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AN INVESTIGATION OF THE CORRELATION BETWEEN LEARNING AND  
STUDENT ACHIEVEMENT OF MINORITY STUDENTS

by  
Melissa Williams

A Thesis

Submitted in partial fulfillment of the requirements of the  
Masters of Arts Degree in School Administration Secondary Principal  
of  
The Graduate School  
at  
Rowan University  
April 15, 2004

Approved by \_\_\_\_\_  
Professor

Date Approved April 15, 2004

## Abstract

Melissa Williams

An Investigation of the Correlation Between  
Learning and Student Achievement of Minority Students  
2004

Robert W. Kern

Masters of Arts Degree in School Administration Secondary Principal

The purpose of this study was to evaluate why the grades of minority students in the high school were not up to par with majority students using action research resulting in a description of patterns within the school. At this stage of the research, inequities were generally defined as unfair advantages or disadvantages among groups of students. A sample of the minority population of the high school was compared to the majority population. The subjects participated in the Let Me Learn (LML) program that helped the learner recognize how they learned. By analyzing the data using LML combinations and grade point averages (GPAs) of students' patterns and trends in learning were rendered. The existence of the learning gap was supported and some conclusions made for a problem that has existed for many years.

## Mini-Abstract

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## Chapter 1

### Introduction

#### Focus of the Study

With the implementation of the No Child Left Behind Act of 2001, school districts were focusing on improving student achievement for all, yet there were still students being left behind. Improvements in literacy standards, teacher quality, enhancing accountability, and working with business leadership to develop a skilled workforce were all cornerstones of the Act. By 2013, 100% of a district's students must be proficient. Most facts showed that minority students were still not meeting the bar, even as it was raised higher. This study focused on minority groups (African American students) in contrast with majority groups (Caucasian students). Let Me Learn (LML) combinations and grades were used to compare the groups. The ultimate goal of education is to promote and increase learning. This study focused on why some students were still unable to or had difficulty learning and meeting mandated requirements, shifting the focus from environments and outside factors that schools cannot control to something they can control-learning. Why were some learners able to function and perform in a classroom better than other learners? How would a student's individual learning have affected his performance in the classroom? Does teacher assessment affect specific learners? Improving student learning hinges on acknowledging and understanding who the individual learners are in the classroom.



## Purpose of the Study

The purpose of this study was to evaluate why the grades of minority students in the high school were not up to par with white students using action research resulting in a description of patterns within the school. At this stage of the research, inequities were generally defined as unfair advantages or disadvantages among groups of students.

## Definitions

*Comprehensive:* All-inclusive.

*Content Standards:* Specific ideas of what the teacher expects and how the teacher will know how close a student has come to meeting the standards (NJ Department of Education, 2003).

*Curriculum:* All of the courses collectively offered within a school.

*High School Proficiency Assessment (HSPA):* The state test for eleventh-grade students. The test gives information about eleventh grade achievement in the areas required by New Jersey's Core Curriculum Content Standards. The test currently includes the content areas of language arts literacy and mathematics. Passing all sections of this test is a requirement for receiving a high school diploma (Comprehensive HS Definitions, 2003).

*Instruction:* The act of educating.

*Learning Combination Inventory (LCI):* The LCI is made up of a 28-item self-report scale and three written responses. It is designed to measure the multidimensional nature of learning (Johnston, *Unlocking the Will to Learn*, 1996).

*Learning style:* "A preferred way of acquiring knowledge and processing information" (Lamarche-Bisson, 2002).

*Learning theory*: “A systematic integrated outlook in regard to the nature of the process whereby people relate to their environments in such a way as to enhance their ability to use both themselves and their environments in a most effective way”

(Bigge & Shermis, 1999).

*Let Me Learn Process (LML)*: An approach to help teachers and students understand their learning processes and use them with intention (Johnston, *A Personal Guide to Implementing the LML Process*, 2000).

*Minority*: a racial group smaller than and differing from the larger, controlling group.

*No Child Left Behind Act of 2001 (NCLB)*: NCLB focuses on school success as measured by student achievement with four basic education reform principles: stronger accountability for results, increased flexibility and local control, expanded options for parents, and an emphasis on teaching methods that have been proven to work (No Child Left Behind in New Jersey).

*Public education*: The public’s responsibility for the education of the rising generation (A Nation Still at Risk, 1998).

*Special Education*: “Special instruction designed to meet the unique needs of a child with a disability” (LaMorte, 2002).

*Thinking*: “...a directed, goal-oriented activity of an individual; in other words, it is a creative, problem-solving process...” (Bigge & Shermis, 1999).

### Limitations of the Study

The boundaries of this study were that it was being done in the high school, using grades and LML combinations. Other areas of a student’s life were not being factored in such as environment or economic status.

Other limitations involved the nature of the environment. The ethnic makeup of the high school was largely white, middle class. Thus the population in question (minority students) was small when compared to the population as a whole.

### Setting of the Study

The Delsea Regional School District is located in the southeast corner of Gloucester County, New Jersey. In 1960, the Delsea Regional High School District was formed when overcrowding at Clayton High School caused three sending districts to leave the Clayton School District. The Delsea Regional High School District was created using students from Franklin and Elk Townships and the Newfield Borough. In 1983, Newfield decided to send its students to Buena Regional High School due to overcrowding. This created the present system consisting of two municipalities, Franklin and Elk Township. The school district serves the seventh through twelfth grade populations of both townships, which consists of approximately 1931 students (Power School, 2003).

The area is rich in history. The first known inhabitants were Lenni-Lenape Indians. Some of the first American pioneers of the area date back to the late 1700's. Franklinville, located in the northwest part of the township, was one of the earliest settled in the township ([Township of Franklin Online](#)). In 1891, Elk Township was formed and in 1924, Franklin Township became an independent municipality. At that time, these townships were dense forests of small pines and fields with good soil for cultivation of fruits and vegetables. Franklin Township turned into a profitable truck-farming community. Although the township has shown rapid growth, it was not due to any growth in industry. The major reason for the population increase was twofold. First, many

urbanites have moved out of the surrounding urban areas for more room and cheaper housing. Second, the completion of Route 55 has made the townships more accessible to urban areas. Truck farming was still a major livelihood of these two townships; however, urban sprawl caused more farmers to sell their land to developers thus eventually causing the farming industry to erode.

The total population of both municipalities according to the 2001 census was 18,980. The number of minorities from these municipalities made up 10% of the total population, the majority being African Americans at 8.1%. The senior citizen population accounted for 10.1% of the total population of the municipalities (The New Jersey Municipal Data Book, 2003). This information was important to school officials because senior citizens generally voted against school budgets. In the past ten years, seven budgets have passed while three failed (K. Mastran, personal communication, June 12, 2003).

The Delsea School District consists of two buildings. The middle school is comprised of grades seven and eight, with the high school consisting of grades nine through twelve. Delsea is a comprehensive high school located on an 85-acre campus in Franklinville. Student enrollment is 1931 (1312 in grades nine through twelve and 619 in grades seven and eight) with 105 faculty members (Power School, 2003). The district offers a vast curriculum beyond the graduation-required classes. Advanced placement and honors subjects were available in math, science, social studies, world language, and English (Snapshot of Our School, 2003). A strong basic skills curriculum in reading, writing, and math is also available. An all-inclusive special education program is provided meeting the requirements of the special needs population.

Vocational training is offered through Delsea's successful vending, marketing, and business education programs. Experience is also gained through participation in the Gloucester County Vocational-Technical School ([Township of Franklin Online](#)).

Computer technology is state of the art within the district, focusing on integration and immersion. "The district has adopted the goals, objectives, and proficiencies outlined in the Gloucester County Technology Plan" (Snapshot of Our School, 2003). There is a network within the district, classroom computers, a media center, art labs, twelve computer labs, a television/broadcasting studio, a PC repair lab, an interactive distance-learning lab, an online website and grading program, and a Cisco Networking Academy (Snapshot of Our School, 2003).

The district also provides ample opportunities to grow outside of academics. Delsea is involved with and supports the Renaissance concept in which academic achievement is presented through activities of recognition, reward, respect, and reinforcement. The district is a New Jersey and National Service Learning Leader School. A comprehensive after-school activities program exists including academic, social, and service organizations, interest clubs, and extensive athletic teams offering something for all students. Delsea also recognizes its obligation to the community. The gymnasium, track, and weight room are provided for community use along with school grounds for athletic events. The study will be done in the high school. Using information from the current school year's Power School database, the population consisted of ninth through twelfth grade students, which consisted of approximately 1312 students (2003). Of those students, approximately eighty-four percent were Caucasian students, twelve percent

were African American students, three percent were Hispanic students, and one percent was Asian/Pacific Islander.

### Significance of the Study

There was a clear path to the study since the intern was also one of the Let Me Learn consultants for the district. Thus, student and teacher data regarding learning combinations was readily available. There was also a need for the data as the high school was entering its fourth year of the LML initiative. The study tied in nicely with the district's goals and a need to produce an improvement in student achievement by the year 2013 per the No Child Left Behind Act. The sampling was cluster sampling, focusing on the minority population.

### Organization of the Study

The remainder of this study was organized in the following way: chapter two was a review of the literature, chapter three focuses on the data collected, chapter four was an analysis of the data, and chapter five contains conclusions, implications, and further study.

## Chapter 2

### Introduction

The focus of the study was not a new concept. Many prior studies, papers, and projects have been completed dealing with learning and inequity. Learning itself was an almost inexhaustible subject as new theories, styles, and facets were uncovered. The brain, and what occurs within it, still posed many questions as to how people actually learn. This naturally propelled the other area of the study. Why were some students able to learn and some unable to keep up with their classmates? Why were some students treated fairly while others got left behind even though measures were taken to do away with the inequities?

“School efforts to close the gap in academic achievement between ethnic and racial minority students and white students have been largely unsuccessful to date; differences in educational performance persist at all achievement levels, with the gap greatest between students of color and immigrants and their white and Asian American peers at high achievement levels” (Schwartz, p.2).

Literature focusing on the actual inequities and reasons for their existence along with proposals to bring everyone to the same playing field were sparse. Maybe the problem and suggested answers that focused on learning and fair educations separately were part of the real problem. By shifting the focus from race to learning, achievement for all may occur.

#### Review on the Problem

The problem focused on individual student learning, concentrating on minority

students in conjunction with the requirements set forth in the No Child Left Behind Act, grades, LML combinations, and individual teachers in order to improve learning for all students.

The problem focused on a specific group and their ability to learn and achieve. With focus shifting in schools towards the achievement of all with the *No Child Left Behind Act*, all students regardless of race, poverty, ethnicity, disability, or limited English proficiency must meet state proficiency goals. Fifteen years after inadequate education was identified, one of the major focuses remained a nation at risk. Inequities in education and learning existed. In an educational manifesto entitled “A Nation Still At Risk” the original “at risks” was examined in light of the current society.

“Since 1983, over 10 million Americans have reached the 12<sup>th</sup> grade not even having learned to read at a basic level. Over 20 million have reached their senior year unable to do basic math...In the same period, over 6 million Americans dropped out of high school altogether. The numbers were even bleaker in minority communities. In 1996, 13% of all blacks aged 16-24 were not in school and did not hold a diploma. 17% of first-generation Hispanics had dropped out of high school...For them the risk was grave indeed” (1998, p.1).

The other major focus was on the act of learning itself.

“...learning by definition was a psychological process. It occurs inside the heads and hearts of individual learners. Teachers and others can influence learning, but it was the individual learner who must decide to learn and must engage attentional, intellectual, and emotional processes in learning. The social context



can also influence learning, but again, it was the individual learner who decides what and how much to learn” (Lambert and McCombs, 1998, p.xiii).

How students learn was an age-old question. If this could be deciphered, student learning achievement rates could ultimately rise. There were at least eleven different theories concerning the learning process advocated by psychologists or used within the educational system (Bigge and Shermis, 1999). If so much information on learning existed within the educational system and learners were still failing to engage in their own learning, then something was still failing. One of the problems was how learning was viewed. All students within a classroom had individual needs and came from unique environments. “We can no longer assume that all learners bring similar experiences and needs to the learning context” (Lambert and McCombs, 1998). So, although it had been established that everyone learned differently and that distinct styles/intelligences must be focused on, the learner was more often than not forgotten in the move to reform.

Since the National Commission on Excellence in Education declared the United States a nation at risk over fifteen years ago, strides were made with the economy and technology (A Nation Still at Risk, 1998). Yet, the overall educational statistics did not show the improvement many thought would occur. “...the most worrisome finding of many reform reports has been the mediocre average test scores of American students” (Walberg, 1986). United States students were comparable to international students in elementary school, but fell far behind by the end of high school. “We seem to be the only country in the world whose children fall farther behind the longer they stay in school” (A Nation Still At Risk, 1998). President Bush’s No Child Left Behind Act of 2001 focused

on improving the performance of schools and ensuring that the minds and characters of every child were developed through goals in standards-based reform and accountability, early childhood literacy, school environments conducive to learning, high quality teachers, and parental choice.

Much of the current problem focused on the gap that many thought disappeared with the civil rights cause and the all-important *Brown v. Board of Education* decision in 1954 that overturned the “separate but equal” doctrine. Federal laws, especially Title 1, mandated that all students were to be held to the same high standards (Lewis, 2000). The ultimate goal of Title I was to eradicate the achievement gap and defeat the vicious cycle of poverty (Borman, 2002-2003). Yet, test scores and retention rates proved that these goals were not being met.

“...we were re-creating a dual school system, separate and unequal...after it was declared unconstitutional. We face a widening and unacceptable chasm between good schools and bad, between those youngsters who get an adequate education and those who emerge from school barely able to read and write. Poor and minority children, by and large, go to worse schools, have less expected of them, were taught by less knowledgeable teachers, and have the least power to alter a bad situation. Yet it’s poor children who most need great schools” (*A Nation Still At Risk*, 1998, p.2).

While this may be true, there was limited available data concerning desegregated achievement effects (Scott, 2001). Much of this was due to the culture that prevailed during the civil rights movement. Yet, it did not change the fact that minority students performed well below their white and Asian counterparts as numerous standardized test

scores and school data showed. Ralph Scott at the University of Northern Iowa completed one such study. It focused on mandated school busing and student learning achievement profiles of third, fifth and tenth grade black and white students. Basically, the study concluded that integration alone would not close the learning gap between black and white students. This was based on test and SAT scores of the two groups. Overall, white students scored approximately a grade and a half higher than their black gender counterparts. "...the black-white achievement gap equaled or exceeded a standard deviation on most measures" (2001). The exact case has yet to be determined even though numerous answers were available. According to past research, "Certain groups of children have been found to be a particular risk for low expectations or 'underestimated' ability. These include the poor, certain ethnic-minority groups, immigrants, girls in math and science, children with handicaps and generally students in the bottom half of the achievement hierarchy" (Lambert & McCombs, 1998).

Some of this had to do with assessment. Many assessments were not geared to test what students learned. According to a research report by Audrey Amrein and David Berliner, which appeared in Educational Leadership on the effects of high-stakes testing, student's motivation, and learning was adversely affected instead of the intended outcome. The intention was to motivate the unmotivated, which were usually identified as low socioeconomic students in urban schools, often minority students. Teachers were spending more time on test-taking skills instead of improving an understanding of the specific content area. Teachers were also taking greater control of student's learning, decreasing opportunities for students to direct their own learning (Amrein & Berliner, 2003). Not only do these assessments not test what students were learning, they often

labeled students and produced low expectations for achievement. This “stereotype threat” largely impacted women and minorities. “If you tell students they are low achievers, they achieve at a lower level than if you do not” (Boaler, 2003). While this may seem like common sense, the gap between races continued to widen in an educational setting.

When reading through literature involving solutions to improve education in the 21<sup>st</sup> century, much was said about learning. Standards, excellent schools, qualified teachers, higher pay, and more suggested that the implementation of these options would help the nation to be “at risk” no longer. Yet, somehow the learner got lost in the shuffle. Could tapping into the learner be the key to improvement amidst the environments that many cannot control? Schools cannot determine what social class a student came from, nor could they choose an individual’s parents; schools could work to ensure that each child had an opportunity to learn. The point of identifying a student’s learning was to improve the effectiveness of instruction and to increase academic achievement (Burns & Johnson, 1998).

Despite new developments in cognitive learning theory and the growing evidence that learning strategies did lead to significantly improved performance efforts, the remediation of black high school students continued to focus mainly on traditional study skills and study behavior with little attention to cognitive learning. There was a need to examine the use of specific learning strategies among Black high school students in relation to their learning achievement (Haynes, Comer & Hamilton-Lee, 2001).

“It urges child-centered education, considerable individual responsibility for learners, an emphasis on motivation, a personalized and supportive school environment, active engagement of learners with the material to be learned, the

centrality of the human community, and a thorough interweaving of the affective, cognitive, and social aspects of development during the school years” (Raywid, 1992, p.632).

The concept of learning was very different from the concept of schooling.

“...schooling was formally training persons how to conduct themselves in a place called school...the process of learning, was a highly personal process whereby individuals use their informed, engaged, and reflective effort to develop their abilities to know, do, and feel” (*Unlocking the Will to Learn*, 1996). The standard lecture and test method was not reaching all learners.

“When students can be involved in directing their own learning and making important decisions about classroom procedures, instruction, and curriculum...when students think that what they are learning was somehow connected to the real world and their personal interests...students’ natural curiosity will guide their learning. Students become more effective, more interested, and more independent learners. They develop skills, such as learning to question, analyze, think about their thinking, and make decisions” (McCombs & Lambert, 1998, p.486).

One conclusion was the concept of focusing learning on the individual learner.

There was possible merit in assessing individual students’ profiles as one strategy to effectively individualize learning strategies (Scott, 2001). In order to afford everyone the same education, tracking was a practice of the past. Yet, the population being educated was so diverse.

“To be successful in educating all of our students, we need to be aware of their

individual learning styles and multiple intelligences. To be more effective teachers of this diverse population of learners, teachers need concise and efficient ways to learn more about their students' learning styles and multiple intelligences" (Snyder, 2000, p.1).

Carl Jung, Jean Piaget, Benjamin Bloom, Maria Montessori, and Howard Gardner were just a few names of professionals dedicated to the cause of understanding learning.

Another such concept working to shift the focus within schools to the learner was LML. This involved administering an instrument titled the Learning Combination Inventory (LCI) that identifies learning patterns. "The instrument and teacher aren't telling the learner what the learner was; the information provided by the LCI was confirming for the learner what the learner already knows but may not know how to express" (*Unlocking the Will to Learn*, 1996). The information from the LCI was then used to empower the learner, making him accountable for his own learning.

Another conclusion concerning learning was that it must be a focus and a commitment by all involved. Otherwise, the student does not reap the learning benefit. "...teachers are much more aware of what it means to be a learner and how they must plan activities that take into account how students will become engaged" (Alvarez, 2002). In an article entitled "Engaging Students in Their Own Learning", Doris Alvarez spotlighted a school largely made up of minorities at an economic disadvantage who were taking control of their own learning and finding success. At the Preuss School U.C. San Diego, a grade six to twelve charter school, low-income students will be the first in their families to attend college due to this school's preparation. One mission of the school was to use best practices to ensure student success and preparation for a university. The

teachers were involved in the mission and planning of the school from the conception of the idea. Learning and student engagement was one of the main focuses of the curriculum. There was a commitment by all of the stakeholders. The administration had set up the school so that teachers had collaborative planning time, received professional development committed to the goals, and allowed for personalization with students through block scheduling. The results were in after three years. Preuss students performed well on standardized and school-wide assessments. The 10<sup>th</sup> graders outperformed schools across the country in the percentage of students passing the High School Exit Exam in language arts (2002).

There were instances where schools consisting of predominantly minority children of low-income backgrounds were improving. One of the most successful attempts was the Comer Model, known as the School Development Program at work in school districts in Washington, D.C., Prince George's County, Maryland, Camden, New Jersey, Brooklyn, New York and many more sites. The key to this model was intervention at the school level rather than the classroom or student level. Not only did mental health and relationships improve, but also standardized test scores and classroom grades. While this program was proven to work in many inner city districts, the question still remained for those students in districts that did not have the problems of these at-risk schools. Change was needed to bring about the achievement of all student learners (Squires & Kranyik, 1996).

## Chapter 3

### Design of the Study

With the implementation of the No Child Left Behind Act of 2001, school districts focused on improving student achievement for all, yet there were still students being left behind. By 2013, 100% of a district's students must be proficient. Yet many minority students were unable to meet the bar, even as it was being raised higher. Years after the identification of the achievement gap, there was still a noticeable difference in learning opportunities among students. This study focused on minority students in contrast with white students. Let Me Learn (LML) combinations and grades were used to compare the groups. Ultimately, the project sought to show that learners, regardless of their ethnicity, needed to be heard within the classroom in order to succeed. By focusing on the learner and less on factors that are uncontrollable such as ethnicity, environment, or gender, the achievement gap could be closed.

### Research Design & Development

The design and development of the research was based on a current district initiative involving Let Me Learn. The intern reviewed student and teacher LML combinations and current grades of those students. The intern then compared minority student grades with those of white students, taking into account individual student LML combinations and teacher LML combinations.



### Research Instrumentation

The study was based on data obtained from the Learning Combination Inventory (LCI). The instrument itself used a Likert scale and written response section to derive four numbers known as a learning combination. The results of the LCI were reported in a sequence of scores labeled Sequence, Precision, Technical, and Confluence. The scores within each scale fell between three ranges from a “use first”, to “use as needed”, to “avoid this pattern”. “The degree of variation among the scores, the placement of the scores within a given range, and the combination of the scores all provide insights into the “volume” of the voice of each learning pattern” (*Let Me Learn*, Johnston1998).

### Sampling & Sampling Techniques

The high school as a whole was observed, focusing on 201 minority students. The sampling technique used was cluster sampling.

### Data Collection

The data was gathered largely through the review of material culture, including student grades and LML combinations. The grades used were students’ Grade Point Averages (GPAs) within their class. The LML combinations were the four numbers that indicated how a student learns, using the combination of the four learning patterns. The LML combinations had previously been administered by the district as part of a district-wide initiative and posted on a database for use by all. Student grades were available through the Power School database.

### Data Analysis Plan

The analysis was a structured case study of minority students in comparison with Caucasian students. An assessment was made to determine if the LML initiative program

was successful in identifying why some student learners were not at the same level as other student learners. The minority students' class rank, GPA, and LML combinations were analyzed. Students from all four grade levels were looked at to determine correlations between learning and achievement. Students were looked at by their achievement thus far in high school and then compared to their learning combinations.

## Chapter 4

### Introduction

The research gathered consisted of data from the minority and Caucasian students within the high school. The research was to determine the link between learning and grades. This related to the current achievement gap and the proposed No Child Left Behind legislation. The information found led to multiple conclusions as well as possible questions for further study.

### Data Analysis

For data analysis, the majority was defined as the Caucasian population and the minority was defined as the African American population. There were currently 1105 Caucasian and 149 African American students in the high school. The Grade Point Averages (GPAs) used were from this pool of students. Out of these, 1049 Caucasian and 135 African American students had Let Me Learn (LML) combinations available to use in the data analysis.

The minority group had a much smaller percentage of students when compared with the majority population for the high school. The minority group consisted of eleven percent while the majority group made up eighty-five percent of the total high school population. Thus the minority group had a smaller range to choose from. By simply looking at the GPAs of the two groups, much is revealed when the range is identified. The GPA was proportional to the total amount of students when comparing the majority group to the minority group as viewed in Table 1. The failure rates were the same for both groups, that of two percent. Two percent of students had a GPA lower than 6.5 in

both the Caucasian and African American populations. The distribution of the remaining GPAs was where the variance occurred.

Table 1

GPA Distribution of Both Population Groups

| <u>Student Population</u> | <u>Grade Point Average (GPA)</u> |         |         |         |       |
|---------------------------|----------------------------------|---------|---------|---------|-------|
|                           | <u>Student Percentage</u>        |         |         |         |       |
|                           | 10.0-9.3                         | 9.2-8.5 | 8.4-7.5 | 7.4-6.5 | 6.5-0 |
| Caucasian                 | 24                               | 33      | 29      | 11      | 2     |
| African American          | 12                               | 26      | 45      | 16      | 2     |

Twenty-four percent of the Caucasian population had a GPA of 9.3 and higher. The Caucasian students had the largest percentage of GPAs in the 8.5 to 9.2 range, which resulted in thirty-three percent. Twenty-nine percent of the students maintained a GPA between 7.5 and 8.4, while the remaining eleven percent had GPA's from 6.5 to 7.4. When viewing the minority population, only twelve percent of the students carried a GPA of a 9.3 and higher. Twenty-six percent had a GPA between 8.5 and 9.2. The largest group of students at forty-five percent maintained a GPA between 7.5 and 8.4. Sixteen percent had a GPA between 8.5 and 7.4.

The data clearly showed that both groups of students had the same percentage of students failing. It was in the somewhat proficient groups that the numbers varied. These were the students needing the most attention to ensure that one hundred percent of students are proficient by 2013. This was where the issue of learning came into play. What could a school do to increase the learning of those students in the middle, not failing but not totally proficient? Since proficiency was on average determined through

test scores, for the sake of argument it will be viewed through GPA numbers. Proficiency will be said to be determined with GPAs of an 8.5 and over. Those GPAs between 6.5 and 8.4 will be somewhat proficient. Those below 6.5 will be failures. Over fifty-seven percent of the Caucasian population was proficient. While only thirty-eight percent of the African American population was proficient. That was a difference of nineteen percent proficiency. Only forty percent of the Caucasian population was somewhat proficient while sixty-one percent of the African American population was somewhat proficient.

The two percent listed as failures are the easier group to remediate since a higher intensity level of skills could be administered. Determining where the learning was not happening for the forty and sixty-one percents of the populations is the remaining issue at large.

The learning combinations of the two populations revealed some interesting data (see Table 2). It was found that in the ninth grade, fifty-one percent of the majority students and fifty percent of the minority group possessed a “Use First” sequence. Only six percent of majority students and thirteen percent of minority students had a “Use First” precision. Fifty-eight percent of the majority and fifty-five percent of the minority had a “Use First” technical. The “Use First” confluent pattern was viewed at a forty-seven percent rate with the majority and a forty-two percent rate with the minority.

The educational system was geared to the student who possessed a “Use First” sequential and precise combination. Thus it would appear that those groups of students possessing this combination would succeed. In the ninth grade, the percentage of students with “Use First” sequence was almost identical with both fifty-one and fifty percent. The precise pattern was where the numbers varied the most. The minority group actually

possessed a higher percentage of students who had “Use First” precision. Both the technical pattern and the confluent pattern were similar in the fifty and forty percentiles. The average GPA for the majority ninth grade group was 8.73. The average GPA for the minority ninth grade group was 8.65. There was very little variance between the two groups. Thus, if the achievement gap was still prevalent within the ninth grade class after test scores were garnered, the issue could be beyond learning. The same elements within learning combinations were present for both sets of students, yielding similar GPAs.

Table 2

Use First Patterns with Ninth Grade Populations

| <u>Population</u> | <u>Student Percentage Use First Pattern</u> |                  |                  |                   |
|-------------------|---|------------------|------------------|-------------------|
|                   | <u>Sequence</u>                             | <u>Precision</u> | <u>Technical</u> | <u>Confluence</u> |
| Majority 9        | 51  | 6                | 58               | 47                |
| Minority 9        | 50  | 13               | 55               | 42                |

When viewing Table 3 of the tenth grade groups, forty-nine percent of the majority and fifty-two percent of the minority have a “Use First” sequence. Ten percent of the majority and nineteen percent of the minority have a “Use First” precision. Viewing the “Use First” technical, fifty-six percent of the majority and fifty-five percent of the minority used this pattern first. Thirty-seven percent of the majority and forty-five percent of the minority had a “Use First” confluent pattern. It would seem that the minority group would have a better GPA average and ability within the school setting based on the higher percentage of “Use First” sequence and precision students. Yet the

majority group maintained an average of 8.52 GPA, while the minority group maintained an average of 8.23. Some of this could be attributed to the higher “Use First” confluence for the minority group. That part of the learner is the side most willing to take risks and do things his own way. Depending on the learning environment, it could hinder or help that student’s grade.

Table 3

Use First Patterns with Tenth Grade Populations

| <u>Population</u> | <u>Student Percentage Use First Pattern</u> |                  |                  |                   |
|-------------------|---|------------------|------------------|-------------------|
|                   | <u>Sequence</u>                             | <u>Precision</u> | <u>Technical</u> | <u>Confluence</u> |
| Majority 10       | 49  | 10               | 56               | 37                |
| Minority 10       | 52  | 19               | 55               | 45                |

In the eleventh grade (see Table 4), fifty-two percent of the majority and forty-seven percent of the minority had a “Use First” sequential pattern. Only nine percent of the majority and twenty-eight percent of the minority possessed a “Use First” precise pattern. Forty-four percent of the majority and sixty-nine percent of the minority had a “Use First” technical pattern. Thirty-two percent of the majority and thirty-nine percent of the minority had “Use First” confluence. Once again, the minority group had higher “Use First” patterns in all learning patterns but the sequential pattern. While the higher percentage in precision would make it appear that that group possesses more “Use First” precise learners, the average for the minority group in precision was 21.08 and the average for the majority group was 19.07. Both groups possessed a “Use as Needed” precise pattern. The same went for the technical and confluent patterns. While the

percentages were higher, the averages only had a range of one point for both patterns.

When viewing the average GPA, the difference was even smaller. The difference between the majority and minority averages was only .4. Thus, both sets of students were equipped with similar learning patterns, resulting in similar GPAs overall.

Table 4

Use First Patterns with Eleventh Grade Populations

| <u>Population</u> | <u>Student Percentage</u><br><u>Use First Pattern</u> |                  |                  |                   |
|-------------------|---|------------------|------------------|-------------------|
|                   | <u>Sequence</u>                                       | <u>Precision</u> | <u>Technical</u> | <u>Confluence</u> |
| Majority 11       | 52  | 9                | 44               | 32                |
| Minority 11       | 47  | 28               | 69               | 39                |

As shown in Table 5, the senior class maintained a fifty-three percent majority and a fifty-seven percent minority “Use First” sequential pattern. Twelve percent of the majority and ten percent of the minority populations possessed a “Use First” precise pattern within their learning combinations. Forty-seven percent of the majority and forty-three percent of the minority had a “Use First” technical pattern. Thirty percent of the majority and thirty-seven percent of the minority maintained a “Use First” confluent pattern. The senior class was even closer in percentage range with all four patterns. When viewing the averages, they were almost identical across the four patterns and in GPA. Thus, the learning combinations of the two groups were equal to their GPAs. Many trends were seen when comparing GPAs and learning patterns.



Table 5

Use First Patterns with Twelfth Grade Populations

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| <u>Population</u> | <u>Student Percentage<br/>Use First Pattern</u> |                  |                  |                   |
|-------------------|---|------------------|------------------|-------------------|
|                   | <u>Sequence</u>                                 | <u>Precision</u> | <u>Technical</u> | <u>Confluence</u> |
| Majority 12       | 53  | 12               | 47               | 30                |
| Minority 12       | 57  | 10               | 43               | 37                |

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## Chapter 5

### Conclusions

The fact that the issue of a learning gap has been prevalent without solutions for over five decades made it challenging for an actual solution to be devised. One determined conclusion was the existence of external factors beyond the learning environment's control. The GPAs of the two learning groups would lead one to believe that the students were accurately placed within the learning environment with all of the tools necessary to close the learning gap. Another conclusion drawn arose from the learning combinations of the two groups. The "Use First" pattern percentages allowed for insight into why the different learning groups were still separated.

When viewing the GPAs of the students, the failure rate of two percent was the same for both groups of students. Thus the actual distribution of grades was where the question remained. The Caucasian population achieved higher grade point averages between 10.0 and 8.5. The minority population was greater in percentages in the 8.4 to 6.5 ranges. This was the area where students achieved somewhat proficient levels in their subject matter. The gap between those who were proficient and those who were somewhat proficient was the area needing closing. Since the minority population was no greater in failures, a conclusion can be drawn that the students were correctly placed within the courses and classes of the curriculum. Thus the motivation to learn within these classes and in environments outside of the school building could be where the gap was occurring

By strictly viewing the quantitative data involving GPAs, the conclusion that minority students were already somewhat equal in education could be drawn. Yet, the gap existed in most schools. When viewing the students learning combinations in all but one grade, the minority students led with a higher percentage of students with “Use First” technical and confluent patterns. This was the part of the learner that wanted relevance to the real world and occasions for hands-on assignments. This was also the learner who yearned for the opportunity to take risks. The eleventh grade population yielded these conclusions in concrete patterns. The majority group had a range of over a point higher in GPA averages than the minority group. They also had a wider variation in learning combinations. The minority group had a technical “Use First” pattern of almost twenty-five percent higher and a confluent “Use First” pattern of almost five percent higher. The insight being that this group of students needed more relevance from life brought into their learning. There could be things occurring outside of the school-learning environment that took precedence over the school including home and economic status. Tapping into the relevance of this group could yield higher results in learning, thereby closing the learning gap of the junior class and the entire district.

A final conclusion was drawn from the literature reviewed. Both learning and the racial gap were areas difficult to change. Solutions had been proposed, attempted with some successes and failures, and inequities still existed as students were left behind.

“...in less successful schools-even those with a learning focus-many of these benefits were noticeably absent, except in isolated classrooms in which teachers

intuitively implemented learner-centered approaches with their students or in schools in which administrators intuitively implemented learner-centered approaches with their staff”(McCombs & Lambert, 1998, p.489).

“Learning was change and change involves learning. Both processes are continual and ongoing; they are complementary and reciprocal” (1998).

The literature was vast on both learning and racial inequities. A solution has yet to be found that totally solves the mystery of the learner, thereby closing the gap between races within a school setting. Part of the problem was that these two subjects were usually dealt with separately or the focus was on areas that cannot be controlled by the school, such as economic status and ethnicity.

### Implications

A learner could be motivated to find success with learning if the will to learn was there. Outside factors could often impede success, but if the will was ignited the student had a better chance of rising above factors outside of his control. Identifying that will to learn would be the key to raising the achievement scores and closing the gap between the different groups. Utilizing curriculums and teaching methods that focus on providing that relevance would then keep the will alive and let the learner succeed.

As a leader of an organization, identifying the needs of the diverse learners within a population would be at the top of the priority list. Due to the nature of this question and its longevity within the American educational system, it is not a question to simply disappear over time. Until it is addressed and resolved, minority students will continue to be left behind. For future leaders of school systems, those schools with learners being left

behind will have serious ramifications being met on their district by 2013. Thus, leaders need to address this need, finding the relevance for their learners in order to increase learning for all.

### Further Study

One avenue that might yield more concrete data and conclusions would be to identify and follow certain minority students. By actively taking steps to improve their learning environments such as placing them in classes with teachers whose learning patterns complimented the students, their grades over four years could be charted. Thus, an accurate correlation could be drawn connecting student and teacher learning with success.

Obviously another area that needs examined would be how to provide relevance for all ethnic groups within one school and one curriculum that would meet the standards, while improving learning for all students. This would be specific to each learning environment and district. The needs of students living in an urban setting would be different compared to those living in a rural setting. The relevance and will to learn would be vastly diverse.

In order to provide relevance and meet the needs of a specific minority group in order to meet the standards set in The No Child Left Behind act, barriers will need to be broken down and new mentalities formed within individual districts. One of these barriers is that all students learn the same way; that methods of the past worked then so they should work now. This no longer holds true as more students are being left behind and more measures of accountability are established. That the same curriculum works

within a district does not mean it will continue to work simply because it has worked in the past. As society changes, student needs and relevance also changes. As the needs of the learner are identified, districts must be prepared to take the necessary steps in order to meet those needs.

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