

GED SUCCESS RATES FOR INMATES AT A FEDERAL CORRECTIONAL FACILITY
BASED ON READING LEVEL: A CORRELATIONAL STUDY

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A dissertation submitted to the faculty at the University of North Carolina at Chapel Hill in
partial fulfillment of the requirements for the degree of Doctor of Education in Curriculum and
Instruction in the School of Education.

Chapel Hill
2014

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ABSTRACT

CYNTHIA BOWEN BRAND: GED SUCCESS RATES FOR INMATES AT A FEDERAL CORRECTIONAL FACILITY BASED ON READING LEVEL: A CORRELATIONAL STUDY

(Under the direction of Barbara Day)

Correctional education programs provide a means for inmates to gain the knowledge or skills that may assist them in making a more successful transition back to society. The purpose of this study was to compare the GED success rates of inmates who had been identified as having low reading levels to their higher functioning peers. Graduation rates as well as scores on practice and official GED sub-tests were compared for thirty low level readers and thirty inmates with higher reading levels. Inmates' perceptions of themselves as learners and their personal motivations for continuing their educational endeavors were also examined. Chi-square results indicated that graduation rates were lower for struggling readers and literacy enrollment periods were longer for these inmates. Results from a t-test of independence revealed significant differences in some, but not all practice and official GED sub-tests. A written survey provided inmate feedback regarding their learning preference and personal motivations. Results indicated that inmates with lower reading levels preferred to learn in the same manner as their counterparts, would be just as likely to voluntarily enroll in school, wanted similar goals or outcomes from education programming, and responded to questions pertaining to their motivation for completing their education no differently than higher functioning inmates.

To my husband, Jason, and daughters, Lindsay and Mackenna.

ACKNOWLEDGEMENTS

I would like to extend my personal gratitude to each of my committee members who have stood by me throughout this long, and at times, arduous process. To Dr. Barbara Day, thank you for your encouragement and unwavering belief that I would get this finished even when I had my doubts. I am also grateful to Drs. Linda Stone, Xue Rong, and Sandra Hughes-Hassell, for providing valuable insight throughout the many rewrites of my work and for their expertise. To Dr. Kimberly Akers, I cannot express enough thanks for your stepping in when I needed another committee member. Your assistance truly made this possible.

I wish to thank the staff at the Federal Bureau of Prisons for allowing me the time and resources needed to complete this study. My sincerest appreciation goes to those who reviewed and approved my study proposal and to the staff who personally assisted me in gathering data.

A special thanks goes to my family who provided support and encouragement throughout the completion of this study. Without your understanding and extreme patience, I could not have done this. To Jason, my biggest supporter, thank you for never giving up on me. And to my daughters, Lindsay and Mackenna, know that anything is possible, set your goals high, and never settle.

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CHAPTER I: INTRODUCTION

Introduction

What is correctional education? Many citizens are unaware of and would be surprised to know that prisons operate schools as part of the daily programming for incarcerated individuals. Education in prison does not resemble that in public schools due to the nature of the curriculum it offers and the necessity of maintaining a secure environment that is safe for all inmates and personnel. It has been noted in the literature that prison education programs should have marked differences from those typically conducted in community schools (Hunsinger, 1997). Others contend that correctional education should resemble typical classrooms as much as possible. According to Rentzmann (1996), prisoners should be treated no differently as students in the public while instruction should be relevant to life outside the prison walls. Regardless of the methodology utilized, correctional educators must teach students in an environment that ensures the physical safety of both staff members and inmates. Therefore, many of the instructional tools associated with public school classrooms are unavailable to students in prison.

While the primary purpose for incarcerating criminal offenders is punitive in nature, a secondary goal of correctional settings is the rehabilitation of inmates in preparation for their re-entry into society. Pavis (2002) stated the following in regard to the rehabilitation of inmates:

While its core responsibility is to safely confine its prisoner population, another central mission of the Bureau is to rehabilitate and to provide inmates with opportunities to obtain skills which will aid them in their ability to readjust to their community after being released. A key component of this is providing education and vocational training so they are better qualified to find a job. (p.146)

As such, the Bureau concentrates effort in education programming that provides skills in both academic and vocational areas.

Educational programming offered by prison systems focuses on the provision of rehabilitative services with the hope of reducing recidivism, or the likelihood of returning to prison. These programs assist inmates in their preparation to enter back into society so they may live and work as productive citizens and family members (Erisman & Contardo, 2005; Tam, Heng & Rose, 2007). Existing literature indicates that inmates who complete education programs and possess functional literacy skills are less likely to return to prison (Vacca, 2004).

Inmates who are enrolled in correctional education programs did not complete their formal education, so they do not possess a high school diploma. Although the educational program in the Federal Bureau of Prisons (BOP) does not offer coursework required for a diploma, it does consist of courses designed to teach basic academic skills that will prepare them for General Educational Development (GED) testing. The GED consists of the following academic areas: Language Arts/Writing, Language Arts/Reading, Mathematics, Social Studies and Science. Inmates must not only achieve the minimum score of 410 to pass a single subject area but must obtain an overall average of 450 of all tests combined in order to pass the GED and receive their High School Equivalency Diploma. The curriculum used in the prison setting, therefore, is centered on improving reading skills such as vocabulary and comprehension, as well as critical thinking in mathematics. Turnbull, Lin and Bavaja (1997) wrote that efforts to reform inmates usually include educational programs designed to help improve low math and inadequate reading and writing skills.

Many of today's prisons are filled almost to capacity throughout the United States. Numbers have indicated a total population of over 1.5 million state and federal prisoners (Cho &

Tyler, 2008). While the number of prisoners housed in state prisons is on a decline, the number of inmates entering the federal system has risen. In 2009, Federal numbers rose to 3.4 % to a record of 208,118 inmates (Pew Center, 2010).

Almost as alarming is the overwhelming number of those individuals who enter the prison system without a high school education. In 1997, only 41% of all inmates in the US had a high school diploma (Harlow, 2003). Additional statistics have indicated that 14.2 % of state inmates were reported as having attained an eighth grade education (Hetland, Eikeland, Manger, Diseth, & Asbjornsen, 2007). Correctional education, then, becomes an essential piece for preparing these individuals to successfully transition from prison back into society. As such, educational programs are offered at correctional facilities throughout the nation and range from teaching the most basic academic skills to vocational and post-secondary education (Rutherford, Nelson & Wolford, 2001).

Correctional education programs have been attributed to reducing recidivism rates, or returning to prison due to re-offenses, as well as lowering the number of disciplinary infractions (Klein, et al., 2004). In a study completed by Wilson et al. (2000), it was found that program participants are employed at a higher rate and recidivate at a lower rate than non-participants in education, vocation and work programs. Fabelo (2002) reported similar results when looking at the reintegration of Texas inmates. In this study, it was also discovered that educational achievements obtained during one's incarceration resulted in a decrease in recidivism rates. Based on the understanding that a better education will lower recidivism rates, the BOP provides educational services to all incarcerated individuals who enter the prison system without a high school diploma. Nuttall, Hollmen and Staley (2003) wrote that the Bureau of Prisons considers education to have a direct impact on recidivism. In other words, as the number of completed

educational courses increases, the likelihood of returning to prison decreases. Therefore, the educational mission of the BOP is primarily to create a setting where inmates will receive the skills required for obtaining a GED.

An individual's success is often equated with one's ability to obtain employment that further reduces future criminal acts and recidivism. A study conducted by Garner (2005), discovered a 20% increase in the earnings among racial and ethnic minorities who were GED holders relative to non-GED holders in their first post-release year. Educational programming in prison then becomes a contributing factor to the greater benefit of society as a whole. According to Lochner and Moretti (2004), correctional education may positively impact society since any reduction in crime reduces the associated cost. The BOP recognized the educational needs of its population; therefore, it operates an education department at each of its institutions throughout the country. Each educational program is comprised of: literacy (GED), English-as-a-Second-Language (ESL), occupational education (vocational training, or VT, and apprenticeships), Release Preparation courses (i.e. Parenting, Money Smart, Employability Skills and Keyboarding), Adult Continuing Education (ACE) classes, and wellness/leisure activities. The education department is led by a Supervisor of Education (SOE) who may be assisted by one or more Assistant Supervisors of Education (ASOE) depending on whether the location is a stand-alone institution or a complex with multiple sites. Instructors may teach separate subject areas (i.e. Language Arts/Writing) or by level (i.e. Pre-GED or GED), however, instructors in the Special Learning Needs programs must be certified in special education.

Inmates who enter the prison without a high school diploma or its equivalent are required to participate in the literacy program as a way to improve their overall academic skills. They are also encouraged to participate in optional courses that are available through the education

department such as an ACE or vocational trade courses for personal self-improvement. These educational courses are available to all inmates and highly sought after for enrollment. However, many have prerequisites such as a GED that must be obtained prior to enrollment. In the document published by the BOP entitled *Education, Occupational Training, and Recreation Program* (March, 2007), it is written that approximately 35 % of all inmates in the BOP are involved in a variety of educational programs.

Background of Study

The Federal Bureau of Prisons implemented the mandatory education policy in 1981 by Norman A. Carlson who was the Director of the BOP at that time (Federal Prisons Journal, 1989) in the effort to meet the needs of incarcerated individuals who did not possess a high school diploma and often lacked the skills necessary to obtain this credential. These persons would be required to spend a minimum of 90 days in education so they could work on building basic academic skills. Along with this new policy, certain incentives were put into place to reward progress and encourage the completion of the program.

In 1994, a new law entitled the *Violent Crime Control and Law Enforcement Act* (VCCLEA) was created that continued the requirement of mandatory attendance in an education program for those without high school diplomas along with the stipulation that the inmate must be making satisfactory progress towards attaining a GED. The minimum number of hours that must be spent in the literacy program was specified at 240 hours and must be completed in order to achieve a satisfactory program assignment. This notation in their educational transcript indicates that the inmate is not only continuing their educational enrollment, but is putting forth good effort towards classroom assignments and is making educational gains. Although inmates are required to spend at least 240 hours in the education program, those who do not obtain a

GED during that timeframe may continue their participation for as long as needed to accomplish that task. As inmates continue their enrollment in education, they are eligible to earn Good Conduct Time (GCT) that is deducted from the overall length of an inmate's sentence; thereby, reducing time spent in prison.

After completing 240 hours of continuous participation in education, an inmate can then elect to withdraw from the education program. The status of the inmate would be changed to reflect unsatisfactory progress in his educational transcript and he would no longer be eligible to receive GCT. If the inmate were to elect to re-enter the education program, he would be required to begin at zero hours and work towards the 240 hour minimum requirement again. According to the *1995 Prison Litigation Reform Act* (PLRA), Bureau officials, typically education staff, must monitor an inmate's educational progress to ensure that each inmate continues to work on give assignments and is making academic progress.

Purpose of Study

The purpose of this study was to compare the GED completion rates for male inmates who have been identified with low reading levels with their peers in a North Carolina Federal prison. While the Federal Bureau of Prisons does not apply a label or specific diagnosis of disability for inmates while they are incarcerated, BOP education policy mandates that scores from the Tests for Adult Basic Education (TABE) that fall below a grade level of 4.9 are used to determine placement in Special Learning Needs classes. Inmates who receive scores at a 5.0 grade level and above are placed in more advanced GED courses. This study will also look at how inmates from both academic groups answer questions pertaining to student motivation and personal perceptions of themselves as learners to determine if students with lower reading levels respond differently than their higher functioning peers.

This correlational study uses descriptive methods to determine the relationships among variables while descriptive and ex post facto techniques were utilized for analysis of data. The target population for this study was derived from male inmates housed within the BOP who had participated or were currently participating in the GED program. From a random sample of 1,655 inmates at the institution, 355 inmates were identified as having met these criteria and would serve as potential participants for this study.

Research Questions

How do the GED success rates for inmates with low reading levels compare to their peers with higher reading levels?

1. Are there significant differences in specific demographic factors when comparing inmates with low reading levels and their peers with higher reading levels?
2. Do inmates with lower reading levels have lower GED graduation rates or spend more time in school than their peers with higher reading levels?
3. Are GED/practice GED scores lower for inmates with lower reading levels than those with higher reading levels?
4. Do inmates with lower reading levels have lower motivation for getting their GED than inmates with higher reading levels?
5. How do inmates with lower reading levels who obtain their GED compare to those who do not in terms of their reading TABE score, time spent in school, and practice and official GED attempts?

Research Hypotheses

H₀₁: There are no significant differences in specific demographic factors when comparing inmates with low and high reading levels.

H₀₂: There are no significant differences between the graduation rates or time spent in school for inmates enrolled in classes for lower level readers versus those with higher reading levels who are enrolled in general education classes.

H₀₃: There are no significant differences between the practice and official GED test scores for inmates with lower reading levels when compared to inmates with higher reading levels.

H₀₄: There are no significant differences between the motivation levels for inmates with lower reading levels compared to their counterparts with higher functioning reading levels.

H₀₅: There are no significant differences between the inmates with lower reading levels who are continuing their enrollment in school and inmates with lower reading levels who have obtained a GED.

Identification of Variables

The dependent variable in this study is the reading level of each inmate based on the TABE reading assessment. Inmates receiving a score equivalent to a grade level of 4.9 or below are placed in classes designed to review and master basic academic skills. Those receiving scores at a grade level of 5.0 and above are placed in classes that are more advanced and geared towards reviewing skills needed to pass the GED.

The independent variables are based on external demographic factors that may be used to describe each inmate within the testing site. These variables are easily accessible for every inmate in Sentry, a computerized data system used for storing such information by the BOP.

- Age – Continuous variable used to provide age in years at the time of this study.
- Race – Binary variable used to indicate the race of each inmate participant.
- Length of Sentence – Continuous variable depicting the number of months the inmate is currently serving in prison.

- Highest grade completed in public school – Continuous variable providing the highest grade completed in a formal school setting.
- Graduation rates – Binary variable used to indicate whether a participant in the study had completed all GED requirements and graduated from the program.
- Practice/official GED scores – Continuous variable providing the final score received on either the practice or official GED tests in all subject areas.
- Motivation – Acquired through the use of an inmate survey where all responses were assigned a binary variable for analysis.

Significance of Study

An in-depth look at the GED success rates of inmates identified with lower reading levels as compared to their counterparts with higher reading levels should be of particular interest to the correctional educators and administrators who implement and supervise the classes that take place. Data retrieved from the study could possibly enhance the existing curriculum and illustrate how individuals in a correctional learning environment learn best. The data may also promote further research in educational policy regarding inmates who are struggling learners and re-entry efforts for these inmates.

Limitations of the Research

One of the primary factors that may negatively affect this study would be the lack of full participation of the inmates. While participation is completely voluntary, some inmates may choose not to complete the written survey because they would be unable to see how that activity would help them personally. These individuals may view the survey as additional work they are being asked to complete without it helping them to pass the GED. Without a foreseeable reward, refusal is possible. Thus, the sample may not be representative of the entire population.

As a researcher conducting a study within one's place of work, there are distinct advantages, such as easy access to pertinent records and the availability of participants. There could be some researcher bias that would possibly affect the overall objectivity of the study. As a teacher with the BOP, the researcher would have a greater understanding of the policies and procedures that govern the operation of the education department while there could be personal opinions that were developed prior to the beginning of the study. Therefore, one must strive to remain impartial in the formulation of test materials as well as during the collection and review of the data.

A third limitation is the generalizability of the findings to inmates in other BOP facilities. The data collected would describe only one inmate population and specific results for that group whereas other institutions and their students' needs would be omitted. Demographic data are provided to address this limitation. Broad, sweeping conclusions could not be made on one study group but would allow the researcher to identify if certain patterns of behavior exist, thereby warranting further research.

Finally, the TABE test is administered to all inmates prior to their enrollment in the GED program. The reading section is the primary tool used by this testing site to enroll inmates based on their performance on this test. If not taken seriously or attempted to the best of their ability, the reliability of this test for placement purposes could be called into question.

Definition of Terms

The following terms are utilized for the purposes of this study:

Adult Basic Education (ABE) – classes for inmates who have been identified as having a reading level at 4.9 and below

General Educational Development (GED) – to earn the equivalent of a high school diploma by passing a five-part test comprised of Mathematics, Language Arts/Reading, Language Arts/Writing, Science and Social Studies; primary component of the literacy program in each Education Department

Federal Bureau of Prisons (BOP) – a law enforcement agency within the Department of Justice created to house incarcerated individuals

English-as-a-Second-Language (ESL) – a program within the BOP designed to teach English to individuals who speak a variety of non-native languages

Vocational Technical classes (VT) – courses designed to teach skills related to a specific trade

Adult Continuing Education (ACE) – a program consisting of various courses designed teach skills for a more successful re-entry into society or self-improvement

Supervisor of Education (SOE) or Assistant Supervisor of Education (ASOE) – person(s) who manage the daily operation of the Education Department in the BOP and supervises staff

Violent Crime Control and Law Enforcement Act of 1994 (VCCLEA) – requires inmates without a high school diploma or GED to attend school while incarcerated

Prison Litigation Reform Act of 1995 (PLRA) – requires education staff to monitor the academic progress of each inmate enrolled in school

Good Conduct Time (GCT) – time removed from total length of sentence

Sentry – computer system utilized by the BOP to maintain operational and management information for each inmate

CHAPTER II: LITERATURE REVIEW

Correctional education may be traced back as early as 1798 when it was initiated at the Walnut Street Jail in Philadelphia (Coley & Baron, 2006; Gordon & Weldon, 2003; Skidmore, 1948). With prisoners suffering from poor living conditions, the Pennsylvania Prison Society advocated for a change in legislation that would provide inmates with solitary living quarters as well as workshops where individuals would receive instruction in a common trade (Pennsylvania Correctional Industries, n.d.). This form of separate housing and an increase in crime led to an over-crowded prison, an increase in discipline problems, and a decrease in the number of inmates employed in the workshops (PCI & The Prison Society, n.d.). These resulting factors led to the ideology that education would serve as one of the primary functions of a prison (Office of Vocational and Adult Education, n.d.).

During the early 1800s, the correctional setting focused on secular education in the effort to improve spiritual enlightenment (Skidmore, 1955; Ward, 2009). Inmates were provided instruction in reading skills primarily so they could read and understand the Bible (Skidmore, 1955). Instructional sessions at that time were informal and typically taught by local chaplains (Ryan & McCabe, 1994).

In 1870, the *Declaration of Principles* became the first official document that made a commitment to the provision of education within the correctional setting (Ryan & McCabe, 1994). The development of the Mutual Welfare Leagues by Thomas Mott Osborne in the early 1900s (Davidson, 1995) is also considered a significant achievement in correctional education since it highlighted the use of cognitive development instruction. There were minimal

innovations to occur in correctional education during the time to follow until the 1930s when the Federal Bureau of Prisons (BOP) was established. Austin MacCormick, Assistant Director of the BOP at that time, provided a philosophical framework for the organization's educational programming (Hunsinger, 1997) that resulted in courses designed to improve an inmate's academic and vocational skills that would rehabilitate individuals and prepare them for release (Esperian, 2010; Ward, 2009).

Despite an identified need for these specialized services, change again affected correctional education in the 1940s and 1950s due to the nation's involvement in World War II. According to Ryan and McCabe (1994), both materials and monetary resources were appropriated for supporting the on-going war efforts. Less focus was given to educating criminals and the pendulum once again swung towards punitive measures.

An instrumental development during the 1960s paved the way for educational models utilized in today's prison schools. Because of a growing interest in inmate education, federally funded programs were created, including Adult Basic Education (ABE) for prisons in 45 states (Ryan & McCabe, 1994). Cho and Tyler (2008) defined these programs as education provided to individuals who read at a ninth grade level or below. Those involved in such programs received instruction in basic reading, writing, and mathematics skills needed to progress to a more advanced level of study.

The 1970s were a time where educational programming began to receive increased support and are considered by many as the "Golden Age" of correctional education (Ryan & McCabe, 1994). Crayton and Neusteter (n.d.) wrote that ABE and GED programs "flourished" alongside vocational training and post-secondary education programs. Such programs were deemed as effective tools for rehabilitating inmates and reducing recidivism (Ward, 2009).

Textbooks and other commercial resources became more readily available that targeted the adult who was a low to non-reader and included a wide range of topics (Steurer, 2001).

Although vast changes and improvements were being made in the field of correctional education through the 1970s, public opinion and politics once again had a negative impact as people questioned the provision of educational programming for offenders. This led to cuts in the budget that reduced the quality and number of programs offered (Lillis, 1994). The decline in funding did not deter the BOP from implementing the first mandatory education policy on November 12, 1981 (Ryan & McCabe, 1994). Similar policies have been adopted by state prisons and continue to be implemented in the BOP today.

Gehring (2007) wrote that there have been five different organizational structures in place throughout history to depict the make-up of correctional education in our prisons. These include: Sabbath schools, a traditional or decentralized pattern, correctional education bureaus, correctional school districts (CSD's) and integral education. The one that best describes the current program in the BOP is the correctional school district. The school staff are employed by the BOP and must abide by institutional policies and procedures, and education is viewed as a highly valuable program offered to the inmates. Decisions regarding educational programming are initiated in the Central Office and at the Regional level whose staff is also responsible for compiling information for legislative reports. Information is filtered to the Supervisors and Assistant Supervisors of Education regarding policy, budgeting, and educational needs.

Education in the Bureau

The term "literacy" is often used when describing a person who can read and write (Muth, 2008). A literacy program within the correctional setting, however, must provide various

skills that are necessary for independent living for all individuals regardless of their background.

Derbyshire et al. (2005) provided the following definition for literacy:

Literacy involves listening and speaking, reading, writing, numeracy and using everyday technology to communicate and handle information. It includes more than the technical skills of communication: it also has personal, social and economic dimensions. Literacy increases the opportunity for individuals and communities to reflect on their situation, explore new possibilities and initiate change. (p.3)

The Education Department in the BOP offers inmates a curriculum that provides inmates with basic skills in all academic areas. As written in the BOP Program Statement (2003), the literacy program is designed to “help inmates develop foundational knowledge and skills in reading, math, and written expression, and to prepare inmates to get a General Education Development (GED) credential” (p.1). The literacy program in the BOP includes: Special Learning Needs (SLN), English-as-a-Second Language, Pre-GED and GED classes. These are stepped in such a way that allows inmates to progress through each level at their own pace and builds on prior knowledge.

The implementation of the Violent Crime Control and Law Enforcement Act of 1994 (VCCLEA), in conjunction with the existing Prison Litigation Reform Act of 1995 (PLRA) mandates that individuals who are incarcerated in the BOP and do not possess a high school diploma or GED must participate in the literacy program until they either accumulate a minimum of 240 hours of satisfactory progress or obtain a GED. As an inmate’s enrollment in the literacy program continues, BOP staff must monitor the academic progress of each inmate. Therefore, the status of inmates are continuously monitored and updated as needed.

As part of their admission process to a prison, education personnel assess inmates to determine academic strengths and weaknesses. Based on diagnostic results and past educational history, inmates are assigned a particular education program that will best suit their individual

needs. The following mission statement for the BOP Education Department outlines its overall purpose:

The mission of Education/Recreation Services is to provide mandatory literacy and ESL programs as required by law and such other education/recreation and related programs that meet the needs and interests of the inmate population, provide options for the positive use of inmate time and enhance successful reintegration into the community. (Education, Vocational Training, and Recreational Programs, March 2007, p.1)

Inmates who receive a score of 4.9 or below on the Test of Adult Basic Education (TABE) in the area of reading are placed in the Special Learning Needs (SLN) class. While in this class, inmates work on improving basic skills in reading, writing, math and overall functional skills needed to live and work in the outside world independently. Inmates who achieve a reading level of 5.0 or greater may promote to a more advance Pre-GED or GED level course where they may begin working on academic skills required to pass GED exams.

Limited research is available that focuses on inmates' reading levels and the effect that has on success in education programs in regards to program completions. However, existing literature does support mandatory education programs in both state and federal prison systems. Ryan & McCabe (1993) conducted a study in a state correctional facility where they focused on the academic achievement of inmates who either attended school on a voluntary or non-voluntary basis. It was discovered that the likelihood of an inmate's voluntary participation was not drastically different from one required to attend.

Another supporting article by Harlow, Jenkins and Steurer (2010) explained the findings by The National Adult Literacy Survey that was completed in 2003. The authors wrote that, "prisoners with a GED scored higher in reading skills than persons in the general population with an equivalent education" (p.68). It was also discovered that "individuals in correctional facilities received a higher pass rate (73.5%) than their counterparts in the community (69.9%)" (p.88).

The Inmate Population and Their Literacy Needs

The prison system in the United States has been steadily growing at an alarming rate. According to the BOP's official website, the total number of inmates housed within BOP facilities was 180,322 in August 2011 (BOP Quick Facts, 2011). Research by The Sentencing Project (2011) stated that the federal prison population has risen over 700% from 1980 to 2009. This report indicates that current policy and sentencing practices have contributed to such a large increase with 51% of the population being drug offenders while others concur that the "war on drugs" is the major cause for the number of men and women entering the prison system (Sheldon, 2004). Among the BOP population, racial disparities exist with an over-representation of minorities. It was reported that 76% of the federal prison population were minorities with the following make-up: Black – 39%, Latino – 33%, Native American – 2% and Asian – 2% (The Sentencing Project, 2011, p.2).

As the prison population increases, so does the need for correctional education services. Studies indicate that among persons incarcerated, there is a lower educational attainment (Bureau of Justice Statistics, 2003) and overall lack of the most basic academic skills (Office of Vocational and Adult Education, n.d.). According to the 1992 National Adult Literacy Survey (NALS), "51% of prisoners had their high school diploma or equivalent, compared with 76% of the general population (LoBuglio, 2001, p.5). Failure to complete their secondary education typically characterizes the inmate population (Winters, 1997).

Various forms of learning disabilities are prevalent in the correctional setting and represent a disproportionate number of inmates. The 1992 NALS report revealed that 11% of inmates reported a disability whereas only 3% of the general population indicated any need for

special education (LoBuglio, 2001). Hogen, Bullock and Fritsch's (2010) article focused on the correctional youth in prisons and contribute the following to an overrepresentation of this group:

1. the large numbers of incarcerated children and youth who are products of the foster system,
 2. failure of students to attend school on a regular basis, and
 3. students who had not been identified by the public school as having a disability.
- (p.134)

Of those who reported as having a disability, approximately 44% did not finish high school (Harlow, 2003, p.9).

In regards to inmate learning characteristics, Winters (1997) wrote that “they usually have maladaptive, passive learning styles, and attribute their lack of academic success to extra individuals factors” (para. 13). Despite their history of learning difficulties, individuals entering the prison system do so with extensive differences and life experiences. These individuals have also had to adapt to the world around them, although the real-world knowledge base they create is often deemed inappropriate by society (de Maeyer, 2001).

Statistics in the existing literature reflect an over-representation of minorities in the correctional setting. Inmates in state and federal facilities are predominantly young males (LoBuglio, 2001) with African-Americans outnumbering whites 8 to 1 (Sheldon, 2004). These numbers indicate that as the rate of incarceration goes up, so does the negative impact on minorities and other at-risk individuals from low-social economic communities (Nicholson-Crotty, Birchmeier, & Valentine, 2009; Sheldon, 2004).

Motivation

What is motivation? According to *The American Heritage High School Dictionary* (2007), to motivate an individual means to “provide with an incentive or move to action” (p.908). The definition may vary depending upon the context in which it is being used. For

example, Schlesinger (2005) wrote, “in psychology, the motivation construct accounts for the initiation, direction, intensity and persistence of behavior” (p. 387). A common factor of these definitions is that there is an action based on a given incentive or expectation of some perceived reward for engaging in the behavior. In order for an incentive to work, there must be some value associated that makes the action or behavior worthwhile. Dieseth, Eikeland, Manger, & Hetland (2008) stated that both expectancy and value have important roles in achievement of motivation because they indicated the degree of involvement in the task.

As an educator, it is an expected duty to motivate those you teach, even if those students are incarcerated adults. The ability to motivate individuals may rest on the prior experiences of those students, their personal attitude toward education, and what a student finds motivating (Schlesinger, 2005). Personal motivations for participating in educational programming, therefore, may be widely varied and result in difficulties in providing programs that meet the needs of all individuals.

Motivation in correctional education has not been a major focus of research as opposed to the arguments of such programming. Although the literature provides ample testimony regarding why such programs should be available, relatively little is known about inmates’ motivations for participation (Parsons & Langenbach, 1993). From the research available, there are some indicators of what commonly motivates inmates to go to school. In a study by Tewsbury and Stengel (2006), inmates were given a closed-ended questionnaire that specifically asked them to state their reason for attending school. The authors noted the following:

In regard to what motivates the inmates to go to school, the responses indicated that the most prevalent motivator for academic students is to increase one’s self-esteem. Academic students are especially likely to report this as a motivation whereas vocational students most frequently reported participation so as to increase their chances for securing employment once released. (p.22)

Other studies have provided results that have shown some similarities, but additional findings noted by Schlesinger (2005) were not related to education. In this study, participants were interviewed using a list of questions that pertained to their school experience in prison. Major findings from this research included inmate goals such as getting out of their housing unit or cell, to exchange contraband, and to gamble with other inmates or it gives them something to do to help pass time.

In an article by Vacca (2004), the author describes a study conducted by the Select Committee on Narcotics Abuse and Control within the Federal prison system. The purpose of this particular study was to determine the effectiveness of the prison literacy and vocational programs offered to the inmate population. Inmates reported that they were more willing to participate if an improved chance for post-release success was evident.

Inmate Perspectives on Education

In order to learn more about inmate's perspectives on correctional education, Hall and Killacky (2008) questioned inmates about their past educational experiences and the programs offered within the institution. From these interviews, the researchers were able to identify the inmate's definition of success as being able to support themselves and their families in the outside world. The authors noted that the inmates' perceptions "influenced their study habits, their motivation to attend and persist in the classroom, and their future educational and employment plans" (p.305). A second theme consistently reported by the participants was a feeling of regret concerning past decisions they had made.

Inmates, while possessing different motives for attending, have voiced opinions containing consistent themes in regards to their current educational offerings. During a study conducted by Gee (2006), the following perceptions were discovered:

- 1) Attitude – inmates approved of programs, but would like more options and more time for each class,
- 2) Motivation – inmates were goal-oriented,
- 3) Needs – support groups for drug users were needed, and
- 4) Inmates wanted classes in transition skills to assist in family, life and social skills. (p.320)

A second study by Griswald and Myles (1998) named additional needs that inmates felt were important for them to succeed. Among these findings, the authors found that inmates wanted a learning environment where teacher cared. Inmates also wanted programs that were better suited to their interests.

Curricular Programming in the Correctional Setting

In the effort to better prepare inmates for release, prisons must take care to include instruction in areas that will assist inmates in becoming more independent. Bayliss (2003) noted that while the main goal of prison education was to address basic skills, life skills must also be included. Therefore, educational programs are developed with the purpose of equipping inmates with the knowledge and skills that will help them find gainful employment, permanent housing and the ability to locate various resources outside the prison that will increase their chances of living productively in their community. These programs range from educational and behavioral modification to spiritual intervention and release preparation.

For an education program to be successful, there are specific factors that must be addressed. Vacca (2004) offers the following suggestions:

Successful prison literacy programs are learner centered and they should be tailored to the prison culture. They recognize different learning styles, cultural backgrounds, and multiple literacies. The programs are participatory and they use the strengths of the learner to help them shape their own learning. Literacy should be put into meaningful contexts that address the learners' needs. Instruction should involve engaging topics that motivate and sustain the inmates' interest. (p.302)

When these points are addressed, educational programming becomes more learner-centered and is based on prisoners' specific needs. Instruction becomes more relevant for the learner and provides purpose for learning. Students must be able to personally identify particular benefits for participating in an educational program and begin the process of becoming a life-long learner (Fisher, 2001).

Learning disabilities can have a profound effect on the adjustment to life in prison and participation in rehabilitative programs while incarcerated. Talbot (2007) concluded that the learning difficulties themselves could seriously hamper the coping skills of these individuals while Hayes (2007) noted that in order to more effectively rehabilitate current offenders, sufficient access to appropriate services should be provided. The following six components were recommended by Rutherford, Nelson and Wolford (1985) for a successful special education program:

- 1) procedures for conducting functional assessments of the skills and learning needs of handicapped offenders,
- 2) the existence of a curriculum that teaches functional academic and daily living skills,
- 3) the inclusion of vocational special education in the curriculum,
- 4) the existence of transitional programs and procedures between correctional programs and the community,
- 5) the presence of a comprehensive system for providing institutional and community services to handicapped offenders, and
- 6) the provision of in-service and pre-service training for correctional educators in special education. (p.64)

Correctional educators must also design instruction that is appropriate for the preferred learning styles of their learners. Sheridan and Steele-Dadzie (2005) write the following:

Research has shown that when children are taught in their learning styles...they obtain higher test grades along with demonstrating a more positive attitude in the classroom. A mismatch between learning style and teaching approach leads to frustration on the part of both the teacher and student. Due to all the differences that may be found in a classroom including culture, age, gender, and SES, the need for teachers to understand individual learning preferences cannot be overemphasized. (p.353)

This understanding is instrumental for involving each student and making every person an active participant in their own learning. Instruction for inmates must be relevant and based on realistic scenarios one will encounter upon release (Fisher, 2001). Teaching methods should promote student involvement and actively engage the learner as well as provide ample opportunities for students to display knowledge or understanding (Sheridan & Steele-Dadzie, 2005).

Ideal programming for inmates should build on prior knowledge and expand on what is already known. Instruction should be constructed in logical, sequential steps that takes a learner from the most basic level and proceed to mastery of a concept (Ellis, McFadden & Colaric, 2008). Through proper diagnostic methods, correctional staff may determine where to correctly place inmates in the education program that would allow them to begin at the appropriate level of need and promote to more advanced levels as learning occurs.

Effective correctional education programs should also enhance the critical thinking skills of inmates. Critical thinking is defined by Facione (2000) as the cognitive process of forming reasoned and reflective judgments about what to believe, how one should behave, or what to do. The ability to think through one's actions and consider the consequences is often a skill that inmates lack and could contribute to their anti-social or criminal behavior (Porpornino, Fabiano & Robinson, 1991). Curricular planning for instruction in this area is difficult for this particular population. Currently, the textbook market contains few materials that appropriately serve the purpose of combining academic and decision-making skills (Taymans & Corley, 2001).

Challenges

One of the primary challenges that correctional educators face is limited structured time inmate attendance. Aside from the fact that an inmate might simply not show up for class, there are other departments such as medical, psychology or religious services that may schedule events

that require the inmate's attendance. While education courses take priority, inmate job assignments may also interfere with class scheduling. Unit teams regularly meet with inmates to review their adjustment to prison, progress with programming activities, as well as release information. Phone calls with lawyers, possible meetings with lieutenants in regards to behavioral infractions, and visits are also events that sometimes reduce the amount of time actually spent on educational tasks.

Inmates entering the prison system typically have a history of poor academic achievement or are high school dropouts (Vacca, 2004). For those who chose not to complete public school, mandatory education in prison may be equated as additional punitive measures and reduces the ability of an individual to make independent choices regarding how they spend their time in prison. Elliot (2007) wrote the following:

The reality of the prison as a coercive institution impacts on the motivation of individual prisoners, for it constrains a prisoner's potential for cultivating genuine internal values and, even more, the expression of those values. Prison education and correctional programming are about teaching in a milieu based in punishment. (p.204)

Inmates may respond to this prison culture in a variety of ways ranging from rebelliousness to impassiveness (Eggleston & Gehring, 2000). This impassiveness may be evidenced by consistently not attending classes or refusal to complete assigned classwork.

Summary

Research has shown that educating inmates while they are incarcerated reduces recidivism or their return to prison. According in Conlon, Harris, Nagel, Hillman, & Hanson (2008), each completed course and every certificate earned increases an inmate's chances for success upon release. Educational programming, therefore, is utilized by the BOP as a tool for

preventing inmate idleness, preparing inmates for the GED examination and decreasing recidivism.

With the passing of Violent Crime Control Act of 1994 (VCCLEA), inmates are required to attend classes within the literacy program if they enter the federal system without a high school diploma or GED. These inmates must attend classes for a minimum of 240 hours before they may elect out of the program. However, inmates who maintain a record of satisfactory progress while they are enrolled in school are eligible for earning Good Conduct Time (GCT). The Prison Litigation Reform Act of 1995 (PLRA), along with VCCLEA, requires prison staff to continuously monitor the inmates' academic progress during their literacy enrollment and maintain accurate records in the BOP's computer database, Sentry.

The primary goal of the education department is to provide inmates with the literacy skills needed to successfully take and pass the GED examination. This objective requires proficient reading, writing, and math skills that make up the content taught in education classes. Effective instruction must go beyond academics to address critical thinking, problem-solving, and decision-making skills as well as setting realistic goals. The implementation of a successful program has many challenges. Taymans and Corley (2001) wrote:

The challenges of providing educational programming in a correctional setting are multifaceted. Given that the primary goal of a correctional facility is to provide security, it is not uncommon for instruction to be interrupted in the interest of security or for inmate-students to be transferred to other institutions, to meet with their attorneys or to be scheduled to appear in court. Educational staff must deal with the continual and unpredictable turnover of students. (p.75)

These obstacles, along with various learner characteristics and experiences, create significant challenges that correctional educators must overcome.

Finally, an inmate's personal motivation for engaging in educational programming may vary from person to person. Inmates also enter the correctional education setting with different

educational experiences that often include limited academic success. Therefore, educators in the prison system must be able to adapt instruction that addresses the sometimes reluctant learner.

Conceptual Framework

Figure 1 represents the conceptual framework used for this study. It provides specific factors identified by the research that may impact the success of students identified as having special learning needs in correctional education. Along with variables such as age, length of prison sentence, highest grade completed, and current reading level, views of oneself as a learner or personal motivation has been shown to impact a person's decision to continue participating in a certain task and the degree of effort applied to that task (Wolters, Karabenick, Johnston, & Young, 2005). Inmates also adjust their behavior based on the environment they are in and others who are around them. Individuals learn socially by observing others and the consequences that occur which, in turn, might influence how they act (Davis & Luthans, 1980, p. 283).

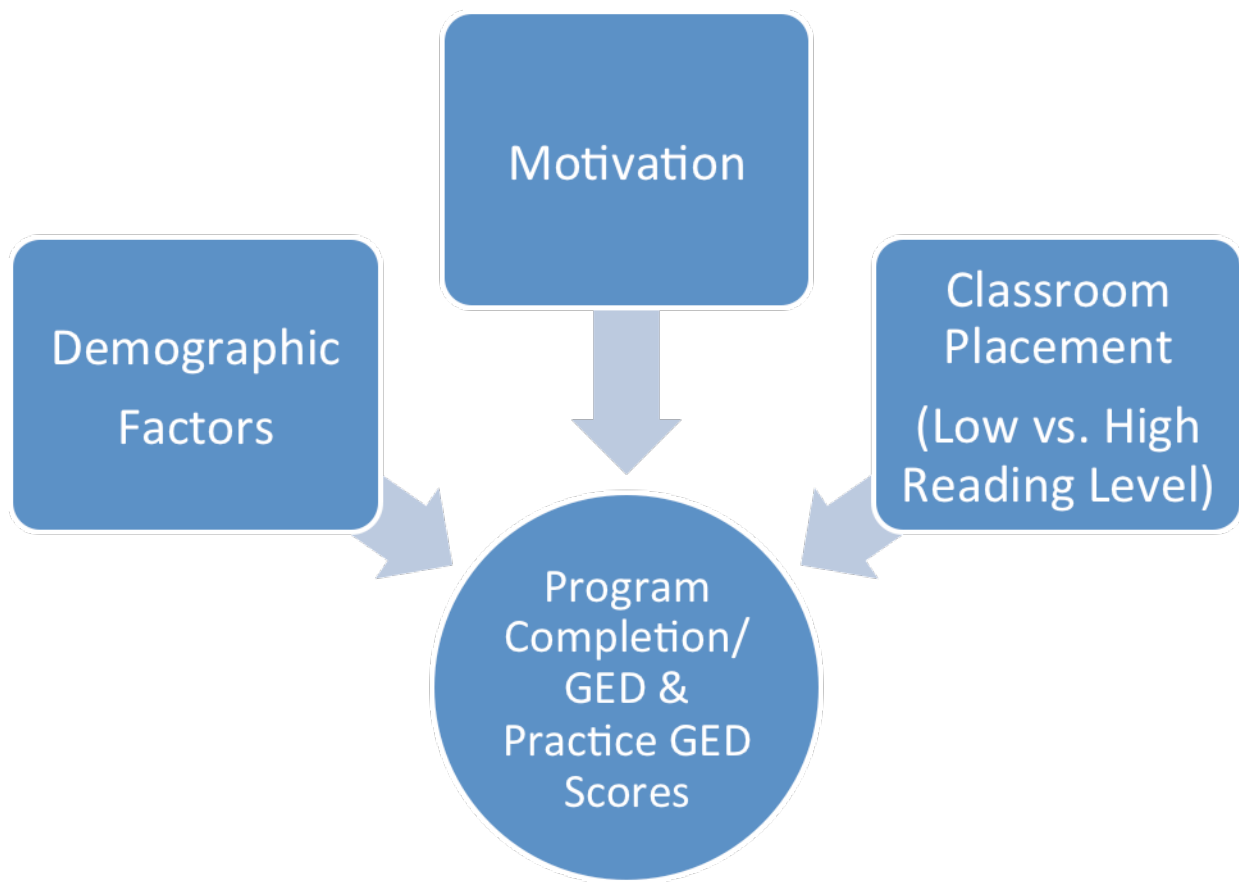


Figure 1. Conceptual Framework for the Study of GED Program Success Rates of Inmates with Low Reading Levels within the Federal Bureau of Prisons.

CHAPTER III: METHODOLOGY

The purpose of this study was to compare the GED completion rates for male inmates who have been identified with low reading ability with their higher functioning peers in a North Carolina Federal prison. While the Federal Bureau of Prisons does not apply a label or specific diagnosis of disability for inmates while they are incarcerated, BOP education policy mandates that scores from the Tests for Adult Basic Education (TABE) that fall below a grade level of 4.9 are used to determine placement in Special Learning Needs classes. Inmates who receive scores at a 5.0 grade level and above are placed in more advanced GED courses. This study will also look at how inmates from both academic groups answer questions pertaining to student motivation and personal perceptions of themselves as learners to determine if students with lower academic ability respond differently than their higher functioning peers. This retrospective study design will use correlational and descriptive methods to determine the relationships among variables (Burns & Grove, 2003) while descriptive and ex post facto techniques will be utilized for analysis of data.

Research Questions

How do the GED success rates for inmates with low reading levels compare to their peers with higher reading levels?

1. Are there significant differences in specific demographic factors when comparing inmates with low reading levels and their peers with higher reading levels?
2. Do inmates with lower reading levels have lower GED graduation rates or spend more time in school than their peers with higher reading levels?

3. Are GED/practice GED scores lower for inmates with lower reading levels than those with higher reading levels?
4. Do inmates with lower reading levels have lower motivation for getting their GED than inmates with higher reading levels?
5. How do inmates with lower reading levels who obtain their GED compare to those who do not in terms of their reading TABE score, time spent in school, and practice and official GED attempts?

Research Hypotheses

H₀₁: There are no significant differences in specific demographic factors when comparing inmates with low and high reading levels.

H₀₂: There are no significant differences between the graduation rates or time spent in school for inmates enrolled in classes for low level readers versus those with higher reading levels who are enrolled in general education classes.

H₀₃: There are no significant differences between the practice and official GED test scores for inmates with lower reading levels when compared to inmates with higher reading levels.

H₀₄: There are no significant differences between the motivation levels for inmates with lower reading levels compared to their counterparts with higher reading levels.

H₀₅: There are no significant differences between the inmates with lower reading levels who are continuing their enrollment in school and inmates with lower reading levels who have obtained a GED.

Research Participants

This study was conducted on site at an all-male facility at the Federal Correctional Complex in Butner, N.C. All inmates are required to attend education classes, per BOP policy

5350.28, if they do not have a verified high school diploma or GED credential. Inmates who must attend school are first given the Test of Adult Basic Education (TABE) to determine educational needs and classroom placement. For the purpose of classroom placement, the institution in this study uses the results of the reading test to determine the appropriate class for each inmate enrolled. Due to the reading comprehension skills required to complete the Reading, Science, and Social Studies sub-tests as well as the Applied Mathematics portion, the reading TABE score is the primary assessment tool utilized to gauge an inmate's current academic ability. Those who score at a reading grade level of 4.9 or below are enlisted in the Adult Basic Education (ABE) classes while others reading at a 5.0 grade level and above are enrolled in general education classes. The focus of the ABE classes is to improve basic reading, writing, and math skills while general education classes work on specific academic skills required to pass all sections of the GED test.

The TABE test is a diagnostic tool utilized by the BOP to assess an inmate's academic skills in the areas of reading, math, and language. The facility in this study uses the TABE Forms 9 and 10, which both have four levels (Easy, Medium, Difficult, & Advanced) to determine grade equivalents in content knowledge. Developers of the TABE test and subject matter experts created items for this assessment after reviewing K-12 curricular materials and testing items on approximately 34,000 adults to standardize items and eliminate various biases (Discover TABE 9 & 10, 2008). To further obtain the highest level of statistical accuracy, developers also employed an Item Response Theory (IRT) model to prevent bias in test items which were then correlated to similar test questions on the GED. Data concerning test-retest reliability or validity is not reported in TABE publications; however, the TABE forms have been proven to consistently assess content knowledge (Sticht, 1999).

At the time of this study, there were a total of 1,655 inmates housed at the research site. Using class rosters ranging from the fiscal years October 2011 to September 2012 as well as October 2012 to December 2012, 355 inmates were subtracted from the total prison population. These 355 inmates were further divided into two groups: 153 with TABE reading scores of 4.9 and below and 202 inmates with a reading TABE score of 5.0 or above. A random number generator was used to select a sample population of 60 inmates to include 30 who had been identified as having a reading grade level of 4.9 or below (low reading ability) and 30 inmates whose reading scores were at 5.0 grade level or above (high reading ability). Since the site used for the purpose of this study was an all-male facility, the participants were men with ages ranging from the early 20s to 70s.

Other demographic variables were collected from Sentry for each participant to include: age, ethnicity, length of sentence, and highest grade completed in public school. The frequency distributions for the data collected are summarized in this section. A Chi-square test of independence was conducted to determine if there were any significant discrepancies between each variable for these two groups.

Research Materials

In order to obtain information from inmate participants in this study, a written survey format was chosen. To determine the validity of the survey items, a copy of the questions and multiple-choice responses were first given to an instructor at the testing site to review how well the survey items and possible responses aligned to the programming offered in the Education Department. The survey was also reviewed by a staff member at the University of North Carolina – Chapel Hill (UNC-CH) IRB office to ensure the readability of the survey items was not above a 6.0 reading grade level and reviewed by a staff member at the Odum Institute, also at

UNC-CH, to ensure that survey items were not only easily readable but would not be misleading or increase any potential risk to the inmate participants. The survey was then administered to a group of 10 inmates to represent the sample group that would later be used in the study. From this pilot study, the vocabulary and wording of survey items could be deemed appropriate for the prison population. Also, input and questions posed by the respondents could be used to make questions and responses more easily understandable. The final written survey (Appendix A) consisted of the following six questions:

- 1) How do you learn best?
- 2) Would you have taken GED classes in the school if you were not required to do so?
- 3) What are/were your educational goals?
- 4) Why did you choose to get a GED?
- 5) How do you feel about going to school while in prison?
- 6) Select one of the following choices that best describes you?

Question number 3 on the survey specifically asked inmates about their educational goals, if there were any. Multiple-choice answers included getting a GED, enrolling in Adult Basic Education (ACE) and post-secondary courses, or learning a new skill such as those taught in the vocational trades program. Number 4 also pertained to educational goals by inmates why they had chosen to pursue a GED. Question number one asked inmates to reflect on how they think they learn best. Various options involving different modalities were provided for selection. Questions 2, 5, and 6 were related to personal motivations for attending school.

The survey was then evaluated using the test-retest method for reliability. A total of 60 inmates were selected employing a simple random sampling method at the testing site due to the fact that they would most accurately represent the size and characteristics of the intended sample

population. The survey was then administered to these inmates on two separate occasions and four weeks apart. The results were analyzed using SPSS and are displayed in Table 1. Reliability coefficients ranging from 0.75 to 1.00 (Cicchettic & Sparrow, 1981) demonstrated that the survey would be a reliable, valid assessment tool. For this survey, there was a total of six items which measured separate constructs and lacked the item association required to compare to a given standard. In this instance, measures of internal consistency do not apply and the survey may be utilized to compare how low level readers respond to questions as opposed to their peers with higher reading levels.

Table 1. Pearson Product Moment Correlations between Survey Pilot Trials

Survey Item	Total Sample Population <i>N</i> = 60
1) How do you learn best?	0.95
2) Would you have taken GED classes if you were not required to do so?	0.61
3) What are/were your educational goals?	0.95
4) Why did you choose to get a GED?	0.93
5) How do you feel about going to school?	0.92
6) Select the following response that best describes you.	0.92

Demographic and achievement data for each participant was also extracted from Sentry, a computer system containing information pertaining to each inmate from the date they were admitted into BOP. Tracy (1985) identified various variables that impacted inmates' success on GED examinations. These variables included ethnicity, an inmate's sentence length, age, educational achievement prior to incarceration, and participation. Therefore, the education data form developed for this study included age, race, length of sentence, the highest grade completed in public school, current reading level, and scores for the practice GED and official GED tests if

these had been attempted by the inmate. The time spent in the literacy program was also recorded for all participants in this study to determine if these factors impacted the success rates of lower and higher performing GED students.

Research Procedures

The initial step in this process was to obtain approval of the research proposal by the dissertation committee. Upon approval, an application was submitted to the Academic Affairs Institutional Review Board at the University of North Carolina-Chapel Hill (Appendix D). In addition, the researcher requested approval by the Institutional Review Board at the local level that is chaired by the Warden. After approval was obtained at the local level, the application was sent to the Regional Director, then on to the Office of Research and Evaluation in Washington, D.C. (Appendix E).

An individual who was uninvolved with this study (Alternate Literacy Coordinator) used a random number generator to create a list of 60 participants from class rosters ranging between October 2011 to September 2012 and October 2012 to December 2012. Thirty of these inmates had an identified reading grade level of 4.9 and below while the other 30 had a reading grade level of 5.0 and above. These individuals were placed on call-out, meaning they were assigned specific dates and times to report to the education department for the purpose of this study.

The Alternate Literacy Coordinator distributed and read the consent form to each inmate (Appendix B). After reading the form, but before asking the inmates to give their consent, the Alternate Literacy Coordinator verbally asked additional questions (Appendix C) in order to ensure that each person understood the concept of a research study and were able to provide their informed consent. If participants demonstrated full understanding, they were then asked to sign

the consent form. Sixty inmates were put on call-out for this study. All 60 voluntarily agreed to participate.

The Alternate Literacy Coordinator then passed out a written survey and a blank envelope. Inmates were instructed to write their register number on the flap of the envelope only. The envelope, containing the survey, was then turned in to the Alternate Literacy Coordinator who assigned the envelope a number that was written on both the front of the envelope and the label. The label was torn off and placed in a separate stack from the envelope and survey. All participants completed the written survey in less than 15 minutes.

A complete list of participants and their register numbers was given to the researcher. Information pertaining to the individual's age, race, length of sentence, highest grade completed, and practice/official GED scores were obtained from Sentry. Data were entered into a spreadsheet using Excel on a password-protected computer. Answers from this survey were converted into categorical variables where each answer was given a value (i.e. 0, 1, 2, etc.). Once this was completed, the spreadsheet was returned to the Alternate Literacy Coordinator who then substituted the assigned numbers from the survey distribution for register numbers. This process ensured that the researcher could begin analyzing data that had been stripped of identifying information and coded data could no longer be connected directly to an individual.

Teacher as Researcher

One fact that is important to note is that the researcher conducting this study is employed as a Special Learning Needs instructor with the BOP. She began with the Bureau in April 2007 and for six years has been working in the classroom with students whose achievement is at 4.9 reading grade level or below. As an instructor, the researcher has worked closely with a given number of students during her employment with the BOP. Lessons typically consist of skills that

focus on improving reading, writing, and math skills. Classes are comprised of a maximum of 10 students and last for two hours each. The low student-teacher ratio allows the teacher to work individually with each student on assignments that are based on specific needs of the inmate.

Conducting Research in a Prison Setting

Research conducted within a prison setting is often met with a series of challenges that must be addressed prior to and during the research design process. The prison population is considered to be “at-risk” and extreme caution must be used to ensure that the rights of the intended study subjects are protected at all times (Kalmbach & Lyons, 2003; Overholser, 1987). In 1979, the Department of Health, Education and Welfare commissioned *The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research*. The purpose of this document was to provide guidance for working with human subjects. Three major principles were identified:

- 1) Respect for persons – retain the autonomy and dignity of the individual;
- 2) Beneficence – strive to do no harm to the subjects while maximizing potential benefits;
- 3) Justice – distribute burdens and benefits equally (Kalmbach, 2003, 677-678).

A researcher in the correctional setting must provide an adequate explanation of the purpose of the study, all potential risks and benefits and ensure that individuals understand their participation is strictly voluntary.

Analysis of Research Data

The analysis for the data collected is correlational since there will be comparisons of two sets of data. Each variable will be assigned a numerical code for determining the degree of relationship between reading level, the dependent variable, and independent variables. Coded variables will then be placed in an Excel spreadsheet to represent the sample observations collected for each participant. The data collected will then be analyzed with the use of Statistical

Package for Social Studies (SPSS), a statistical analysis software program. Scatterplots for each data set will be used to visually represent the relationship between the two variables as well as the degree and direction of association between the two variables. Another purpose of this step will be to eliminate any outliers within the data, if present.

The results of this study will be reported using appropriate quantitative statistical techniques according to Gall, Gall, & Borg (2006). Descriptive statistics such as percentages, frequencies, and means will be used to organize and guide the interpretation of data. Displays such as charts and tables will be used to present findings. Three types of statistical analysis will be used: (a) frequency distributions, (b) descriptive analysis, and (c) correlation analysis. The statistical tests will be performed with a predetermined .05 alpha level of significance for purposes of data interpretation, indicating that lesser values are indicative of statistical significance.

CHAPTER IV: FINDINGS

The purpose of this study is to compare GED passing rates for inmates who have been identified as having low reading levels with their higher functioning peers. Scores from the practice and official tests were analyzed for inmates reading at a grade level of 4.9 and below as well as those individuals reading at a grade level of 5.0 and above. In addition, survey data collected from inmates that have been or are currently enrolled in school pertained to personal motivations for participating in correctional education programs. The overarching question for this study asked: How do the GED success rates for inmates with low reading levels compare to their peers with higher reading levels?

The Sample

The population for this study was selected from class rosters ranging between October 2011 to September 2012 and October 2012 to December 2012 utilizing a simple random sampling method. From class rosters ranging from these dates, the BOP register numbers that are assigned to every inmate was entered into an Excel spreadsheet. Upon the completion of this step, a random number generator in the Excel software produced a random sample which was then used for this study. This probability sampling technique allows for a sample population that has an equal chance of being chosen and allows the researcher to make generalizations that are considered to have higher external validity (Laerd Dissertation, 2012). The sample size was limited to 60 based on the work of Kutner, Nachtsheim, and Neter (2004), which accepts a minimum of 6 to 10 subjects or cases for every variable used in the study. Also, the number of students assigned to classes specifically for low-level readers is limited to 10 persons per class

with only one teacher for these classes at the testing site. A larger number of teachers assigned to instruct classes for higher level readers allows for a larger population who are reading at a 5th grade reading level and above. Due to these differences, the sample population of low readers who have been enrolled in the GED program is smaller than for higher-level readers.

Validity and Reliability

Reliability refers to the stability of test results and the extent to which those results are free from errors of measurement (Jacobs, 1991). Variables pertaining to age, race, length of sentence, the highest grade completed in school, and scores for the practice and official GED tests were retrieved from archived data, thereby decreasing the likelihood for induced errors typically caused during test administrations or scoring. Existing studies have also used these variables not only as characteristics of the prison population but have examined their possible effect on GED performance (Tracy, 1985).

Analysis of internal consistency is typically calculated for instruments measuring one construct such as aptitude. Items on these surveys contain an association to assist in the measurement of that construct. For this survey, there was a total of six items, which measured separate constructs and lacked the item association required to compare to a given standard. In this instance, measures of internal consistency do not apply and the survey may be utilized to compare how low level readers respond to questions as opposed to their peers with higher reading levels.

Internal validity in a correlational study refers to how well the results can be attributed to the design of the study itself (Huitt, Hummel, & Kaeck, 1999). Data gathered for each variable was first entered into an Excel spreadsheet and examined by the researcher and the alternate Literacy Coordinator at the testing site to identify and correct errors from keying information

into the computer. Another staff person at the test site who was familiar with the educational program policies and course offerings at the time of the study reviewed survey items. A group of 10 inmates enrolled in the GED program then completed the survey. This concluded that items were written on an appropriate reading level and were easily understood.

External validity is reflected by how well results can be generalized to other people, situations, or settings. By using participants an all-male Federal Correctional facility for a research study involving federal inmates, threats to the external validity may be reduced. Further, research results for this study should not be used in comparing youth or female offenders. Through the use of an appropriate research design and statistical analysis, researchers may improve internal and external validity (Huitt et al., 1999).

Research Question 1

The first research question asks: Are there significant differences in specific demographic factors when comparing inmates with low levels and their peers with higher reading levels? To address this question, variables were selected that characterized each individual within the inmate population to include: age, race, length of sentence, and the highest grade completed in public school. There were a total of 1,655 inmates at the time of this study. Inmates were initially sorted by age groups for the entire population, then again for both the low and high reading ability groups. Table 2 displays a distribution of ages for the 60 GED students who participated in this study along with the total prison population. Age groupings are provided in 10-year increments with the exception of ages 50 – 79. These age groups were collapsed to eliminate possible zeroes during analysis due to the smaller sample used for this study and lack of elderly inmates enrolled in the GED program. Ages were recorded for each individual and then tallied in the appropriate column indicating the person's classroom

placement. Percentages are provided for the low and high-level readers in the sample group of 60 and for the 1,655 inmates in the general prison population separately.

For reporting purposes of this study, the research question was restated:

H₀₁: There are no significant differences in specific demographic factors when comparing inmates with low and high reading levels. The overall ages ranged from 20 to 70 years of age with 22 (36%) falling within the 30 to 39 years of age category. Once the ages were recorded, SPSS was used to compute a Chi-square statistic to compare the two sample groups. The results of this analysis indicated that the differences between the ages of the low and high reading level groups within the sample were not statistically significant, $X^2(3, N = 60) = 0.06, p > 0.05$.

Additionally, ages for low level readers were not significantly different from those with similar grade level equivalents in the general population, $X^2(3, N = 30) = 0.11, p > 0.05$. The ages for individuals with higher reading levels also did not greatly differ from higher level readers within the general population, $X^2(3, N = 30) = 0.10, p > 0.05$.

Table 2. Distribution of Inmates by Age and Reading Level

Age	Low Readers Sample	High Readers Sample	Sample Total	Low Readers General Population	High Readers General Population	Prison Population
20-29	11 (19%)	5 (8%)	16 (27%)	209 (13%)	135 (8%)	344 (21%)
30-39	13 (22%)	9 (14%)	22 (36%)	338 (20%)	263 (16%)	601 (36%)
40-49	5 (8%)	11 (19%)	16 (27%)	215 (13%)	142 (9%)	357 (22%)
50-79	1 (2%)	5 (8%)	6 (10%)	142 (9%)	211 (12%)	353 (21%)
Total	30	30	60	904	751	1,655

At the time of data collection, there were a total of 1,655 inmates housed at the site used in this study with subtotals of 1,093 Blacks/Non-white and 562 Whites. The sample population selected for this research was comprised of 51 (85%) blacks/non-white individuals with 23

inmates in the low reading level group and 23 in the higher reading level group. There was a total of 9 (15%) whites with 7 inmates with low reading levels and only 2 who had been identified as having higher reading levels.

An overrepresentation of minority groups in the prison population is noted and Table 3 provides a frequency distribution of the racial categories indicative of the population used in this study and provides the specific numbers of racial make-up for both the low and high reading level groups. Percentages are indicated along with the totals for both the sample group used in the study and the general population separately. Within the sample of 30 low reading level readers and 30 high level readers, a significant relationship was not discovered, $X^2(1, N = 60) = 0.07, p > 0.05$, indicating that the reading levels for both groups did not vary greatly. A comparison between the lower level reading group in the sample and the general population with similar reading levels also did not show a significant difference, $X^2(1, N = 30) = 0.22, p > .05$. Significant differences were identified between the higher reading level group and the overall population at the testing site, $X^2(1, N = 30) = 0.00, p < 0.05$.

Table 3. Distribution of Inmates by Race and Reading Level

Race	Low Readers Sample	High Readers Sample	Sample Total	Low Readers General Population	High Readers General Population	Prison Population
Black/Non-white	23 (38%)	28 (47%)	51 (85%)	416 (25%)	677 (41%)	1,093 (66%)
White	7 (12%)	2 (3%)	9 (15%)	257 (16%)	305 (18%)	562 (34%)
Total	30	30	60	673	982	1,655

Table 4. Distribution of Inmates by Length of Sentence and Reading Level

Months	Low Readers Sample	High Readers Sample	Sample Total	Low Readers General Population	High Readers General Population	Prison Population
0-49	7 (12%)	5 (8%)	12 (20%)	181 (11%)	150 (9%)	331 (20%)
50-99	9 (15%)	5 (8%)	14 (23%)	215 (13%)	166 (10%)	381 (23%)
100-149	4 (7%)	8 (13%)	12 (20%)	162 (10%)	210 (13%)	372 (22%)
150-199	4 (7%)	6 (10%)	10 (17%)	92 (6%)	179 (10%)	271 (16%)
200-249	3 (5%)	3 (5%)	6 (10%)	87 (5%)	79 (5%)	166 (10%)
250-499	3 (5%)	3 (5%)	6 (10%)	61 (4%)	73 (4%)	134 (9%)
Total	30	30	60	798	857	1,655

The length of prison sentence was also collected for each study participant in terms of the total number of months to be served. Table 4 presents the frequency distribution of the sample totals and percentages by length of sentence using numerical increments for the total prison population as well as individuals who were identified with either low or high reading grade level equivalents on the TABE. Within the 1,655 inmates in the prison, 331 (20%) were serving sentences ranging between 0 – 49 months, with 7 of those identified as low readers in the sample population and 5 as having higher reading levels. The largest number of inmates, 381 (23%), was serving between 50 – 99 months, with 9 of the sample population being low level readers and 5 individuals with higher reading levels. The next largest group consisted of 372 (22%) of the general population who were serving 100 -149 month sentences; 4 of these were struggling readers and 8 were reading at a higher level. There were 271 (16%) of the total population serving 150 – 199 month sentences, of which 4 were lower functioning and 6 were stronger readers. One hundred sixty-six inmates (10%) made up the total population serving 200 – 249 month terms with 3 individuals from the sample population in the lower and higher reading groups. The number of individuals within the general and sample populations began to gradually

diminish within the prison sentence increments over 250 months, therefore, the rows ranging from 250 to 499 months were collapsed in order to complete the analysis of the data without confounding the Chi-square statistic.

The number of months did not differ significantly between the lower and higher level readers from the sample, $\chi^2(5, N = 60) = 0.67, p > 0.05$, and the months recorded also indicated that within the given inmate population, fewer inmates were serving lengthier prison terms. Further analysis revealed that there was not a significant difference between the distribution of low readers from the sample and that for the general population, $\chi^2(5, N = 30) = 0.88, p > 0.05$, or between the higher readers and the entire population, $\chi^2(5, N = 30) = 1.00, p > 0.05$.

Table 5. Distribution of Inmates by Highest Grade Completed and Reading Level

Grade	Low Readers Sample	High Readers Sample	Sample Total	Low Readers General Population	High Readers General Population	Prison Population
6-8	7 (12%)	5 (9%)	12 (21%)	39 (2%)	28 (1%)	67 (3%)
9-10	16 (26%)	18 (30%)	34 (56%)	108 (8%)	137 (8%)	245 (15%)
11-12	7 (12%)	7 (12%)	14 (24%)	81 (5%)	1262 (76%)	1343 (81%)
Total	30	30	60	228	1427	1,655

For the purposes of this study, educational achievement was defined by the highest grade completed in public school. Table 5 depicts the grade levels that were reported in Sentry as the last full year of school completed by each individual along with the totals and percentages of each group separately. Grades 6 – 8, 9 – 10, and 11 – 12 were collapsed to eliminate possible zeroes for any single grade. Grades 6 – 8 were grouped together since those are traditionally equivalent to middle schools grades while 9 – 10 represent early high school years, and 11 – 12 represent the latter school years. There were 1,303 (79%) inmates at the 12th grade level, making up the largest portion of the general inmate population. Of the sample group, only one individual

reported having a high school diploma or its equivalent that had not been verified. The second largest group within the general population was 142 (9%) who had completed 10th grade in public school. Ten of these inmates were identified as lower level readers while another 10 were identified as having higher reading levels. One hundred three (6%) inmates made up the third largest group and reported having completed the 9th grade. Six inmates within this group were low readers and 8 were in the higher reading group.

The Chi-square statistic indicated that the inmates who had been identified as having low reading levels did not attend public school significantly less than their counterparts with higher level reading, $\chi^2(2, N = 60) = 0.80, p > 0.05$. Further analysis showed that the number of low readers and their last grade completed in public school were not significantly different than lower functioning individuals in the general population, $\chi^2(2, N = 30) = 0.38, p > 0.05$. The grade level for the sample of higher functioning readers, on the other hand, were found to be significantly different, $\chi^2(2, N = 30) = 0.00, p < 0.05$.

To test the hypothesis, a comparison of the low and high-level readers' age, race, length of sentence, and highest grade completed in public school was conducted. No significant differences were noted; therefore, the hypothesis is accepted.

Research Question 2

The second research question for this study asks: Do inmates with lower reading levels have lower GED graduation rates or spend more time in school than their peers with higher reading levels? In order to address Question 2a, or graduation rates, the educational status for inmates was first collected from education transcripts located on Sentry. For the total prison population, it was documented that 1,282 had a verified high school diploma or equivalent, while 373 had yet to complete their education. Table 6 provides the frequency of distribution for

inmates' graduation rates, total, and percentages for both groups. From the total sample of 60 inmates, only 12 (20%) had received a GED while in the program. Two of these graduates had been identified as having lower reading levels while 10 were reading at higher levels. Conversely, 48 (80%) of the sample group had yet to complete all testing requirements for GED completion. Twenty-eight of these individuals were in the low reading level group and 20 were in the higher reading level group.

Table 6. Distribution of Inmates by Graduation Rates and Reading Level

Education Status	Low Readers	High Readers	Sample Total	Prison Population
Non-Graduate	28 (93%)	20 (67%)	48 (80%)	373 (23%)
Graduate	2 (7%)	10 (33%)	12 (20%)	1,282 (77%)
Total	30	30	60	1,655

For the purpose of reporting results, the research question was restated:

H₀₂: There are no significant differences between the graduation rates or time spent in school for inmates enrolled in classes for lower level readers versus those with higher reading levels who are enrolled in general education classes.

Question 2a: A Chi-square test was then conducted to determine if there was a significant difference between both groups. The results of this analysis indicated that the graduation rates for the lower level reading group was significantly different than their peers in the general education group, $X^2(1, N = 60) = 0.01, p < 0.05$. Since graduation rates are lower for struggling readers than their higher functioning counterparts, the null hypothesis is rejected.

Question 2b: An additional comparison was made between the non-graduates within the low and higher reading level groups to determine if there was a difference in the amount of time that had been spent enrolled in the GED program. It was discovered that the non-graduates in

the higher reading skills group had spent less time overall in the GED program with 20 inmates having been enrolled 18 months or less at the time of this study. There were a total of 28 inmates who were reading at a lower level with 21 of these having been in the GED program between 13 and 24 months. Table 7 provides the distribution of inmates by their education status and the time spent in school by months. A Chi-square analysis between these two groups showed that the time spent in the literacy program was not significantly greater for non-graduates with lower reading levels than for higher level inmates, $X^2(1, N = 48) = 0.09, p > 0.05$; therefore, the null hypothesis is accepted.

Table 7. Distribution of Inmates by Graduation Rates and Time Spent in School

Time in School (Months)	Low Non-Graduate	High Non-Graduate	Sample Total
0 – 12	7 (25%)	9 (45%)	24 (40%)
13 - 24	21 (75%)	11 (55%)	36 (60%)
Total	28	20	60

Research Question 3

The third research question asks: Are GED/practice GED scores lower for inmates with lower reading levels than those with higher reading levels? In order to analyze this question, the highest practice GED and official GED scores were recorded for each inmate if a score was available. Instructors may refer inmates for practice GED testing based on their classroom performance and in-class assessments. If an inmate passes with a minimum score of 410, they may be added to the list for the official GED tests. Inmates who are functioning at a lower reading level may become eligible to take practice GED tests. However, if these individuals go on to attempt a practice GED in any given subject and do not pass, there would not be an official GED score available for that particular subject area.

To report the results for this research question, the statement was reworded as follows:

H₀₃: There are no significant differences between the practice or official GED test scores for inmates with lower reading levels when compared to inmates with higher reading levels. An independent, two-sample t-test was conducted to test the hypothesis that there are no significant differences between the practice test or official GED scores for inmates with lower reading levels and inmates with higher reading levels. Table 8 depicts the descriptive statistics and t-test results for each sub-test on the practice-GED for both the lower and higher reading level groups.

Table 8. Results of t-test and Descriptive Statistics for Practice GED Scores

	Low Level			High Level			95% CI for Mean Difference	<i>t</i>	<i>df</i>	<i>p</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>				
Literature	20	386.00	55.95	30	476.67	85.07	-134.15, -47.19	-4.19	48	.00*
Science	20	413.50	72.93	28	453.57	54.92	-77.19, -2.95	-2.17	46	.04*
Social Studies	20	410.50	82.68	30	483.67	71.46	-111.34, -29.00	-3.33	48	.00*
Math	15	354.00	96.64	27	412.59	70.96	-111.24, -5.95	-2.25	40	.03*
Writing	7	429.29	89.27	22	450.00	51.96	-97.46, 22.39	-1.29	27	.21

Note: *N* = Number of tests recorded for each sub-test. Numbers are provided for both groups.

M = Mean, *SD* = Standard Deviation

**p* < .05

Results of the t-test show a statistically significant mean difference, at the .05 significance level, in the practice-GED scores for inmates with lower reading levels in the areas of Literature (reading), Science, Social Studies, and Math when compared to their peers with higher reading levels. The mean difference for the Writing portion of the practice-GED test indicates that inmates with lower reading levels had not scored significantly lower than the inmates within the higher reading level group. Inmates with lower reading levels were found to

have attempted the practice test fewer times in each subject area than counterparts in the higher reading level group. Both inmates in the lower and higher reading groups had fewer attempts on the practice test in Writing than in any other area.

Descriptive statistics and t-test results for the comparison of each academic section of the official GED test scores are shown in Table 9. There were no statistically significant differences between the official GED scores in the areas of Literature (reading), Science, or Math for inmates with lower reading levels when compared to inmates with higher reading levels. Results did indicate that inmates with lower reading levels received scores that were significantly lower than peers functioning at a higher reading level in Social Studies and Writing.

Table 9. Results of t-test and Descriptive Statistics for Official GED Scores

	Low Level			High Level			95% CI for Mean Difference	<i>t</i>	<i>df</i>	<i>p</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>				
Literature	7	480.00	52.28	20	488.00	73.31	-70.28, 54.28	-.27	25	.80
Science	8	455.00	57.07	19	469.47	56.52	-63.67, 34.72	-.61	25	.55
Social Studies	8	432.50	21.21	23	476.52	62.20	-74.67, -13.38	-2.94	29	.01*
Math	7	390.57	7.89	15	440.13	6.33	-11.09, 1.97	-1.46	20	.16
Writing	7	408.57	20.35	19	450.00	51.96	-70.73, -12.13	-2.92	24	.01*

Note: *N* = Number of tests recorded for each sub-test. Numbers are provided for both groups.

M = Mean, *SD* = Standard Deviation

**p* < .05

In summary, inmates with lower reading levels received Practice-GED scores that were significantly lower in Reading, Science, Social Studies, and Math. Lower scores for the Practice Writing test were found for inmates with lower reading levels to be insignificant. Comparisons between the official GED scores did not indicate a significant difference in Reading, Science, or Math. However, inmates with lower reading levels did receive significantly lower scores in

Social Studies and Writing. Due to the presence of the differences noted for both practice and official GED scores, the null hypothesis is rejected.

Research Question 4

The fourth question asks: Do inmates with lower reading levels have lower motivation for getting their GED than inmates with higher reading levels? To gain insight into how the inmate population saw themselves as learners and their personal motivations towards learning, a written survey (Appendix A) was distributed to and completed by inmate participants in the study. This survey contained six questions that pertained to their personal motivations for participating in the educational programming. All items were multiple-choice which allowed inmates to choose the one answer that best described themselves as learners. When all of the surveys had been completed, the answers for each question were tallied by hand for both the surveys labeled as low-level responses and high-level responses. The totals for each item selection were then entered into an SPSS in order to conduct a Chi-square analysis. Such a comparison would allow the researcher to determine whether there was any significant differences found in how low versus high-level readers responded to each question. Table 10 contains the distribution of answers for question one on the written survey as reported by participants in both groups.

Table 10. Distribution of Survey Number 1 Responses

Item #1) How do you learn best?		
Low Reading Ability Group		
Response	# of Responses	% of Total Responses
A) Not interested	2	7%
B) Read the material	5	17%
C) Listening to instruction	1	3%
D) Watching the teacher	11	38%
E) Doing an activity	9	31%
F) All of the above	1	4%
Total	29	100%
High Reading Ability Group		
Response	# of Responses	% of Total Responses
A) Not interested	3	10%
B) Read the material	3	10%
C) Listening to instruction	5	17%
D) Watching the teacher	6	22%
E) Doing an activity	9	31%
F) All of the above	3	10%
Total	29	100%

For reporting purposes, the research question was restated as follows:

H₀₄: There are no significant differences between the motivation levels of inmates with lower reading levels compared to their counterparts with higher functioning reading levels.

In order to begin understanding possible motivational factors, item number 1 on the survey was included in order to see how inmates viewed themselves as learners. In addition to having no interest in learning, various modalities were provided to assist inmates in depicting how they learned best. Of the 60 total inmates who were invited to participate, only 29 inmates from either reading group provided an answer for the first item. Both groups reported a preference for watching the instructor demonstrate or model a behavior and doing tasks where they were

actively involved most often on the survey. Eleven (38%) of the low reading group preferred watching a lesson or were visual learners while 6 (22 %) of the higher functioning group selected this choice. Both groups also indicated a strong preference for performing a task at 31% each. Five (17%) of the higher reading group chose to listen to instruction while there were no inmates within the lower functioning group who would describe themselves as audio learners. A Chi-square statistic was calculated to indicate if there were any significant differences in how either group reported their learning preferences. From this analysis, it was discovered that inmates with lower reading levels did not report any significant differences in their learning preferences than their counterparts with higher reading levels, $\chi^2(5, N = 58) = 0.60, p > 0.05$.

Table 11. Distribution of Survey Number 2 Responses

Item #2) Would you have taken GED classes if you were not required to do so?		
Low Reading Ability Group		
Response	# of Responses	% of Total Responses
A) No	10	34%
B) Yes	19	66%
Total	29	100%
High Reading Ability Group		
Response	# of Responses	% of Total Responses
A) No	5	17%
B) Yes	25	83%
Total	30	100%

Mandatory education requirements dictate that inmates without a high school diploma or an equivalent must attend a minimum of 240 hours in the literacy program. Item number 2, therefore, asks inmates to indicate whether they would have made a personal choice to attend school during their incarceration. These responses may be viewed in Table 11. For this item,

inmates were simply required to provide a yes/no response. Twenty-five (83%) of the higher level readers and 19 (66%) of the lower level readers indicated that they would have elected to attend educational programming if they were not required to do so. Only 5 (17%) of higher reading level individuals reported they would not have chosen to attend and 10 (34%) of the struggling readers said they would not. Overall, the answers for item number 2 were not significantly different between the lower and higher level reading groups, $\chi^2(1, N = 59) = 0.12, p > 0.05$.

Table 12. Distribution of Survey Number 3 Responses

Item #3) What are/were your educational goals?		
Low Reading Ability Group		
Response	# of Responses	% of Total Responses
A) I do not have a goal	1	3%
B) To get a GED	7	24%
C) To take ACE classes	9	31%
D) College courses	4	14%
E) To learn a new skill	4	14%
F) Other	4	14%
Total	29	100%
High Reading Ability Group		
Response	# of Responses	% of Total Responses
A) I do not have a goal	1	3%
B) To get a GED	9	30%
C) To take ACE classes	7	24%
D) College courses	3	10%
E) To learn a new skill	6	20%
F) Other	4	13%
Total	30	100%

Inmates were asked to provide an educational goal they had while participating in educational programming at their current facility in question three. Possible answers ranged from having no educational goals to allowing them to choose all of the choices provided. The total distribution of these responses is located in Table 12. Nine (30%) of the higher reading group and 7 (24%) of the lower reading group reported they were interested in getting a GED. Nine (31%) of the participants in the lower reading group were interested in attending an ACE class while 7 (24%) of their peers from the higher-level reading group reported similar goals. Although these differences did exist, the overall responses from those in the lower reading level group did not greatly differ from those given by the higher functioning group, $X^2(5, N = 59) = 0.88, p > 0.05$.

There are many reasons why an individual may choose to participate in education programs, therefore, item number 4 on the survey asks inmates to select one reason that best represents why they are continuing in their educational endeavors. The tallied responses for both groups are found in Table 13. Multiple-choice responses included not wanting a GED, improving specific academic skills, and preparing oneself for more gainful employment once released. The largest number of responses noted for both groups were to find more gainful employment. Ten (33%) out of the higher level group and 14 (49%) from the group with lower reading levels considered this as essential for a successful re-entry back into society. The next response reported most frequently was a desire to improve one's writing skills. Six (20%) higher and six (21%) lower reading level participants expressed the need to communicate themselves more effectively in writing. Although 5 (17%) of higher reading level inmates chose "All of the above", only one (3%) of the participants from the lower level group made that selection. One (3%) individual from the higher-level group expressed that they did not want a GED but 3 (10%)

of the lower level participants listed that as a personal goal. An analysis comparing the answers for both groups revealed that while these few differences did exist, inmates identified with lower reading levels did not respond significantly different than those from the other group, $\chi^2(6, N = 59) = 0.36, p > 0.05$.

Table 13. Distribution of Survey Number 4 Responses

Item #4) Why did you choose to get a GED?		
Low Reading Ability Group		
Response	# of Responses	% of Total Responses
A) I do not want a GED	3	10%
B) It gives me something to do	1	3%
C) Improve my reading skills	2	7%
D) Improve my math skills	2	7%
E) Improve my writing skills	6	21%
F) To get a better job	14	49%
G) All of the above	1	3%
Total	29	100%
High Reading Ability Group		
Response	# of Responses	% of Total Responses
A) I do not want a GED	1	3%
B) It gives me something to do	1	3%
C) Improve my reading skills	2	7%
D) Improve my math skills	5	17%
E) Improve my writing skills	6	20%
F) To get a better job	10	33%
G) All of the above	5	17%
Total	30	100%

Item 5 pertained to personal feelings as a potential motivator for going to school while incarcerated. Selections included disliking school, wanting to accomplish the goal of finishing their education, or being a role model for others. Results from the survey showed that 10 (34%)

of the lower level group and 11 (37%) of the higher-level group wanted to be a role model for someone in their family. Eight (26%) from the higher level group reiterated an interest in gaining skills that would lead to better employment while 6 (21%) of the lower reading group made this selection. Another 6 (21%) participants from the low level group wanted to finish their education while they were in prison. Interestingly, only 5 (17%) participants from either group expressed a dislike for school regardless of the mandatory attendance requirements. Table 14 provides complete response numbers and percentages of responses for both groups. Comparison of these responses showed that self-reported feelings regarding academic participation were not significantly different for the lower reading group, $X^2(4, N = 59) = 0.79, p > 0.05$, as opposed to those provided by their peers in the higher reading level group.

Table 14. Distribution of Survey Number 5 Responses

Item #5) How do you feel about going to school?		
Low Reading Ability Group		
Response	# of Responses	% of Total Responses
A) I dislike school	5	17%
B) I want to finish my education	6	21%
C) I want to be a role-model for my family	12	41%
D) I want a better job	6	21%
E) Other	0	0
Total	29	100%
High Reading Ability Group		
Response	# of Responses	% of Total Responses
A) I dislike school	5	17%
B) I want to finish my education	4	13%
C) I want to be a role-model for my family	11	37%
D) I want a better job	8	26%
E) Other	2	7%
Total	30	100%

The sixth and final item on the written survey asks inmates to reflect on their personal motivation for continuing their education by selecting a statement that best describes them. Responses are located in Table 15. Of the 29 inmates in the low reading group, 10 (34%) indicated they did not care if they received a GED while only 4 (13%) of the 30 higher reading level students expressed a similar sentiment. Fourteen (47%) students from the higher reading group were somewhat motivated and only 7 (23%) from the same group considered themselves to be highly motivated. Lower functioning students reported slightly lower results with 9 (31%) being somewhat motivated and only 7 (25%) being highly motivated. Overall, responses did not greatly differ between the two groups, $\chi^2(3, N=59) = 0.25, p > 0.05$.

Table 15. Distribution of Survey Number 6 Responses

Item #6) Select the one that best describes you.		
Low Reading Ability Group		
Response	# of Responses	% of Total Responses
A) I don't care if I get a GED	10	34%
B) I am somewhat motivated to get a GED	9	31%
C) I am highly motivated to get a GED	7	25%
D) Other	3	10%
Total	29	100%
High Reading Ability Group		
Response	# of Responses	% if Total Responses
A) I don't care if I get a GED	4	13%
B) I am somewhat motivated to get a GED	14	47%
C) I am highly motivated to get a GED	7	23%
D) Other	5	17%
Total	30	100%

In summary, there were no significant differences discovered between the answers reported by either the inmates identified with low reading level skills and those given by inmates with higher functioning reading skills. Both groups provided similar answers related to how they learn new material best, their educational goals while incarcerated, and personal motivations for attending educational programming. Since no significant differences were noted between these groups, the null hypothesis is accepted.

Research Question 5

The fifth question asks: How do inmates with lower reading levels who obtain their GED compare to those who do not? To answer this question, several comparisons were made between

low reading level inmates who had graduated from the GED program and those who had yet to pass all 5 sections of the GED test. This included: (Question 5a) the reading TABE scores for both sets of inmates, (Question 5b) the time spent in school, and (Question 5c) the number of times individuals had attempted either a practice or official GED test in any academic area.

Table 16. Distribution of Lower Reading Level Group by Reading TABE Score

Reading TABE Score	Low Non-Graduate	Low Graduate	Total
1.0 – 3.9	15 (54%)	1 (50%)	16 (53%)
4.0 – 4.9	13 (46%)	1 (50%)	14 (47%)
Total	28	2	30

To report the results for this question, the statement was reworded as follows:

HO₄: There are no significant differences between the inmates with lower reading levels who are continuing their enrollment in school and inmates with lower reading levels who have obtained a GED.

Question 5a: An initial comparison was completed between the inmates in the lower reading ability groups who had graduated and those who remained in school and the reading TABE score they had received prior to placement in the literacy program. Table 16 provides the breakdown of TABE scores for the lower performing inmates. Grade levels 1.0 – 3.9 were combined to eliminate possible zeroes in either column. A total of 28 inmates were still enrolled in the literacy program at the time of this study and 2 had already obtained their GED. Of these low ability level inmates, 14 (47%) had a TABE score on a 4.0 – 4.9 grade level. Thirteen of these individuals were still participating in the literacy program and only one had passed all portions of the GED. Sixteen (53%) inmates had reading grade levels ranging from 1.0 – 3.9. Fifteen of these inmates were continuing students and one had successfully completed his GED.

A Chi-square statistic was computed that indicated that the reading scores for the non-graduates were not significantly different the two who individuals who had graduated, $\chi^2(1, N = 30) = 0.83, p > 0.05$.

Question 5b: A second comparison was completed between the two groups and the amount of time they had spent in the literacy program at the time the data for this study was collected. Table 17 displays the numbers of inmates and the months of school attendance. Seventeen (57%) of these inmates had been enrolled between 19 -24 months with 16 still participating and 1 graduate. Thirteen (43%) inmates had been in school between 13 – 18 months with only one graduate and 12 still in school. The difference between the two groups was not statistically significant, $\chi^2(1, N = 30) = 0.89, p > 0.05$, meaning that those who had obtained their GED had not spent considerably more time in school.

Table 17. Distribution of Lower Reading Group by Time Spent in School

Time Spent in School (In Months)	Low Non-Graduate	Low Graduate	Total
13 – 18	12 (43%)	1 (50%)	13 (43%)
19 – 24	16 (43%)	1 (50%)	17 (57%)
Total	28	2	30

Question 5c: The number of attempts was also recorded for both the practice and official GED scores for both groups to determine if any significant differences existed. Overall, there were a total of 82 practice tests attempted by the inmates with lower reading levels. These inmates made 20 (24%) attempts each in reading, science, and social studies with 18 by current students and 2 by graduates. Fifteen (18%) attempts were made in math with 13 by inmates in school and 2 graduates. There were 7 (10%) writing tests taken by 5 current students and 2

graduates. In all, 72 attempts were made by inmates in school and 10 attempts were made by GED graduates. Table 18 shows the number of attempts in each subject area on the practice test. A Chi-square analysis indicated that the number of attempts on the practice tests were not significantly different for lower level non-graduates than those who had graduated, $X^2(4, N = 82) = 0.73, p > 0.05$.

Table 18. Practice GED Attempts by Lower Reading Level Inmates

Test Name	Non-Graduates	Graduates	Total
Reading	18 (25%)	2 (20%)	20 (24%)
Science	18 (25%)	2 (20%)	20 (24%)
Social Studies	18 (25%)	2 (20%)	20 (24%)
Math	13 (18%)	2 (20%)	15 (18%)
Writing	5 (7%)	2 (20%)	7 (10%)
Total	72	10	82

A total of 36 attempts at the official GED were made by inmates who had been identified with lower reading levels. Eight (22%) attempts were made in Science and Social Studies with 6 current students and 2 graduates in each subject. Seven (19%) attempts had been made in Reading and Math by 5 inmates who were still enrolled in school and 2 graduates. The fewest attempts, 6 (18%), were made in Writing with 4 current students and 2 graduates. Table 19 provides the number of tests taken by these inmates. The number of attempts at the official GED tests were not significantly different for non-graduates and graduates of the GED program, $X^2(4, N = 36) = 1.00, p > 0.05$.

Table 19. Official GED Attempts by Lower Reading Level Inmates

Test Name	Non-Graduates	Graduates	Total
Reading	5 (19%)	2 (20%)	7 (19%)
Science	6 (23%)	2 (20%)	8 (22%)
Social Studies	6 (23%)	2 (20%)	8 (22%)
Math	5 (19%)	2 (20%)	7 (19%)
Writing	4 (16%)	2 (20%)	6 (18%)
Total	26	10	36

In summary, there were no significant differences found when comparing current students and graduates who had lower reading levels. For research sub-question 5a, reading grade level equivalents were not found to be vastly different for lower level readers who were non-graduates than those who had graduated. Therefore, the null hypothesis is accepted. Similar findings were found during the analysis for research sub-question 5b regarding the time spent in school and 5c which referred to the number of attempts made on the practice and official GED sub-tests. For both of these sub-questions, the null hypothesis is also accepted.

CHAPTER V: DISCUSSION

This chapter summarizes the purpose of the study, the research questions and the results from the data analysis. Conclusions based on the results are also included in this chapter. Recommendations for future research and implications for correctional education are also presented.

Summary

The purpose of this study was to compare GED passing rates for inmates who had been identified as having lower reading levels to inmates with higher functioning reading levels. Graduation rates for both groups were compared as well as the scores from attempts at the practice and official GED sub-tests. In addition, survey data were collected from inmate participants who had been enrolled in the GED program and had successfully obtained their GED or those who were continuing their educational endeavors at the time of this study. The overarching question for this study asked: How do the GED success rates for inmates with low reading levels compare to their higher functioning peers? Table 20 provides a summary of the findings.

Table 20. Summary of Research Findings

Research Question 1: Are there significant differences in specific demographic factors when comparing inmates with low reading levels with higher reading levels?	Findings
Age	Not significant
Race	Not significant
Length of sentence	Not significant
Highest Grade completed	Not significant
Research Question 2: Do inmates with lower reading levels have lower GED graduation rates or spend more time in school than their peers with higher reading levels?	Findings
2a: Graduation rates	Significant
2b: Time spent in school	Not significant
Research Question 3: Are GED/practice GED scores lower for inmates with lower reading levels than those with higher reading levels?	Findings
Practice	Significant differences in Reading/Science/Social Studies/Math
GED	Significant differences in Social Studies/Writing
Research Question 4: Do inmates with lower reading levels have lower motivation for getting their GED than inmates with higher reading levels?	Findings
Survey item #1	Not significant
Survey item #2	Not significant
Survey item #3	Not significant
Survey item #4	Not significant
Survey item #5	Not significant
Research Question 5: How do inmates with lower reading levels who obtain their GED compare to those who do not in terms of their reading TABE score, time spent in school, and practice and official GED attempts?	Findings
5a: Reading TABE score	Not significant
5b: Time spent in school	Not significant
5c: Test attempts	Not significant

Research Question 1

The first research question asks: Are there significant differences in specific demographic factors when comparing inmates with low reading levels and their peers with higher reading levels? To address this question, variables were selected that characterized each individual within the inmate population to include: age, race, length of sentence, and the highest grade completed in public school. A sample of 60 inmates was then randomly selected and was

assigned to either a low reading group, those reading at a grade level of 4.9 and below, or a high reading group, those reading at a grade level of 5.0 or above. These assignments were based on results obtained from the reading TABE score that had been administered prior to enrollment in the GED program. The reading TABE score was utilized for comparisons due to its use for classroom placement at the research site. A Chi-square was calculated using SPSS to compare the study participants by each variable listed and their assigned reading level. An alpha level of .05 was used to determine the level of significance.

It was discovered that the ages for both reading level groups in the sample were not significantly different. The ages of both reading groups in the sample were also found to be similar to their counterparts in the general population. Within the total prison population, a racial disparity was evident by an overrepresentation of minorities housed at the testing site. Similar findings were reported by Trojanowicz & Bucueroux (1991) to describe the number of minorities in the criminal justice system. A comparison of the low and high reading level groups used in the sample showed that there were no significant differences between the racial groups. Lower readers in the sample and general population were also not vastly different, but a larger number of minorities was prevalent at the research site when comparing the high level readers in the sample and general populations. This may be due to rate of incarceration of minorities as opposed to whites (Legislative Council, 2201). It was also discovered that the length of sentence and the highest grade recorded for both groups were not significantly different.

Research Question 2

The second research question asked: Do inmates with lower reading levels have lower GED graduation rates or spend more time in school than their peers with higher reading levels? In order to answer this question, a sample population of 60 inmates was randomly selected.

Thirty of these inmates scored at a reading level of 4.9 or below on the reading section of the TABE test while the other 30 obtained a reading level of 5.0 or above. Inmates with lower reading levels had participated in classes that were designed to provide learning strategies for improving basic academic skills and lead to a promotion to a more challenging class. Individuals with a reading level of 5.0 or above had been enrolled in classes to review skills needed to take and pass each academic area of the GED exam.

A Chi-square statistic was used to compare the graduation rates for the two groups of inmates. This analysis showed that the graduation rates for the inmates with lower reading ability were significantly lower than those for the higher functioning inmates and provides statistical data that proves that struggling readers experience less academic success in terms of GED program completion. These findings correlate to those reported by The National Center on Education, Disability, & Juvenile Justice (n.d.) where it was found that inmates with lower skills or learning disabilities were less likely to complete their formal education by either obtaining a GED or a high school diploma in prison or after returning to society. Other findings indicated that the time spent in the GED program was not significantly different between these two groups.

Research Question 3

The third research question asked: Are GED/practice GED scores lower for inmates with lower reading levels than those with higher reading levels? Practice and official GED scores were collected for both groups. While it may be assumed that higher functioning students would have taken some, if not all, of the GED sub-tests, it was decided to include the practice scores as well to increase the likelihood that lower functioning or struggling students would have attempted a practice test. In turn, this would also increase the number of scores to be used for comparison.

A t-test statistic was used to compare the means of the scores for both groups. It was discovered that the practice scores for struggling readers were significantly lower in Reading, Science, Social Studies, and Math. This is not surprising since the Reading, Science, and Social Studies sub-tests are primarily comprised of questions that require strong reading comprehension and vocabulary skills. Test-takers must possess critical thinking skills where they are able to make inferences and predictions. The Math sub-test includes word problems where individuals must determine the relevant information for solving the problem and which mathematical operations are necessary before they can derive an answer. Scores were also significantly lower for the struggling readers on the official Reading, Science, and Math sub-tests.

While inmates who were struggling readers did receive lower scores on practice tests in Writing or on the official Social Studies and Writing portions of the GED, the differences were not significant. Other studies had also revealed that students who had participated in specialized courses did not receive scores that were significantly different from those enrolled in general education classes (McKenna et al., 207).

Research Question 4

The fourth research question asked: Do inmates with lower reading levels have lower motivation for getting their GED than inmates with higher reading levels? For this question, a written survey containing 6 multiple-choice items was developed to obtain information directly from the inmates. A Chi-square statistic was used to compare responses given by both reading ability groups for each item. Item number 1 on the survey asked inmate participants to select a learning modality that best described them. The comparison of both reading groups indicated that individuals with lower reading ability did not significantly rate themselves differently than their higher functioning peers. The responses from both groups indicated a strong preference for

performing a task and watching an instructor model a new task or behavior which would suggest that both struggling and higher functioning readers thought they learned best by watching a demonstration of a new skill, then doing a hands-on activity.

Item number 2 asked inmates to provide a yes or no response to whether they would have chosen to participate in educational programming if it was not a requirement by law. Twenty-five (83%) of the higher functioning inmates stated that they would have elected to participate while 19 (66%) of the lower ability group stated they would have participated voluntarily. Based on inmate responses, struggling readers were just as likely to choose enrollment in the literacy program as their peers with higher academic skills.

Item number 3 asked inmates to provide an educational goal they had while they were enrolled in the literacy program. Although responses showed varied interests, inmates from both reading ability groups indicated the desire to complete their GED and enroll in ACE classes. Motivation to engage in education programming becomes higher when the learner sees the course as valuable or will improved their chances of success upon release (Wolters, Karabenick, Johnston, & Young, 2005). This was strongly indicated by the responses to item number 4 where inmates were asked to provide their reason for getting a GED. Thirteen (43%) of the higher ability group and 18 (62%) of the lower functioning group overwhelmingly reported that they considered a GED to be an important aspect of finding gainful employment one they were released.

Item number 5 asked participants to select the response that best described their feelings about going to school while incarcerated. Responses included disliking school, wanting to complete their education, being a role-model for others, and getting a better job. Of these

possible responses, 12 (41%) of the lower ability group and 11 (37%) of the higher ability group stated that they wanted to be a role model for their family.

The last item on the written survey asked inmates to reflect on their personal motivation for continuing their educational endeavors. Responses ranged from not caring about getting a GED to being highly motivated to complete their GED credentials. Overall, responses from inmates in the lower reading ability group were not significantly different from the inmates in the higher ability group.

Research Question 5

The fifth question asked: How do inmates with lower reading levels who obtain their GED compare to those who do not in terms of their reading TABE score, their time spent in school, and practice and official GED attempts? To begin this comparison, a Chi-square analysis was conducted for the reading TABE scores for the low ability non-graduates and low ability graduates. Of the 30 inmates in the lower ability group, 28 had not completed their GED while 2 had passed each sub-test and passed the official GED. It was found that the reading TABE scores recorded for each of these individuals were not significantly different. The amount of time the low ability graduates had spent in education also was not found to be greater than the low ability non-graduates. Finally, the number of attempts made on the practice and official GED sub-tests was compared for both groups. For both the practice and official sub-tests, the number of attempts did not differ greatly.

Limitations

Correlational research designs describe the associations between two variables yet do not determine cause-and-effect. For determining causal relationships, an experimental design is

more appropriate. This design also allows for a greater control of factors that may affect variables in the study and if conducted correctly, yield the most reliable and valid results.

Another limitation related to this study would be the sole use of the reading TABE score for educational placement. Individuals who did not complete their public education made a decision to dropout based on a variety of reasons. Yet upon entering the federal prison system, were told that were required to attend the GED program by law and are given an academic achievement test. Personal feelings and prior experiences may dictate the effort placed on these tests and impact how well one performs academically or whether they willingly complete the test.

Finally, the 2014 GED test will be administered on a secured computer network. Inmates must not only possess the knowledge to answer questions pertaining to each academic area, but must do so on a computer and within a given time frame. This change may affect all inmates participating in the GED program but have a greater impact on individuals who are reading below a 5th grade level.

Conclusions

The results of the first research question might not be surprising since students with learning difficulties traditionally have lower completion or graduation rates compared to their non-disabled peers. However, the study did reveal within the sample population that program completions are possible for inmates with specialized academic needs. The method of instructional delivery is often the key for an inmate's academic success and requires the presentation of information in various formats and in smaller increments for aiding in their understanding and retention (MTC Insititute, 2003). The current classroom structure at the site used in this study focuses on identifying the academic strengths and weakness of the inmates so

that assignments may be assigned on what the inmates need in order to be more successful on the GED tests.

When comparing the scores on the practice and official GED sub-tests, several significant differences were noted, except in the practice Writing and official Reading, Science, and Math sub-tests. The level of preparation that was implemented in the classroom or on the inmates' own time away from school was not taken into consideration for this study. Also, the amount of informal testing the inmates had engaged in prior to qualifying to take the practice or official tests was not part of the data collected for study. However, test-taking attempts that have been recorded would suggest academic progress and mastery of curricular content. Increasing the sample size would also have allowed the researcher to include a larger set of test scores for data analysis; however, the current study provides an example of how inmates are performing academically and could serve as a springboard for future research in this topic.

Inmates with learning difficulties, whether they participate in special or regular classes, may be eligible for accommodations on the GED tests. These accommodations may include but are not limited to extra time, supervised breaks and testing in a separate room. Since accommodations such as these are put into place to "level the playing field" and improve chances of success on tests, it would have been worthwhile to consider how many of the study participants, if any, had been approved for one or more accommodations.

Question one on the written survey asked inmates how they viewed themselves as learners while questions two through six pertained to personal motivations for participation in educational programming. The goal of this survey was to determine how individuals with low reading levels would respond to questions about their education when compared to their peers with higher reading levels. The items on the survey required inmates to select an answer that

best describes them. For each of these six questions, there was not a significant difference in answers for inmates with lower reading skills compared to those with higher reading ability.

Recommendations

Based on the results of this study, future research is suggested in order to gain more insight into the educational needs of inmates participating in classes designed to meet specialized learning needs of inmates. Researchers could begin by examining the existing curriculum utilized in the GED program and materials used in the classroom to determine how well their specialized needs are being addressed. Interviews with the inmates about their K-12 years would also provide valuable information describing their successes in public school and the time-line of when they began to experience difficulties that eventually led to them dropping out.

Additional research studies should include larger populations to gain access to a greater number of individual sub-tests scores to be used for comparisons and include various institutional sites to account for geographical differences. Future studies in this area should also look at the existence of GED accommodations for either group of students in order to see if approved accommodation requests increase the number of test-taking attempts or successful completions. A written survey could also be used in future research; however, a Likert scale might be integrated into the design of the instrument to measure actual motivation factors and add to existing literature in this field. Researchers may also look beyond the GED program to identify coursework or programs that encourage inmates to continue their educational endeavors. These may range from art/music appreciation classes to other self-improvement courses offered through the Adult Continuing Education program, or learning more technical skills in vocational trades.

It is recommended that future consideration be taken into the use and reliability of the TABE test as the sole source for classroom placement. Inmates who meet the Bureau's requirement for mandatory education must be TABE tested upon admission to the facility for placement into classes. These individuals are placed on call-out for the education department and often arrive with no idea why they are there. Factors such as a recent incarceration, a transfer from another institution, or being told they are taking an educational test may impact the effort put forth in testing and resulting test scores.

The testing format of the GED will be changing for 2014. While the current GED tests are centered on reading comprehension skills, the upcoming format will be more content-based. Inmates will be required to utilize critical thinking skills and explain answers through their writing. Future consideration must be taken into how these changes will affect inmates with special learning needs. If lower functioning students are already struggling with the current test format and material, will they face more academic challenges once the new GED test takes effect and how well is correctional staff prepared to meet those challenges?

One strategy for meeting the needs of these particular individuals is a curriculum that more closely resembles an Apprenticeship Program offered in the Bureau or an Occupational Course of Study implemented by public school systems. Although the Bureau previously ran a pilot study called the Life Skills Curriculum, this only took place in select locations and was not carried over to be used full-time by institutions throughout the BOP. A typical Occupational Course of Study would need to be adapted for the Bureau due to safety concerns; however, this program would require inmates to complete a set number of hours in hands-on instruction so they begin to learn practical skills they may build on once they are released. In addition, inmates

would be required to attend classroom instruction where they work on life skills such as reading for everyday living, completing applications and other forms, and consumer math.

Final Word from the Researcher

Based on the results of this study, one must wonder if correctional education, as a whole, is failing individuals who have poor academic histories in public school and have continued struggling in the prison environment. Existing programs are in place to assist inmates in transitioning to society where they may gain employment in order to support themselves and their families, as well as function as a productive citizen. The caveat to this is that a high school education or its equivalent must be accomplished as a prerequisite to entering these programs. For inmates with higher-level reading levels, this may never present as a problem, but often serves as a barrier for others. Inmates who are struggling academically typically want the same goals as their peers but have limited access to the tools needed to reach those goals. Alternative education requirements or course offerings may be instrumental in helping these individuals reach their fullest potential and truly assist the BOP in fulfilling their re-entry efforts for all inmates.

APPENDIX A: FCC BUTNER – LITERACY PROGRAM SURVEY

- 1) How do you learn best?
 - A) None
 - B) Read the material
 - C) Listening to the teacher
 - D) Watching the teacher
 - E) Doing an activity
 - F) All of the above
- 2) Would you have taken GED classes in the school if you were not required to do so?
(No or Yes)
- 3) What are/were your educational goals? Choose one of the following.
 - A) I do not have any goals
 - B) To get a GED
 - C) To take Adult Continuing Education (ACE) courses
 - D) College courses
 - E) To learn a new skill
 - F) Other
- 4) Why did you choose to get a GED?
 - A) I do not want my GED
 - B) It gives me something to do
 - C) To improve my reading skills
 - D) To improve my math skills
 - E) To improve my writing skills
 - F) To get a better job
 - G) All of the above
- 5) How do you feel about going to school while in prison? Choose one of the following.
 - A) I dislike school and do not want to take classes
 - B) I want to finish my education
 - C) I want to be a role-model for my family
 - D) I want a better job
 - E) Other
- 6) Select one of the following choices that best describes you.
 - A) I do not care if I get my GED
 - B) I am somewhat motivated to get my GED
 - C) I am highly motivated to get my GED
 - D) Other

APPENDIX B: CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Consent to Participate in a Research Study

Title: GED Success Rates for Inmates within a Federal Correctional Setting: A Correlational Study

Researcher: C. Brand, Doctoral Candidate, UNC-Chapel Hill

What is this study about and why are you doing it?

I am doing a study called, “GED Success Rates for Inmates in a Federal Correctional Setting.” The purpose of this study is to determine if there is a relationship between classroom placement and success on the Pre-GED/GED tests.

What are you asking me to do if I agree to be in the study?

If you agree to be in the study, you will be asked to complete a survey with items related to your educational goals, how you see yourself as a learner and your degree of motivation to participate in school. The survey should take about 5-15 minutes to complete. A staff member will be available to provide directions and answer any questions you may have.

How will this study help me?

The results of this study may not benefit you directly. However, any information you provide may be used to adapt the curriculum and teaching methods used for all students.

Why should I be in the study?

There are no direct benefits from volunteering in the research study. Your answers could assist with the planning of instructional materials to better meet the needs of students in school.

Are there any risks or can I get hurt by being in the study?

I do not know of any risks or discomforts that are due to being in this study. However, you may have a difficult time reading some words on the questionnaire or understanding the meaning of some questions. Also, you might feel that you there will be negative consequences if you do not answer these questions. Personal information about you could be revealed if I do not properly protect the data.

What steps are you taking to reduce these risks or discomforts?

You may decide to not respond to some or all of the items on the questionnaire. I will do everything I can to protect the confidentiality of your personal information. You will be given a study ID number. This number will be used on your questionnaire instead of your name or register number. I will not include personal information about you in any report or paper.

What else do I need to know?

- Your decision whether or not to be in this study is voluntary.
You may refuse to be in this study at any time and you will not be penalized.
- Your decision either way will not affect your release date or parole eligibility.

Whom should I contact with questions or concerns?

If you have any questions, you may contact me at my office in the Education building. If you have any concerns about this study, you may contact the Chief Psychologist at your institution and contact the Institutional Review Board, UNC-Chapel Hill. You may have a copy of this form if you would like.

What if I have questions about my rights as a research participant?

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, or you would like to obtain information or offer input, you may contact the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

Participant's Agreement: I have read the above information (or it has been read aloud to me). The study has been explained to me. My questions have been answered. I voluntarily agree to be in this study.

Name (Printed)	Register #
Signature	Date

Witness' Statement: The information in this consent form was accurately conveyed to the participant.

Name (Printed)	Register #
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APPENDIX C: ADDITIONAL CONSENT QUESTIONS

Additional questions (asked after providing purpose of the study and reading of consent form, but before having participants sign):

- 1) I told you that being in this study is voluntary. What does that mean?
- 2) I told you that your answers are confidential. What does that mean?
- 3) If you didn't want to be in the study would you still be able to work toward earning a GED?
- 4) If you wanted to stop being in the study, what would you do?

APPENDIX D: UNC IRB APPROVAL

From: IRB [irb_no_reply@mailserv.unc.edu]
Sent: Monday, March 18, 2013 4:00 PM
To: cbrand@email.unc.edu
Subject: IRB Notice

To: Cynthia Brand
School of Education

From: Non-Biomedical IRB

Approval Date: 3/18/2013
Expiration Date of Approval: 4/09/2013

RE: Notice of IRB Approval by Expedited Review (under 45 CFR 46.110)
Submission Type: Modification
Expedited Category: Minor Change to Previously Approved Research
Study #: 12-0506

Study Title: GED Success Rates for Special Needs Inmates Compared to Non-Disabled Counterparts in a Federal Correctional Setting: A Correlational Study

This submission has been approved by the IRB for the period indicated. It has been determined that the risk involved in this modification is no more than minimal. Unless otherwise noted, regulatory and other findings made previously for this study continue to be applicable.

Submission Description:

The focus of this study has been narrowed from the overall success of a GED program within a Federal Correctional Institution to studying the GED success rates of inmates identified with special needs as compared to their non-disabled counterparts. A total of 60 inmates will be randomly selected as with the previous proposal submitted, however, 30 of these inmates will have been identified as having a reading level of a 4.9 grade level or below whereas the other 30 would have a reading level of a fifth grade level and above. Information to include age, race, length of sentence, the highest grade completed and current reading level will still be utilized. In addition, scores for Pre-GED or official GED tests will be compared which can be easily obtained using the same computer system in the initial proposal (Sentry). A written survey will still be distributed but has been modified in order to acquire information pertaining to an inmate's perception of themselves as learners. The overarching question is: Do special needs inmates have a lower passing rate on the GED than those inmates without special needs? Specific questions ask: 1) Do inmates with special needs have a lower GED graduation rate the non-disabled students? 2) Are GED/practice GED scores lower for special needs inmates?, and 3) Do special needs inmates have lower motivation for getting their GED than non-disabled students?

Investigator's Responsibilities:

Your approved consent forms and other documents are available online at http://apps.research.unc.edu/irb/irb_event.cfm?actn=info&irbid=12-0506.

This study was reviewed in accordance with federal regulations governing human subjects

research, including those found at 45 CFR 46 (Common Rule), 45 CFR 164 (HIPAA), 21 CFR 50 & 56 (FDA), and 40 CFR 26 (EPA), where applicable.

IRB Informational Message—please do not use email REPLY to this address

From: IRB [irb_no_reply@mailserv.unc.edu]
Sent: Wednesday, September 12, 2012 1:27 PM
To: cbrand@email.unc.edu
Subject: IRB Notice

To: Cynthia Brand
School of Education

From: Non-Biomedical IRB

Approval Date: 9/10/2012

Expiration Date of Approval: 4/09/2013

RE: Notice of IRB Approval by Full Board Review
Submission Type: Initial
Study #: 12-0506

Study Title: An Investigation of the Overall Success of a GED Program within the Federal Bureau of Prisons: A Causal Comparative Study

This submission has been approved by the IRB for the period indicated.

Study Description:

Purpose: To determine the effectiveness of the current GED program offered to the inmate population at a facility within the Federal Bureau of Prisons (BOP). By having a better understanding of how inmates view their current education program as well as inmate characteristics, correctional personnel may review the existing program to make necessary changes and recommend amendments to existing educational policy.

Participants: A total of 60 inmates will be selected randomly to include 30 who have passed the GED program and 30 who have met the 240-hour requirement, but have yet to pass all sections of the GED.

Procedures (methods): Inmates will be asked to complete a written survey regarding their perspectives of the current educational programming at the institution, motivational factors for staying in school, and data collection items (i.e. age, history of special education, and employment history).

Regulatory and other findings:

In accordance with 45 CFR 46.304, the convened IRB committee included a board member who is a prisoner representative. This research, which involves prisoners, meets criteria set forth in section 45 CFR 46.305(a)(1-7) and is permitted according to 45 CFR 46.306.

The Board agreed that this research involves no more than minimal risk and future reviews may be done on an expedited basis, under Expedited Review, Category 9.

Investigator's Responsibilities:

Federal regulations require that all research be reviewed at least annually. It is the Principal Investigator's responsibility to submit for renewal and obtain approval before the expiration date. You may not continue any research activity beyond the expiration date without IRB approval. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.

Your approved consent forms and other documents are available online at http://apps.research.unc.edu/irb/irb_event.cfm?actn=info&irbid=12-0506.

You are required to obtain IRB approval for any changes to any aspect of this study before they can be implemented. Any unanticipated problem involving risks to subjects or others (including adverse events reportable under UNC-Chapel Hill policy) should be reported to the IRB using the web portal at <http://irbis.unc.edu>.

Researchers are reminded that additional approvals may be needed from relevant "gatekeepers" to access subjects (e.g., principals, facility directors, healthcare system).

This study was reviewed in accordance with federal regulations governing human subjects research, including those found at 45 CFR 46 (Common Rule), 45 CFR 164 (HIPAA), 21 CFR 50 & 56 (FDA), and 40 CFR 26 (EPA), where applicable.

IRB Informational Message—please do not use email REPLY to this address

APPENDIX E: BUREAU OF PRISONS RESEARCH PROPOSAL APPROVAL

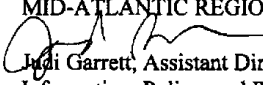


U.S. Department of Justice

Federal Bureau of Prisons

Washington, D.C. 20534
February 26, 2013

MEMORANDUM FOR IKE EICHENLAUB, REGIONAL DIRECTOR
MID-ATLANTIC REGION

FROM:  Jodi Garrett, Assistant Director
Information, Policy, and Public Affairs Division

SUBJECT: Research Proposal from Cynthia Brand, SLN Teacher

This is in response to a request by Ms. Cynthia Brand, SLN Teacher at FCI Butner to conduct a study, "GED Success Rates for Special Needs Inmates Compared to Non-Disabled Counterparts in a Federal Correctional Setting: A Correctional Study." I concur with your recommendation for approval, and the researcher is authorized to proceed with the study subject to the capability of FCI Butner to accommodate her. This approval expires one year from the date of this memorandum.

When the project is complete, Ms. Brand should send a final report to the Bureau's Research Review Board (BRRB). If the project is not completed within the year, Ms. Brand should submit a progress report and request a project extension from the BRRB.

For any questions that arise or any unanticipated problems with the research, please contact Jody Klein-Saffran, Ph.D. (202) 305-4110.

cc: Gerri Levister, Warden, FCI Butner, NC
Gary Junker, Ph.D., Chief Psychologist, FCI Butner, NC

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