships and emphasize the positives. He insisted students will remember these feelings and it will help continue to encourage their schooling as they reflect on these successful emotions. These students need to be involved in their own instructional design so that they can have a vision on changing their future (Cerrero & Wilson, 2006). Adult education should not just equip the learners with skills but also give them a voice to change their society (McKay, 2010).

### **English Language Learners**

Non-English speaking adults have a dual struggle of becoming proficient at the English language while learning basic literacy skills (Condelli et al. 2010). In core literacy tasks low-level Caucasian individuals outscored Hispanic individuals unless it was in the native language (Baer, Kutner, & Sabatini, 2009). In fact, the literacy level of non-English speakers compared to native low-level students was much lower in the areas of job skills, computer literacy, and percentage of GED or high school graduation levels (Jin, 2009).

In dealing with adults communicating and interacting through daily language has been affective. Nonnative speakers need real life, practical knowledge as they are building their vocabulary. Daily usage of English vocabulary will encourage these students to learn incidental vocabulary. Extensive reading will further help them as they learn new words (Larotta & Brooks, 2009). One thing that both low-level and non-English students have in common is their participation in their children's school environment (Jin & Kling, 2009). Oral reading could be a resource for the adult educator to attack this issue. In the beginning of the 20th Century, oral reading was used less often than earlier years in schooling. It is a resource to build confidence and community. Oral reading can connect the spoken and written word that limited English learners need. Furthermore, it can improve decoding and fluency. All of these skills could be beneficial to both the parent and the child (Rasinski, 2003).

### **History of GED Testing**

The American Council on Education first made the GED test in 1943 for veterans who were entering college under the GI Bill. It was used as an assessment to measure the soldiers' scholastic abilities (Tuck, 2012). Over the years the GED has been updated three times, in 1978, 1988, and 2002, to reflect the changes in high school standards (Adams, 2011). After 50 years of testing there was a change in the U.S. Census where people marked either high school diploma or GED certificate. This change affected a growing attitude in the United States: the GED is an alternate to a high school diploma but not the equivalent (Tuck, 2012). To combat the test's loss of relevance and credentials, a new assessment has been proposed (Adams, 2001). In 2011

Pearson Publishing paired with the American Council on Education to develop a more rigorous test (Tuck, 2012).

### **State of Adult Basic Education**

Nationally and internationally it has been recognized that there is a need for adults to become more literate (Golding & Foley, 2011). In fact, a goal has been set to raise the literacy rate for adults to 50% by 2015 (“LFA project designed”, 2009). The last 8 years has brought an emphasis to the field of adult education through accountability measures. Although there have been some improvements, many suggestions have been made by the US Department of Education’s research. It was found that only a small part of the target population is actually being served; therefore, more publicity is needed (Institute of Education Sciences, 2008). More flexible opportunities should be offered to improve basic literacy at the state and local levels. Local data need to be gathered and evaluated so that necessary training can ensue. States and counties need to publish their results in journals so that several actions can occur: more long-term investments, more common measurement, and more cooperation between offices. Finally, the study also showed that more adult education experts should be involved in the adult basic education process.

Funding is a problem for adult education worldwide. In the United States the Department of Education reported that adult literacy programs need more funding (Institute of Education Sciences, 2008). In Georgia the adult education programs have to compete with the welfare programs for money (Kilgos & Valentine, 2006). Rhode Island had to look for outside grants to provide childcare and job training services in their adult education centers (Fritz & Alsabek,

2010). In California over half the adult education budget was cut and put into K-12 schooling (Temes, 2012). For nonwhite, nonnative speakers, this is a disadvantage because property taxes and federal funding are spending more than \$733 less per nonwhite pupil as it is (Ramirez, 2012). Furthermore, it has been suggested that low-income neighborhoods need to provide literacy education to parents to put an end to the cycle (Phillips, 2010). Ironically, the Goodwill Corporation planned to open multiple adult education schools, but legislature put a cap on the number allowed (Wall, 2013). Politicians recognize the dilemma – one in five adults is illiterate, yet issues like war and the economy keep overshadowing the problem (Crutcher, 2013; Rebuck, 2011).

### **State of GED Graduates**

Receiving a GED diploma can free students from a history of failure and defeat (Learning Disabilities Association, 2006). As of 2013 more than 15.2 million people have received a GED throughout the 65-year history of the test. Since the 1990s more young people are taking the test (Tuck, 2012). More students from rural communities pass the GED than students living in urban areas, although the passing score of the rural resident is lower than the nationwide score (VanHorn & Kassab, 2001). More GED recipients enroll in college than ever before, but a lower rate of these students actually graduate. The older students get, the more similar they become, so educators should encourage them to continue to a degree (Maralani, 2011). Only 2% to 8% of GED graduates completed a bachelor's degree in 2009 (Tuck, 2012).

A center in California is teaching its students to give back to where they came from. These future adult learner leaders will serve their community and teach social justice through

culturally relevant lessons (Wong, 2007). The idea of raising adult learners' ambitions and including the idea of giving back to future generations will help break the cycle of poverty (Reed & Marieneau, 2008). Collecting and using ideas from other countries could make adult education more globally competitive (Phillips, 2006). After the debut of the new millennium, the skills of being able to work with others and communicate well has given success to professionals. Businesses are looking for more abilities from candidates (Bracken, 2008). Employees must have many more qualified skills: critical thinking, problem solving, computers, as the competition for jobs has spread to an international candidate pool (O'Brien, 2011). Adult education affects all countries, even wealthy ones (Crutcher, 2013). The ultimate goal of the Tennessee Department of Labor and Workforce Development is to assist students to not only obtain employment but to help with their education (Phillips, 2013).

### **The Future of Adult Education**

By 2050 there will be a growth of people over the age of 65 in Europe. This expansion is predicted to be 70% over the number of those aged 65 in 2008. This trend is not unique to Europe. There will be an overall need for more adult education for the active aging in the workplace (Requejo, 2008). The public and private sectors should work together to coordinate how to provide more adult education and workspaces for the elderly and be supportive of it (Jacobs, 2006).

Nations and business alike need to begin addressing adult education. Australia is making action plans to help reluctant learners (Golding & Foley, 2011). The United States is recognizing a need to be inclusive for diverse learners (Reed & Marieneau, 2008). More businesses need to

embrace their employees' personal development by supporting adult education monetarily (Jacobs, 2006). Dweck (2006) defined the way one thinks about oneself as a mindset. She furthermore divided these mindsets into two: fixed and growth. To promote the growth mindset feedback and nurturing should be advised. It is a difficult step to take, but this step will promote some students to necessary classes to improve their situations.

### **The Future of GED Testing**

In the fall of 2012 a press release was issued by the Department of Education announcing major changes to the GED occurring in January of 2014. The content will change and become more rigorous. The cost of the test will increase from \$65 to \$120. The biggest change will be that the test will be computer based (tn.gov.labor, 2012). Technology instruction will be necessary for all students. The instructors must facilitate computer tutorials so that it will be taught correctly (Dillon, Marable, & Valentine, 2006). The Kentucky Adult Education Centers are beginning to practice the new requirements on computers. If students agree to practice, they are given coupons to help with the higher cost of the new test ("Kentucky Adult Education", 2012). In pilot programs that are being offered currently students are given the math part of the test on paper then on the computer. At this time, no major differences have been noted between the scores (Higgins, Patterson, Bozman, & Katz, 2011).

The test will change from the current five tests: reading, math, social studies, science, and writing to only four areas: literacy, math, science, and social studies (Adams, 2011; Tuck, 2012). The intent is to have the GED students use more analytical and critical thinking skills. This new rigor will allow students to get through postsecondary education without the need for remedial

courses (Adams, 2011). These changes are to make the GED a more “aspirational degree”, but for some people it is already a monumental goal (Rose, 2013)

### **Conclusion**

The GED test has earned its place in education. Test developers continue to strive to make it equitable to a high school diploma. The hope is to have employers and colleges look at the two certificates similarly. The GED test can prove to be a strenuous task for some adult students who have been out of school for many years. On the other hand, adult students are driven to succeed and persevere in spite of the challenge.



## CHAPTER 3

### RESEARCH METHOD

#### **Introduction**

The purpose of this study was to determine whether any significant relationship exists between the demographics of those adults earning a GED degree. The demographics that were analyzed are gender, age groupings, and race. This chapter describes the methodology and procedures used in this quantitative, ex post facto study.

#### **Research Questions and Corresponding Null Hypothesis**

The following questions (RQs) and null hypotheses were developed to guide the research.

RQ1: Is there a significant difference in the number of males and females who earn GEDs in Tennessee?

Ho1<sub>1</sub>: There is not a significant difference in the number of males and females who earn GEDS in Tennessee.

Ho1<sub>2</sub>: There is not a significant difference in the number of attempts to pass the GED by males and females in the state of Tennessee.

RQ2: Is there a significant difference in the number of adults who successfully complete their GED in Tennessee as compared by age group?

Ho2<sub>1</sub>: There is not a significant difference in the number of adults as compared by age group.

Ho2<sub>2</sub>: There is not a significant difference in the number of attempts to pass the GED by age group in the state of Tennessee.

RQ3: Is there a significant difference in the number of adults who successfully complete their GED in Tennessee as compared by racial groups?

Ho3<sub>1</sub>: There is not a significant difference in the number of adults who successfully complete the GED as compared by racial groups.

Ho3<sub>2</sub>: There is not a significant difference in the number of attempts to pass the GED by racial groups in the state of Tennessee.

### **Sample**

The sample of this study was of adult students in the state of Tennessee who had earned the GED certificate from 2008 through 2013. The information was compiled by demographics to give a picture of the GED participants. These overall statistics are based on the population of the GED graduates in the state of Tennessee. During the years 2008 through 2013, 60,000 people became GED graduates. The random sampling of gender and age included 2,000 students. These graduates qualify as adults, which puts them in the age group of 16 years or older. The adult students were from a variety of races, but the main two representative races in the state are white and black. When analyzing the data a random sampling of 2,000 students was used.

## Instrumentation

The GED has been part of the United States since 1945. It was originally made for the soldiers returning from World War II who desired to complete their high school diploma. This allowed the GIs to attend college or a trade school and improve their quality of life. Seventy years later, over 18 million people have achieved this high school equivalency test ([gedtestingservice.com](http://gedtestingservice.com)). The following quote addresses the validity of the exam.

The GED® test is developed using specifications established by experienced secondary school and adult educators and are reviewed by subject matter experts. Every test question is subjected to multiple reviews by test specialists and external content specialists, and is pretested before becoming part of a final test form. The GED® test is also standardized and normed using a national stratified random sample of graduating high school seniors. In order to pass the tests, the GED® candidate must demonstrate a level of skill that meets or surpasses that demonstrated by approximately 60 percent of graduating high school seniors. ([gedtestingservice.com](http://gedtestingservice.com), par. 6)

The exam currently consists of five different parts: reading/language arts, math, science, social studies, and writing. The passing score for each test is 410, except for the writing test that is based on a rubric scale. A minimum of a two is considered passing on the writing section. The exam is administered at the many adult education offices around the 50 states and is recognized as a high school equivalent. This diploma allows entrance into college as well as certification for hiring purposes.

## **Data Collection**

I contacted Jim Whitbeck, a longtime teacher at the adult basic education center in Hamblen County, Tennessee. He connected me with Joey Czarneski at the Tennessee Department of Education. Czarneski instructed me to complete and submit several forms and then forwarded my information to the Measure TN office in Knoxville, Tennessee. This is where the data are housed. I needed to obtain IRB certification to be able to access the data. The data include no identifiable information; therefore, no issues concerning confidentiality were breeched. The data contained 60,000 samples of GED testing results. It disclosed the number of males and females who took the GED test from 2008 through 2013. The data further revealed the test takers' ages and ethnicity. These data assisted in the answering of the research questions that were posed.

## **Data Analysis**

A series of two-way contingency table chi square analyses using crosstabs were conducted to test the hypotheses. A two-way contingency table determines whether a relationship exists between two variables. The table consists of two or more rows and two or more columns (Green & Salkind, 2008). The randomly sample data was tallied and totaled from an excel spreadsheet and then entered into an SPSS program to provide a statistical analysis of the difference between adult GED test takers in the state of Tennessee by age, gender, and race. According to Green and Salkind (2008) chi-square and Cramer's V are appropriate to measure this type of data. The independent variables were gender, age, and race. The dependent variable

was passing or not passing the GED and the number of attempts. All data were analyzed at the .05 level of significance.

## CHAPTER 4

### FINDINGS

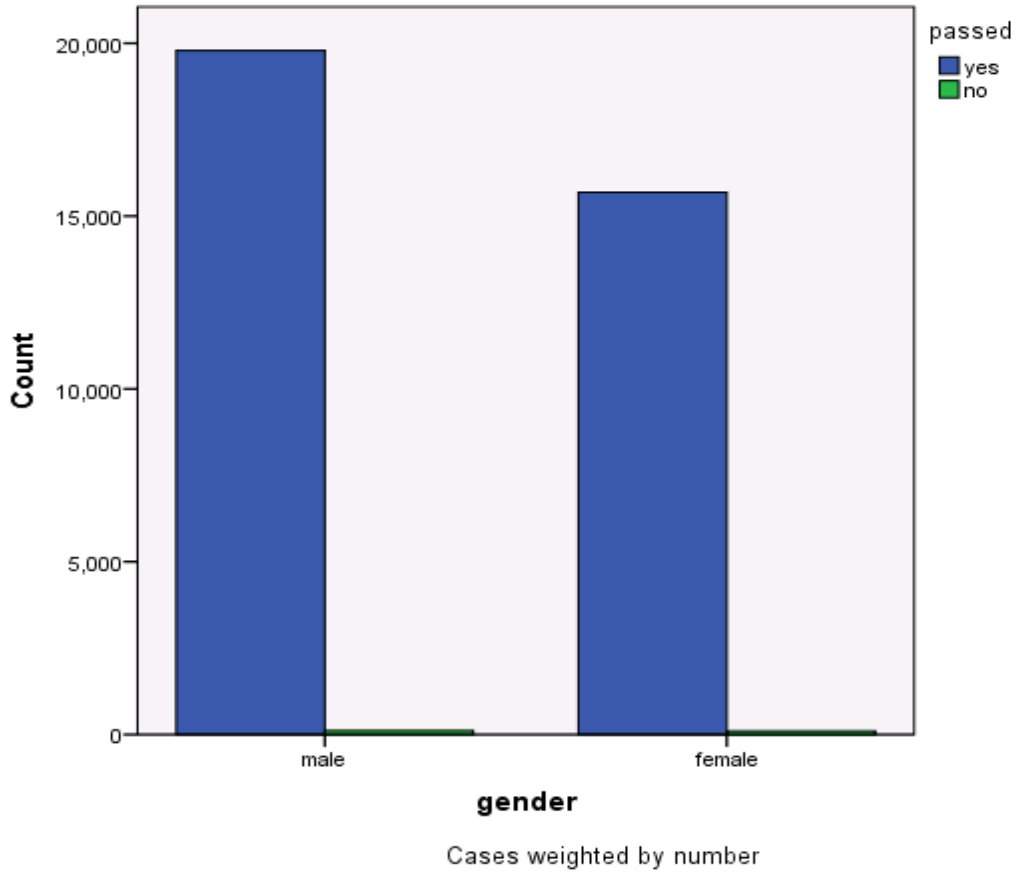
Chapter 4 depicts the calculations of the analysis of the research questions indicated in chapters 1 and 3. The purpose of this study was to investigate the state of adult literacy in Tennessee and to determine whether any significant relationship exists between the demographics of those adults earning a GED degree. These categories were reported to the researcher through data records. These records were shared by the Tennessee Department of Labor and Workforce Development through the Measure Tennessee database.

#### **Research Question 1**

Is there a significant difference in the number of males and females who earn GEDs in Tennessee?

$H_{01}$ : There is not a significant difference in the number of males and females who earn GEDS in Tennessee.

A two-way contingency table analysis was conducted to evaluate which proportion of males and which proportion of females earn GEDs in Tennessee. The two variables were gender and passing rates. Gender and passing rates were found to not be significantly related, Pearson  $\chi^2(1, N=35688) = .524, p = .469$ , Cramer's  $V = .004$ . Therefore, the null hypothesis is not rejected. Males had a 99.4% passing rate, while females had a 99.3% passing rate. In general, the passing rates of males and females in the state of Tennessee are not significantly different. Figure 1 displays the bar chart for the frequency of each level within the gender categories.

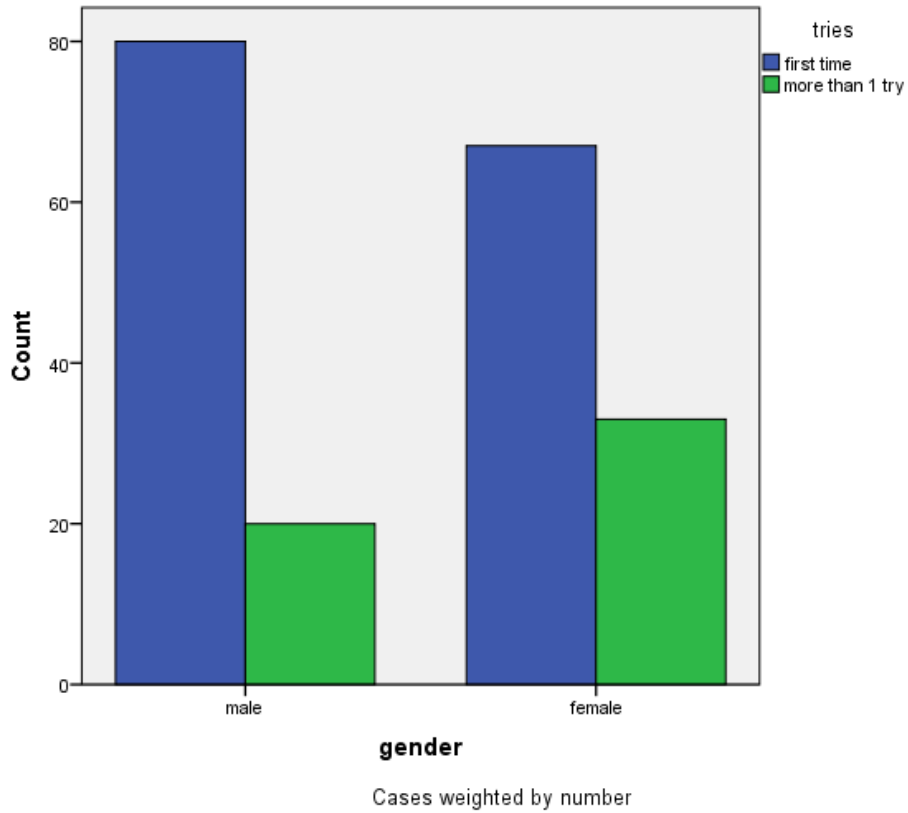


*Figure 1.* Bar graph displaying the number of males and females who have passed the GED based on the sample of data provided by the state of Tennessee that was analyzed.

Ho<sub>12</sub>: There is not a significant difference in the number of attempts to pass the GED by males and females in the state of Tennessee.

A two-way contingency table analysis was conducted to evaluate whether the proportion of adult test takers who attempted to pass the GED on their first attempt varied depending on gender. Gender and the number of attempts to take the GED were found to be significantly related, Pearson  $\chi^2(1, N = 200) = 4.338, p = .037$ , Cramer's  $V = .147$ . Therefore, the null hypothesis is rejected. On the first attempt males passed the test 80% of the time. Females passed the test 67% of the time on the first attempt. In general male test takers pass on their first attempt significantly more often than female test takers. Figure 2 displays proportion of males and females compared to the number of testing attempts.





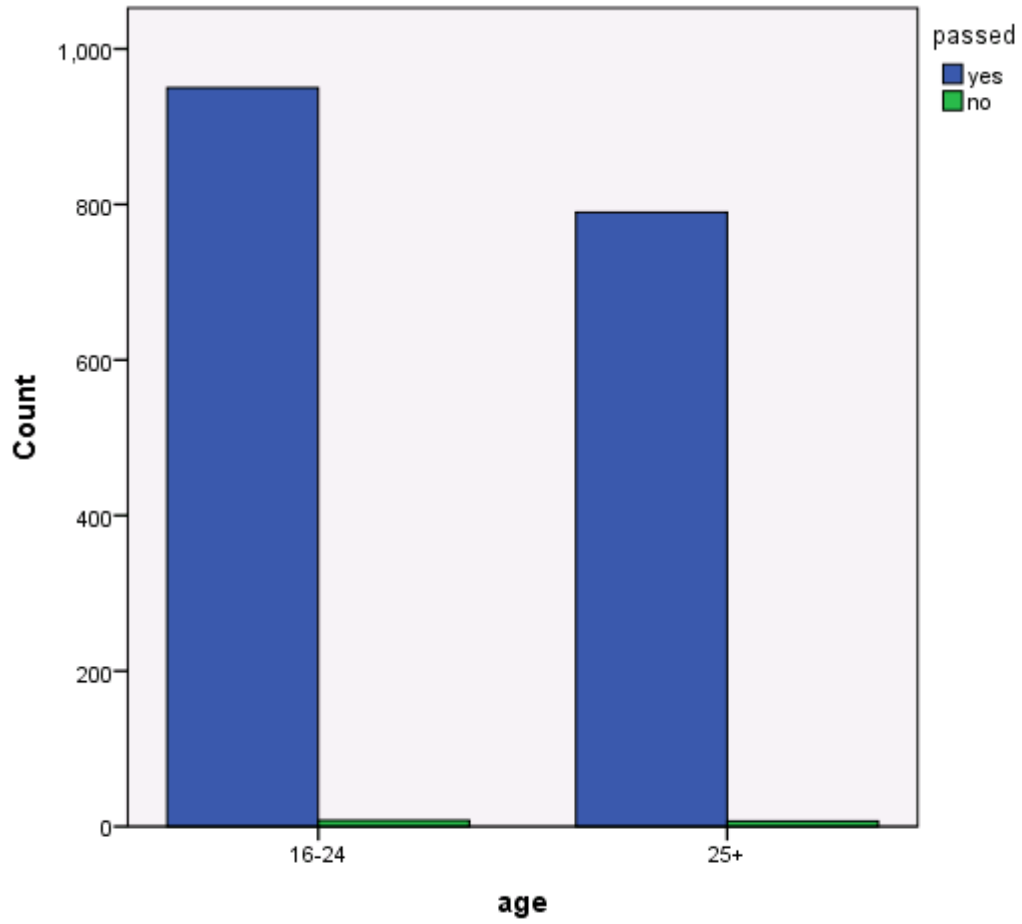
*Figure 2.* Bar graph displaying the number of males and females that passed the GED in the first attempt compared to those who attempted the test more than once.

## Research Question 2

Is there a significant difference in the number of adults who successfully complete their GED in Tennessee as compared by age group?

Ho<sub>2</sub>: There is not a significant difference in the number of adults as compared by age group.

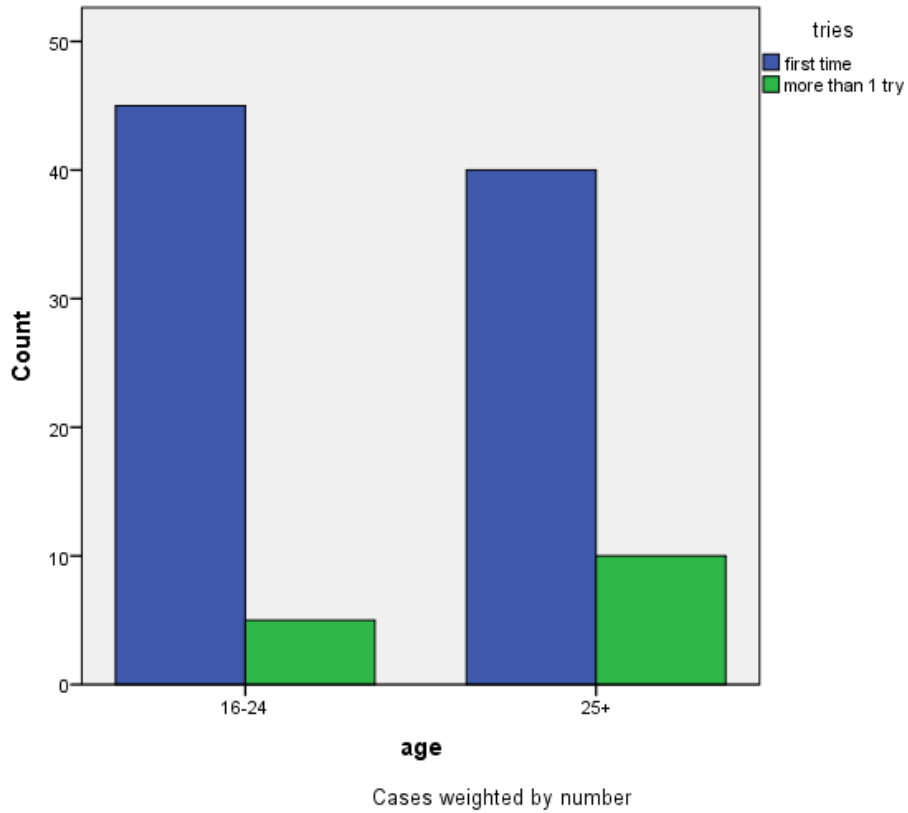
A two-way contingency table analysis was conducted to evaluate whether the proportion of adults who take the GED in the state of Tennessee varies depending on their age grouping. The two variables were students aged 16 through 24 and those who were 25 plus. Age groupings were not found to be significantly related, Pearson  $\chi^2(1, N = 1755) = .01, p = .922$ , Cramer's  $V = .002$ . Therefore, the null hypothesis is not rejected. Adults, 16 through 24, had a 99.2% passing rate, while adults, 25 and over had a 99.1% passing rate. In general, age groupings do not make a significant difference in the passing rate of the GED in the state of Tennessee. Figure 3 displays the clustered bar chart for the frequency of passing within the age groups.



*Figure 3.* Bar graph displaying the age groups of adults who have passed the GED.

Ho<sub>2</sub>: There is not a significant difference in the number of attempts to pass the GED by age group in the state of Tennessee.

A two-way contingency table analysis was conducted to evaluate whether the proportion of adult test takers number of attempts to pass the GED varied on the age of the test taker. Age and the number of attempts to pass the test were found not be significantly related, Pearson  $\chi^2(1, 100) = 1.961, p = .161$ , Cramer's  $V = .147$ . Therefore, the null hypotheses is not rejected. In general there is no significant relation between age and number of attempts to pass the GED. The adults ages 16 through 24 passed 90% of the time on their first attempt, while students 25 and older passed 88% of the time. Figure 4 displays proportion of the number of attempts to pass the GED compared to the age groups.



*Figure 4.* Bar graph displaying the number of students who passed the GED on the first attempt compared to those who attempted more than once by age category.

### Research Question 3

Is there a significant difference in the number of adults who successfully complete their GED in Tennessee as compared by racial groups?

Ho3<sub>1</sub>: There is not a significant difference in the number of adults who successfully complete the GED as compared by racial groups.

A two-way contingency table analysis was conducted to evaluate whether the proportion of white students who pass the GED in the state of Tennessee varies from the proportion of black students who pass the GED in the state of Tennessee. The two variables were race and scores. Race and passing scores were found not to be significantly related, Pearson  $\chi^2(1, N = 28887) = .128, p = .720$ , Cramer's  $V = .002$ . Therefore, the null hypothesis is not rejected. In general, ethnicity and passing scores on the GED test in the state of Tennessee are not significantly related. White students passed 99.3% of the time, while black students passed 99.2% of the time. Figure 5 displays the clustered bar chart for the frequency of passing the GED within the ethnic categories.

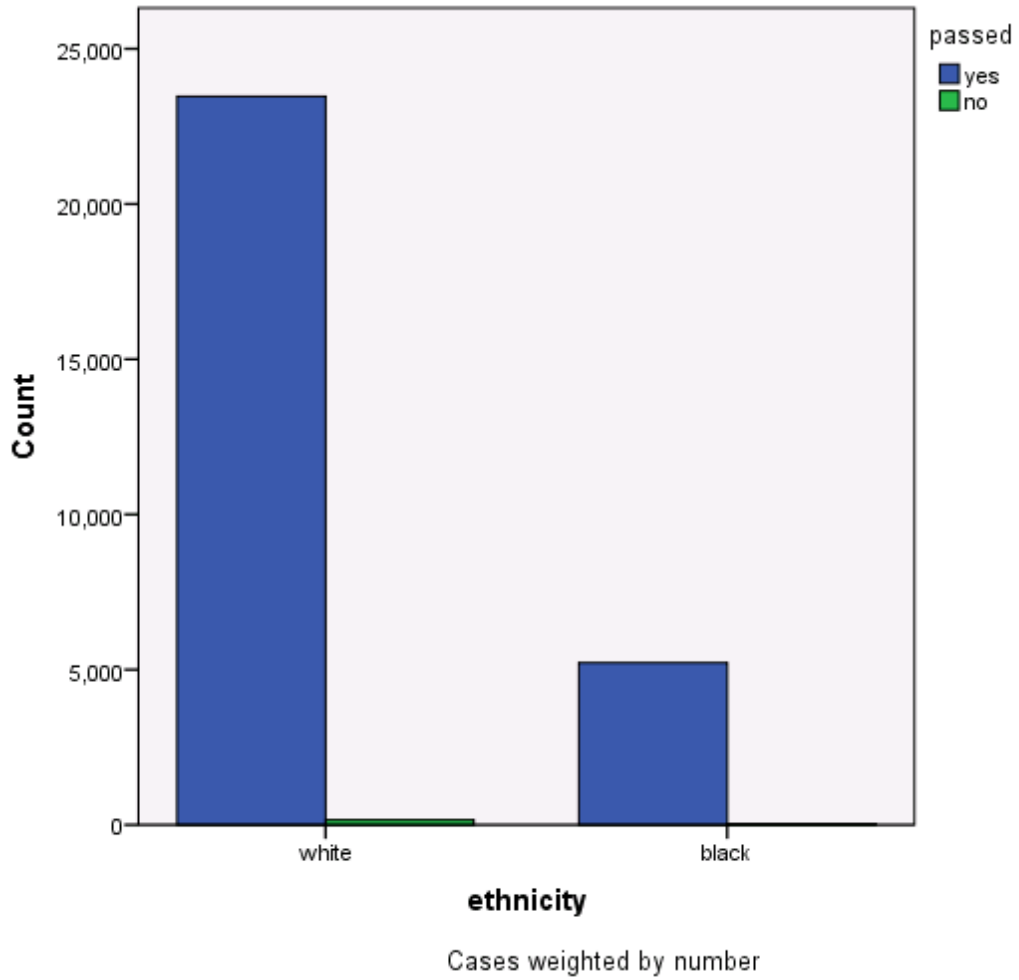
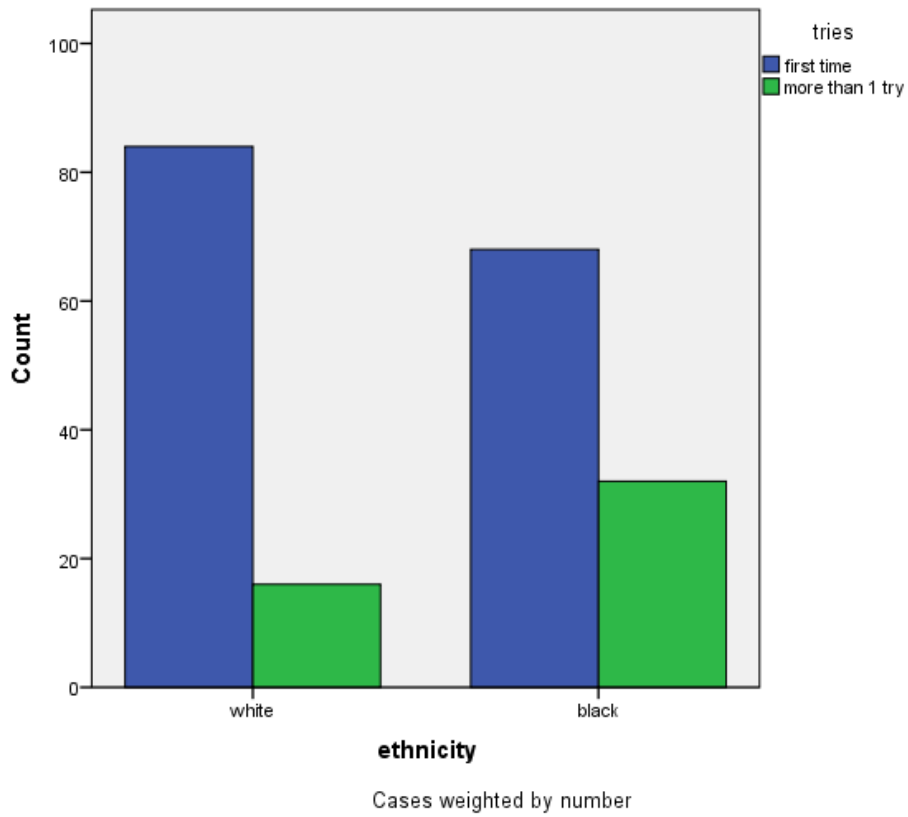


Figure 5. Bar graph displaying the number of adult students who passed the GED by race.

Ho3<sub>2</sub>: There is not a significant difference in the number of attempts to pass the GED by racial groups in the state of Tennessee.

A two-way contingency table analysis was conducted to evaluate whether the proportion of adult GED test takers' number of attempts to pass varies depending on race in the state of Tennessee. Race and the number of attempts were found to be significantly related, Pearson  $\chi^2(1, N = 200) = 7.018, p = .008$ , Cramer's  $V = 1.87$ . Therefore, the null hypothesis is rejected. In general white adult test takers passed the GED in significantly fewer tries than black adult test takers in the state of Tennessee. White students passed in the first attempt 84% of the time while black students passed 68% of the time on the first attempt. Figure 6 displays proportion of race of test takers' number of attempts to pass the GED in the state of Tennessee.





*Figure 6.* Bar graph displaying the students who passed the GED on the first attempt by race versus those who took it more than once.

## **Summary**

Chapter 4 presents the research questions that address the number of adults who took the GED in Tennessee from 2008 through 2013. There was no significant difference in age, gender, or race when analyzing pass rates. The significant differences appeared with number of attempts needed to pass the test in the categories of race and gender. Males and white students were more successful at passing the GED on the first attempt.

## CHAPTER 5

### SUMMARY, CONCLUSION, AND RECOMMENDATIONS

#### **Introduction**

Educators enter any classroom and greet students who come with a plethora of experiences and education levels. This is true when walking into a GED testing center as well. Some students may be there due to a court order or because their income provider suggested that they attend classes. Other students may have never finished high school and want to achieve that accomplishment for themselves or as an example to their children. Students may be attending to keep or obtain a job. The students enter the center at different levels: non-English speaking students, students who dropped out of high school recently, and those who have not been in school for 40 years. Most of the students must be self-motivated to come and continue the program. Practicing for the exam can be a daunting challenge for some and quite an easy task for others. I began to wonder what was driving the decision making process for the government to amend the GED test. I interviewed Phil Roe who is the cochair of the Adult Literacy Committee in Congress. He admitted that this is uncharted territory and he would like more research. Presently, it seems the GED testing is beginning to follow the trends of current public education reform.

## **Research Questions and Findings**

### *Research Question 1*

Is there a significant difference in the number of males and females who earn GEDs in Tennessee?

The two-way contingency analysis that was performed on the sample of adults who passed the GED in the state of Tennessee during the years 2008 through 2013 revealed no significant differences in the outcome of passing rates by gender. This outcome is slightly different when compared to the national average reported in 2012. Males passed the test more often than females with rates of 55.7% and 44.3% respectively. The national statistics reported for 2012 for the state of Tennessee reported that 54% of males passed and only 47% of females passed (American Council on Education, 2013).

There was a significant difference when it came to the number of attempts to pass the GED. The crosstabs test showed that males pass the GED on the first try more often than females do. Nationally, 84.9% of all test takers pass on their first attempt (American Council on Education, 2013).

### *Research Question 2*

Is there a significant difference in the number of adults who successfully complete their GED in Tennessee as compared by age group?

The two-way contingency analysis that was performed based on age groups passing the test from 2008 through 2013 showed no significant differences on the passing rate or the number of attempts to take the GED. According to the 2012 national report, the average age of a GED

graduate is slightly over 26. It further reports that the 16 to 18 year old age group, has a 21.7% pass rate (American Council on Education Testing, 2013). In the state of Tennessee, the 2012 national report stated the average age of a graduate in almost 28 and a half years old. The report displayed that the Tennessee 16 to 18 year old age group was slightly below the national average at 16.9% (American Council on Education Testing, 2013). After viewing the state data, it was determined that the age categories could be analyzed in two main groups: 16 through 24 and 25 and over.

### *Research Question 3*

Is there a significant difference in the number of adults who successfully complete their GED in Tennessee as compared by racial groups?

The two-way contingency analysis that was performed to determine if there was a relationship between passing scores and races of those who had passed the GED in the state of Tennessee from 2008 through 2013 proved to be insignificant. This was incongruent with the reported national statistics of 2012. This report described 44.3% of white students passing the test and 24.3% of black students passing the test. In fact, specific to the state of Tennessee in 2012, this report published white adult students passing 66.2% of the time, while black adult students passed 26% of the time (American Council on Education, 2013).

The crosstabs analyses did identify a significant difference in the number of attempts it took to pass the test by race. White adult students had a higher percent of first-time passers of the GED than black adult students did.

There is information collected when people enroll to take the test. Analyzing the data can help those in adult education evaluate the previous scores and test takers' backgrounds. This

information can assist in the planning and progression of adult education classes in the future. After gaining permission from the Tennessee Department of Labor and Workforce Development, problems occurred with from the guardians of the data. The group, housed at the University of Tennessee, had difficulties releasing everything that was requested. This was a learning process for the group, Measure TN, to have an outsider want to view the data. In the end I had to eliminate three questions because the data were not released. My request created an opportunity for Measure TN to work through some issues with providing data to an outside researcher and brought other issues to life. These issues must be resolved if the data are to be used.

### **Recommendations For Practice**

Changes have been infrequent during the existence of the GED; therefore, when a testing change occurs it is noticed. With the intent to standardize and make more rigorous the testing of adults, the GED underwent construction for the calendar year 2014. Before accepting changes, I think states should look more closely at the place adult education currently fills. States should also explore other testing options like the HiSET or ACE and recognize that other companies can produce equitable standardized GED tests (Fain, 2013). Hence, I advise these recommendations for practice.

1. Teachers of adult education, business leaders, and community members in each county should have easier access to this data. This would allow more research based decisions to be made at the local level when dealing with budgeting issues. It would also assist

teachers to pinpoint targeted genders and races that may need additional time, resources, and assistance.

2. Business that have vested interest in their potential employees should be involved in working more closely with the adult education field.
3. Early Childhood Education initiatives should set aside money for parenting education as a part of their programs.
4. Adult educators should be equipped with andragogy techniques for their students.
5. New testing options should be investigated at a state and local level.
6. A Spanish based test should be available for students who are fluent in their own language to demonstrate their knowledge.

### **Recommendations for Further Study**

As much further study of research is needed, I recommend the following:

1. A comparison study should be conducted to compare these results with those of the new testing method after 5 years of implementing the new test.
2. A qualitative study should be conducted of the GED participants to identify the motivation behind their testing.
3. A quantitative study should be conducted of the adult educators to identify their teaching skills background. The teaching status of part-time, full-time, and number of years teaching could be evaluated.

4. A comparison study of more successful states with similar demographics could be beneficial in order to gain insight.
5. This study should be reproduced using all of the data housed by Measure TN after they resolve their issues with access.

### **Summary**

The world of adult literacy is somewhat of a paradox. On one hand, we are not ensuring that teachers of adult education are trained in the methods of andragogical techniques. Standards are inconsistent in adult education from site to site. Unfortunately, not all communities are highlighting the successes of adult students. Yet, if this topic is not brought to light, it has a resounding effect on the job market, the poverty level, the economy, and, ultimately, the future.

The GED test has withstood the test of time and the educational programs and passing the test have increased the quality of life of its graduates. Although changes may need to be made, the changes should result in a test that is still passable by adults.



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## APPENDICES

### Appendix A: Communication with Measure TN

#### Measure Tennessee Longitudinal Data System Confidential Data Request Application

##### Overview

In reviewing requests for data by researchers external to the Partner Agencies of the Measure Tennessee Longitudinal Data System (MeasureTN), consideration is given to access permitted by statute and federal law, privacy concerns, security procedures, the availability of staff to monitor the data release, and the perceived benefits of the research. In all cases, the benefits to the use of the individual record must outweigh potential risks of personal identification. Data requests apply to those education and workforce data which are accessible under the restricted data policies. While no formal, written request is required for research on any publicly accessible data, the MeasureTN Office would request that the results of any research done using Tennessee data be conveyed to the MeasureTN Office via email.

##### Requirements for Access

Entities seeking access to data from MeasureTN must be conducting research that has a legitimate educational or workforce development interest. **Research** is defined by MeasureTN as a formal investigation designed to develop or contribute to generalized knowledge. For these purposes, **legitimate educational and workforce development interest** is defined as an endeavor meant to further the understanding of educational and/or workforce development practices, methods, and/or theory that is expected to be analyzed through formal, accepted research practice and the results of which will be disseminated in such a manner as to benefit the educational and workforce development communities and/or the public in general.

Once these requirements are met, entities seeking access to data are required to submit their request online through a portal provided by the University of Tennessee. Applicants must register for the MeasureTN Research site to submit and review status of the *Confidential Data Request Application*. If this research requires Institutional Review Board (IRB) approval from your organization or institution, this approval must be obtained, in writing, prior to submitting the *Confidential Data Request Application*, and a copy of the approval letter must be submitted with the application.

##### Requirements for Security, Privacy, and Confidentiality

Except in rare instance, data will be accessed in the MeasureTN research environment. Data accessed under such a request are considered a loan and may not be removed, sold, or rented. Commercial use of data obtained under such a request is prohibited. Recipients **do not** attain ownership of the data. Such data may not be shared or distributed, and, if applicable, all copies must be destroyed when the researcher completes the analysis or report. Data, copies of data, and all reports must be maintained in a secure environment to prevent unauthorized access.

A secure environment includes but is not limited to any electronic media, personal computer, server, or network on which the data reside as described in the National Institute of Standards and Technology (NIST) *Federal Information Technology Security Assessment Framework* (November 29, 2000). Compliance with these security requirements may be monitored by unannounced, unscheduled inspections of the data user's work site by MeasureTN representatives to ensure that appropriate policies and procedures are in place to protect the confidential subject data.

Researchers/investigators requesting data from MeasureTN are subject to all applicable statutes and federal regulations. All individuals who shall have access to the private or confidential data are required to sign a statement of data confidentiality and security. This form is included in the *Confidential Data Request Application*. Each investigator is to sign his or her own form, which is to be included with the submitted *Confidential Data Request Application*. Any investigators added to the research project at any time during the duration of the data loan period who will have access to the restricted data must sign the *Data Confidentiality and Security Agreement Form* and mail it to the MeasureTN Office. *Violations of the agreement will result in loss of access to the data to the researcher and the sponsor institution (if applicable) for five years and will be reported to appropriate state or federal authorities for action under appropriate regulations or statutes as required.*

#### **Processing Request**

Completed requests will be reviewed and a written response usually provided within ninety (90) days of receipt. In the event a request is rejected, specific reasons shall be given and if appropriate, may include information concerning possible remediation. Requests may be rejected if information on the application form is incomplete. If rejected, an appeal providing additional information for consideration may be submitted within forty-five (45) days of the response date.

Data allowed to be released under this agreement may require processing prior to release to the researcher in order to achieve compliance with state or federal law to protect privacy or confidentiality. Under Section 552(4)(A)(ii) Part 23 of the FOIA, such processing may require compensation from the requester for staff time to complete data review and to meet the requester's data processing requirements. Any special requirements in regard to fees or time required for processing prior to release shall be documented in the letter of acceptance from the MeasureTN Internal Review Board. At no time shall such fees exceed actual costs.

A *Data Logistics Agreement* will then be drafted by the MeasureTN Office detailing the data provided, methods of access and requirements for maintaining a dataset for replication of findings. The *Data Logistics Agreement* must

be signed by the Primary investigator. In general, data access or release via the MeasureTN environment will occur within ninety (90) days from the receipt of the signed *Data Logistics Agreement* unless otherwise negotiated by the MeasureTN Office and the researcher.

**Submission Checklist**

- Completed *Confidential Data Request Application*
- All investigators signed the *Data Confidentiality and Security Agreement* form
- IRB approval attached (if applicable)

**Measure Tennessee Longitudinal Data System  
Confidential Data Request Application**

Researchers requesting the loan of data from the Measure Tennessee Longitudinal Data System (MeasureTN) Department who have legitimate educational or workplace development interests to conduct research must register with the MeasureTN Research site to submit a written request.

**Name of Primary Investigator:** Amy R. Keesler

**Title:** Adult Literacy in Tennessee

**Department/Institution:** Educational Leadership Program – East Tennessee State University

**Address:** College of Education Warf Pickel Building 501

**City/State/Zip:** Johnson City, TN. 37614

**Phone:** 423-439- 4430

**Fax:** 423-439-7636

**Email:** FOSTERAR@goldmail.etsu.edu

**\*\* Chair information – Dr. Virginia Foley foleyv@goldmail.etsu.edu**

**Title of Research Project:** Adult Literacy in the State of Tennessee

**Funding Source (if any):**

**Name of Secondary Investigator(s) and affiliated institution:**

**Data Loan Period:** Estimated data loan period to use the data set and when it will be destroyed.

*Note:* If you receive released data from MeasureTN, you must submit a certificate of destruction to the MeasureTN Office via US mail on the date that your data loan expires, or submit a request to extend the data loan period to continue the study. On the date of data loan expiration, you must submit a statement indicating the outcomes of the research.

November 2013 – May 2014 – destroyed on May 2, 2014

**Project Description:** Describe, in 1000 words or less, the research project for which the confidential data are needed. This should take the form of a standard research prospectus, including:

- a) Purpose and scope of the study
- b) Research questions/hypothesis
- c) Research timeline
- d) Specific data requested from MeasureTN
- e) Analysis
- f) Expected processes for disseminating findings
- g) Why such data are needed instead of public data
- h) Sample size, grade levels, race, ethnicity, age, categoricals or other variables to be used in the analysis.

Is this a longitudinal study (you seek to request the same data again once next year's data is available)?

X No

Yes If yes, please justify the need for the continuation of data. It is the responsibility of the primary investigator to submit the Longitudinal Data Renewal Request Form each time the approved confidential data are requested.

**Data Security and Access Plan:** Describe the procedures to be used for protecting privacy and confidentiality of any individual, including encryption, handling, transmitting and/or storing of the data; disclosure avoidance in reported results (these must adhere to FERPA regulations); and requirement for maintaining a copy of the data set for replication of findings.

Access to data will be granted via the MeasureTN system. A flash drive will be provided to enable analysis of the data. Aggregate data results can be made available for download upon request for inclusion in your report. An email must be submitted to the TLDS office indicating the location and name of the file containing results for download

**Institutional Review Board Approval:** Has the proposed research been reviewed by a Human Subject Review committee at your school district/institution?

No

X Yes (If yes, approval letter must be attached.)

In submitting this application, the individual(s) and district/institution agree to comply with all legal requirements for and conditions of security, privacy, and confidentiality documented within that policy and this application. I acknowledge that I am duly authorized to execute this application on behalf of the individuals and district/institution making this application and that this application is binding on those parties. It is understood and agreed that the data provided under this request are a loan and that the license for use is restricted to only those designated in this application for the specific purposes stated above.

Amy R. Keesler doctoral student-researcher - teacher<sup>NS</sup>  
Name of Requester, printed Title

Amy R. Keesler 11/1/13  
Signature Date  
EAST TN. State Univ - doctoral program (student) FOSTER AR@goldmail.etsu.edu

Hamblen Co. Board of Ed. - West View MS akeesler@hcboe.net  
Place of Employment Email and Phone Number (area code and extension)  
423-581-2407(x200)

\_\_\_\_\_  
Name of Authorized Representative, printed Title

\_\_\_\_\_  
Signature Date

Place of Employment

Email and Phone Number (area code and extension)

**Measure Tennessee Longitudinal Data System  
Confidential Data Request Application  
Data Confidentiality and Security Agreement Form**

All primary and secondary investigators who will have access to the confidential data requested in the *Confidential Data Request Application* must sign this form and submit it with the Application. Any investigators added to the research project at any time during the duration of the data loan period who will have access to the confidential data must sign this form and submit it to the MeasureTN Office.

I Amy R. Keesler, as a primary or secondary investigator, agree to access or receive confidential data from the Measure Tennessee Longitudinal Data System (MeasureTN) and to observe the following security provisions in transferring, storing, analyzing and reporting of the data.

1. Policy for data storage if data retained off-site
  - a. The location of **all copies** of the data must be carefully tracked.
  - b. The data must be stored where **only** the *Confidential Data Request Application* designed primary and secondary investigator(s) may access the data.
  - c. Data files **must** remain secure throughout the duration of data storage.
  
2. Policy for data usage
  - a. Data may be accessed **only** by the *Confidential Data Request Application* designed primary and secondary investigator(s).
  - b. Data **may not** be shared with any other individuals outside those designed as the primary and secondary investigator(s) in the *Confidential Data Request Application*.
  - c. Data may be used **only** for analyses that respect privacy and confidentiality of all concerned parties including students, teachers, classrooms, schools, districts, intermediate school districts, postsecondary institutions, employers, employees, and the State of Tennessee.
  - d. Data may **only** be used for the purposes of answering the research questions and/or hypotheses presented in the *Confidential Data Request Application*.
  - e. Publicly available discussions, presentations and reports based upon the confidential data **may not** include information that would make it possible to identify a student, teacher, classroom, school, district, intermediate school district, postsecondary institutions, employers, employees, or the State of Tennessee unless specific permission has been granted in writing to do so.
  - f. To ensure that premature public disclosure of research findings does not adversely affect the interests of all parties and that data presented are in compliance with federal and state regulations, the primary or secondary investigator shall submit preliminary findings of analysis and provide a copy of all manuscripts for publication to the MeasureTN Internal Research Board for information and review. The MeasureTN Internal Research Board shall have the right to delay publication for a period not to exceed ninety (90) days after receipt of such manuscript. Failure of the MeasureTN Internal Research Board to make a written request for delay in publication within thirty (30) days after receipt of any manuscript to the primary investigator shall constitute permission to publish the manuscript as submitted, and the investigators shall incur no liability to State of Tennessee thereafter.
  - g. Primary and secondary investigators will present a summary of their research findings to MeasureTN representatives if requested. Presentation of findings can be done in-person or by an online conference. Online conference services are to be coordinated and provided by the primary investigator.

- h. Internal discussions and reports should protect the privacy, anonymity and confidentiality of all concerned parties if there is any reasonable possibility that the internal document may become publically available.
  - i. Internal documents that contain any identifying information must clearly be marked "confidential—for internal use only."
  - j. Data will, at all times, adhere to federal and state laws, including the Family Educational Rights and Privacy Act (FERPA).
  - k. Researcher shall notify the MeasureTN Office immediately in writing upon discovering any breach, or suspected breach, of security, or of any disclosure of subject data to an unauthorized party or agency.
3. Policy for data disposal
- a. The data *must* be destroyed in accordance with the date designated for destruction in the signed *Confidential Data Request Application*.
  - b. If an extension on the data destruction deadline is needed, the MeasureTN Office *must* be contacted, in writing, to approve an extension.
  - c. A certificate of destruction will be submitted to the MeasureTN research site no later than the date of the data loan expiration.
4. Termination of this agreement
- a. This Agreement shall terminate six months from the date it is signed by the MeasureTN Representative. The Agreement, however, may be extended by written agreement of both of the parties.
  - b. Any violation of the terms and conditions of this Agreement may result in the immediate revocation of this Agreement by the MeasureTN Representative.
  - c. The MeasureTN may initiate revocation of this Agreement by written notice to the Researcher indicating the factual basis and grounds of revocation.
  - d. Upon receipt of the written notice of revocation, the Researcher shall immediately cease all research activity related to the Agreement until the issue is resolved. The Researcher will have three business days to submit a written Response to the MeasureTN Office indicating why this Agreement should not be revoked.
  - e. The TLDS Research Review Committee shall decide whether to revoke this Agreement based on all the information available to it. The MeasureTN Representative shall provide written notice of its decision to the Researcher within 10 business days after receipt of the Response. These timeframes may extend for good cause.
  - f. If found in violation of the terms and conditions of this Agreement, the Researcher/Research Organization shall be prohibited from accessing confidential data for five years. Subject data must be destroyed (e.g., data wiping, degaussing, shredding) and a notarized statement indicating the data were destroyed must be provided to the MeasureTN Office.

Amu B. Keesler  
Signature of Investigator

FOSTERAR@goldmail.etsu.edu 11/1/13  
Email and Phone Number  
(C) 423-736-9881  
(h) 423-307-8193



December 12, 2013

## DATA LOGISTICS AGREEMENT



The Measure Tennessee Longitudinal Data System ("MeasureTN") contains individual level data which requires protection to ensure the identity of individuals remains confidential. This Data Logistics Agreement ("Agreement") details what data will be provided, how data will be provided, who will have access and the duration of access. Data will be released to The [Click here to enter text.](#) ("Researcher") upon acceptance of this agreement by the primary investigator.

### INFORMATION SUBJECT TO THIS AGREEMENT

All data provided to the Researcher from MeasureTN, all information derived from those data, and all data resulting from merges, matches, or other uses are subject to this Agreement ("Subject Data"). Subject Data will be used to create dataset(s) including:

#### Years of Data

Calendar years 2008 through 2013. 2013 data will not be a full calendar year.

#### Level of Data

Aggregate Totals       Masked Individual Records       Identifiable Individual Records

#### Data Domains

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Pre K-12                       | <input type="checkbox"/> Higher Education            | <input checked="" type="checkbox"/> Workforce         |
| <input type="checkbox"/> Student Characteristics        | <input type="checkbox"/> Student Characteristics     | <input type="checkbox"/> Employee Characteristics     |
| <input type="checkbox"/> Enrollment                     | <input type="checkbox"/> Admission Criteria          | <input type="checkbox"/> Unemployment Claims          |
| <input type="checkbox"/> Graduation                     | <input type="checkbox"/> Enrollment                  | <input type="checkbox"/> Employee Wages               |
| <input type="checkbox"/> Course/Grades                  | <input type="checkbox"/> Credit Hours/GPA            | <input checked="" type="checkbox"/> GED Certification |
| <input type="checkbox"/> Attendance                     | <input type="checkbox"/> National Clearinghouse      | <input type="checkbox"/> Labor Market                 |
| <input type="checkbox"/> Assessments                    | <input type="checkbox"/> Financial Aid               |   |
| <input type="checkbox"/> Career and Technical Education | <input type="checkbox"/> Teacher Report Card         | Workforce Program Participation:                      |
| <input type="checkbox"/> Special Education              | <input type="checkbox"/> Institution Characteristics | <input type="checkbox"/> Adult Education              |
| <input type="checkbox"/> Discipline                     |  | <input type="checkbox"/> Workforce Investment Act     |
| <input type="checkbox"/> Staff/Teacher Assignments      |  | <input type="checkbox"/> Job Services                 |
| <input type="checkbox"/> Staff Licensing/Certifications |  | <input type="checkbox"/> Trade Adjustment Assistance  |
| <input type="checkbox"/> Staff Evaluations/Value Add    |  |   |
| <input type="checkbox"/> School Characteristics         |  |   |
| <input type="checkbox"/> District Financials            |  |   |

The attached file (GED Data.xls) provides a data dictionary with definitions of MeasureTN data fields that will be provided.

### ACCESS TO SUBJECT DATA

Subject Data will be made available in a secure environment on the MeasureTN systems. Data will be accessed with a username, password and connection details provided to the Researcher via secure email. Researcher is authorized use of this data and STATA from 12/20/2013 through 5/2/2014. Access to Subject Data is set to terminate on 5/2/2014. If Subject Data are needed for additional time, a request for extension must be submitted in writing to the MeasureTN Office.

Investigators agree to protect the data as defined in the approved *Confidential Data Request Application* and abide by the policies defined in the signed *Data Confidentiality and Security Agreement*. Investigators with signed *Data Confidentiality and Security Agreements* who are authorized use of data include:

December 12, 2013

## DATA LOGISTICS AGREEMENT



Name	Role	Number	Email
Amy Keesler	Primary Investigator & Graduate Student	423-439-4430	<a href="mailto:fosterer@goldmail.edsu.edu">fosterer@goldmail.edsu.edu</a> <a href="mailto:amykeesler73@gmail.com">amykeesler73@gmail.com</a>

### PUBLICATIONS

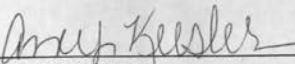
The intent to publish and requirements for replication of results must be established as early in the project as possible. Researcher shall provide the MeasureTN Office with the preliminary findings from completed research and a copy of each publication containing information based on the Subject Data. The projected date for completion of the research preliminary findings is [Click here to enter a date.](#) and submission of the final report is [Click here to enter date.](#) Researcher agrees to provide the MeasureTN Office with additional details in writing regarding intent to publish and need for replication of results once determined.

### PRIMARY CONTACT

Primary contact from the MeasureTN Office assigned to your data request is:

Tammy Lemon  
Director, Longitudinal Data System  
The University of Tennessee  
916 Volunteer Boulevard  
705 Stokely Management Center  
Knoxville TN, 37996-0570  
Voice: (865) 974.6096  
Email: [tlemon@utk.edu](mailto:tlemon@utk.edu)

### PRIMARY INVESTIGATOR APPROVAL

  
\_\_\_\_\_  
Primary Investigator

1-9-14  
[Click here to enter a date.](#)  
\_\_\_\_\_  
Date

## Appendix B: IRB permission



East Tennessee State University

Office for the Protection of Human Research Subjects • Box 70565 • Johnson City, Tennessee 37614-1707  
Phone: (423) 439-6053 Fax: (423) 439-6060

October 31, 2013

Amy Keesler  
509 Bluegrass Dr.  
Morristown, TN 37814

Dear Ms. Keesler,

Thank you for recently submitting information regarding your proposed project "Adult Literacy in Tennessee."

I have reviewed the information, which includes a completed Form 129.

The determination is that this proposed activity as described meets neither the FDA nor the DHHS definition of research involving human subjects. Therefore, it does not fall under the purview of the ETSU IRB.

IRB review and approval by East Tennessee State University is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities are human subject research in which the organization is engaged, please submit a new request to the IRB for a determination.

Thank you for your commitment to excellence.

Sincerely,  
Chris Ayres  
Chair, ETSU IRB



*Accredited Since December 2005*

VITA

AMY R. KEESLER

Education: Columbia Central High School, 1991  
Columbia, Tennessee

Bachelors of Art in Education, 1995  
Tusculum College, Greeneville, TN

Masters of Education, 1998  
University of West Georgia, Carrollton, GA

Doctor of Education, 2014  
East Tennessee State University, Johnson City, TN

Professional Experience: Hamblen County, TN Schools, teacher

Columbia State Community College, adjunct

Maury County, TN Schools, teacher

Whitfield County, GA Schools, teacher

Peach County, GA Schools, teacher

Professional Activities: Member of Kappa Delta Pi

Chapter Services Committee Member

Presented at Title I Conference

Sponsor of Jr. Beta Club

SACS Review Committee Fulton GA Schools