2010

The state of education in Louisiana: trend analyses of student achievement, student matriculation, and student behavior in the accountability era

Jonathon Anthony Szymanski
Louisiana State University and Agricultural and Mechanical College, jonszymanski@yahoo.com

Follow this and additional works at: https://digitalcommons.lsu.edu/gradschool_dissertations

Part of the Education Commons

Recommended Citation
https://digitalcommons.lsu.edu/gradschool_dissertations/819

This Dissertation is brought to you for free and open access by the Graduate School at LSU Digital Commons. It has been accepted for inclusion in LSU Doctoral Dissertations by an authorized graduate school editor of LSU Digital Commons. For more information, please contact gradetd@lsu.edu.
THE STATE OF EDUCATION IN LOUISIANA:  
TREND ANALYSES OF STUDENT ACHIEVEMENT, STUDENT MATRICULATION, AND 
STUDENT BEHAVIOR IN THE ACCOUNTABILITY ERA

A Dissertation

Submitted to the Graduate Faculty of the 
Louisiana State University and 
Agricultural and Mechanical College 
in partial fulfillment of the 
requirements for the degree of 
Doctor of Philosophy

in

The Department of Educational Theory, Policy, and Practice

by

Jonathon Szymanski
B.S., Texas A&M University, 1999
M.Ed., University of Saint Thomas, 2003
M.A., Louisiana State University, 2007
May 2010
DEDICATION

This dissertation is dedicated with loving memories to Julius and Lucille Zurek and Joe Hinze. I am very lucky to have been blessed with the best grandparents and uncle to grace God’s earth. Grandpa and Grandma Zurek were like parents and Uncle Joe provided the soundest advice. Until we meet again, they live with me daily.
ACKNOWLEDGEMENTS

This journey would not have been possible without the love and support provided by my family. First, I must thank my wife, Lisa Szymanski, for being there each day. I love her very much. Now, both of us will have free time! Next, I thank my mother, Jeraldine Szymanski, and father, Jodie Szymanski, for teaching me discipline and to never settle for second best. Mom taught me to be tough, persistent, and caring. She is the backbone of the family. Dad taught me how to hunt and consequently, I learned that having patience and accuracy are essential life skills. Completing the Ph.D. is the hunting equivalent of taking a charging animal!

Additionally, I thank my brother, Jeff Szymanski, and his family. Jeff is my best friend and counselor. He is a diehard Texas Aggie and a true family man. Perhaps, now, his affinity towards LSU will grow. That being said, Geaux Tigers! I thank Sarah for being the world’s number one sister-in-law. Let this degree demonstrate to my niece and nephew, Ellie and Will, and to my future children that nothing is impossible. It is necessary to find what you want to do in life and never look back. Furthermore, I thank my aunt, Cornelia Hinze, for her continuous encouragement. She will always be my favorite Texas Longhorn.

It is imperative to thank several special people at LSU. I thank Dr. Dianne Taylor for taking me under her wing and serving as my advisor. LSU is lucky to have her. Her professionalism, kindness, patience, and consideration are second to none. She constantly challenged me to think critically. For that, I am truly grateful. I sincerely appreciate that she always took the time to listen. She is the ultimate transformational leader! I thank Dr. Eugene Kennedy and Dr. Kim MacGregor for teaching and assisting me over the years. The quantitative and qualitative knowledge obtained from them is priceless. I thank Dr. Spencer Maxcy for interviewing and accepting me into the Ph.D. program in 2003. He comprehends and teaches
philosophy like no other. I thank Dr. Earl Cheek, Dr. Krisanna Machtmes, and Dr. Noelle Witherspoon for serving on my committee. Also, I thank Dr. Belinda Cambre, former LSU doctoral candidate and current University of New Orleans assistant professor, for helping me with any and all dissertation questions.

I thank the West Baton Rouge Parish School System for allowing me to apply what I have learned and to grow as both a teacher and an administrator. I thank Dawn Henry for recommending me to become Cohn Elementary School’s physical education teacher in 2003. I was a little nervous with the thought of beginning the Ph.D. program without a job! Today, she is my immediate supervisor and it is a pleasure working for her. I thank David Corona for believing in me and granting me the opportunity and privilege to serve as the principal of Port Allen Middle School. I thank Dr. Tammy Seneca for the relentless motivation. Additionally, I thank Henry Knox for our daily conversations.

Most importantly, I thank God for giving me the people above and making me a Tiger. With Him, all things are possible.
## TABLE OF CONTENTS

Dedication

Acknowledgements

List of Tables

List of Figures

Abstract

Chapter 1: U.S. Education Versus The World

- The Effects of Sputnik
- International Comparisons
  - International Academic Achievement
  - Progress in International Reading Literacy Study
  - Trends in International Mathematics and Science Study
  - Programme for International Student Assessment
  - A Comparison of Germany, Japan, and the United States
  - Southern Region Educational Expenditures
  - Southern Region Academic Achievement
- Purpose and Importance of the Study
- Definition of Terms
- Limitations and Delimitations of the Study
- Position of Researcher
- Organization of the Study

Chapter 2: The Road to Accountability Legislation in Louisiana

- Poverty and the Achievement Gap in Louisiana
- Deficit Thinking
- U.S. Accountability Movement After 1950
- Louisiana
- Texas
- North Carolina
- Kentucky
- Maryland
- Florida
- Summary

Chapter 3: The Fruits of ACT 478

- State Testing and Accountability
- Challenging Curriculum and Content Standards, Benchmarks and Grade-Level Expectations
- Assessment Program

v
School, District, and State Performance Monitoring and Reporting................................. 81
Assistance to Low Performing Schools and Districts...................................................... 83
Recognition and Rewards............................................................................................ 84
Community Based Tutorial Program........................................................................... 85
Distinguished Educators............................................................................................. 86
K-3 Reading and Mathematics Initiative...................................................................... 87
Learning-Intensive Networking Communities for Success......................................... 87
Local Teacher Quality................................................................................................. 88
Louisiana Teacher Assistance and Assessment Program.......................................... 89
Regional Education Service Centers......................................................................... 90
Remediation................................................................................................................ 90

Chapter 4: Methodology................................................................................................. 92
Purpose......................................................................................................................... 92
Research Questions..................................................................................................... 93
Trend Analysis............................................................................................................. 94
Subjects......................................................................................................................... 95
  Student Achievement................................................................................................. 95
  Student Matriculation............................................................................................... 98
  Student Disciplinary Actions................................................................................... 99
Data Collection............................................................................................................ 101
Analysis......................................................................................................................... 101

Chapter 5: Results........................................................................................................ 104
Student Achievement.................................................................................................. 104
  National Assessment of Educational Progress......................................................... 104
  Louisiana Educational Assessment Program.......................................................... 106
  Iowa Tests of Basic Skills......................................................................................... 107
  American College Testing Program......................................................................... 108
Student Matriculation................................................................................................ 109
  Retention.................................................................................................................. 110
  Dropouts.................................................................................................................. 110
Student Disciplinary Actions.................................................................................... 110
  Disciplinary Actions............................................................................................... 111
  Arrests...................................................................................................................... 111
Achievement, Matriculation, and Disciplinary Actions for Black and White Students.. 112
  National Assessment of Educational Progress......................................................... 112
  Louisiana Educational Assessment Program.......................................................... 114
  Iowa Tests of Basic Skills......................................................................................... 115
  Retention.................................................................................................................. 116
  Dropouts.................................................................................................................. 117
  Disciplinary Actions............................................................................................... 117
LIST OF TABLES

1.1 Total Public Expenditures per OECD Country as a Percentage of the GDP for Primary and Secondary Institutions From 1985 to 2003 ................................. 5

1.2 Federal, State, and Local Percentages of the Total Revenue, in Unadjusted Dollars, for Public Elementary and Secondary Schools From 1959 to 2005 .... 6

1.3 Total U.S. Expenditures per Pupil Based on Average Daily Attendance in Public Elementary and Secondary Schools by School Year from 1959 to 2005 .......................................................... 7

1.4 PIRLS 2001 Average Scale Score for the Top 10 and Bottom 10 Performing Countries ................................................................. 12

1.5 PIRLS 2006 Average Scale Score for the Top 10 and Bottom 10 Performing Countries ................................................................. 13

1.6 TIMSS 1995 Grade 8 Average Mathematics and Science Scale Scores for the Top 10 and Bottom 10 Performing Countries ................................. 14

1.7 TIMSS 1999 Grade 8 Average Mathematics and Science Scale Scores for the Top 10 and Bottom 10 Performing Countries ................................. 15

1.8 TIMSS 2003 Grade 8 Average Mathematics and Science Scale Scores for the Top 10 and Bottom 10 Performing Countries ................................. 16

1.9 TIMSS 2007 Grade 8 Average Mathematics and Science Scale Scores for the Top 10 and Bottom 10 Performing Countries ................................. 17

1.10 Average Combined PISA Scores of G-8 Countries for the 2000 Reading, 2003 Mathematics, and 2006 Science Assessments ........................................ 18

1.11 Educational Levels by Ages and Schooling Years in the United States, Germany, and Japan ................................................................. 21

1.12 Percentage of 3-Year-Olds, 4-Year-Olds, and 5-Year-Olds Enrolled in Preprimary Programs by Year in the United States ......................................... 22

1.13 Current Expenditures per Pupil Based on Average Daily Attendance in Public Elementary and Secondary Schools in Constant 2006-07 Dollars for the Southern Region From 1959 to 2005 ................................................................. 27

1.14 Grade 4 Reading NAEP Scale Scores by Southern Region States and the District of Columbia Since 1992 ................................................................. 29
1.15  Grade 4 Mathematics NAEP Scale Scores by Southern Region States and the District of Columbia Since 1992 ................................................................. 30

1.16  Grade 8 Reading NAEP Scale Scores by Southern Region States and the District of Columbia Since 1998 ................................................................. 31

1.17  Grade 8 Mathematics NAEP Scale Scores by Southern Region States and the District of Columbia Since 1990 ................................................................. 32

2.1   Household Income and Poverty Rates in Constant 2006 Dollars by South Region States and the District of Columbia From 1990 to 2006 .................................. 40

2.2   Percentages of Louisiana Public School Students by Ethnicity From 2000 to 2007 ................................................................................................................. 40

2.3   Grade 4 Reading NAEP Scale Scores for Black and White Louisiana Students Since 1992 ................................................................. 42

2.4   Grade 4 Mathematics NAEP Scale Scores for Black and White Louisiana Students Since 1992 ................................................................. 42

2.5   Grade 8 Reading NAEP Scale Scores for Black and White Louisiana Students Since 1998 ................................................................. 43

2.6   Grade 8 Mathematics NAEP Scale Scores for Black and White Louisiana Students Since 1990 ................................................................. 43

2.7   Particulars and Influence of the Texas, North Carolina, Kentucky, Maryland, and Florida Accountability Systems on Louisiana ......................................................... 77

3.1   Major Education Programs and Total State Allocations in Louisiana From 1997-2005 ........................................................................................................ 78

3.2   SPS Indicators and Corresponding Weights ................................................................................................................. 82

3.3   SPS and DPS Performance Labels ................................................................................................................. 82

4.1   2005 Louisiana Public School Districts ................................................................................................................. 98
# LIST OF FIGURES

3.1  Key Components of the Louisiana School and District Accountability System. ................................. 80

4.1  Formula for Average Annual Percent Change. ................................................................. 103

5.1  Louisiana Grade 4 Reading NAEP Scale Scores, 1992 to 2005 ....................... 118

5.2  Louisiana Grade 4 Mathematics NAEP Scale Scores, 1992 to 2005 ............. 119

5.3  Louisiana Grade 8 Reading NAEP Scale Scores, 1998 to 2005 ..................... 120

5.4  Louisiana Grade 8 Mathematics NAEP Scale Scores, 1990 to 2005 ............. 121

5.5  Percentages of Louisiana Students That Scored Basic or Above on Grade 4 LEAP ELA Assessments, 1999 to 2005 .............................. 122

5.6  Percentages of Louisiana Students That Scored Basic or Above on Grade 4 LEAP Mathematics Assessments, 1999 to 2005 ..................... 123

5.7  Percentages of Louisiana Students That Scored Basic or Above on Grade 8 LEAP ELA Assessments, 1999 to 2005 .............................. 124

5.8  Percentages of Louisiana Students That Scored Basic or Above on Grade 8 LEAP Mathematics Assessments, 1999 to 2005 ..................... 125

5.9  ITBS Composite National Percentile Rankings for Louisiana Grade 3 Students, 1999 to 2005 .............................. 126

5.10 ITBS Composite National Percentile Rankings for Louisiana Grade 7 Students, 1999 to 2005 .............................. 127

5.11 ITBS Composite National Percentile Rankings for Louisiana Grade 9 Students, 1999 to 2005 .............................. 128

5.12 ACT Average Composite Scores for Louisiana and the Nation, 1994 to 2005 ........................................................................... 129

5.13 Percentages of Retained Louisiana K-12 Students, 1998 to 2005 .................. 130

5.14 Percentages of Louisiana Dropouts in Grades 9-12, 1997 to 2005 .............. 131

5.15 Percentages of Louisiana Students That Received One or More Disciplinary Actions in PK-12, 1997 to 2005 ........................................ 132
5.16 Louisiana Juvenile Arrests, 1999 to 2005 ................................................. 133
5.17 Louisiana Grade 4 Reading NAEP Scale Scores for Black and White
Students, 1992 to 2005 .............................................................................. 134
5.18 Louisiana Grade 4 Mathematics NAEP Scale Scores for Black and
White Students, 1992 to 2005 ................................................................. 135
5.19 Louisiana Grade 8 Reading NAEP Scale Scores for Black and White
Students, 1998 to 2005 ............................................................................. 136
5.20 Louisiana Grade 8 Mathematics NAEP Scale Scores for Black and
White Students, 1990 to 2005 ................................................................. 137
5.21 Percentages of Louisiana Black and White Students That Scored Basic
or Above on Grade 4 LEAP ELA Assessments, 1999 to 2005 .................. 138
5.22 Percentages of Louisiana Black and White Students That Scored Basic
or Above on Grade 4 LEAP Mathematics Assessments, 1999 to 2005 ....... 139
5.23 Percentages of Louisiana Black and White Students That Scored Basic
or Above on Grade 8 LEAP ELA Assessments, 1999 to 2005 ................. 140
5.24 Percentages of Louisiana Black and White Students That Scored Basic
or Above on Grade 8 LEAP Mathematics Assessments, 1999 to 2005 ....... 141
5.25 ITBS Composite National Percentile Rankings for Louisiana Black
and White Grade 3 Students, 2002 to 2005 .................................................. 142
5.26 ITBS Composite National Percentile Rankings for Louisiana Black
and White Grade 7 Students, 2002 to 2005 .................................................. 143
5.27 ITBS Composite National Percentile Rankings for Louisiana Black
and White Grade 9 Students, 2002 to 2005 .................................................. 144
5.28 Percentages of Louisiana Black and White Students Retained in K-12,
1998 to 2005 ............................................................................................ 145
5.29 Percentages of Louisiana Black and White Dropouts in Grades 9-12,
1997 to 2005 ............................................................................................ 146
5.30 Percentages of Louisiana Black and White Students That Received
One or More Disciplinary Actions in PK-12, 1997 to 2005 .............. 147
ABSTRACT

Public education has long been the subject of public discontent. Historical events such as the Soviet launch of Sputnik in 1957, the Civil Rights Movement of the 1950s and 1960s, and repeated media reports that U.S. students were outscored by students in many other countries on international tests each prompted federal and state legislation aimed to reform public education.

Following a presentation of the relative standing of the United States on three international tests, the history of public schooling in six states, Texas, North Carolina, Kentucky, Maryland, Florida, and Louisiana, is discussed. The central focus of the study is student outcomes in Louisiana since the passage of Act 478 in 1997, which provided for the state’s present accountability system. Among a number of programs intended to improve public education, Act 478, consistent with the federal No Child Left Behind Act of 2002, supported the creating of the high stakes test, LEAP.

The purpose of the present study was to use trend analysis to examine changes in three student outcomes: (a) student achievement, (b) student matriculation, and (c) student disciplinary actions, particularly suspension and expulsion rates and juvenile arrests. The study was bounded by the years 1997, when Act 478 was passed, to 2005, prior to the landfall of Hurricanes Katrina and Rita. Because Black and White students composed approximately 98% of the public school student population during those years, trends are reported in aggregate and disaggregated by race, except for juvenile arrests for which disaggregated data were not available.

The analysis resulted in 30 trends, which revealed that statewide, student achievement had improved for both Black and White students, but not substantially. Contrary to national trends, dropout percentages improved, but the in-grade retention of students increased, especially after LEAP became high stakes in 2000. Suspensions and expulsions trended upwards, but
juvenile arrests decreased. The achievement gap between Black and White students persisted though it narrowed slightly in some instances. Finally, more Black than White students were retained, suspended and expelled, and dropped out of school.
CHAPTER 1: U.S. EDUCATION VERSUS THE WORLD

“Our progress as a nation can be no swifter than our progress in education. Our requirements for world leadership, our hopes for economic growth, and the demands of citizenship itself in an era such as this all require the maximum development of every young American's capacity.”
John F. Kennedy (“Special Message,” 1961, ¶1)

As the United States pursues academic superiority, educational reforms are paramount. Such reforms require extensive commitment and numerous resources. This study strives to illustrate the results of Louisiana’s public education system since enactment of Act 478 of the Louisiana Legislature in 1997 via a macro to micro approach. In this chapter, the U.S. education system is measured against the world in terms of student achievement and dollars expended before Louisiana is measured in the same manner against the U.S. Southern Region. Along the way, much attention is given to Louisiana’s accountability system, including its development and major components. Student achievement, student matriculation, and student disciplinary actions from 1997-2005 are specifically investigated.

The Effects of Sputnik

Conventional wisdom dictates that educational reforms are expensive. After the Soviet Union propelled the Sputnik satellite into space in 1957 (Cooper, Fusarelli, & Randall, 2004; Ornstein & Levine, 2003), federal, state, and local dollars were expended on education in the United States through the National Defense Education Act (NDEA). Cooper et al. (2004) declared that, “The launch of Sputnik was a triggering event with significant effects on American education. Congressional action redirected resources toward science, math, and language programs, as well as freeing up resources for school districts to purchase new technology” (p. 68). As will be shown in this chapter, more than fifty years later, federal commitments to educational reform have not propelled the academic achievement of U.S. students to the
international forefront. Specifically, the relative mediocre academic achievement of U.S. students in mathematics, reading, and science indicates that monetary expenditures since Sputnik were not put to the best use.

It is imperative to understand that education in the United States is unique. Dissimilar to most industrialized nations where strong centralization of education regulated by the federal government prevails (Lunenburg & Ornstein, 2004), the Tenth Amendment of the U.S. Constitution reserves education to the states. Thus, federal intervention in education was all but missing until the last half of the twentieth century (Alexander & Alexander, 2001; Cooper et al., 2004; Lunenburg & Ornstein, 2004; Ornstein & Levine, 2003). The Tenth Amendment placed the academic lives of countless U.S. students in the hands of local and state politicians, who often used this responsibility for political purposes. For example, in 1928, Governor Huey Long of Louisiana withheld approval of Shreveport’s bid for a new U.S. Army airbase until the leaders of both Caddo and Bossier parishes accepted his free schoolbook proposition (White, 2006). White (2006) quoted Governor Long, who exclaimed, “I didn’t coerce them…I stomped them into distributing the books” (p. 56).

Because of the Tenth Amendment, federal intervention in public education occurs through monetary incentives. Accountability, for example, commands the educational agendas of state and local policymakers as a result of the No Child Left Behind (NCLB) Act of 2002 (Cooper et al., 2004). This control exists because policymakers accept NCLB funds. Although any state could decline federal funding, and thereby free itself of the requirements of NCLB, the reality is that it would be political suicide to do so. The result is that, as McColl (2005) remarked, “There is little dispute over whether NCLB represents an unprecedented level of federal involvement in the affairs of our public schools” (p. 605).
NCLB narrowly conceives accountability to include state developed standards and high stakes testing as measures of accountability (Hanushek & Raymond, 2005). NCLB did not catalyze the drive for school improvement, but signified the next step after two decades of reform initiated by the 1983 National Commission on Excellence in Education report, entitled *A Nation at Risk* (Commission on No Child Left Behind, 2007). The law prompted numerous states to augment existing accountability systems and a few states to fashion initial accountability systems (Center on Education Policy, 2007). A case in point is Louisiana’s accountability program, initiated by Act 478 of the Louisiana Legislature, which established the School and District Accountability Advisory Commission in 1997 (Louisiana Department of Education [LDE], 2008a). Louisiana expended millions of dollars on nine programs designed to improve student achievement between 1997 and 2005 (Cambre, 2009). Said programs included:

1. Community Based Tutorial Program
2. Distinguished Educator Program
3. K-3 Reading and Mathematics Initiative
4. Learning-Intensive Networking Communities for Success
5. Local Teacher Quality
6. Louisiana Teacher Assistance and Assessment Program
7. Regional Education Service Centers
8. Remediation
9. State Testing and Accountability

The purpose of the present study is to examine the effects of the Louisiana accountability system on student achievement, matriculation, and behavior. The specifics of each program listed above are discussed in Chapter 3. This chapter lays a foundation by presenting national data and international comparisons of both educational expenditures and academic achievement, comparing the U.S. educational system to those of Germany and Japan, and finally, discussing Louisiana’s educational expenditures and academic achievement in comparison to Southern Region States.
International Comparisons

According to *Fast Facts* of the National Center for Education Statistics (NCES), in the United States, projected expenditures for the 2007-08 school year approached $490 billion, which included expenditures for approximately 97,000 public elementary and secondary schools and 50 million public elementary and secondary students (U.S. Department of Education, n.d.a). While this amount seems large, a different perspective emerges when it is compared to the Gross Domestic Product (GDP). GDP is “The total market value of all final goods and services produced in a country in a given year, equal to total consumer, investment and government spending, plus the value of exports, minus the value of imports” (InvestorWords.com, n.d., ¶1). Thus, the GDP provides an index of relative national wealth. Nationwide expenditures in various areas, such as education or the military, can be calculated as a percentage of GDP, thereby giving an estimate of relative priority (value) placed on a given area. Table 1.1 compares the countries that comprise the Organisation for Economic Co-operation and Development (OECD)¹ in terms of total public expenditures for primary and secondary institutions as a percentage of the GDP from 1985 to 2003.

As the column for rank indicates, some countries have the same average resulting in 19 ranked positions. For example, Belgium, the United Kingdom, and the United States each spent an average of 3.6% of GDP on education between 1985 and 2003, giving each of them a rank of ten. Sweden, Denmark, and New Zealand averaged the highest total public expenditures as a percentage of GDP for primary and secondary institutions, while Germany, the Slovak Republic, Japan, Greece, Turkey, and the Russian Federation averaged the lowest total public expenditures

---

¹“The OECD traces its roots to the Marshall Plan. Today, it groups 30 member countries committed to democratic government and the market economy and provides a forum where governments can compare and exchange policy experiences, identify good practices and promote decisions and recommendations. Dialogue, consensus, peer review and pressure are at the very heart of OECD” (Organisation for Economic Co-operation and Development, 2008, p. 10).
as a percentage of GDP for primary and secondary institutions. From 1990 to 2003, U.S. total public expenditures for primary and secondary institutions as a percentage of the GDP for primary and secondary institutions remained at the OECD average or above.

Table 1.1
Total Public Expenditures per OECD Country as a Percentage of the GDP for Primary and Secondary Institutions From 1985 to 2003

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian Federation</td>
<td>-</td>
<td>-</td>
<td>1.9</td>
<td>1.7</td>
<td>2.1</td>
<td>1.9</td>
<td>19</td>
</tr>
<tr>
<td>Turkey</td>
<td>-</td>
<td>2.3</td>
<td>1.4</td>
<td>2.4</td>
<td>2.5</td>
<td>2.2</td>
<td>18</td>
</tr>
<tr>
<td>Greece</td>
<td>-</td>
<td>-</td>
<td>2.8</td>
<td>2.7</td>
<td>2.6</td>
<td>2.7</td>
<td>17</td>
</tr>
<tr>
<td>Japan</td>
<td>-</td>
<td>2.9</td>
<td>2.8</td>
<td>2.7</td>
<td>2.7</td>
<td>2.8</td>
<td>16</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2.7</td>
<td>2.8</td>
<td>2.8</td>
<td>16</td>
</tr>
<tr>
<td>Germany</td>
<td>2.8</td>
<td>-</td>
<td>2.9</td>
<td>3.0</td>
<td>2.9</td>
<td>2.9</td>
<td>15</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>-</td>
<td>-</td>
<td>3.4</td>
<td>3.0</td>
<td>2.9</td>
<td>3.1</td>
<td>14</td>
</tr>
<tr>
<td>Spain</td>
<td>2.9</td>
<td>3.2</td>
<td>3.5</td>
<td>3.1</td>
<td>2.8</td>
<td>3.1</td>
<td>14</td>
</tr>
<tr>
<td>Mexico</td>
<td>-</td>
<td>2.2</td>
<td>3.4</td>
<td>3.4</td>
<td>3.8</td>
<td>3.2</td>
<td>13</td>
</tr>
<tr>
<td>Ireland</td>
<td>4.0</td>
<td>3.3</td>
<td>3.3</td>
<td>3.0</td>
<td>3.1</td>
<td>3.3</td>
<td>12</td>
</tr>
<tr>
<td>Korea, Republic of</td>
<td>-</td>
<td>-</td>
<td>3.0</td>
<td>3.3</td>
<td>3.5</td>
<td>3.3</td>
<td>12</td>
</tr>
<tr>
<td>Australia</td>
<td>3.5</td>
<td>3.2</td>
<td>3.2</td>
<td>3.9</td>
<td>3.4</td>
<td>3.4</td>
<td>11</td>
</tr>
<tr>
<td>Hungary</td>
<td>-</td>
<td>3.5</td>
<td>3.3</td>
<td>3.1</td>
<td>3.5</td>
<td>3.4</td>
<td>11</td>
</tr>
<tr>
<td>Italy</td>
<td>3.2</td>
<td>4.1</td>
<td>3.2</td>
<td>3.2</td>
<td>3.5</td>
<td>3.4</td>
<td>11</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>4.1</td>
<td>3.6</td>
<td>3.0</td>
<td>3.2</td>
<td>3.2</td>
<td>3.4</td>
<td>11</td>
</tr>
<tr>
<td>Belgium</td>
<td>4.0</td>
<td>3.4</td>
<td>3.4</td>
<td>3.4</td>
<td>4.0</td>
<td>3.6</td>
<td>10</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>3.1</td>
<td>3.5</td>
<td>3.8</td>
<td>3.4</td>
<td>4.0</td>
<td>3.6</td>
<td>10</td>
</tr>
<tr>
<td>United States</td>
<td><strong>3.2</strong></td>
<td><strong>3.8</strong></td>
<td><strong>3.5</strong></td>
<td><strong>3.5</strong></td>
<td><strong>3.9</strong></td>
<td><strong>3.6</strong></td>
<td><strong>10</strong></td>
</tr>
<tr>
<td>Austria</td>
<td>3.7</td>
<td>3.6</td>
<td>3.8</td>
<td>3.8</td>
<td>3.7</td>
<td>3.7</td>
<td>9</td>
</tr>
<tr>
<td>Canada</td>
<td>4.1</td>
<td>3.7</td>
<td>4.0</td>
<td>3.3</td>
<td>-</td>
<td>3.8</td>
<td>8</td>
</tr>
<tr>
<td>Poland</td>
<td>-</td>
<td>-</td>
<td>3.3</td>
<td>3.8</td>
<td>4.2</td>
<td>3.8</td>
<td>8</td>
</tr>
<tr>
<td>Switzerland</td>
<td>4.0</td>
<td>3.7</td>
<td>4.1</td>
<td>3.9</td>
<td>4.0</td>
<td>3.9</td>
<td>7</td>
</tr>
<tr>
<td>Finland</td>
<td>-</td>
<td>4.3</td>
<td>4.2</td>
<td>3.6</td>
<td>3.9</td>
<td>4.0</td>
<td>6</td>
</tr>
<tr>
<td>France</td>
<td>-</td>
<td>3.7</td>
<td>4.1</td>
<td>4.1</td>
<td>4.0</td>
<td>4.0</td>
<td>6</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>-</td>
<td>-</td>
<td>4.2</td>
<td>-</td>
<td>4.0</td>
<td>4.1</td>
<td>5</td>
</tr>
<tr>
<td>Norway</td>
<td>4.0</td>
<td>4.1</td>
<td>4.1</td>
<td>3.9</td>
<td>4.6</td>
<td>4.1</td>
<td>5</td>
</tr>
<tr>
<td>Iceland</td>
<td>-</td>
<td>3.3</td>
<td>3.4</td>
<td>4.7</td>
<td>5.2</td>
<td>4.2</td>
<td>4</td>
</tr>
<tr>
<td>Portugal</td>
<td>-</td>
<td>-</td>
<td>4.1</td>
<td>4.2</td>
<td>4.2</td>
<td>4.2</td>
<td>4</td>
</tr>
<tr>
<td>New Zealand</td>
<td>-</td>
<td>3.9</td>
<td>3.8</td>
<td>4.9</td>
<td>4.5</td>
<td>4.3</td>
<td>3</td>
</tr>
<tr>
<td>Denmark</td>
<td>4.7</td>
<td>4.4</td>
<td>4.2</td>
<td>4.8</td>
<td>4.1</td>
<td>4.4</td>
<td>2</td>
</tr>
<tr>
<td>Sweden</td>
<td>-</td>
<td>4.4</td>
<td>4.4</td>
<td>4.9</td>
<td>4.5</td>
<td>4.6</td>
<td>1</td>
</tr>
<tr>
<td>Average</td>
<td>3.7</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.6</td>
<td>3.5</td>
<td></td>
</tr>
</tbody>
</table>


NOTE: Dashes indicate that data are not available. 1985 Germany data represents the former West Germany.

Despite an increased federal commitment, public education in the United States is primarily sustained by state and local funds. Table 1.2 presents the federal, state, and local
revenues, in unadjusted dollars, allocated for public elementary and secondary schools in the United States from 1959 to 2005.

Table 1.2
Federal, State, and Local Percentages of the Total Revenue, in Unadjusted Dollars, for Public Elementary and Secondary Schools From 1959 to 2005

<table>
<thead>
<tr>
<th>School Year</th>
<th>Federal</th>
<th>State</th>
<th>Local</th>
<th>Total (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959-60</td>
<td>4.42</td>
<td>39.11</td>
<td>56.47</td>
<td>14,746,618</td>
</tr>
<tr>
<td>1969-70</td>
<td>8.00</td>
<td>39.89</td>
<td>52.11</td>
<td>40,266,923</td>
</tr>
<tr>
<td>1979-80</td>
<td>9.81</td>
<td>46.81</td>
<td>43.38</td>
<td>96,881,165</td>
</tr>
<tr>
<td>1989-90</td>
<td>6.09</td>
<td>47.11</td>
<td>46.80</td>
<td>208,547,573</td>
</tr>
<tr>
<td>1999-2000</td>
<td>7.27</td>
<td>49.50</td>
<td>43.23</td>
<td>372,943,802</td>
</tr>
<tr>
<td>2004-05</td>
<td>9.19</td>
<td>46.86</td>
<td>43.95</td>
<td>487,761,164</td>
</tr>
</tbody>
</table>


Federal, state, and local contributions varied each year. During this time period, total contributions multiplied approximately 33 times. State contributions surpassed local contributions as the primary revenue source in the late 1970s and federal contributions grew the most between the 1959-60 school year and the 1969-70 school year. Total expenditures per student increased each year (see Table 1.3). Total expenditures encompass, “The sum of current expenditures, non-elementary/secondary expenditures, capital outlay, and interest payments on debts” (Zhou, 2008, p. 22). Zhou (2008) defined current expenditures:

Current expenditures include expenditures for the day-to-day operation of schools and school districts (salaries, benefits, supplies, and purchased services) for public elementary and secondary education. They exclude expenditures for construction, equipment, property, debt services, and programs outside of public elementary and secondary education such as adult education and community services. (p. 2)

Table 1.3 reveals total U.S. expenditures per student in public elementary and secondary schools based on average daily attendance from the 1959-60 school year to the 2004-05 school year.

Prior to the 1950s, there was little federal money allocated to public education. Following the launch of Sputnik in 1957 and the passage of the NDEA in 1958, federal legislation and allocation for public education became common.
Table 1.3
Total U.S. Expenditures per Pupil Based on Average Daily Attendance in Public Elementary and Secondary Schools by School Year from 1959 to 2005

<table>
<thead>
<tr>
<th>School Year</th>
<th>Unadjusted Dollars</th>
<th>Percent Increase</th>
<th>Constant 2006-07 Dollars</th>
<th>Percent Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959-60</td>
<td>471</td>
<td>-</td>
<td>3,272</td>
<td>-</td>
</tr>
<tr>
<td>1969-70</td>
<td>955</td>
<td>102.76</td>
<td>5,161</td>
<td>57.73</td>
</tr>
<tr>
<td>1979-80</td>
<td>2,491</td>
<td>160.84</td>
<td>6,549</td>
<td>26.89</td>
</tr>
<tr>
<td>1989-90</td>
<td>5,550</td>
<td>122.80</td>
<td>8,923</td>
<td>36.25</td>
</tr>
<tr>
<td>1999-2000</td>
<td>8,592</td>
<td>54.81</td>
<td>10,360</td>
<td>16.10</td>
</tr>
<tr>
<td>2004-05</td>
<td>10,770</td>
<td>25.35</td>
<td>11,470</td>
<td>10.71</td>
</tr>
</tbody>
</table>


By 2004-05, total expenditures per pupil in constant 2006-07 dollars increased nearly fourfold from the 1959-60 school year to the 2004-05 school year. For this reason, an examination of the academic achievement of U.S. public school students versus the academic achievement of students around the world is warranted.

International Academic Achievement

The publication of the Binet-Simon mental ability scales in 1905 launched the modern era of behavioral measurement (Thorndike, 2005). Thorndike (2005) noted that, “At the same time that Binet and Simon were developing the first measures of intelligence, E.L. Thorndike and his students at Teachers College of Columbia University were tackling problems related to measuring school abilities” (p. 3). Approximately 60 years later, measurements were introduced to assess international student achievement. Baker (2007) elaborated:

Since Sputnik, the evidence driving worries about the performance of U.S. schools has come primarily from a series of international achievement testing programs that started in 1964 with the First International Mathematics Study (FIMS). This was followed by the Second International Mathematics Study (SIMS), the Third International Mathematics and Science Study (TIMSS), and, most recently, the Programme for International Student Assessment (PISA). (p. 101)

Thus, concerns regarding the academic achievement of U.S. students are not new. Today, according to the U.S. Department of Education (n.d.b), the United States participates in three major assessments:
1. The Progress in International Reading Literacy Study (PIRLS) administered by the International Association for the Evaluation of Educational Achievement (IEA).
2. The Trends in International Mathematics and Science Study (TIMSS) administered by the IEA.
3. The Programme for International Student Assessment (PISA) administered by the OECD.

The 14 IEA founders, which included 6 from the United States (i.e., Arnold Anderson, Benjamin Bloom, Arthur Foshay, Harry Passow, Moshe Smilansky, and Robert Thorndike), recognized the importance of researching educational methods designed and incorporated worldwide to obtain common results (IEA, 2007). The next three subsections give a brief description of each of these measures and scores for the top and bottom scoring countries.

**Progress in International Reading Literacy Study**

PIRLS compares the reading literacy of Grade 4 students internationally (Baer, Baldi, Ayotte, & Green, 2007). In the foreword of *PIRLS 2006 Encyclopedia: A Guide to Reading Education in the Forty PIRLS 2006 Countries*, Hans Wagemaker (2007) stated:

> At the beginning of the new century, IEA re-focused its research program in reading literacy with the establishment of the Progress in International Reading Literacy Study (PIRLS), a regular assessment of 4th grade reading achievement on a 5-year cycle. Conducted in 35 countries, PIRLS 2001 was the first cycle of the PIRLS program, providing a wealth of information about reading achievement and the home, school, and classroom environment for the teaching and learning of reading. PIRLS 2006 was the second study in the PIRLS cycle, collecting data on 4th grade reading achievement and the context for learning reading in 40 countries. (p. 1)

Mullis, Martin, Kennedy, & Foy (2007) added that through coordination with the IEA Secretariat in Amsterdam, member countries determine whether or not they will participate in a study. Both Table 1.4 and Table 1.5 reveal the top ten and bottom ten performing countries on PIRLS 2001 and PIRLS 2006, respectively. For the present study, data for the learning context were not relevant because such data are not reported by the Louisiana accountability program.
Of the participating countries, Sweden, The Netherlands, Bulgaria, Canada, Hungary, Italy, and Germany remained among the top 10 performing countries in 2001 and 2006, while Norway, the Republic of Moldova, the Republic of Macedonia, the Islamic Republic of Iran, and Kuwait remained among the bottom 10 performing countries in 2001 and 2006. Table 1.4 shows that in 2001, U.S. Grade 4 students possessed the eighth highest average reading literacy scale score, which exceeded the international average by 42 points. By 2006, U.S. Grade 4 students fell from the top ten performing countries, but exceeded the international average by 34 points (see Table 1.5).

Trends in International Mathematics and Science Study

The IEA (2007) discussed the infancy of TIMSS:

In 1995, IEA completed data collection for the Third International Mathematics and Science Study (TIMSS). Forty-five countries participated in TIMSS, with more than half a million students encompassing five grades tested. The overall aims of the study were to measure the mathematics and science achievement in the various target populations and to identify the major in- and out-of-school determinants of the educational outcomes. (¶15)

Like PIRLS, member countries that decide to participate do so through the IEA Secretariat in Amsterdam (Mullis et al., 2007). As noted, TIMSS began in 1964 as an international test of mathematics achievement. Target grades for the study varied over the years. TIMSS 2003 included 46 countries at Grade 4, Grade 8, or both (Gonzales et al., 2004). “The Trends in International Mathematics and Science Study (TIMSS) 2007 is the fourth time since 1995 that this international comparison of student achievement has been conducted (Gonzales, Williams, Jocelyn, Roey, Kastberg, & Brenwald, 2008, p.1). Thus, TIMSS obtained data in 1995, 1999, 2003, and 2007 (U.S. Department of Education, n.d.c; IEA, 2007). Currently, TIMSS is recognized as the Trends in Mathematics and Science Study (IEA, 2007). Table 1.6, Table 1.7,
Table 1.8, and Table 1.9 reveal the top ten and bottom ten performing countries on the TIMSS 1995, 1999, 2003, and 2007 Grade 8 mathematics and science assessments.

The United States scored among the bottom ten countries on the TIMSS 1995 Grade 8 mathematics assessment (see Table 1.6) and among the top ten countries on the TIMSS 2007 Grade 8 mathematics assessment (see Table 1.9). Of the participating counties, Table 1.6, Table 1.7, Table 1.8, and Table 1.9 reveal that Singapore, Japan, the Republic of Korea, Hong Kong SAR, Hungary, and the Russian Federation remained among the top ten on the TIMSS 1995, 1999, 2003, and 2007 Grade 8 mathematics assessments, while no country remained among the bottom ten in 1995, 1999, 2003, and 2007. The United States scored among the bottom ten countries on the TIMSS 1995 Grade 8 science assessment (see Table 1.6) and among the top ten countries on both the TIMSS 2003 Grade 8 science assessment (see Table 1.8) and the TIMSS 2007 Grade 8 science assessment (see Table 1.9). Also, of the participating counties, Table 1.6, Table 1.7, Table 1.8, Table 1.9 reveal that Singapore, Japan, the Republic of Korea, and Hungary remained among the top performing countries on the TIMSS 1995, 1999, 2003, and 2007 Grade 8 science assessments, while no country remained among the bottom ten in 1995, 1999, 2003, and 2007.

Programme for International Student Assessment

Canada, France, Germany, Italy, Japan, the Russian Federation, the United Kingdom, and the United States compose some of the most economically advanced countries in the world, collectively referred to as the Group of Eight (G-8) countries (Miller, Sen, & Malley, 2007). Table 1.10 compares the PISA scores of G-8 countries since 2000. According to the U.S. Department of Education (n.d.d),

The Program for International Student Assessment (PISA) was developed by the OECD to assess the reading, mathematics and science literacy of 15-year-olds in participating
countries. PISA assesses how well prepared students are for life beyond the classroom by focusing on the application of knowledge and skills to problems with a real-life context. PISA results reflect the influences of education systems and societies on young people up to the age of 15. PISA represents an international collaboration that provides information for policymakers and researchers throughout the world. (¶1)

Beginning in 2000, PISA administrations occurred every three years with each administration extensively focusing on one area: reading literacy in 2000, mathematics literacy in 2003, and science literacy in 2006 (OECD, n.d.a). To partake in PISA, the OECD (n.d.b) elaborated:

Countries who are interested in participating in PISA contact the OECD Secretariat. The PISA Governing Board then approves membership according to certain criteria. Participating countries must have the technical expertise necessary to administer an international assessment and must be able to meet the full costs of participation. To take part in a cycle of PISA, countries must join two years before the survey takes place. For example, all countries participating in PISA 2009 will have joined before March 2007. (¶7)

Table 1.10 shows the average combined literacy PISA scores of G-8 countries for the 2000 reading, 2003 mathematics, and 2006 science assessments.

Canada remained among the top two performing countries and the Russian Federation performed the lowest on PISA 2000, 2003, and 2006. The United States produced the fifth highest average reading literacy score in 2000, the fifth highest mathematics literacy score in 2003, and the sixth highest science literacy score in 2006.

To contrast the United States’ strong monetary contributions to public education among the G-8 and its largely average record of international academic achievement on most international assessments, the following section delineates two countries with weaker monetary contributions to public education and above average records of international academic achievement. The U.S. educational system is contrasted with those of Germany and Japan.
### Table 1.4
PIRLS 2001 Average Scale Score for the Top 10 and Bottom 10 Performing Countries

<table>
<thead>
<tr>
<th>Rank</th>
<th>Rank</th>
<th>Top 10</th>
<th>Score</th>
<th>Bottom 10</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Sweden</td>
<td>561</td>
<td>Kuwait</td>
<td>396</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>The Netherlands</td>
<td>554</td>
<td>Islamic Republic of Iran</td>
<td>414</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>England</td>
<td>553</td>
<td>Argentina</td>
<td>420</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Bulgaria</td>
<td>550</td>
<td>Colombia</td>
<td>422</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>Latvia</td>
<td>545</td>
<td>Republic of Macedonia</td>
<td>442</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>Canada</td>
<td>544</td>
<td>Turkey</td>
<td>449</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>Hungary</td>
<td>543</td>
<td>Republic of Moldova</td>
<td>492</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Lithuania</td>
<td>543</td>
<td>Cyprus</td>
<td>494</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>United States</td>
<td>542</td>
<td>Norway</td>
<td>499</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>Germany</td>
<td>539</td>
<td>Slovenia</td>
<td>502</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average</td>
<td>500</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Ontario and Quebec are the only provinces that represent Canada.
Table 1.5
PIRLS 2006 Average Scale Score for the Top 10 and Bottom 10 Performing Countries

<table>
<thead>
<tr>
<th>Rank</th>
<th>Top 10</th>
<th>Score</th>
<th>Rank</th>
<th>Bottom 10</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Russian Federation</td>
<td>565</td>
<td>1</td>
<td>Kuwait</td>
<td>330</td>
</tr>
<tr>
<td>2</td>
<td>Hong Kong SAR</td>
<td>564</td>
<td>2</td>
<td>Qatar</td>
<td>353</td>
</tr>
<tr>
<td>3</td>
<td>Singapore</td>
<td>558</td>
<td>3</td>
<td>Indonesia</td>
<td>405</td>
</tr>
<tr>
<td>4</td>
<td>Luxembourg</td>
<td>557</td>
<td>4</td>
<td>Islamic Republic of Iran</td>
<td>421</td>
</tr>
<tr>
<td>5</td>
<td>Hungary</td>
<td>551</td>
<td>5</td>
<td>Trinidad and Tobago</td>
<td>436</td>
</tr>
<tr>
<td>6</td>
<td>Italy</td>
<td>551</td>
<td>6</td>
<td>Republic of Macedonia</td>
<td>442</td>
</tr>
<tr>
<td>7</td>
<td>Canada</td>
<td>550</td>
<td>7</td>
<td>Georgia</td>
<td>471</td>
</tr>
<tr>
<td>8</td>
<td>Sweden</td>
<td>549</td>
<td>8</td>
<td>Romania</td>
<td>489</td>
</tr>
<tr>
<td>9</td>
<td>Germany</td>
<td>548</td>
<td>9</td>
<td>Norway</td>
<td>498</td>
</tr>
<tr>
<td>9</td>
<td>Belgium - Flemish</td>
<td>547</td>
<td>10</td>
<td>Belgium - French</td>
<td>500</td>
</tr>
<tr>
<td>9</td>
<td>Bulgaria</td>
<td>547</td>
<td>10</td>
<td>Republic of Moldova</td>
<td>500</td>
</tr>
<tr>
<td>9</td>
<td>The Netherlands</td>
<td>547</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Denmark</td>
<td>546</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>United States</strong></td>
<td></td>
<td><strong>540</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Average 506

SOURCE: Adapted from “Distribution of Reading Achievement” in *PIRLS 2006 International Report: IEA's Progress in International Reading Literacy Study in Primary Schools in 40 Countries* by Mullis, Martin, Kennedy, and Foy (2007).

NOTE: Canada’s score was averaged and is based on the five independently submitted provincial scores: Alberta, British Columbia, Nova Scotia, Ontario, and Quebec.
<table>
<thead>
<tr>
<th>Rank</th>
<th>Mathematics Rank</th>
<th>Top 10 Score</th>
<th>Rank</th>
<th>Bottom 10 Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Singapore</td>
<td>609</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Japan</td>
<td>581</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>Republic of Korea</td>
<td>581</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>Hong Kong SAR</td>
<td>569</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>Belgium - Flemish</td>
<td>550</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>Sweden</td>
<td>540</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>Slovak Republic</td>
<td>534</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>The Netherlands</td>
<td>529</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>9</td>
<td>Bulgaria</td>
<td>527</td>
<td>9</td>
</tr>
<tr>
<td>8</td>
<td>10</td>
<td>Hungary</td>
<td>527</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Russian Federation</td>
<td>524</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Australia</td>
<td>509</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Science Rank</th>
<th>Top 10 Score</th>
<th>Rank</th>
<th>Bottom 10 Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Singapore</td>
<td>580</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Japan</td>
<td>554</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Sweden</td>
<td>553</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Republic of Korea</td>
<td>546</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>Bulgaria</td>
<td>545</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>The Netherlands</td>
<td>541</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>Hungary</td>
<td>537</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Belgium - Flemish</td>
<td>533</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>Slovak Republic</td>
<td>532</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>Russian Federation</td>
<td>523</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

Average: Mathematics - 517, Science - 516

Table 1.7
TIMSS 1999 Grade 8 Average Mathematics and Science Scale Scores for the Top 10 and Bottom 10 Performing Countries

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td>Top 10</td>
<td>Score</td>
<td>Rank</td>
<td>Bottom 10</td>
<td>Score</td>
<td>Rank</td>
<td>Bottom 10</td>
<td>Score</td>
<td>Rank</td>
</tr>
<tr>
<td>1</td>
<td>Singapore</td>
<td>604</td>
<td>1</td>
<td>South Africa</td>
<td>275</td>
<td>2</td>
<td>Philippines</td>
<td>345</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Republic of Korea</td>
<td>587</td>
<td>2</td>
<td>Philippines</td>
<td>345</td>
<td>4</td>
<td>Indonesia</td>
<td>403</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Chinese Taipei</td>
<td>585</td>
<td>3</td>
<td>Chile</td>
<td>392</td>
<td>6</td>
<td>Jordan</td>
<td>428</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Hong Kong SAR</td>
<td>582</td>
<td>4</td>
<td>Indonesia</td>
<td>403</td>
<td>8</td>
<td>Tunisia</td>
<td>448</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td>Japan</td>
<td>579</td>
<td>5</td>
<td>Islamic Republic of Iran</td>
<td>422</td>
<td>10</td>
<td>Russia Federation</td>
<td>526</td>
<td>10</td>
</tr>
</tbody>
</table>

**United States**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td>Top 10</td>
<td>Score</td>
<td>Rank</td>
<td>Bottom 10</td>
<td>Score</td>
<td>Rank</td>
<td>Bottom 10</td>
<td>Score</td>
<td>Rank</td>
</tr>
<tr>
<td>1</td>
<td>Chinese Taipei</td>
<td>569</td>
<td>1</td>
<td>South Africa</td>
<td>243</td>
<td>2</td>
<td>Singapore</td>
<td>568</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Singapore</td>
<td>568</td>
<td>2</td>
<td>Philippines</td>
<td>345</td>
<td>3</td>
<td>Hungary</td>
<td>552</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Hungary</td>
<td>552</td>
<td>3</td>
<td>Chile</td>
<td>420</td>
<td>4</td>
<td>Japan</td>
<td>550</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Japan</td>
<td>550</td>
<td>4</td>
<td>Tunisia</td>
<td>430</td>
<td>5</td>
<td>Republic of Korea</td>
<td>549</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Republic of Korea</td>
<td>549</td>
<td>5</td>
<td>Indonesia</td>
<td>435</td>
<td>6</td>
<td>The Netherlands</td>
<td>545</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>The Netherlands</td>
<td>545</td>
<td>6</td>
<td>Islamic Republic of Iran</td>
<td>448</td>
<td>7</td>
<td>Belgium - Flemish</td>
<td>535</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>Belgium - Flemish</td>
<td>535</td>
<td>7</td>
<td>Jordan</td>
<td>450</td>
<td>8</td>
<td>Slovak Republic</td>
<td>535</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>Slovak Republic</td>
<td>535</td>
<td>8</td>
<td>Republic of Macedonia</td>
<td>458</td>
<td>9</td>
<td>Hong Kong SAR</td>
<td>530</td>
<td>9</td>
</tr>
<tr>
<td>9</td>
<td>Hong Kong SAR</td>
<td>530</td>
<td>9</td>
<td>Republic of Moldova</td>
<td>459</td>
<td>10</td>
<td>Russian Federation</td>
<td>529</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>Russian Federation</td>
<td>529</td>
<td>10</td>
<td>Cyprus</td>
<td>460</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**United States**

<table>
<thead>
<tr>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td>Top 10</td>
<td>Score</td>
<td>Rank</td>
<td>Bottom 10</td>
<td>Score</td>
<td>Rank</td>
<td>Bottom 10</td>
<td>Score</td>
<td>Rank</td>
</tr>
<tr>
<td>1</td>
<td>Chinese Taipei</td>
<td>569</td>
<td>1</td>
<td>South Africa</td>
<td>243</td>
<td>2</td>
<td>Singapore</td>
<td>568</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Singapore</td>
<td>568</td>
<td>2</td>
<td>Philippines</td>
<td>345</td>
<td>3</td>
<td>Hungary</td>
<td>552</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Hungary</td>
<td>552</td>
<td>3</td>
<td>Chile</td>
<td>420</td>
<td>4</td>
<td>Japan</td>
<td>550</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Japan</td>
<td>550</td>
<td>4</td>
<td>Tunisia</td>
<td>430</td>
<td>5</td>
<td>Republic of Korea</td>
<td>549</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Republic of Korea</td>
<td>549</td>
<td>5</td>
<td>Indonesia</td>
<td>435</td>
<td>6</td>
<td>The Netherlands</td>
<td>545</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>The Netherlands</td>
<td>545</td>
<td>6</td>
<td>Islamic Republic of Iran</td>
<td>448</td>
<td>7</td>
<td>Belgium - Flemish</td>
<td>535</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>Belgium - Flemish</td>
<td>535</td>
<td>7</td>
<td>Jordan</td>
<td>450</td>
<td>8</td>
<td>Slovak Republic</td>
<td>535</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>Slovak Republic</td>
<td>535</td>
<td>8</td>
<td>Republic of Macedonia</td>
<td>458</td>
<td>9</td>
<td>Hong Kong SAR</td>
<td>530</td>
<td>9</td>
</tr>
<tr>
<td>9</td>
<td>Hong Kong SAR</td>
<td>530</td>
<td>9</td>
<td>Republic of Moldova</td>
<td>459</td>
<td>10</td>
<td>Russian Federation</td>
<td>529</td>
<td>10</td>
</tr>
</tbody>
</table>

**United States**

<table>
<thead>
<tr>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td>Top 10</td>
<td>Score</td>
<td>Rank</td>
<td>Bottom 10</td>
<td>Score</td>
<td>Rank</td>
<td>Bottom 10</td>
<td>Score</td>
<td>Rank</td>
</tr>
<tr>
<td>1</td>
<td>Chinese Taipei</td>
<td>569</td>
<td>1</td>
<td>South Africa</td>
<td>243</td>
<td>2</td>
<td>Singapore</td>
<td>568</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Singapore</td>
<td>568</td>
<td>2</td>
<td>Philippines</td>
<td>345</td>
<td>3</td>
<td>Hungary</td>
<td>552</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Hungary</td>
<td>552</td>
<td>3</td>
<td>Chile</td>
<td>420</td>
<td>4</td>
<td>Japan</td>
<td>550</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Japan</td>
<td>550</td>
<td>4</td>
<td>Tunisia</td>
<td>430</td>
<td>5</td>
<td>Republic of Korea</td>
<td>549</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Republic of Korea</td>
<td>549</td>
<td>5</td>
<td>Indonesia</td>
<td>435</td>
<td>6</td>
<td>The Netherlands</td>
<td>545</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>The Netherlands</td>
<td>545</td>
<td>6</td>
<td>Islamic Republic of Iran</td>
<td>448</td>
<td>7</td>
<td>Belgium - Flemish</td>
<td>535</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>Belgium - Flemish</td>
<td>535</td>
<td>7</td>
<td>Jordan</td>
<td>450</td>
<td>8</td>
<td>Slovak Republic</td>
<td>535</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>Slovak Republic</td>
<td>535</td>
<td>8</td>
<td>Republic of Macedonia</td>
<td>458</td>
<td>9</td>
<td>Hong Kong SAR</td>
<td>530</td>
<td>9</td>
</tr>
<tr>
<td>9</td>
<td>Hong Kong SAR</td>
<td>530</td>
<td>9</td>
<td>Republic of Moldova</td>
<td>459</td>
<td>10</td>
<td>Russian Federation</td>
<td>529</td>
<td>10</td>
</tr>
</tbody>
</table>

**United States**

<table>
<thead>
<tr>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td>Top 10</td>
<td>Score</td>
<td>Rank</td>
<td>Bottom 10</td>
<td>Score</td>
<td>Rank</td>
<td>Bottom 10</td>
<td>Score</td>
<td>Rank</td>
</tr>
<tr>
<td>1</td>
<td>Chinese Taipei</td>
<td>569</td>
<td>1</td>
<td>South Africa</td>
<td>243</td>
<td>2</td>
<td>Singapore</td>
<td>568</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Singapore</td>
<td>568</td>
<td>2</td>
<td>Philippines</td>
<td>345</td>
<td>3</td>
<td>Hungary</td>
<td>552</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Hungary</td>
<td>552</td>
<td>3</td>
<td>Chile</td>
<td>420</td>
<td>4</td>
<td>Japan</td>
<td>550</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Japan</td>
<td>550</td>
<td>4</td>
<td>Tunisia</td>
<td>430</td>
<td>5</td>
<td>Republic of Korea</td>
<td>549</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Republic of Korea</td>
<td>549</td>
<td>5</td>
<td>Indonesia</td>
<td>435</td>
<td>6</td>
<td>The Netherlands</td>
<td>545</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>The Netherlands</td>
<td>545</td>
<td>6</td>
<td>Islamic Republic of Iran</td>
<td>448</td>
<td>7</td>
<td>Belgium - Flemish</td>
<td>535</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>Belgium - Flemish</td>
<td>535</td>
<td>7</td>
<td>Jordan</td>
<td>450</td>
<td>8</td>
<td>Slovak Republic</td>
<td>535</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>Slovak Republic</td>
<td>535</td>
<td>8</td>
<td>Republic of Macedonia</td>
<td>458</td>
<td>9</td>
<td>Hong Kong SAR</td>
<td>530</td>
<td>9</td>
</tr>
<tr>
<td>9</td>
<td>Hong Kong SAR</td>
<td>530</td>
<td>9</td>
<td>Republic of Moldova</td>
<td>459</td>
<td>10</td>
<td>Russian Federation</td>
<td>529</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 1.8
TIMSS 2003 Grade 8 Average Mathematics and Science Scale Scores for the Top 10 and Bottom 10 Performing Countries

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Top 10</th>
<th>Score</th>
<th>Rank</th>
<th>Bottom 10</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Singapore</td>
<td>605</td>
<td>1</td>
<td>South Africa</td>
<td>264</td>
</tr>
<tr>
<td>2</td>
<td>Republic of Korea</td>
<td>589</td>
<td>2</td>
<td>Philippines</td>
<td>378</td>
</tr>
<tr>
<td>3</td>
<td>Hong Kong SAR</td>
<td>586</td>
<td>3</td>
<td>Chile</td>
<td>387</td>
</tr>
<tr>
<td>4</td>
<td>Chinese Taipei</td>
<td>585</td>
<td>4</td>
<td>Tunisia</td>
<td>410</td>
</tr>
<tr>
<td>5</td>
<td>Japan</td>
<td>570</td>
<td>5</td>
<td>Indonesia</td>
<td>411</td>
</tr>
<tr>
<td>6</td>
<td>Belgium - Flemish</td>
<td>537</td>
<td>5</td>
<td>Islamic Republic of Iran</td>
<td>411</td>
</tr>
<tr>
<td>7</td>
<td>The Netherlands</td>
<td>536</td>
<td>6</td>
<td>Jordan</td>
<td>424</td>
</tr>
<tr>
<td>8</td>
<td>Hungary</td>
<td>529</td>
<td>7</td>
<td>Republic of Macedonia</td>
<td>435</td>
</tr>
<tr>
<td>9</td>
<td>Malaysia</td>
<td>508</td>
<td>8</td>
<td>Cyprus</td>
<td>459</td>
</tr>
<tr>
<td>9</td>
<td>Russian Federation</td>
<td>508</td>
<td>9</td>
<td>Republic of Moldova</td>
<td>460</td>
</tr>
<tr>
<td>9</td>
<td>Slovak Republic</td>
<td>508</td>
<td>10</td>
<td>Norway</td>
<td>461</td>
</tr>
<tr>
<td>10</td>
<td>Australia</td>
<td>505</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Latvia - LSS</td>
<td>505</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>485</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science</th>
<th>Top 10</th>
<th>Score</th>
<th>Rank</th>
<th>Bottom 10</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Singapore</td>
<td>578</td>
<td>1</td>
<td>South Africa</td>
<td>244</td>
</tr>
<tr>
<td>2</td>
<td>Chinese Taipei</td>
<td>571</td>
<td>2</td>
<td>Philippines</td>
<td>377</td>
</tr>
<tr>
<td>3</td>
<td>Republic of Korea</td>
<td>558</td>
<td>3</td>
<td>Tunisia</td>
<td>404</td>
</tr>
<tr>
<td>4</td>
<td>Hong Kong SAR</td>
<td>556</td>
<td>4</td>
<td>Chile</td>
<td>413</td>
</tr>
<tr>
<td>5</td>
<td>Japan</td>
<td>552</td>
<td>5</td>
<td>Indonesia</td>
<td>420</td>
</tr>
<tr>
<td>6</td>
<td>Hungary</td>
<td>543</td>
<td>6</td>
<td>Cyprus</td>
<td>441</td>
</tr>
<tr>
<td>7</td>
<td>The Netherlands</td>
<td>536</td>
<td>7</td>
<td>Republic of Macedonia</td>
<td>449</td>
</tr>
<tr>
<td>8</td>
<td>Australia</td>
<td>527</td>
<td>8</td>
<td>Islamic Republic of Iran</td>
<td>453</td>
</tr>
<tr>
<td>9</td>
<td><strong>United States</strong></td>
<td>527</td>
<td>9</td>
<td>Romania</td>
<td>470</td>
</tr>
<tr>
<td>10</td>
<td>Sweden</td>
<td>524</td>
<td>10</td>
<td>Republic of Moldova</td>
<td>472</td>
</tr>
<tr>
<td>10</td>
<td>New Zealand</td>
<td>520</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Slovenia</td>
<td>520</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>491</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1.9  
TIMSS 2007 Grade 8 Average Mathematics and Science Scale Scores for the Top 10 and Bottom 10 Performing Countries

<table>
<thead>
<tr>
<th>Rank</th>
<th>Mathematics Rank</th>
<th>Top 10 Score</th>
<th>Mathematics Rank</th>
<th>Bottom 10 Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chinese Taipei</td>
<td>598</td>
<td>1</td>
<td>Qatar</td>
</tr>
<tr>
<td>2</td>
<td>Republic of Korea</td>
<td>597</td>
<td>2</td>
<td>Ghana</td>
</tr>
<tr>
<td>3</td>
<td>Singapore</td>
<td>593</td>
<td>3</td>
<td>Saudi Arabia</td>
</tr>
<tr>
<td>4</td>
<td>Hong Kong SAR</td>
<td>572</td>
<td>4</td>
<td>El Salvador</td>
</tr>
<tr>
<td>5</td>
<td>Japan</td>
<td>570</td>
<td>5</td>
<td>Kuwait</td>
</tr>
<tr>
<td>6</td>
<td>Hungary</td>
<td>517</td>
<td>6</td>
<td>Botswana</td>
</tr>
<tr>
<td>7</td>
<td>England</td>
<td>513</td>
<td>7</td>
<td>Palestinian National Authority</td>
</tr>
<tr>
<td>8</td>
<td>Russian Federation</td>
<td>512</td>
<td>8</td>
<td>Oman</td>
</tr>
<tr>
<td>9</td>
<td>United States</td>
<td>508</td>
<td>9</td>
<td>Colombia</td>
</tr>
<tr>
<td>10</td>
<td>Lithuania</td>
<td>506</td>
<td>10</td>
<td>Algeria</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td></td>
<td></td>
<td>452</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Science Rank</th>
<th>Top 10 Score</th>
<th>Science Rank</th>
<th>Bottom 10 Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Singapore</td>
<td>567</td>
<td>1</td>
<td>Ghana</td>
</tr>
<tr>
<td>2</td>
<td>Chinese Taipei</td>
<td>561</td>
<td>2</td>
<td>Qatar</td>
</tr>
<tr>
<td>3</td>
<td>Japan</td>
<td>554</td>
<td>3</td>
<td>Botswana</td>
</tr>
<tr>
<td>4</td>
<td>Republic of Korea</td>
<td>553</td>
<td>4</td>
<td>El Salvador</td>
</tr>
<tr>
<td>5</td>
<td>England</td>
<td>542</td>
<td>5</td>
<td>Saudi Arabia</td>
</tr>
<tr>
<td>6</td>
<td>Hungary</td>
<td>539</td>
<td>6</td>
<td>Palestinian National Authority</td>
</tr>
<tr>
<td>6</td>
<td>Czech Republic</td>
<td>539</td>
<td>7</td>
<td>Algeria</td>
</tr>
<tr>
<td>7</td>
<td>Slovenia</td>
<td>538</td>
<td>7</td>
<td>Egypt</td>
</tr>
<tr>
<td>8</td>
<td>Hong Kong SAR</td>
<td>530</td>
<td>8</td>
<td>Lebanon</td>
</tr>
<tr>
<td>8</td>
<td>Russian Federation</td>
<td>530</td>
<td>9</td>
<td>Colombia</td>
</tr>
<tr>
<td>9</td>
<td>United States</td>
<td>520</td>
<td>10</td>
<td>Kuwait</td>
</tr>
<tr>
<td>10</td>
<td>Lithuania</td>
<td>519</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td></td>
<td></td>
<td>467</td>
</tr>
</tbody>
</table>

Table 1.10
Average Combined PISA Scores of G-8 Countries for the 2000 Reading, 2003 Mathematics, and 2006 Science Assessments

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>534</td>
<td>1</td>
<td>532</td>
<td>2</td>
<td>534</td>
<td>1</td>
<td>3.8</td>
<td>2</td>
</tr>
<tr>
<td>France</td>
<td>505</td>
<td>4</td>
<td>511</td>
<td>3</td>
<td>495</td>
<td>5</td>
<td>4.0</td>
<td>1</td>
</tr>
<tr>
<td>Germany</td>
<td>484</td>
<td>7</td>
<td>503</td>
<td>4</td>
<td>516</td>
<td>3</td>
<td>2.9</td>
<td>5</td>
</tr>
<tr>
<td>Italy</td>
<td>487</td>
<td>6</td>
<td>466</td>
<td>7</td>
<td>475</td>
<td>8</td>
<td>3.4</td>
<td>4</td>
</tr>
<tr>
<td>Japan</td>
<td>522</td>
<td>3</td>
<td>534</td>
<td>1</td>
<td>531</td>
<td>2</td>
<td>2.8</td>
<td>6</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>462</td>
<td>8</td>
<td>468</td>
<td>6</td>
<td>479</td>
<td>7</td>
<td>1.9</td>
<td>7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>523</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>515</td>
<td>4</td>
<td>3.6</td>
<td>3</td>
</tr>
<tr>
<td>United States</td>
<td><strong>504</strong></td>
<td><strong>5</strong></td>
<td><strong>483</strong></td>
<td><strong>5</strong></td>
<td><strong>489</strong></td>
<td><strong>6</strong></td>
<td><strong>3.6</strong></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td>Average</td>
<td>503</td>
<td>500</td>
<td>504</td>
<td></td>
<td></td>
<td></td>
<td>3.3</td>
<td></td>
</tr>
</tbody>
</table>


a Represents each country’s total public expenditures as a percentage of its Gross Domestic Product allocated to primary and secondary institutions as shown in Table 1.1. b Ranks each country’s total public expenditures as a percentage of its Gross Domestic Product allocated to primary and secondary institutions with the G-8 countries. NOTE: Dashes indicate that data were not available.

A Comparison of Germany, Japan, and the United States

As displayed in Table 1.1, based on the percentage of the GDP allocated for primary and secondary institutions, Germany and Japan ranked fifteenth and sixteenth, respectively, out of the nineteen ranking positions regarding the average total expenditures from the 1985-86 school year to the 2002-03 school year; the United States tied the United Kingdom for tenth in average total expenditures. Among the G-8 countries, during this period Germany and Japan ranked fifth and sixth, respectively, in average total expenditures, while the United States ranked third in average total expenditures.

Yet, unlike the United States, Germany and Japan regularly scored high on measurements of international student achievement. Germany and the United States scored among the top ten countries on PIRLS 2001 (see Table 1.4); Germany scored among the top ten countries on
PIRLS 2006, while the United States scored above average, but outside of the top ten (see Table 1.5). Japan did not participate in PIRLS, but consistently scored among the top five countries on the TIMSS 1995, 1999, 2003, and 2007 Grade 8 mathematics and Grade 8 science assessments (see Table 1.6, Table 1.7, Table 1.8 and Table 1.9). The United States scored among the bottom ten countries on TIMSS 1995 Grade 8 mathematics and Grade 8 science assessments (see Table 1.6). The United States scored in the middle on the TIMSS 1999 Grade 8 mathematics, TIMSS 1999 Grade 8 science, and TIMSS 2003 Grade 8 mathematics assessments, but yielded a top ten score on the TIMSS 2003 Grade 8 science, TIMSS 2007 Grade 8 mathematics, and TIMSS 2007 Grade 8 science assessments (see Table 1.7, Table 1.8, and Table 1.9). Germany did not participate in the TIMSS in 1995, 1999, 2003, and 2007. The United States scored higher than Germany on PISA reading literacy in 2000; both Germany and Japan scored higher than the United States on PISA mathematics literacy in 2003 and PISA science literacy in 2006 (see Table 1.10). While Germany ranked seventh among the G-8 countries on PISA reading literacy in 2000, it ranked fourth on PISA mathematics literacy in 2003, and third on PISA science literacy in 2006. Japan held the third highest score on PISA reading literacy in 2000, the highest score on PISA mathematics literacy in 2003, and the second highest score on PISA science literacy in 2006. The United States ranked fifth and sixth in 2000 reading literacy, 2003 mathematics literacy, and 2006 science literacy, respectively. In light of the international academic standings and financial commitments to education made by Germany, Japan, and the United States, understanding the basic tenets of their respective educational systems is helpful.

Alexander and Alexander (2001) wrote that, “Public education is shaped by the political philosophy of particular governments and the social and cultural traditions of the country in which those governments are found” (p. 21). Both the United States and Japan liberally promote
academic achievement due to the commonly held perspective that educational success fosters national success (Wieczorek, 2008). As early as the 1630s, the Massachusetts colonists decided upon the need for tax supported schooling. By the mid-1800s, the Common School Movement promoted free education to instill democracy and to disperse generalized knowledge (Alexander & Alexander, 2001). Since the Common School Movement, education in the United States has been valued as a right freely available to all children of European descent. Okamoto (2001) declared that the Japanese interest in education resembles religion. Okamoto added that the Japanese educational system primarily sought kokoro, or character development, instead of skill development until after World War II. On the other hand, the German educational system evolved during the Middle Ages and is based on social class (“Wasting Brains,” 2006). German students are tracked into one of three types of schools; one path leads to apprenticeships and occupation in the trades, one to white-collar jobs, and the third to university admittance (Auernheimer, 2006; “Wasting Brains,” 2006). Thus, the purposes of education varied historically among the three countries.

Similar to the United States, Utitz (2003) acknowledged that, “Germany is a federal country, in which the issue of education comes under the remit of individual federal states and their district and regional administrations” (p. 33). In Germany, curricular decisions are determined at the state level despite the development of de facto national standards to compare educational attainments across states (Stevenson & Nerison-Low, 2002). Quite the opposite, in Japan, the nationally centralized Ministry of Education exercises control over educational matters (Okano & Tsuchiya, 1999; Okamoto, 2001; Stevenson & Nerison-Low, 2002). Specifically, a national curriculum was established by the Ministry of Education (Cummings, 1974; Cummings, 1980; Okamoto, 2001; Stevenson & Nerison-Low, 2002)
Table 1.1 displays preprimary, primary, lower secondary, and upper secondary educational levels by ages and schooling years in the United States, Germany, and Japan.

### Table 1.1
Educational Levels by Ages and Schooling Years in the United States, Germany, and Japan

<table>
<thead>
<tr>
<th>Country</th>
<th>Preprimary</th>
<th>Primary</th>
<th>Lower Secondary</th>
<th>Upper Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age</td>
<td>Year</td>
<td>Age</td>
<td>Year</td>
</tr>
<tr>
<td>United States</td>
<td>3-5</td>
<td>PK-K</td>
<td>6-11</td>
<td>1-6</td>
</tr>
<tr>
<td>Germany</td>
<td>3-5</td>
<td>K</td>
<td>6-9</td>
<td>1-4</td>
</tr>
<tr>
<td>Japan</td>
<td>3-5</td>
<td>Hoikuen</td>
<td>6-11</td>
<td>1-6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Year</th>
<th>Age</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>12-14</td>
<td>7-9</td>
<td>15-18</td>
<td>10-12</td>
</tr>
<tr>
<td>Germany</td>
<td>10-14, 15</td>
<td>5-9, 10</td>
<td>15-18, 19</td>
<td>10-13</td>
</tr>
<tr>
<td>Japan</td>
<td>12-14</td>
<td>7-9</td>
<td>15-18</td>
<td>10-12</td>
</tr>
</tbody>
</table>


Educational levels in the United States and Japan appear analogous, while Germany slightly varies. Students in the United States, Germany, and Japan can expect to begin primary schooling at age 6, and students complete upper secondary schooling by age 18 in the United States and Japan and at age 18 or 19 in Germany. However, in the United States, Stevenson and Nerison-Low (2002) added:

> There is no uniform configuration throughout the country in the organization of primary and secondary education. Elementary school begins with kindergarten, but may continue through grades 5, 6, or 8, depending on decisions made at the local level. High school typically begins at grade 9 or 10, with middle or junior high schools usually covering the intervening years between elementary school and high school. Students graduate from high school following grade 12. In some locations, a single school may enroll students from kindergarten through grade 12. (p. 15-16)

Different from Germany and Japan, in the United States students can begin compulsory schooling prior to age six because some states mandate preprimary education. Preprimary education is commonly referred to as nursery school, prekindergarten, or kindergarten in the United States; kindergarten in Germany; and Hoikuen or Yochien in Japan (Miller, Sen, & Malley, 2007). To illustrate the U.S. commitment to preprimary education, Table 1.12 presents the percentage of 3-year-olds, 4-year-olds, and 5-year-olds enrolled in preprimary programs by year in the United States from 1965 to 2006.
Table 1.12
Percentage of 3-Year-Olds, 4-Year-Olds, and 5-Year-Olds Enrolled in Preprimary Programs by Year in the United States

<table>
<thead>
<tr>
<th>Year</th>
<th>3-Year-Olds</th>
<th>4-Year-Olds</th>
<th>5-Year-Olds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>4.9</td>
<td>16.1</td>
<td>60.6</td>
</tr>
<tr>
<td>1975</td>
<td>21.5</td>
<td>40.5</td>
<td>81.3</td>
</tr>
<tr>
<td>1985</td>
<td>28.8</td>
<td>49.1</td>
<td>86.5</td>
</tr>
<tr>
<td>1995</td>
<td>35.9</td>
<td>61.6</td>
<td>87.5</td>
</tr>
<tr>
<td>2005</td>
<td>41.3</td>
<td>66.2</td>
<td>86.4</td>
</tr>
<tr>
<td>2006</td>
<td>42.4</td>
<td>68.8</td>
<td>85.9</td>
</tr>
</tbody>
</table>


The enrollment of 3-year-olds and 4-year-olds in preprimary programs in the United States increased each year from 1965 to 2006. The enrollment of 5-year-olds stabilized from 1985 to 2006 at about 86%. The 1965 to 1975 decade witnessed the largest increase in preprimary program enrollment for 3-year-olds, 4-year-olds, and 5-year-olds.

Primary education is commonly referred to as elementary school or grade school in the United States, Grundschule in Germany, and Shogakkou in Japan (Miller, Sen, & Malley, 2007). Since NCLB, 44% of U.S. districts have added instructional time for English language arts and mathematics by reducing time in science, social studies, art, music, physical education, lunch, and recess at the elementary school level (Center on Education Policy, 2008). Serving as the only educational level where students with diverse abilities learn together (“Wasting Brains,” 2006), the Grundschule was designed to prepare students for secondary education (Grundschule, 2008) and democratize German education after World War I (Kahl, 2004). Grundschule instructional time is largely dedicated to German language, mathematics, and the combined science and social studies, while physical education, music, handwriting, arts and crafts, first aid, and bicycle safety receive the remaining instructional time (Stevenson & Nerison-Low, 2002). In contrast, Okamoto (2001) noted that in the Japanese educational system, “Japanese parents expect elementary and lower-secondary schools to take responsibility for teaching fundamental
etiquette and manners, moral education and discipline: things that are normally taught at home or at Church in a number of other countries” (p. 19). For example, Okamoto claimed that the Japanese sixth grade curriculum spanned Japanese language, mathematics, social studies, science, physical education, home economics, music, art, special educational activities, moral education, and cross-curricular activities.

Lower secondary education is commonly referred to as middle school or junior high school in the United States; Hauptschule, Realschule, Gymnasium, or Gesamtschule in Germany; and Chugakkou in Japan (Miller, Sen, & Malley, 2007). The U.S. Department of Education (2008b) confirmed that, “Middle schools serve pre-adolescent and young adolescent students between grades 5 and 9, with most in the grade 6-8 range. Middle schools in the upper grade range (7-9) are sometimes referred to as junior high schools” (p. 2). U.S. middle schools face the pressures presented by the accountability movement for improved test scores (Elmore, 2000) and dedicate instructional time to four core areas: English language arts, mathematics, science, and social studies (Stevenson & Nerison-Low, 2002). Stevenson and Nerison-Low (2002) discussed schooling in Germany post-Grundschule:

In most states, students then transfer to one of three types of school: Gymnasium (for students who receive the highest grades during the 4 preceding years), Realschule (for students who receive average grades), and Hauptschule (for the least academically qualified students). In addition, some students attend a Gesamtschule, a comprehensive school which enrolls students of all ability levels. (p. 15)

In essence, the Gymnasium prepares students for university entrance; Realschule graduates pursue white-collar professions; the Hauptschule educates students to enter an apprenticeship; and the Gesamtschule ensures an education of equal opportunity (“Wasting Brains,” 2006). Stevenson and Nerison-Low also listed the courses taught in Japanese junior high schools which are designed to ready students for competitive high school entrance examinations: Japanese
language, social studies, mathematics, science, music, fine arts, health and physical education, industrial arts or homemaking, moral education, special activities, and assorted electives.

Upper secondary education is commonly referred to as high school or senior high school in the United States; Berufsschule, Berufsfachschule, Fachoberschule, and Gymnasium or Gymnasiale Oberstufe in Germany; and Koutougakkou in Japan (Miller, Sen, & Malley, 2007). Stevenson and Nerison-Low (2002) found that U.S. high schools offer various levels of English language arts, mathematics, and science courses. For example, the Texas Education Agency (TEA) (2008a) stated that the Recommended High School Program in Texas consists of 26 credits to graduate: 4 credits of English Language Arts that include English I, II, II, and IV; 4 credits of mathematics that include algebra I, algebra II, geometry and an additional course; 4 credits of science that include biology, chemistry, physics, and an additional course; 3.5 credits of social studies that include world history, world geography, U.S. history, and U.S. government; 0.5 credits of economics; 1.5 credits of physical education that include foundations of personal fitness with substitutions allowed for drill, band, cheerleading, JROTC, athletics, dance, and approved career and technology courses; 2 credits of languages other than English; 0.5 credits of health education; 1 credit of technology applications; 1 credit of fine arts; 0.5 credits of speech; and 3.5 credits of state approved electives. Miller, Sen, and Malley (2007) described upper secondary education in Germany: The Berufsschule is a part-time vocational school of up to four years where most students fulfill apprenticeships; the Berufsfachschule is a full-time vocational school of up to three years; the Fachoberschule is an advanced vocational school of two years; and the Gymnasium and Gymnasiale Oberstufe are combined lower and upper secondary academic schools. The lower secondary Gymnasium mandates courses in German language, two foreign languages, mathematics, science, history, geography, civics, art and music, and physical
education, while the upper secondary Gymnasium mandates four areas: languages, literature, and arts; social sciences; mathematics, science, and technology; and physical education (Stevenson & Nerison-Low, 2002). Ornstein and Levine (2003) added that numerous vocational education experts deem the German apprenticeship program as the most successful in the world. For the Japanese high school student, required subjects include Japanese language, geography and history, civic education, mathematics, science, health, physical education, arts, and homemaking (Stevenson & Nerison-Low, 2002). Regarding high school in Japan, Cummings (1980) remarked:

Up to this point, most students have studied the uniform curriculum of public middle schools. Depending on the high school they enter, they will be exposed to either an academic or a vocational curriculum, a fast-paced exam-oriented educational style or a more extensive general education; they will either dedicate themselves to the rigors of exam preparation or they will have time for clubs and fun. (p. 140)

Compared to the academic centered high schools of Germany and Japan, the United States does not mandate high school entrance examinations, but like the Gymnasium, many states require exit examinations (Stevenson & Nerison-Low, 2002). Specifically, Zaba, Minnici, McMurrer, and Briggs (2008) reported that 23 states mandate students to pass exit examinations in order to receive a diploma.

Variations among the historical academic performance students from German, Japanese, and American begin with culture. Germany’s belief in tracking students contrasts with the egalitarian approach of the United States. Likewise, Cummings (1980) mentioned that despite having many similarities as nations, Japan and the United States display differences with education. In particular, Cummings wrote that in Japan, “the public believes that individual success in education leads to personal advancement. Thus, families invest enormous amounts of time and energy in promoting the educational success of their own children” (p. 7).
Nevertheless, when comparing student achievement internationally, understanding the sampling strategies for PIRLS, TIMSS, and PISA is critical. For example, further analysis of the international academic performance of U.S. students by Berliner (2005) involved disaggregated reading, mathematics, and science scores for PISA 2000. Berliner discovered “that our white students (without regard for social class) were among the highest performing students in the world. But our African American and Hispanic students, also undifferentiated by social class, were among the poorest performing students in this international sample” (p. 19).

As discussed above and observed by Millicent (1996), the performance of U.S. students versus other countries is neither the best nor the worst. Also, the research of Boe and Shin (2005) asserted that U.S. students typically finished above average when compared to students of industrialized nations. With a better understanding of the monetary contributions to education and the academic performance of United States students in international comparisons, the discussion now shifts attention to the monetary contributions and academic performance of Louisiana students in reference to the U.S. Southern Region.

Southern Region Educational Expenditures

The Southern Region includes 16 states and the District of Columbia (U.S. Census Bureau, 2009). Table 1.13 presents current expenditures per student in public elementary and secondary schools based on average daily attendance for the period, 1959-60 to 2004-05, for the Southern Region, as identified by the U.S. Census Bureau.

Yearly expenditures per student for Louisiana hovered below both the Southern Regional average and the U.S. average each year except for the 1959-60 school year when Louisiana surpassed the Southern Regional average. The Southern Regional average trailed the U.S. average from 1959-60 to 2004-05. In the Southern Region, only Delaware, Maryland, and the
District of Columbia expended more per student than both the Southern Regional average and the U.S. average from 1959-60 to 2004-05. Delaware and the District of Columbia consistently expended the most per student and with the exception of the 1979-80 school year, Mississippi expended the least per student.

Table 1.13
Current Expenditures per Pupil Based on Average Daily Attendance in Public Elementary and Secondary Schools in Constant 2006-07 Dollars for the Southern Region From 1959 to 2005

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>1,675</td>
<td>2,940</td>
<td>4,283</td>
<td>5,349</td>
<td>6,944</td>
<td>7,783</td>
</tr>
<tr>
<td>Arkansas</td>
<td>1,564</td>
<td>3,067</td>
<td>4,140</td>
<td>5,603</td>
<td>6,786</td>
<td>8,778</td>
</tr>
<tr>
<td>Delaware</td>
<td>3,166</td>
<td>4,864</td>
<td>7,523</td>
<td>9,323</td>
<td>10,622</td>
<td>12,534</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>2,995</td>
<td>5,503</td>
<td>8,570</td>
<td>14,397</td>
<td>14,391</td>
<td>15,398</td>
</tr>
<tr>
<td>Florida</td>
<td>2,207</td>
<td>3,957</td>
<td>4,967</td>
<td>8,034</td>
<td>7,697</td>
<td>8,232</td>
</tr>
<tr>
<td>Georgia</td>
<td>1,761</td>
<td>3,177</td>
<td>4,274</td>
<td>6,872</td>
<td>8,324</td>
<td>9,134</td>
</tr>
<tr>
<td>Kentucky</td>
<td>1,619</td>
<td>2,946</td>
<td>4,473</td>
<td>6,021</td>
<td>8,181</td>
<td>8,923</td>
</tr>
<tr>
<td>Louisiana</td>
<td>2,584</td>
<td>3,502</td>
<td>4,712</td>
<td>6,276</td>
<td>7,543</td>
<td>8,826</td>
</tr>
<tr>
<td>Maryland</td>
<td>2,728</td>
<td>4,963</td>
<td>6,831</td>
<td>10,089</td>
<td>9,767</td>
<td>11,450</td>
</tr>
<tr>
<td>Mississippi</td>
<td>1,431</td>
<td>2,707</td>
<td>4,375</td>
<td>4,974</td>
<td>6,458</td>
<td>7,448</td>
</tr>
<tr>
<td>North Carolina</td>
<td>1,648</td>
<td>3,309</td>
<td>4,613</td>
<td>6,897</td>
<td>7,844</td>
<td>7,901</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,163</td>
<td>3,267</td>
<td>5,066</td>
<td>5,639</td>
<td>6,957</td>
<td>7,546</td>
</tr>
<tr>
<td>South Carolina</td>
<td>1,529</td>
<td>3,310</td>
<td>4,607</td>
<td>6,562</td>
<td>7,893</td>
<td>8,841</td>
</tr>
<tr>
<td>Tennessee</td>
<td>1,654</td>
<td>3,059</td>
<td>4,300</td>
<td>5,890</td>
<td>7,039</td>
<td>7,908</td>
</tr>
<tr>
<td>Texas</td>
<td>2,309</td>
<td>3,373</td>
<td>5,037</td>
<td>6,673</td>
<td>8,165</td>
<td>8,321</td>
</tr>
<tr>
<td>Virginia</td>
<td>1,905</td>
<td>3,825</td>
<td>5,180</td>
<td>7,510</td>
<td>7,827</td>
<td>10,054</td>
</tr>
<tr>
<td>West Virginia</td>
<td>1,796</td>
<td>3,620</td>
<td>5,050</td>
<td>7,010</td>
<td>9,209</td>
<td>9,926</td>
</tr>
<tr>
<td>Average</td>
<td>2,043</td>
<td>3,611</td>
<td>5,174</td>
<td>7,242</td>
<td>8,344</td>
<td>9,355</td>
</tr>
<tr>
<td>United States</td>
<td>2,606</td>
<td>4,410</td>
<td>5,974</td>
<td>8,006</td>
<td>8,915</td>
<td>9,910</td>
</tr>
</tbody>
</table>


Southern Region Academic Achievement

Ninety-seven years after the work of Binet and Simon, the measurement of educational achievement constitutes the core of NCLB, with numerous states developing their own standardized tests which are administered yearly to judge the educational achievement of all public school students at certain grades. In contrast to state specific tests, the National Assessment of Educational Progress (NAEP), “authorized by Congress in 1969” (U.S. Department of Education, 2005a, p. 2), comprehensively compares the performance of U.S. students in reading, mathematics, and science at Grade 4, Grade 8, and Grade 12 (Stephens &
Coleman, 2007). “NAEP provides a common yardstick for measuring the progress of students’ education across the country. While each state has its own unique assessment, NAEP asks the same questions in every state – making state comparisons possible” (U.S. Department of Education, 2008c, p. 2). The reporting of state results began in 1990 (U.S. Department of Education, 2005a). State participation in NAEP is voluntary. In participating states, the sample of students to whom the NAEP is administered includes students in both public and non-public schools. For the Southern Region, Table 1.14 displays Grade 4 reading NAEP scale scores since 1992 and Table 1.15 displays Grade 4 mathematics NAEP scale scores since 1992.

The scale scores of Louisiana, along with Mississippi, placed both states among those with the five lowest scale scores for each administration of the reading and mathematics assessments. Virginia achieved one of the three highest scale scores for each administration of the reading and mathematics assessments, while the District of Columbia produced the lowest scale score for each administration of the reading and mathematics assessments.

Table 1.16 displays Grade 8 reading NAEP scale scores since 1998 and Table 1.17 displays Grade 8 mathematics NAEP scale scores since 1990. Grade 8 NAEP results closely resembled Grade 4 NAEP results: Both Louisiana and Mississippi produced scale scores among the five lowest for each administration of the reading and mathematics assessments, Virginia achieved one of the two highest scale scores for each administration of the reading and mathematics assessments, and the District of Columbia produced the lowest scale score for each administration of the reading and mathematics assessments.

Louisiana produced one of the lowest scale scores for all NAEP Grade 4 and Grade 8 reading and mathematics assessments since 1990, and trailed both the Southern Regional average and the U.S. average. The academic performance of Louisiana students merits further attention.
Table 1.14
Grade 4 Reading NAEP Scale Scores by Southern Region States and the District of Columbia Since 1992

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>207</td>
<td>208</td>
<td>211</td>
<td>207</td>
<td>207</td>
<td>208</td>
<td>216</td>
</tr>
<tr>
<td>Arkansas</td>
<td>211</td>
<td>209</td>
<td>209</td>
<td>213</td>
<td>214</td>
<td>217</td>
<td>217</td>
</tr>
<tr>
<td>Delaware</td>
<td>213</td>
<td>206</td>
<td>207</td>
<td>224</td>
<td>224</td>
<td>226</td>
<td>225</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>188</td>
<td>179</td>
<td>179</td>
<td>191</td>
<td>188</td>
<td>191</td>
<td>197</td>
</tr>
<tr>
<td>Florida</td>
<td>208</td>
<td>205</td>
<td>206</td>
<td>214</td>
<td>218</td>
<td>219</td>
<td>224</td>
</tr>
<tr>
<td>Georgia</td>
<td>212</td>
<td>207</td>
<td>209</td>
<td>215</td>
<td>214</td>
<td>214</td>
<td>219</td>
</tr>
<tr>
<td>Kentucky</td>
<td>213</td>
<td>212</td>
<td>218</td>
<td>219</td>
<td>219</td>
<td>220</td>
<td>222</td>
</tr>
<tr>
<td><strong>Louisiana</strong></td>
<td><strong>204</strong></td>
<td><strong>197</strong></td>
<td><strong>200</strong></td>
<td><strong>207</strong></td>
<td><strong>205</strong></td>
<td><strong>209</strong></td>
<td><strong>207</strong></td>
</tr>
<tr>
<td>Maryland</td>
<td>211</td>
<td>210</td>
<td>212</td>
<td>217</td>
<td>219</td>
<td>220</td>
<td>225</td>
</tr>
<tr>
<td>Mississippi</td>
<td>199</td>
<td>202</td>
<td>203</td>
<td>203</td>
<td>205</td>
<td>204</td>
<td>208</td>
</tr>
<tr>
<td>North Carolina</td>
<td>212</td>
<td>214</td>
<td>213</td>
<td>222</td>
<td>221</td>
<td>217</td>
<td>218</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>220</td>
<td>-</td>
<td>219</td>
<td>213</td>
<td>214</td>
<td>214</td>
<td>217</td>
</tr>
<tr>
<td>South Carolina</td>
<td>210</td>
<td>203</td>
<td>209</td>
<td>214</td>
<td>215</td>
<td>213</td>
<td>214</td>
</tr>
<tr>
<td>Tennessee</td>
<td>212</td>
<td>213</td>
<td>212</td>
<td>214</td>
<td>212</td>
<td>214</td>
<td>216</td>
</tr>
<tr>
<td>Texas</td>
<td>213</td>
<td>212</td>
<td>214</td>
<td>217</td>
<td>215</td>
<td>219</td>
<td>220</td>
</tr>
<tr>
<td>Virginia</td>
<td>221</td>
<td>213</td>
<td>217</td>
<td>225</td>
<td>223</td>
<td>226</td>
<td>227</td>
</tr>
<tr>
<td>West Virginia</td>
<td>216</td>
<td>213</td>
<td>216</td>
<td>219</td>
<td>219</td>
<td>215</td>
<td>215</td>
</tr>
<tr>
<td>Average</td>
<td>210</td>
<td>206</td>
<td>209</td>
<td>214</td>
<td>214</td>
<td>215</td>
<td>217</td>
</tr>
<tr>
<td>United States</td>
<td>217</td>
<td>214</td>
<td>215</td>
<td>219</td>
<td>218</td>
<td>219</td>
<td>221</td>
</tr>
</tbody>
</table>

SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online: http://nces.ed.gov/nationsreportcard/nde/
NOTE: Dashes indicate that data were not available. Reading scores ranged from 179 to 227. Accommodations were not allowed in 1992 and 1994.
Table 1.15
Grade 4 Mathematics NAEP Scale Scores by Southern Region States and the District of Columbia Since 1992

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>208</td>
<td>212</td>
<td>217</td>
<td>223</td>
<td>225</td>
<td>229</td>
</tr>
<tr>
<td>Arkansas</td>
<td>210</td>
<td>216</td>
<td>216</td>
<td>229</td>
<td>236</td>
<td>238</td>
</tr>
<tr>
<td>Delaware</td>
<td>218</td>
<td>215</td>
<td>-</td>
<td>236</td>
<td>240</td>
<td>242</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>193</td>
<td>187</td>
<td>192</td>
<td>205</td>
<td>211</td>
<td>214</td>
</tr>
<tr>
<td>Florida</td>
<td>214</td>
<td>216</td>
<td>-</td>
<td>234</td>
<td>239</td>
<td>242</td>
</tr>
<tr>
<td>Georgia</td>
<td>216</td>
<td>215</td>
<td>219</td>
<td>230</td>
<td>234</td>
<td>235</td>
</tr>
<tr>
<td>Kentucky</td>
<td>215</td>
<td>220</td>
<td>219</td>
<td>229</td>
<td>231</td>
<td>235</td>
</tr>
<tr>
<td><strong>Louisiana</strong></td>
<td><strong>204</strong></td>
<td><strong>209</strong></td>
<td><strong>218</strong></td>
<td><strong>226</strong></td>
<td><strong>230</strong></td>
<td><strong>230</strong></td>
</tr>
<tr>
<td>Maryland</td>
<td>217</td>
<td>221</td>
<td>222</td>
<td>233</td>
<td>238</td>
<td>240</td>
</tr>
<tr>
<td>Mississippi</td>
<td>202</td>
<td>208</td>
<td>211</td>
<td>223</td>
<td>227</td>
<td>228</td>
</tr>
<tr>
<td>North Carolina</td>
<td>213</td>
<td>224</td>
<td>230</td>
<td>242</td>
<td>241</td>
<td>242</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>220</td>
<td>-</td>
<td>224</td>
<td>229</td>
<td>234</td>
<td>237</td>
</tr>
<tr>
<td>South Carolina</td>
<td>212</td>
<td>213</td>
<td>220</td>
<td>236</td>
<td>238</td>
<td>237</td>
</tr>
<tr>
<td>Tennessee</td>
<td>211</td>
<td>219</td>
<td>220</td>
<td>228</td>
<td>232</td>
<td>233</td>
</tr>
<tr>
<td>Texas</td>
<td>218</td>
<td>229</td>
<td>231</td>
<td>237</td>
<td>242</td>
<td>242</td>
</tr>
<tr>
<td>Virginia</td>
<td>221</td>
<td>223</td>
<td>230</td>
<td>239</td>
<td>240</td>
<td>244</td>
</tr>
<tr>
<td>West Virginia</td>
<td>215</td>
<td>223</td>
<td>231</td>
<td>231</td>
<td>231</td>
<td>236</td>
</tr>
<tr>
<td>Average</td>
<td>212</td>
<td>216</td>
<td>220</td>
<td>230</td>
<td>234</td>
<td>236</td>
</tr>
<tr>
<td>United States</td>
<td>220</td>
<td>224</td>
<td>226</td>
<td>235</td>
<td>238</td>
<td>240</td>
</tr>
</tbody>
</table>


NOTE: Dashes indicate that data were not available. Mathematics scores ranged from 187 to 244. Accommodations were not allowed in 1992 and 1996.
Table 1.16  
Grade 8 Reading NAEP Scale Scores by Southern Region States and the District of Columbia Since 1998

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>255</td>
<td>253</td>
<td>253</td>
<td>252</td>
<td>252</td>
</tr>
<tr>
<td>Arkansas</td>
<td>256</td>
<td>260</td>
<td>258</td>
<td>258</td>
<td>258</td>
</tr>
<tr>
<td>Delaware</td>
<td>254</td>
<td>267</td>
<td>265</td>
<td>266</td>
<td>265</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>236</td>
<td>240</td>
<td>239</td>
<td>238</td>
<td>241</td>
</tr>
<tr>
<td>Florida</td>
<td>255</td>
<td>261</td>
<td>257</td>
<td>256</td>
<td>260</td>
</tr>
<tr>
<td>Georgia</td>
<td>257</td>
<td>258</td>
<td>258</td>
<td>257</td>
<td>259</td>
</tr>
<tr>
<td>Kentucky</td>
<td>262</td>
<td>265</td>
<td>266</td>
<td>264</td>
<td>262</td>
</tr>
<tr>
<td><strong>Louisiana</strong></td>
<td>252</td>
<td>256</td>
<td>253</td>
<td>253</td>
<td>253</td>
</tr>
<tr>
<td>Maryland</td>
<td>261</td>
<td>263</td>
<td>262</td>
<td>261</td>
<td>265</td>
</tr>
<tr>
<td>Mississippi</td>
<td>251</td>
<td>255</td>
<td>255</td>
<td>251</td>
<td>250</td>
</tr>
<tr>
<td>North Carolina</td>
<td>262</td>
<td>265</td>
<td>262</td>
<td>258</td>
<td>259</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>265</td>
<td>262</td>
<td>262</td>
<td>260</td>
<td>260</td>
</tr>
<tr>
<td>South Carolina</td>
<td>255</td>
<td>258</td>
<td>258</td>
<td>257</td>
<td>257</td>
</tr>
<tr>
<td>Tennessee</td>
<td>258</td>
<td>260</td>
<td>258</td>
<td>259</td>
<td>259</td>
</tr>
<tr>
<td>Texas</td>
<td>261</td>
<td>262</td>
<td>259</td>
<td>258</td>
<td>261</td>
</tr>
<tr>
<td>Virginia</td>
<td>266</td>
<td>269</td>
<td>268</td>
<td>268</td>
<td>267</td>
</tr>
<tr>
<td>West Virginia</td>
<td>262</td>
<td>264</td>
<td>260</td>
<td>255</td>
<td>255</td>
</tr>
<tr>
<td>Average</td>
<td>257</td>
<td>260</td>
<td>258</td>
<td>257</td>
<td>258</td>
</tr>
<tr>
<td>United States</td>
<td>263</td>
<td>264</td>
<td>263</td>
<td>262</td>
<td>263</td>
</tr>
</tbody>
</table>

**SOURCE:** Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online: http://nces.ed.gov/nationsreportcard/nde/

**NOTE:** Reading scores ranged from 236 to 269.
Table 1.17
Grade 8 Mathematics NAEP Scale Scores by Southern Region States and the District of Columbia Since 1990

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>253</td>
<td>252</td>
<td>257</td>
<td>264</td>
<td>262</td>
<td>262</td>
<td>266</td>
</tr>
<tr>
<td>Arkansas</td>
<td>256</td>
<td>256</td>
<td>262</td>
<td>257</td>
<td>266</td>
<td>272</td>
<td>274</td>
</tr>
<tr>
<td>Delaware</td>
<td>261</td>
<td>263</td>
<td>267</td>
<td>-</td>
<td>277</td>
<td>281</td>
<td>283</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>231</td>
<td>235</td>
<td>233</td>
<td>235</td>
<td>243</td>
<td>245</td>
<td>248</td>
</tr>
<tr>
<td>Florida</td>
<td>255</td>
<td>260</td>
<td>264</td>
<td>-</td>
<td>271</td>
<td>274</td>
<td>277</td>
</tr>
<tr>
<td>Georgia</td>
<td>259</td>
<td>259</td>
<td>262</td>
<td>265</td>
<td>270</td>
<td>272</td>
<td>275</td>
</tr>
<tr>
<td>Kentucky</td>
<td>257</td>
<td>262</td>
<td>267</td>
<td>270</td>
<td>274</td>
<td>274</td>
<td>279</td>
</tr>
<tr>
<td>Louisiana</td>
<td>246</td>
<td>250</td>
<td>252</td>
<td>259</td>
<td>266</td>
<td>268</td>
<td>272</td>
</tr>
<tr>
<td>Maryland</td>
<td>261</td>
<td>265</td>
<td>270</td>
<td>272</td>
<td>278</td>
<td>278</td>
<td>286</td>
</tr>
<tr>
<td>Mississippi</td>
<td>-</td>
<td>246</td>
<td>250</td>
<td>254</td>
<td>261</td>
<td>262</td>
<td>265</td>
</tr>
<tr>
<td>North Carolina</td>
<td>250</td>
<td>258</td>
<td>268</td>
<td>276</td>
<td>281</td>
<td>282</td>
<td>284</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>263</td>
<td>268</td>
<td>-</td>
<td>270</td>
<td>272</td>
<td>271</td>
<td>275</td>
</tr>
<tr>
<td>South Carolina</td>
<td>-</td>
<td>261</td>
<td>261</td>
<td>265</td>
<td>277</td>
<td>281</td>
<td>282</td>
</tr>
<tr>
<td>Tennessee</td>
<td>-</td>
<td>259</td>
<td>263</td>
<td>262</td>
<td>268</td>
<td>271</td>
<td>274</td>
</tr>
<tr>
<td>Texas</td>
<td>258</td>
<td>265</td>
<td>270</td>
<td>273</td>
<td>277</td>
<td>281</td>
<td>286</td>
</tr>
<tr>
<td>Virginia</td>
<td>264</td>
<td>268</td>
<td>270</td>
<td>275</td>
<td>282</td>
<td>284</td>
<td>288</td>
</tr>
<tr>
<td>West Virginia</td>
<td>256</td>
<td>259</td>
<td>265</td>
<td>266</td>
<td>271</td>
<td>269</td>
<td>270</td>
</tr>
<tr>
<td>Average</td>
<td>255</td>
<td>258</td>
<td>261</td>
<td>264</td>
<td>270</td>
<td>272</td>
<td>276</td>
</tr>
<tr>
<td>United States</td>
<td>263</td>
<td>268</td>
<td>272</td>
<td>273</td>
<td>278</td>
<td>279</td>
<td>281</td>
</tr>
</tbody>
</table>

SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online: http://nces.ed.gov/nationsreportcard/nde/

NOTE: Dashes indicate that data were not available. Mathematics scores ranged from 231 to 288. Accommodations were not allowed in 1990, 1992, and 1996.

Purpose and Importance of the Study

Despite strong monetary commitments, the United States has not displayed an efficient educational system like that of Germany and Japan. After years of below average to average international academic performance, U.S. public PK-12 schools are enduring an unprecedented transformation. Lunenburg and Ornstein (2004) affirmed that:

Not since the wave of school reform that followed Sputnik has education been so prominently on stage at the national and state level, on television, and in local newspapers. Presidential candidates, governors, state legislators, and chief state school officers have all gotten into the act, indicating the high priority of education, the desire to reform it, and the need to allocate more resources for it. Business groups such as Microsoft, IBM, and Motorola have recently taken active roles in helping to shape education policy, in part because jobs are becoming more demanding and complex and the school products (students) are becoming “dumber.” (p. 306-307)

Louisiana is not immune to such a transformation. The Louisiana District and School Accountability Advisory Commission (1998), hereafter referred to as the Commission,
remarked, “Despite the efforts of many conscientious educators, Louisiana’s students rank near the bottom when compared to students in other states on nearly every measure of test scores, dropout rates, college remediation rates, and employability” (p. 1). Louisiana test scores presented in Table 1.13 and Table 1.14 support this statement.

Louisianans demanded an enhanced public education system (Louisiana District and School Accountability Advisory Commission, 1998; LDE, 2008a). Consequently, Act 478 was passed, leading to the development of the Louisiana School and District Accountability System which is patterned after several states with nationally recognized accountability systems. As part of the accountability system, many of the aforementioned nine programs identified by Cambre (2009) were designed or modified to increase student achievement. Cambre selected the years 1997 to 2005 because the time frame represented the period spanning one year prior to the implementation of Act 478 through the last administration of the Louisiana Educational Assessment Program (LEAP) assessments before Hurricanes Katrina and Rita demolished much of South Louisiana causing massive population shifts. While numerous state funded educational programs existed, Cambre utilized three criteria to select programs for inclusion in her study:

1. State funding per program averaged a minimum of $2 million each year.
2. The program affected both students and teachers and demanded school improvement.
3. The program remained in place for a minimum of two years.

These selection criteria led to the identification of then nine programs mentioned previously.

Cambre (2009) conducted a content analysis to determine the goals, longevity, funding sources, and funding levels of programs that met the selection criteria. Cambre concluded her study by stating that Louisiana has failed to evaluate the results of these programs. Given that Cambre reported total state funding for the nine programs from 1997-2005 reached $490 million, or nearly a half billion dollars, it is time for such an evaluation. The present study is a
The purpose of this study is to discover whether the Louisiana public education system improved in terms of three indicators between 1997 and 2005: (a) student achievement, (b) student matriculation, and (c) student in- and out-of-school behaviors. In doing so, differences among Black and White students on these indicators were investigated because each ethnic group comprises approximately half of the students in the Louisiana public education system. Four major research questions, each with sub-questions, frame the study:

1. What trends are evident regarding statewide student achievement between 1997 and 2005?
   a. What trends occurred with student achievement on Grades 4 and 8 NAEP reading and mathematics assessments?
   b. What trends occurred with student achievement on Grades 4 and 8 LEAP ELA and mathematics assessments?
   c. What trends occurred with student rankings on Grades 3, 7, and 9 Iowa Tests of Basic Skills (ITBS) assessments?
   d. What trends occurred with student achievement on the American College Testing Program (ACT)?

2. What trends are evident regarding statewide student matriculation between 1997 and 2005?
   a. What trends occurred with student in-grade retention in K-12?
   b. What trends occurred with student dropouts in Grades 9-12?

3. What trends are evident regarding statewide student disciplinary actions between 1997 and 2005?
a. What trends occurred with student suspensions and expulsions in PK-12?

b. What trends occurred with juvenile arrests?

4. What trends are evident regarding achievement, matriculation, and disciplinary actions for Black students and for White students between 1997 and 2005?
   a. What trends occurred with student achievement on Grades 4 and 8 NAEP reading and mathematics assessments?
   b. What trends occurred with student achievement on Grades 4 and 8 LEAP ELA and mathematics assessments?
   c. What trends occurred with student rankings on Grades 3, 7, and 9 Iowa Tests of Basic Skills (ITBS) assessments?
   d. What trends occurred with student in-grade retention in K-12?
   e. What trends occurred with student dropouts in Grades 9-12?
   f. What trends occurred with student disciplinary actions in PK-12?

Definition of Terms

1. Trend Analysis: “A trend study is a form of longitudinal research in which independent samples (samples composed of different people) are taken from a general population over time and the same questions are asked of the samples of participants” (Johnson & Christensen, 2004, p. 344).

2. Student Achievement: Four measures were used to determine achievement trends: (a) Louisiana NAEP average scale scores, (b) the percentages of Louisiana students scoring Basic or above on the LEAP, (c) Louisiana ITBS percentile rankings, and (d) Louisiana ACT average composite scores.
3. Student Matriculation: Matriculation consists of two measures: (a) statewide percentages of students retained in-grade and (b) statewide percentages of dropouts.

4. Student Disciplinary Actions: Disciplinary actions included in- and out-of-school data. Two measures were used: (a) statewide percentages of students receiving suspension or expulsion and (c) statewide arrests for persons under age 18 as reported by the Federal Bureau of Investigation (FBI).

Limitations and Delimitations of the Study

Every study has limitations and this one is no exception. The criteria utilized by Cambre (2009) to select programs for her study resulted in the identification of nine programs. During the study period (1997-2005), however, many other programs other programs were operational in Louisiana that shared the goal of improving student achievement. Hence, it is inappropriate to interpret the results of this study as applying solely to the programs identified by Cambre. Also, while Cambre sought to study programs funded solely by the state of Louisiana, it was legal to co-mingle federal and state funds for school improvement purposes; thus, it was not possible to distinguish between state and federal funding sources for the programs Cambre studied. Lastly, the FBI arrest data cannot be disaggregated by specific ages or grades.

This study has two delimitations. First, this study examines data only about Louisiana students. The Southern Region NAEP results were discussed above to provide an understanding of Louisiana within a context. Other than the nine programs identified by Cambre (2009), no other programs designed to improve student achievement in Louisiana between 1997 and 2005 were analyzed.
Position of Researcher

It is imperative to note that I have worked in the field of public education since 2000. I taught secondary physical education in Texas for four years and elementary physical education in Louisiana for approximately one semester before I had the opportunity to become an administrator. I wore many administrative hats between 2004 and 2009: acting assistant principal, dean of students, summer credit recovery assistant principal, assistant principal, summer credit recovery principal, and currently principal of a low socioeconomic status middle school that houses students in Grades 5-8 in a city west of Baton Rouge.

My life is marinated in public education. I graduated from my hometown’s public high school in Texas. My mother is a retired public school elementary teacher in Texas and my father served on my hometown’s public school board for numerous years as a member and an officer. Additionally, my wife is a public school elementary teacher in a city northeast of Baton Rouge, my closest aunt is a public school elementary teacher in Texas, and my closest cousin is an associate athletic director at a large public university in Texas. Nevertheless, with the exception of my first master’s degree, which was earned at a private Catholic university in Texas, my bachelor’s degree and second master’s degree were earned at public universities in Texas and Louisiana, respectively.

Organization of the Study

Chapter 1 provided an overview of the study, international student achievement comparisons, introduced the research questions, and gave the definition of terms. In addition, the purpose of the study was discussed. Chapter 2 describes poverty and the achievement gap in Louisiana, which set the stage for a brief discussion regarding deficit thinking. Since accountability systems can serve as a means of eradicating deficit thinking (Skrla & Scheurich,
2001), a history of significant U.S. educational reforms since 1950 follows. A description of the formation of the Louisiana School and District Accountability System ensues. Chapter 3 explicates the nine major programs from the Cambre study and disaggregates to the extent possible total state funding for each. Chapter 4 details the research methods employed to answer the research questions, while Chapter 5 presents the results. Chapter 6 concludes the study by discussing the implications of the findings and offering conclusions and recommendations for future research.
CHAPTER 2: THE ROAD TO ACCOUNTABILITY LEGISLATION IN LOUISIANA

“If there's one thing I've learned in my travels around our country, it's that education is not a one-size-fits-all enterprise. Just as every child has unique needs, so does every teacher, every school, every district, and every state.”

Margaret Spellings (“U.S. Department of Education,” 2007, ¶14)

Poverty and the Achievement Gap in Louisiana

The U.S. Census Bureau (2008a) identified 2007 United States poverty rates as 24.5% for Blacks, 21.5% for Hispanics, 10.2% for Asians, and 8.2% for non-Hispanic Whites. The U.S. Census Bureau (2008b) defined poverty:

Following the Office of Management and Budget's (OMB) Statistical Policy Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If a family’s total income is less than the family’s threshold, then that family and every individual in it is considered in poverty. The official poverty thresholds do not vary geographically, but they are updated for inflation using Consumer Price Index (CPI-U). The official poverty definition uses money income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps). (¶ 21)

To better understand poverty in Louisiana, Table 2.1 examines median household income in constant 2006 dollars and poverty rates for the Southern Region from 1990 to 2006. Louisiana maintained the fourth lowest median household income in constant 2006 dollars from 1990 to 2006, ahead of only Arkansas, Mississippi, and West Virginia. In 1990, Louisiana trailed Mississippi with the second highest poverty rate. Likewise, Louisiana had the third highest poverty rate from 2000 to 2006 (19.6% in 2000; 17.4%, average 2004-06), ahead of the District of Columbia (20.2% in 2000; 18.8%, average 2004-06) and Mississippi (19.9% in 2000; 19.8%, average 2004-06). High rates of poverty in LA, MS, and DC coincide achievement data reported in Table 1.14, Table 1.15, Table 1.16, and Table 1.17. These tables revealed that Louisiana, along with the District of Columbia and Mississippi, placed among the bottom five in the Southern Region on Grade 4 reading and mathematics NAEP examinations since 1992, Grade 8
reading NAEP examinations since 1998, and Grade 8 mathematics NAEP examinations since 1990.

Table 2.1
Household Income and Poverty Rates in Constant 2006 Dollars by South Region States and the District of Columbia From 1990 to 2006

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AL</td>
<td>37,047</td>
<td>41,305</td>
<td>38,473</td>
<td>18.3</td>
<td>16.1</td>
<td>16.0</td>
</tr>
<tr>
<td>AR</td>
<td>33,201</td>
<td>38,942</td>
<td>37,420</td>
<td>19.1</td>
<td>15.8</td>
<td>15.6</td>
</tr>
<tr>
<td>DE</td>
<td>54,753</td>
<td>57,334</td>
<td>52,214</td>
<td>8.7</td>
<td>9.2</td>
<td>9.2</td>
</tr>
<tr>
<td>DC</td>
<td>48,241</td>
<td>48,556</td>
<td>47,108</td>
<td>16.9</td>
<td>20.2</td>
<td>18.8</td>
</tr>
<tr>
<td>FL</td>
<td>43,148</td>
<td>46,973</td>
<td>44,448</td>
<td>12.7</td>
<td>12.5</td>
<td>11.4</td>
</tr>
<tr>
<td>GA</td>
<td>45,563</td>
<td>51,346</td>
<td>46,841</td>
<td>14.7</td>
<td>13.0</td>
<td>13.3</td>
</tr>
<tr>
<td>KY</td>
<td>35,378</td>
<td>40,745</td>
<td>38,911</td>
<td>19.0</td>
<td>15.8</td>
<td>16.5</td>
</tr>
<tr>
<td>LA</td>
<td>34,460</td>
<td>39,407</td>
<td>37,943</td>
<td>23.6</td>
<td>19.6</td>
<td>17.4</td>
</tr>
<tr>
<td>MD</td>
<td>61,836</td>
<td>63,973</td>
<td>62,372</td>
<td>8.3</td>
<td>8.5</td>
<td>9.3</td>
</tr>
<tr>
<td>MS</td>
<td>31,613</td>
<td>37,911</td>
<td>35,261</td>
<td>13.0</td>
<td>12.3</td>
<td>13.8</td>
</tr>
<tr>
<td>NC</td>
<td>41,836</td>
<td>47,145</td>
<td>42,061</td>
<td>10.2</td>
<td>9.6</td>
<td>9.1</td>
</tr>
<tr>
<td>OK</td>
<td>37,016</td>
<td>40,416</td>
<td>40,001</td>
<td>13.9</td>
<td>13.9</td>
<td>13.9</td>
</tr>
<tr>
<td>SC</td>
<td>41,222</td>
<td>44,871</td>
<td>40,822</td>
<td>13.7</td>
<td>13.7</td>
<td>13.7</td>
</tr>
<tr>
<td>TN</td>
<td>38,947</td>
<td>43,998</td>
<td>40,676</td>
<td>15.7</td>
<td>15.7</td>
<td>15.7</td>
</tr>
<tr>
<td>TX</td>
<td>42,415</td>
<td>48,314</td>
<td>43,425</td>
<td>15.4</td>
<td>15.4</td>
<td>16.4</td>
</tr>
<tr>
<td>VA</td>
<td>52,325</td>
<td>56,482</td>
<td>55,108</td>
<td>15.0</td>
<td>15.0</td>
<td>15.0</td>
</tr>
<tr>
<td>WV</td>
<td>32,648</td>
<td>35,934</td>
<td>37,227</td>
<td>19.7</td>
<td>17.9</td>
<td>15.0</td>
</tr>
<tr>
<td>Average</td>
<td>41,862</td>
<td>46,113</td>
<td>43,522</td>
<td>16.2</td>
<td>14.6</td>
<td>14.4</td>
</tr>
</tbody>
</table>


With consideration of the aforementioned U.S. poverty rates for Blacks, Hispanics, Asians, and non-Hispanic Whites, Table 2.2 illustrates the percentages of Louisiana public school students by ethnicity from 2000 to 2007.

Table 2.2
Percentages of Louisiana Public School Students by Ethnicity From 2000 to 2007

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>47.7</td>
<td>47.8</td>
<td>47.8</td>
<td>47.8</td>
<td>47.7</td>
<td>44.3</td>
<td>45.4</td>
<td>46.9</td>
</tr>
<tr>
<td>White</td>
<td>48.9</td>
<td>48.8</td>
<td>48.6</td>
<td>48.5</td>
<td>48.3</td>
<td>51.5</td>
<td>50.1</td>
<td>49.2</td>
</tr>
<tr>
<td>Other</td>
<td>3.3</td>
<td>3.5</td>
<td>3.6</td>
<td>3.8</td>
<td>4.0</td>
<td>4.1</td>
<td>4.5</td>
<td>3.8</td>
</tr>
</tbody>
</table>


The percentage of White students slightly outnumbered the percentage of Black students, while the percentage of students classified as Other grew each year. The difference between the
percentage of Black students and the percentage of White students was stable between 0.8% and 1.2% from 2000-01 school year to the 2004-05 school year; said difference increased to 7.2% in 2005-06 and decreased to 4.7% in 2006-07. The impact of Hurricane Katrina in 2005 on Louisiana public school enrollments was reported by the Western Interstate Commission for Higher Education (2008), which noted that, “In percentage terms, total enrollments in public schools fell by 16.5 percent among Black non-Hispanics, approximately four times the rate for White non-Hispanics (4.1 percent) and double that of other races/ethnicities (8.3 percent)” (p. 2).

Table 2.3 displays Grade 4 reading NAEP scale scores for Black and White Louisiana students since 1992 and Table 2.4 displays Grade 4 mathematics NAEP scale scores for Black and White Louisiana students since 1992. These scores were reported in aggregate in Table 1.14 and Table 1.15. Reading scores from 1992 to 2007 ranged from 178 to 195 for Blacks and from 213 to 223 for Whites. Mathematics scores from 1992 to 2007 ranged from 187 to 219 for Blacks and from 218 to 242 for Whites. White students outperformed Black students on all reading and mathematics NAEP assessments, whereas the reading scale score difference remained the same in 1992 and 2007 at 26 points and the mathematics scale score difference decreased from 31 points in 1992 to 21 points in 2007. The smallest difference between the reading scale scores of White students and Black students occurred in 1992 and 2007 at 26 points and the largest difference between the reading scale scores of White students and Black students occurred in 1998 at 38 points. With mathematics, the smallest difference between the scale scores of White students and Black students occurred in 2007 at 21 points and the largest difference between the scale scores of White students and Black students occurred in 1992 at 31 points.
Table 2.3
Grade 4 Reading NAEP Scale Scores for Black and White Louisiana Students Since 1992

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>189</td>
<td>178</td>
<td>180</td>
<td>192</td>
<td>189</td>
<td>195</td>
<td>194</td>
<td>188</td>
</tr>
<tr>
<td>White</td>
<td>215</td>
<td>213</td>
<td>218</td>
<td>221</td>
<td>223</td>
<td>220</td>
<td>219</td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online: http://nces.ed.gov/nationsreportcard/nde/
NOTE: According to the U.S. Department of Education (2006), state NAEP changed in 2001 as a result of NCLB, such that any state that accepts Title I funds must participate every two years in both the Grade 4 and Grade 8 reading and mathematics state NAEP assessments. Generally, scale scores range from 0 to 500 in reading, mathematics, U.S. history, and geography (U.S. Department of Education, n.d.f).

Table 2.4
Grade 4 Mathematics NAEP Scale Scores for Black and White Louisiana Students Since 1992

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>187</td>
<td>194</td>
<td>205</td>
<td>213</td>
<td>219</td>
<td>219</td>
<td>206</td>
</tr>
<tr>
<td>White</td>
<td>218</td>
<td>221</td>
<td>230</td>
<td>242</td>
<td>241</td>
<td>240</td>
<td>232</td>
</tr>
</tbody>
</table>

SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online: http://nces.ed.gov/nationsreportcard/nde/
NOTE: According to the U.S. Department of Education (2006), state NAEP changed in 2001 as a result of NCLB, whereas any state that accepts Title I funds must participate every two years in both the Grade 4 and Grade 8 reading and mathematics state NAEP assessments. Generally, scale scores range from 0 to 500 in reading, mathematics, U.S. history, and geography (U.S. Department of Education, n.d.f).

For reading, the highest score for Blacks is almost 20 points lower than the lowest score for Whites. This is the case despite the fact that the gain for Blacks is 18 points, almost twice that for Whites. With regard to mathematics, the highest score for Blacks is one point higher than the lowest score for Whites. However, the score gain for Whites is 32 points while for Blacks the score gain is 24 points. Thus, while score gains for Blacks in reading substantially outpaces that of Whites, in mathematics gain scores for Whites is 25% greater than the gain score for Blacks.

Table 2.5 displays Grade 8 reading NAEP scale scores for Black and White Louisiana students since 1998 and Table 2.6 displays Grade 8 mathematics NAEP scale scores for Black and White Louisiana students since 1990. These scores were reported in aggregate in Table 1.16 and Table 1.17. Reading scores from 1998 to 2007 ranged from 236 to 240 for Blacks and from 262 to 268 for Whites. Mathematics scores from 1990 to 2007 ranged from 229 to 258 for
Blacks and from 259 to 283 for Whites. Like Grade 4, Whites outperformed Blacks on all reading and mathematics NAEP assessments, whereas the reading scale score difference decreased from 26 points in 1998 to 24 points in 2007 and the mathematics scale score difference decreased from 30 points in 1990 to 25 points in 2007. The smallest difference between the reading scale scores of White students and Black students occurred in 2005 and 2007 at 24 points and the largest difference between the reading scale scores of White students and Black students occurred in 2003 at 29 points. With mathematics, the smallest difference between the scale scores of White students and Black students occurred in 2007 at 25 points and the largest difference between the scale scores of White students and Black students occurred in 2000 at 36 points.

Table 2.5
Grade 8 Reading NAEP Scale Scores for Black and White Louisiana Students Since 1998

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>1998</th>
<th>2002</th>
<th>2003</th>
<th>2005</th>
<th>2007</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>236</td>
<td>240</td>
<td>238</td>
<td>240</td>
<td>240</td>
<td>239</td>
</tr>
<tr>
<td>White</td>
<td>262</td>
<td>268</td>
<td>267</td>
<td>264</td>
<td>264</td>
<td>265</td>
</tr>
</tbody>
</table>

SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online: http://nces.ed.gov/nationsreportcard/nde/

NOTE: According to the U.S. Department of Education (2006), state NAEP changed in 2001 as a result of NCLB, whereas any state that accepts Title 1 funds must participate every two years in both the Grade 4 and Grade 8 reading and mathematics state NAEP assessments. Generally, scale scores range from 0 to 500 in reading, mathematics, U.S. history, and geography (U.S. Department of Education, n.d.f).

Table 2.6
Grade 8 Mathematics NAEP Scale Scores for Black and White Louisiana Students Since 1990

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>229</td>
<td>232</td>
<td>235</td>
<td>239</td>
<td>250</td>
<td>252</td>
<td>258</td>
<td>242</td>
</tr>
<tr>
<td>White</td>
<td>259</td>
<td>263</td>
<td>266</td>
<td>275</td>
<td>281</td>
<td>281</td>
<td>283</td>
<td>273</td>
</tr>
</tbody>
</table>

SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online: http://nces.ed.gov/nationsreportcard/nde/

NOTE: According to the U.S. Department of Education (2006), state NAEP changed in 2001 as a result of NCLB, whereas any state that accepts Title 1 funds must participate every two years in both the Grade 4 and Grade 8 reading and mathematics state NAEP assessments. Generally, scale scores range from 0 to 500 in reading, mathematics, U.S. history, and geography (U.S. Department of Education, n.d.f).

For reading, the highest score for Blacks is over 20 points lower than the lowest score for Whites. The gain for Blacks is four points, two points less than for Whites. Contrary to Grade 4,
the highest mathematics score for Blacks is one point lower than the lowest score for Whites. Nevertheless, the score gain for Blacks is 29 points while for Whites the score gain is 24 points. Thus, while score gains for Blacks in reading slightly trailed that of Whites, in mathematics gain scores for Blacks surpassed the gain scores for Whites by five points.

In view of Louisiana’s pronounced poverty and achievement gap, potential causes and explanations are sought. Therefore, deficit thinking warrants examination.

Deficit Thinking

“One of the greatest challenges facing the United States as we move into the 21st century is that of providing a quality education for all children in the nation’s schools, regardless of their ethnic or socioeconomic backgrounds” (Cole-Henderson, 2000, p. 77). Overcoming deficit thinking, a set of assumptions that underestimate a given group of people, proves critical. Skrla and Scheurich (2001) discussed deficit thinking by citing Richard Valencia (1997), who explained deficit thinking vis-à-vis the term at-risk:

The deficit thinking paradigm, as a whole, posits that students who fail in school do so because of alleged internal deficiencies (such as cognitive and/or motivational limitations) or shortcomings socially linked to the youngster – such as familial deficits and dysfunctions...The popular “at-risk” construct, now entrenched in educational circles, views poor and working class children and their families (typically of color) as predominantly responsible for school failure. (p. 235-236)

Garcia and Guerra (2004) added that deficit beliefs thwart the motivation of educators to examine change beyond the traditional emphasis on basic skills and intense drill in preparation for high stakes tests.

McCormack-Larkin (1985) revealed, through her involvement with Project RISE of the Milwaukee School Board and the Milwaukee Teacher Expectation Project, that educators classified students as low achievers due to indicators which include low self concept, low motivational level, sparse genetic endowments, unstable home environments, and unsafe
neighborhoods. Individual deficit theories evolved into what McCormack-Larkin labeled the school deficit theory. McCormack-Larkin elaborated that when schools express low expectations for students through daily practices, students behave accordingly and such behavior cyclically reinforces the beliefs of the school staff.

Skrla and Scheurich (2001) found deficit thinking to have considerable influence upon superintendents of school districts populated by children of color from low income households. Such an alarming discovery highlights the magnitude and extent of deficit thinking. Further cause for concern is expressed by Skrla and Scheurich in the following statement:

Because of the insidiously pervasive deficit thinking in which superintendents, along with the vast majority of other educators including teachers and principals, have been more or less marinated throughout their careers, these superintendents tend to view the broad-scale underperformance of children of color and children from low-income homes in their schools as inevitable, something that is not within their power to change. (p. 237)

However, Skrla, Scheurich and Johnson (2000) explained that, “accountability systems are driving significant improvements in academic achievement for children of color and low-income children, and thus these systems are increasing equity” (p. 296). Skrla and Scheurich argued that academic accomplishments with children of color remained ignored by most educators before the onset of accountability. These researchers listed five ways accountability systems can displace deficit thinking:

1. Provide highly visible evidence in terms of providing an equitable education.
2. Shift the political risk from the district level to the state level in terms of tackling racial and socioeconomic inequity.
3. Compel superintendents to study successful schools populated with low-income children of color.
4. Activate superintendents to develop antideficit notions.
5. Drive higher expectations for all children.

Deficit thinking poisons educators while deteriorating schools and districts. According to Skrla, Scheurich, and Johnson (2000) and Skrla and Scheurich (2001), accountability systems
counter deficit thinking. The United States is not immune to accountability. As depicted below, accountability in the United States steadily escalated after 1950.

U.S. Accountability Movement After 1950

A crisis in U.S. education materialized after the Soviet Union launched the Sputnik satellite into orbit (Cooper et al., 2004). Ornstein and Levine (2003) elaborated:

During the era of the Cold War and the Soviet Sputnik flight (1957), international events gave major impetus to the U.S. movement to reexamine academic disciplines as the focus of schooling. The country was appalled at the notion of losing technological superiority to the Soviets; national pride was challenged, and national goals threatened. (p. 409-410)

Cooper et al. (2004) added that while the United States appeared to be trailing in the Cold War, critics pointed to the educational system and its weak production of students well versed in foreign languages, mathematics, science, and technology. Cooper et al. continued that, “In response, Congress passed the National Defense Education Act. Curriculum was upgraded and more advanced courses offered in these critical areas” (p. 68). Additionally, Dr. Randall Whaley of the National Academy of Sciences called a conference at Woods Hole on Cape Cod in September 1959 to develop enhanced methods of teaching science to primary and secondary students (Bruner, 1978). Regarding the 10 day conference, which consisted of 35 members, Bruner wrote:

Physicists, biologists, mathematicians, historians, educators, and psychologists came together to consider anew the nature of the learning process, its relevance to education, and points at which current curricular efforts have raised new questions about our conceptions of learning and teaching. What shall be taught, when, and how? What kinds of research and inquiry might further the growing effort in the design of curricula? What are the implications of emphasizing the structure of a subject, be it mathematics or history – emphasizing it in a way that seeks to give a student as quickly as possible a sense of the fundamental ideas of a discipline? (p. 2-3)
Thereafter, what began as a concern for mathematics and science spread to a concern for standards in the traditional academic disciplines, including foreign languages (Cibulka & Derlin, 1995).

The largest compensatory federal aid program for education, the Elementary and Secondary Education Act (ESEA) was passed by Congress in 1965 (Cooper et al., 2004). Cibulka and Derlin (1995) avowed that, “the Elementary and Secondary Education Act was the first federal legislation to incorporate specific and far reaching program evaluation requirements and expectations for results” (p. 3). The main purpose of ESEA was to assist the poorest, most disadvantaged children in the United States by providing extra help in the basic subjects of mathematics, reading, and writing (Cooper et al., 2004). Accordingly, Carnoy and Loeb (2002) purported that during this time, assessment was traditionally based at the local level on community participation and parental control, represented by school boards, whereas schools were accountable to district administrators who were accountable to elected school boards.

Production-function research, using inputs to predict outputs, in school accountability garnered interest in the mid-1960s when James S. Coleman and colleagues, in 1966, conducted the United States’ largest ever survey of public education, *Equality of Educational Opportunity* (Hoy & Miskel, 2005). Commonly referred to as the Coleman Report, *Equality of Educational Opportunity*, “determined that family background factors, school facilities and curriculum, teacher quality, and student body characteristics accounted for only 16 percent of the variation in student achievement” (Cooper et al., 2004, p. 4). Hanushek and Raymond (2001) wrote that despite appealing to legislatures and courts, little evidence suggests efforts concentrated solely on providing inputs or resources to schools have increased student performance.
Hoy and Miskel (2005) reported that schools in the 1970s “emphasized social and emotional growth and equity for all students” (p. 272). Also, the 1970s stressed basic skills curriculum (Cibulka & Derlin, 1995) and brought greater measures for educational accountability as minimum competency tests were utilized to assess student achievement, which lasted through the early 1980s (Cooper et al., 2004). Koretz (2002) affirmed that “minimum competency tests were most often relatively easy multiple-choice tests used as a requirement for high school graduation” (p. 754). Such minimum competency tests preceded today’s grade level standards and on-grade level testing.

A Nation at Risk, published in 1983, claimed that the academic performance of American school students was not internationally competitive (Hoy & Miskel, 2005). The report began with this alarming statement:

Our Nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world. This report is concerned with only one of the many causes and dimensions of the problem, but it is the one that undergirds American prosperity, security, and civility. We report to the American people that while we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people. What was unimaginable a generation ago has begun to occur – others are matching and surpassing our educational attainments. (National Commission on Excellence in Education, 1983, p. 5)

As a result, state-level educational reforms skyrocketed as many states modified high school graduation requirements, lengthened the school day and year, instituted competency tests for graduation, and created various diplomas based on student performance (Hoy & Miskel, 2005).

Across various states and school districts during the 1980s, due in large part to the promotion of more stringent measures of educational outcomes by William Spady, it was commonplace for learner outcomes to direct student assessments while possessing “high-stakes”
for students, teachers, and school systems (Cibulka & Derlin, 1995). Stapleman (2000) acknowledged that with standards-based accountability, state and local policymakers share the responsibility of school success. “States hold districts and, in many cases, individual schools accountable for student achievement. In turn, districts and states are responsible for providing ongoing assistance and consequences to struggling schools” (Stapleman, 2000, p. 2). In 1989, President George H. W. Bush, in an unprecedented meeting, met with the nation’s governors to discuss school performance concerns; a pledge to national goals resulted and subsequently, the Goals 2000 legislation (Hanushek & Raymond, 2001). Goals 2000, “blended into what is today perhaps the most acclaimed path to educational improvement: so called ‘standards based reform’” (Hanushek & Raymond, 2001, p. 365). In 1994, before officially authorizing Goals 2000, President Clinton clarified its significance:

> What this Goals 200 [sic] bill does, believe it or not, for the first time in the entire history of the United States of America, is to set world-class education standards for what every child in every American school should know in order to win when he or she becomes an adult. We have never done it before; we are going to do it now because of this bill. (Essential Speeches, 2009, ¶11)

Fuhrman (1999) confirmed that new approaches focusing on student performance have been designed by states and districts to hold districts and schools accountable. By the 1990s, essentially all 50 states designed standards-based accountability systems for school districts (Hoy & Miskel, 2005). “Terms such as ‘accountability,’ ‘academic achievement,’ ‘performance standards,’ ‘assessments,’ ‘high-stakes tests,’ ‘teacher quality,’ and ‘student dropout rates’ infused conversations among educators, policy makers, business leaders, and the public” (Hoy & Miskel, 2005, p. 275). Moreover, 1994 witnessed the enactment of the Improving America’s Schools Act, which mandated states to establish student performance standards, corresponding assessments, and accountability systems; however, schools failing to meet certain academic
criteria were not automatically sanctioned or required to seek interventions (Commission on No Child Left Behind, 2007).

Eight years later, with bipartisan fervor, Congress passed the No Child Left Behind (NCLB) Act which was signed into law by President George W. Bush in 2002 (U.S. Department of Education, 2005b). NCLB “mandates that states develop and implement standards in reading/language arts, mathematics, and science; administer annual assessments connected to the standards; and provide sanctions for continued poor performance” (Hoy & Miskel, 2005, p. 287). Specifically, states were required to construct tests of reading and mathematics for all students in Grades 3-8 by the 2005-06 academic year (Linn, Baker, & Betebenner, 2002). NCLB required states to make testing and accountability changes, including recognizing adequate yearly progress (AYP) objectives, reporting disaggregated results, and participating every two years in Grade 4 and Grade 8 reading and mathematics NAEP administrations (Linn et al., 2002). NCLB directed high schools to meticulously and uniformly identify graduation rates (Joftus & Maddox-Dolan, 2003). Also, Librera (2003) said:

The No Child Left Behind Act of 2001 (NCLB), which reauthorized the Elementary and Secondary Education Act, contains a provision in Section 4155 that requires each state to have in place, a procedure to facilitate the transfer of a student’s disciplinary records, with respect to a suspension or expulsion, when the student enrolls in another public or private elementary or secondary school. (¶1)

Rudalevige (2002) added that NCLB imposes corrective actions on districts and schools when adequate yearly progress is not made, including technical assistance, public school choice options, Title I services, and school reconstruction as a charter or private school. Linn, Baker, and Betebenner (2002) concluded that with NCLB, “accountability requirements go further than laws in most states in prescribing extensive testing and in setting ambitious objectives for rapid
increases in student performance, with the goal that all students achieve at the proficient level or higher by 2014” (p. 24).

Essential to NCLB is eliminating the longstanding achievement gap between White or middle to upper income students and children of color or low income students (Skrla, Scheurich, Garcia, & Nolly, 2004). Because NCLB requires disaggregation of scores by certain student groupings, the achievement gap finally came into focus as a national problem. However, the implicit supposition that forced disaggregation of performance data by ethnicity would close achievement gaps, while advancing the performance of all (Hanushek & Raymond, 2005) has not been realized. McNeil, Coppola, Radigan, and Heilig (2008) wrote:

In the state of Texas, whose standardized, high-stakes test-based accountability system became the model for the nation’s most comprehensive federal education policy, more than 135,000 youth are lost from the state’s high schools every year. Dropout rates are highest for African American and Latino youth, more than 60% for the students we followed. (p. 1)

Nevertheless, in July 2006, claiming an effect of NCLB on NAEP results, which portrayed modest test score gains and a slight narrowing of the achievement gap, United States Department of Education Secretary Margaret Spellings stated, “It [NCLB] is helping to raise the achievement of young students of every race and from every type of background”’ (Hardy, 2006, p. 16).

For Louisiana students, Secretary Spelling’s assertion is an overstatement, especially regarding Grade 8 students (see Tables 2.5 and 2.6). Like most states, Louisiana has a history of educational reform prior to NCLB. A brief overview of said reform is provided here and will be discussed in greater detail in Chapter 3.
Louisiana

In the 1996 book, *A Medley of Cultures: Louisiana History at the Cabildo*, Kimberly Hanger wrote that Louisiana’s disregard for public education during the antebellum period and twentieth century resembled most of the South. “The privileged few received an education in the humanities and sciences from tutors, private academies, schools in the North and Europe, and most frequently parochial schools, especially Catholic ones” (Hanger, 1996, p. 224). In contrast, however, Hanger reported that New Orleans opened the religiously oriented Ursuline school in 1728, the oldest learning institution for women in the United States. Despite entrenched slavery, the Ursuline school admitted all girls and women regardless of color. Louisiana’s first public school system began in New Orleans in 1841. The estate of millionaire John McDonogh was bequeathed to the New Orleans public school system after his death in 1850 and largely contributed to the construction of several public schools (Hanger, 1996; Garvey and Widmer, 2001). Hanger added:

> Important advances in education took place in Louisiana during Reconstruction. The Constitution of 1868 provided for at least one free public school in each parish, open to students ages six to eighteen regardless of race. Although before 1870 there were few schools in Louisiana outside of New Orleans, by the end of Reconstruction most parishes had schools. The Louisiana school system increased dramatically from 100 public schools in the state in 1868 to over 1,100 in 1872. (p. 228)

White public schools remained open in Louisiana mainly due to the financial support of George Peabody from 1867 to 1877 (Garvey & Widmer, 2001). “After 1877 segregation returned, with very few schools for African Americans” (Hanger, 1996, p. 228). Garvey and Widmer (2001) wrote that from 1904 to 1908, 66,000 more students attended public schools due to the dramatic increase in annual public school allocations from $1.5 million to $3.5 million, under the administration of Governor Newton Blanchard. Nevertheless, “Terms were short, teachers were poorly trained, and tens of thousands of children had no opportunity to go to school at all. This
was especially true of black children” (Garvey & Widmer, 2001, p. 141). Garvey and Widmer affirmed that despite roadblocks after the U.S. Supreme Court declared segregation in public schools unconstitutional in 1954 (*Brown v. the Board of Education*), Louisiana finally integrated on November 14, 1960 when Ruby Bridges, Leona Tate, Tessie Prevost, and Gail Etienne were escorted by U.S. marshals to two New Orleans public schools.

By 1976, Louisiana activated public school reforms to improve student performance by (a) defining state minimum standards for Grades K-12 in language arts and mathematics; (b) distributing State Curriculum Guides for eight subjects, which included language arts and mathematics; (c) initially implementing the Louisiana State Assessment Program that was supplanted by the State Basic Skills Testing Program in 1979, designed in accordance with the minimum standards to gauge the language arts and mathematics performance of students in Grades 2-12; and (d) introducing a state funded remedial program for students who struggled to achieve the language arts and mathematics minimum standards (Hunter & Williams, 1983). As the stimulus of said reforms, R.S. 17:391.3 explicitly stated:

The superintendent of education shall develop a guide for educational accountability for the public schools of the state no later than May 1, 1977. Such guide shall be the basis for a comprehensive plan for an education accountability program which shall be developed by the superintendent no later than July 1, 1980. (Program for Educational Accountability, 1976, §391.3)

According to Hill (1998), when the Harvard University educated and reform minded governor, Charles “Buddy” Roemer, took office on March 14, 1988, “Louisiana reluctantly claimed several disreputable national titles: highest illiteracy rate, highest high-school dropout rate, highest unemployment rate and highest incidence of some forms of cancer” (p. 334). With Governor Roemer having promised to better the education system (Hill, 1998; Garvey & Widmer, 2001), the Louisiana Legislature instituted Act 659, commonly referred to as the
Children First Act on July 15, 1988 (Children First Act, 1988). Cambre (2009) noted that the Children First Act was the first comprehensive endeavor of educational reform in Louisiana. The Children First Act aimed “to provide a unified, farsighted, and intense program of school improvement designed to center resources and effort on continually improving the quality in the public school classrooms in this state” (Purpose, 1988, §3872). In doing so, the Children First Act ordered the Progress Profiles Program (LDE, 1999). Intended to increase accountability, the Progress Profiles Program shared data with parents and the public that described the condition of education, shared data with colleges and schools that illustrated performance, and cultivated a dynamic link between grade schools and colleges and universities (Children First Act, 1988). Accordingly, the Progress Profiles Program mandated schools to regularly provide: (a) results from state required criterion-referenced tests, norm-referenced tests, and gradation exit exams; (b) results from college readiness tests; (c) school performance scores; (d) dropout rates; (e) attendance rates; (f) secondary school completion rates; (g) faculty data; (h) financial data; (i) discipline data; (j) class size data; and (k) other board approved data (Children First Act, 1988). “The Children First Act, through its Progress Profiles program, became the impetus toward the introduction of the statewide School Accountability System, implemented in the 1998-1999 school year” (LDE, 2008c, p. 2).

One result of the Children First Act was that Louisiana continued to swing the pendulum towards increased accountability during the 1990s. Act 478 of the Louisiana Legislature, the Louisiana School and District Accountability Act, was passed in 1997 with four objectives:

1. Provide for the development and implementation of a school and district accountability system which requires and supports student achievement in each public school.
2. Provide assurance to the citizens that the quality of education in each public school is monitored and maintained at levels essential for each student to receive a minimum foundation of education.
3. Provide clear standards and expectations for schools and school systems so that assessment of their effectiveness will be understood.
4. Provide information that will assist schools and school systems in order that energies and resources may be focused on student academic achievement. (Louisiana School and District Accountability Act, 1997, §10.1)

Act 478 created the School and District Accountability Advisory Commission, which encompassed 27 members including representatives of the Governor, the State Superintendent, the legislature, Board of Elementary and Secondary Education (BESE), school boards, superintendents, principals, teachers, parents, community groups, and businesses (Louisiana District and School Accountability Advisory Commission, 1998; LDE, 2008a). The School and District Accountability Advisory Commission was charged with recommending to BESE a statewide school and district accountability system (Louisiana School and District Accountability Act, 1997; Louisiana District and School Accountability Advisory Commission, 1998; LDE, 2008a). To do this, the School and District Accountability Advisory Commission recognized the need to tailor an accountability program to the unique needs of Louisiana students and thoroughly examined the accountability systems of states whose accountability programs had received national attention. These states were Texas, North Carolina, Kentucky, Maryland, and Florida (Louisiana District and School Accountability Advisory Commission, 1998).

A history of significant educational reforms that fostered accountability systems in each of these five states is given below. For each state, the history is divided into three subsections, early history, evolution of state educational law, and current accountability law and policy. A detailed description of the Louisiana School and District Accountability System is given in Chapter 3.
Texas

Texas has a long history of educational commitment. Prior to statehood, Texas colonists grew frustrated with the failure of the Mexican government to institute an educational system (Funkhouser, 2000; Texas Almanac, 2008; TEA, 2004). The *Texas Declaration of Independence* clearly described such displeasure along with sentiments toward education:

> It has failed to establish any public system of education, although possessed of almost boundless resources, (the public domain,) and although it is an axiom in political science, that unless a people are educated and enlightened, it is idle to expect the continuance of civil liberty, or the capacity for self government. (The Portal to Texas History, 2008, ¶3)

In 1840, each Texas county was allotted four leagues of land to develop public schools and the 1845 Texas Constitution directed that 10% of state taxes be dedicated to financially support them (Texas Almanac, 2008; TEA, 2004). Please note that one league of land equaled 4,440 acres (Welcome to Industry Texas, n.d.). Governor Elisha Pease signed the bill which established a public school system in Texas on January 31, 1854, supported by $2 million that Texas received from the Compromise of 1850 (Texas Almanac, 2008), and created the Permanent School Fund (TEA, 2004; TEA, 2008b). After changes enacted in the 1876 Texas Constitution, the TEA (2004) wrote:

> In 1884, the school law again was rewritten. The office of state superintendent was re-created, the state ad valorem tax was affirmed, and the Permanent School Fund was to be invested in county and other bonds to increase income. Almost 100 years later, in 1983, Texas voters approved a constitutional amendment that provides for the guarantee of school district bonds by the Permanent School Fund….Today, income from the Permanent School Fund provides approximately $765 million a year to local school districts. (¶5-6)

Moreover, the TEA stated that Texas developed a system of accreditation in 1885 when the University of Texas faculty assessed certain papers submitted by high schools. If these papers were declared satisfactory, the high school earned an affiliation with the university and its graduates gained automatic admittance.
Texas enacted a mandatory free textbook law for students in all grades in 1919 (Lange, 1941). Thirty years later, in 1949, the Gilmer-Aikin Law was enacted demanding better public education (TEA, 2004). According to Kuehlm (2004), the Gilmer-Aikin Law introduced several critical changes: (a) the TEA supplanted the State Department of Education and local school districts gained more control; (b) the composition of the State School Board was changed to 21 elected members instead of 9 governor appointed members; (c) the State Commissioner of Education, appointed every four years by the State Board of Education, replaced the elected state Superintendent of Public Instruction; (d) the “economic index” replaced the “per capita” method of dispersing state funds to public school districts, whereas a Minimum Foundation Program ensured high levels of service to schools in low economic sections and school attendance was encouraged via the distribution of funds for Average Daily Attendance; and (e) a minimum teacher salary scale was established. Kuehlm added that in 1965 Governor John Connally strived to make Texas a national leader in education with public schools playing an expanded role in combating increased unemployment and delinquency rates and welfare expenditures.

The 1983 release of *A Nation at Risk*, mentioned above, prompted Governor Mark White to respond (Funkhouser, 2000; Kuehlm, 2004) by establishing a Select Committee on Public Education, headed by H. Ross Perot, a Dallas oil man and presidential candidate in 1992 and 1996, to make recommendations which led to the enactment of House Bill 72 in 1984 (Brandt, 1985; TEA, 1987; Funkhouser, 2000; Kuehlm, 2004). The TEA (1987) listed several provisions of House Bill 72: (a) the State School Board was reduced to 15 elected members instead of 27 elected members; (b) property-poor school districts received additional state funds; (c) all certified administrators and teachers had to pass both a reading and writing skills examination to retain employment; (d) high school students had to pass both an English language arts and
To receive a diploma; (e) students in odd numbered grades took minimum skills examinations; (f) on-the-job appraisals of administrators and teachers were developed; (g) a four-level career ladder to reward exceptional teachers was developed; (h) a prekindergarten program for limited English proficient and economically disadvantaged students and a language intensive summer program for limited English proficient students entering kindergarten and first grade were developed; (i) kindergarten through Grade 4 class sizes were limited to 22 students; (j) social promotion was prohibited and the passing standard was set at 70 points on a 100 point scale; (k) the “no-pass/no play” rule for extracurricular activities was implemented; (l) students were denied credit after five unexcused absences in any class each semester; (m) the State School Board established long-term goals and objectives as part of a four year public education master plan; (n) a pay raise for all teachers was implemented; and (o) all teachers received a 45 minute planning period each day.

Nearly a decade later, Senate Bill 7, commonly referred to as the “Robin Hood Plan,” was passed by the state legislature in 1993 and mandated “that the wealthiest school districts must relinquish their wealth to the point of allowing a maximum of $280,000 per student. Anything over that amount per student must be relinquished” (Funkhouser, 2000, p. 201). Common forms of relinquishment included merging tax bases with property-poor districts, giving funds to the state, educating students from other districts, voluntarily consolidating with other districts, or sending taxable property to the tax rolls of another district (TEA, 2004).

Despite the aforementioned House Bill 72 provision that students take minimum competency examinations, Senate Bill 350 of 1979 generated Texas’ initial statewide testing program, the Texas Assessment of Basic Skills (TABS) (Kuehlm, 2004), a test that has gone through several iterations and is known today as the Texas Assessment of Knowledge and Skills,
or TAKS. The TABS tested Grade 3, 5, and 9 students (Funkhouser, 2000; Kuehlm, 2004; TEA, n.d.) in math, reading, and writing (TEA, n.d.; Mangino, 1986). “Because results were reported, the TABS test was the beginning of ‘high stakes’ accountability for school districts” (TEA, n.d., ¶1). In 1985 (Funkhouser, 2000; TEA, n.d.; Mangino, 1986), the Texas Educational Assessment of Minimum Skills (TEAMS) replaced TABS (Mangino, 1986). The TEAMS measured student performance on the state curriculum “essential elements” (Funkhouser, 2000). The “TEAMS tested math, reading, and writing, and was administered to students in grades 1, 3, 5, 7, 9 and 11, with the 11th grade testing being the ‘exit level’ assessment” (TEA, n.d., ¶2). The more difficult Texas Assessment of Academic Skills (TAAS) began in 1990 (Kuehlm, 2004). The TEA (n.d.) elaborated:

Changes in state law required the implementation of a new criterion-referenced program. The TAAS test shifted the focus from minimum skills to academic skills, which represented a more comprehensive assessment of the state-mandated curriculum, the Essential Elements. TAAS assessed higher-order thinking skills and problem-solving in math, reading and writing for grades 3, 5, 7, 9, and 11 exit level. (¶3)

Under the governorship of George W. Bush, the Texas Education Code was substantially amended by the Texas Legislature in 1993 and Texas’ accountability system was born. The new accountability system rated schools and determined whether districts received state accreditation (Kuehlm, 2004). A new state curriculum that emphasized more rigorous content and skills (Kuehlm, 2004), the Texas Essential Knowledge and Skills (TEKS), took effect on September 1, 1998 (TEA, 2005). A new assessment program aligned with TEKS, the Texas Assessment of Knowledge and Skills (TAKS), was also developed and implemented (TEA, n.d.). The TEA (n.d.) maintained that in addition to earning passing grades, Grade 3 students must also display proficiency on reading TAKS and students in Grades 5 and 8 must also display proficiency on reading and mathematics TAKS. Likewise, Grade 11 students, along with accruing the required
credits, must also pass the reading, writing, mathematics, science, and social studies subscales of TAKS. Knowledge and experienced gained from the Texas testing and accountability system served as a basis for the development of NCLB, signed into law in the second year of the presidency of George W. Bush (Kuehlm, 2004). Kuehlm (2004) added that NCLB is the most far reaching federal educational reform since ESEA was originally passed in 1965.

North Carolina

After colonization, missionaries operated the first schools of North Carolina (North Carolina State Board of Education [NCSBE], 2001a). As confirmed by the NCSBE (2001a), the North Carolina Constitution of 1776 specifically stated:

That a school or schools shall be established by the Legislature, for the convenient instruction of youth, with such salaries to the masters, paid by the public, as may enable them to instruct at low prices; and all useful learning shall be duly encouraged, and promoted, in one or more universities. (The Avalon Project, 2008, ¶70)

This sentence in the state constitution established three important precedents. One, tax supported schools would exist in the state; two, teachers, or masters, were to receive low salaries; and three, that the state would establish universities.

Archibald D. Murphey, the “father of public education” in North Carolina, spearheaded efforts for the General Assembly to develop a school fund to be managed by an elected State Board in 1817 (NCSBE, 2001a). Consistent with the national push for publically supported grammar schools headed by Horace Mann and Henry Barnard, North Carolina’s first common school law was passed in 1839, and pooled state and local funds to support public schools. After the Civil War and Reconstruction, the state legislature weakened the public school system (NCSBE, 2001b). “Governor Jonathan Worth, who had been elected in 1865 and who earlier in his career had sponsored a bill establishing public education in the state, persuaded the legislature to abolish public schools” (Holdzkom & Kuligowski, 1993, p. 2) thereby absolving
the state from responsibility for providing schools for freed slaves. Other early significant education reforms noted by the NCSBE (2001b) included establishment of the official State Board of Education and affirmation that the state would provide a free education to all children, both as a result of the 1868 State Constitution; appointment of a Board of Examiners to advance teacher preparation in 1897; establishment of a Textbook Commission in 1901; passage of the Compulsory Attendance Act in 1913 for all students, ages 8 to 12, for four months per year; and passage of the School Machinery Act in 1931, in response to the Great Depression, which saved the public schools that were primarily supported by local funds and granted all students free and uniform schooling. Following WWII, an allocation of $50 million was granted for school construction in 1949 via the State Board of Education’s first bond issue, and state commitment to research based university programs began during the 1960s (NCSBE, 2001c).

To gauge the efficacy of North Carolina’s public school system (NCSBE, 1990), the General Assembly passed the first testing legislation in 1977 (NCSBE, 1995a). With attention directed to a minimum competency standard (NCSBE, 2003), two laws were passed: “H.B. 204 – the High School Graduation and Competency Program – and H.B. 205 – the Annual Testing Program” (Gallagher, 1980, p. 240). Gallagher (1980) noted that major intents of the legislation strove to (a) ensure that high school graduates could function in society, (b) develop a method to recognize positives and negatives of the public school system, and (c) develop a method of accountability for the public school system. Hence, the North Carolina Annual Testing Program was born (NCSBE, 1990).

The state testing program started with the Minimum Competency Test (MCT), a criterion-referenced test (CRT), and the California Achievement Tests (CAT), a norm-referenced test (NRT), in 1978. Passing the MCT was mandated to graduate high school; the CAT was
administered statewide to selected elementary grades in the areas of language, mathematics, and reading (NCSBE, 1995a). By 1983, interest in a basic education program emerged via a directive of the General Assembly to the State Board of Education (NCSBE, 1992). The Basic Education Program (BEP) became official in 1985 (NCSBE, 1989; NCSBE, 1995a) and had a component that incorporated “curriculum testing in basic skills in grades 3, 6, and 8; minimum competency testing in high school; and an end-of-course testing program for high school courses” (NCSBE, 1992, p. 1). According to the NCSBE (1992), the BEP ensured that public schools implemented the new Standard Course of Study, which represented a common foundation of knowledge and skills for all students.


This act was designed to give local school systems more flexibility in making decisions in exchange for greater accountability. Senate Bill 2 included local plans for school improvement, waivers from state laws and policies, a report card for local school systems to ensure accountability, and a differentiated pay provision. Senate Bill 2 was devised to build on the framework that the Basic Education Program put in place by giving the staff in local schools more authority in making decisions. (North Carolina State Board of Education, 2001d, ¶3)

As a result, North Carolina’s Performance Based Accountability System (PBAP) commenced with schools encouraged to surpass state accreditation categories and establish higher academic standards (NCSBE, 1995b). Also, designed to measure the Standard Course of Study, end-of-grade tests, developed by the North Carolina Department of Public Instruction, were under development in 1989 and were first normed in 1993 in mathematics and reading for students in Grades 3-8 (NCSBE, 1999a).
Members of the General Assembly believed that North Carolina’s public schools were advancing too slowly for the requirements of higher education and businesses (NCSBE, 1999b). Therefore, the General Assembly passed Senate Bill 16 in March 1995, which created the ABCs of Public Education (NCSBE, 2001e). “In the ABCs Accountability Model, the A stands for Accountability, the B stands for Basics (reading and mathematics), and the C stands for local control” (NCSBE, 1997, p. 1). The ABCs of Public Education originated as North Carolina’s chief accountability system to acknowledge school improvement and one of the nation’s first accountability systems to apply pressure for schools to demonstrate yearly academic growth of students (NCSBE, 2007). The NCSBE (2001e) wrote:

Student achievement is measured through state tests. Elementary and middle grades use the end-of-grade tests in reading, writing (grades 4 and 7), and mathematics, while the high school model consists of the end-of-course tests, the high school writing test, and a comprehensive test in reading and mathematics. (¶3)

The ABCs of Public Education was adapted to the requirements of NCLB in 2002-03 (NCSBE, 2009). As of 2009, testing changes include that students in Grades 3-8 take end-of-grade reading and mathematics tests; students in Grades 5 and 8 take end-of-grade science tests; selected students in Grades 4 and 8 participate in NAEP; a computer skills test must be passed to receive a high school diploma; students in Grades 9-12 take end-of-course tests in certain mandated courses; and selected Grade 12 students participate in NAEP (NCSBE, 2008).

Kentucky

Tyack and Hansot (1982) noted that Kentucky, along with Louisiana and North Carolina, differed from other southern states during the antebellum period because “educational leaders succeeded in founding rudimentary networks of public schools” (p.83). The Kentucky Department of Education (KDE) (1969) wrote that “the little red school house” was a common label for each of the one-room and two-room schools that covered Kentucky for over 100 years.
These early schools were located wherever there were a few students whose parents could or would pay pedagogues for their services as teachers. The poorly planned frame structure was usually constructed on an unprofitable piece of land located in the center of the area it was designed to serve. Since these one-room schools were built to serve isolated communities, the patrons of the village or rural section considered it a center of community pride as well as a conventionalized institution. (KDE, 1969, p. 1)

According to the KDE, Kentucky possessed 7,067 one-room schools during the 1918-19 school year compared to 146 one-room schools during the 1968-69 academic year; such a decline was attributed to the consolidation of schools via improved means of transportation, population increases in small towns, and from 1955 to 1969, the attention paid to school evaluation.

Beginning in the 1950s and over succeeding decades, Kentucky actuated many public school improvement efforts that proved futile. Among these efforts were increased funds to raise standards for both teachers and schools. By the 1980s Kentucky still produced some of the lowest rankings in the United States on numerous indicators of quality education (KDE, 2000). Spaid (1997) explained, “at the time, Kentucky ranked 50th in the nation in adult literacy; 50th in the percentage of high-schoolers who’d received a diploma; 49th in percentage of college graduates; and 48th in per-pupil expenditure” (¶10). The KDE (2000) emphasized that despite progressive legislation like the 1984 School Improvement Act, designed to empower the KDE to overtake school districts not meeting certain criteria for attendance rates, dropout rates, and test scores, the poorest districts lacked the resources of the wealthiest districts. As a result, according to the KDE:

In 1985, 66 of the poorer school districts formed an organization, the Council for Better Education. It hired Bert Combs, the former governor and former federal judge, as its lawyer. The council’s basic position was that every child deserves an opportunity to learn; that an expectation of equal results should entail equal resources....Their quest for fundamental fairness led to an historic decision by Kentucky’s Supreme Court in 1989. (p. vii)
Specifically, in *Rose v. Council for Better Education* (1989) (Steffy, 1993), Kentucky’s public school system was deemed unconstitutional by the Kentucky Supreme Court (Foster, 1991; Steffy, 1993). In essence, “existing statutes, regulations, organizational configurations, curricular mandates, personnel designations and titles, and virtually everything else relating to the vast bureaucratic structure of Kentucky public education was subject to being eliminated, dismantled, or in some other way changed” (Van Meter, 1992, p. 2). Immediately thereafter, the Kentucky General Assembly created the Task Force on Education Reform to recreate the public school system. The task force was separated into three committees: curriculum, finance, and governance (Steffy, 1993). Hence, this unexpected (Van Meter, 1992; Galuszka, 1997) and unprecedented (Foster, 1991; Spaid, 1997) Supreme Court decision led to the most comprehensive educational reform in U.S. history, House Bill 940, the Kentucky Educational Reform Act (KERA) of 1990 (KDE, 2000; Steffy, 1993; KDE, 2005).

KERA was signed into law by Governor Wallace Wilkinson on April 11, 1990 (Steffy, 1993). In terms of curriculum, finance, and governance, the 1995 *Education Digest* article entitled Kentucky’s Systemic Reform listed several noteworthy implications of KERA. With curriculum, the following were established: (a) student performance standards; (b) performance-based assessments; (c) an accountability system with rewards and sanctions; (d) preschool programs for at-risk and handicapped students, family resource and youth service centers for schools where the at-risk population is at least 20 percent; and (e) professional development sessions for teachers dedicated to explaining the details of KERA. With finance, the following occurred: (a) creation of the Support Education Excellence in Kentucky (SEEK) formula to guarantee equitable funding across districts, with additional funds obtainable for transportation and the education of at-risk and exceptional students; (b) the expectation of local districts to tax
at a determined minimum rate, with the ability to raise additional local funds and matched by the state under certain scenarios; and (c) the provision of state funds for required curriculum and governance programs. With governance, the following occurred: (a) the office of education accountability supervises education reform; (b) self-governing schools are based on the creation of a school council at each school and composed of an administrator, three teachers, and two parents; (c) the Education Professional Standards Board, composed mostly of teachers, issues and revokes teaching licenses; (d) alternative certification programs are available; and (e) regional service centers are established to aid professional development. Additionally, Steffy discussed KERA’s origination of a Distinguished Educators program which assigned outstanding teachers to assist struggling schools:

Kentucky Distinguished Educators are certified educators who have been selected by the State Department to serve as “education ambassadors” within the state. During the summer of 1992, five Kentucky Distinguished Educators were selected and given a sabbatical from their district. The Kentucky Distinguished Educators selected the first year planned to assist the department in designing a training program for future distinguished educators. (p. 67)

Beyond the importance of the reforms themselves, Kentucky’s Systemic Reform represents landmark legislation in that Kentucky demonstrated to the nation that restructuring, disestablishing, and reestablishing entire state school systems is achievable.

In terms of measuring academic achievement, Kentucky began testing basic skills in 1978 in Grades 3, 5, 7, and 10 with the Comprehensive Test of Basic Skills (CTBS), an NRT (Kentucky State Legislative Commission, 1988). The state followed with a CRT, the Kentucky Essential Skills Test (KEST), in 1984, testing reading and mathematics in all grades with the addition of spelling, writing, and library reference skills in 1985 (Kentucky State Legislative Commission, 1988). However, Hoff (2003) declared that, “KERA established the nation's first statewide system of testing and accountability to measure progress by individual schools toward
improving student learning” (¶14). At the heart of KERA stands six Learning Goals (KDE, 2007a). As written in the legislation, schools must teach students to:

1. Use basic communication and mathematics skills for purposes and situations they will encounter throughout their lives;
2. Apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, and practical living studies to situations they will encounter throughout their lives;
3. Become a self sufficient individual;
4. Become responsible members of a family, work group, or community including demonstrating effectiveness in community service;
5. Think and solve problems in school situations and in a variety of situations they will encounter in life; and
6. Connect and integrate experiences and new knowledge from all subject matter fields with what they have previously learned and build on past learning experiences to acquire new information through various media sources. (KERA, 1990, p. 1209)

To exemplify student achievement of the goals, the KDE (2007a) developed Academic Expectations for all Kentucky students. A Program of Studies, which defines the necessary minimum content standards for any student striving to graduate from a Kentucky public high school, included primary, intermediate, and middle school standards as well (KDE, 2006). In addition to the Learning Goals, Academic Expectations, and Program of Studies, Kentucky’s curriculum includes the Core Content for Assessment (Howarth & Mountain, 2004) which embodies critical content for all students in preparation for the Kentucky Core Content Test (KCCT) (KDE, 2007b).

As the name implies, the Kentucky Core Content Test assesses student mastery of the Kentucky Core Content for Assessment, as well as higher order thinking and communication skills. The KCCT, composed of open response items and multiple choice questions is given each spring to students in the content areas of reading, mathematics, science, social studies, arts and humanities and practical living/vocational studies; the 4th, 7th and 12th grade tests also require the students to respond to a writing prompt. (KDE, 2008, ¶1)
Maryland

In terms of states that led successful school reforms, Maryland is often mentioned with Kentucky (Bowler, 1995), Texas, and Massachusetts (Garcia & Rothman, 2002; Vranek, 2002). However, a look at early history from 1671 to 1867 reveals that Maryland failed numerous times to institute a system of free schooling (U.S. Department of Health, Education, and Welfare [HEW], 1969). During this time, wealthy landowners favored private education (Zilliox, 2007). Maryland’s 1864 constitution called for the creation of a system of free schooling along with a state superintendent of education; the governor appointed superintendent, Dr. Libertus Van Bokkelen, was constitutionally required to plan the system, which was approved by the General Assembly (HEW, 1969).

The plan accepted by the assembly provided for a uniform statewide system of common schools that would qualify the pupils for admission into any of its high schools and academies; uniform secondary courses, qualifying high school pupils for admission into any of the colleges; and scientific, classical, and mathematical instruction in the colleges, qualifying every graduate for admission into the state university’s law, medical, or mechanical departments. (HEW, 1969, p. 540)

Thus, “Maryland's public school system was officially born in 1865-during the same time that the Civil War ended, President Abraham Lincoln was assassinated, and Congress amended the Constitution to abolish slavery” (Zilliox, 2007, ¶1).

Supported by the belief that each child in Maryland should have the opportunity to receive an equal education, the General Assembly passed an equalization law in 1922 that provided state aid to counties lacking the financial capacity to meet minimum student requirements (HEW, 1969). Said law possessed other mandates:

The Maryland equalization plan required the schools to employ qualified teachers, who were to be paid guaranteed minimum salaries with increments at various intervals for successful experience. It required the public schools for white youth to remain in session at least 180 days per year, and the Negro schools at least 140 days per year. The schools were to maintain an adequate supply of free books and materials, there was to be a
competent instructional supervisor in every school unit, and the county superintendents were to furnish effective professional leadership. (HEW, 1969, p. 545)

After a petition filed by the Maryland State Colored Teachers Association in 1937, both teacher and principal salaries for African Americans were equalized to that of Whites in 1939 (Zilliox, 2007). Moreover, in 1945, the Maryland Legislature added Grade 12 to its public school system by reorganizing the elementary level to include Grades 1-6, the junior high level to include Grades 7-9, and the high school level to include Grades 10-12 (HEW, 1969).

The mandatory statewide administration of minimum competency examinations in Maryland’s public schools dates back to 1972 (Vranek, 2002) as a result of the Educational Accountability Act, passed that year, which created the Maryland Accountability Program (MAP) (Holowenzak & Forgione, 1976). Holowenzak and Forgione (1976) named five significant elements of the Educational Accountability Act:

1. Establishment of goals and objectives initially in the areas of reading, writing, and mathematics;
2. School-by-school summary of current status of student achievement in relation to established objectives;
3. Establishment of procedures for determining the effectiveness of school programs;
4. Regular re-evaluation of program goals objectives [sic]; and
5. Program cost information. (p. 1)

According to Holowenzak and Forgione, the MAP evaluated public schools in several ways: (a) input information about student, school, and community characteristics; (b) output information based on the results of the ITBS and the Non-Verbal Battery of the Cognitive Abilities Test which were administered to students in Grades 3, 5, 7, and 9 and the administration of an objective functional reading test constructed by the Maryland State Department of Education (MSDE) to students in Grades 7 and 11; and (c) process information that included data about student behaviors, pedagogical approaches, administrative leadership styles, curriculum goals, and any issue influencing inputs and outputs.
“During the 1980s, Maryland’s elected and appointed leadership embraced the notion that schooling needed a more fundamental overhaul than basic-skills testing if all students were to be prepared for the demands of the Information Age” (Vranek, 2002, p. 17). Before the overhaul, Grasmick (1997) acknowledged that public education in Maryland mirrored that of the other 49 states; that is, teachers taught, principals managed schools, district administrators fostered relationships with local and state governments concerning finance, educators internally guided reforms, and community involvement was scarce. Political action ensued after school districts repeatedly requested additional funds despite the lack of evidence demonstrating that student performance improved (Bowie, 2007). Governor William Donald Shaeffer (Garcia & Rothman, 2002) established the Commission on School Performance in 1987, chaired by a business leader (Grasmick, 1997), Walter Sondheim Jr. (Bowie, 2007). The resulting Sondheim Commission Report called for increased accountability in the public schools (Grasmick, 1997; Garcia & Rothman, 2002; Vranek, 2002; Bowie, 2007) and vaulted Maryland to the status of being among the first states to progressively raise standards and achievement (Vranek, 2002). The landmark 1989 Sondheim Commission Report (Vranek, 2002) listed eight recommendations to improve Maryland’s public schools:

1. We recommend the establishment of a comprehensive system of public accountability in which each school, each school system and the state are held responsible for student performance.
2. We recommend the establishment of more comprehensive assessment systems at the state and local levels to identify excellence, uncover problem areas, and point the way toward improvement. The state should replace its current testing programs.
3. We recommend the establishment of a system that will collect and report information for schools, school systems, and the state on a “vital core” of student achievements and also on factors that may influence those results.
4. We recommend the establishment of a computerized management information system that is capable of tracking school and school system data.
5. We recommend, as an important step toward school improvement, the elimination of rules, regulations and other strictures that constrain school staffs in applying their professional abilities and creativity to the task of teaching children.
6. We recommend the establishment of a statewide school improvement program directed and supported by a high-level unit in the Maryland State Department of Education devoted solely to school improvement.

7. We recommend the establishment of a public school accreditation program for the state of Maryland to guarantee that every school and school system makes high quality education its continuing priority.

8. We recommend the establishment of an independent, continuing oversight body to monitor standards and to review accountability procedures to ensure that the intent of these recommendations is sustained over time and to suggest changes in this system as needed. (Governor’s Commission on School Performance, 1989, p. 3-4)

Following the Sondheim Commission Report, the MSDE initiated the Maryland School Performance Program (MSPP) in 1990, with public school performance areas designated to hold public schools accountable, and crafted by administrators, teachers, and parents across Maryland (Ysseldyke, Thurlow, Erickson, Haigh, Moody, Trimble et al., 1997). The Maryland School Performance Assessment Program (MSPAP) evolved and concentrated on student development of advanced skills with the intent of schools renovating the curriculum and supporting reasoning and problem-solving activities in all subjects (Garcia & Rothman, 2002). Vranek (2002) referred to the MSPP and MSPAP as, “one of the nation’s first statewide testing and accountability regimes to measure achievement and hold schools accountable for making progress” (p. 17).

Ysseldyke et al. (1997) described the intricacies of MSPAP:

The MSPAP is a single, performance-based test covering mathematics, reading, writing, science, language usage, and social studies. Students in grades 3, 5, and 8 are randomly assigned to one of three clusters per school grade in May of each year. These clusters are composed of portions of the entire MSPAP instrument; consequently, a complete MSPAP score does not exist for any individual student. The assessment takes approximately nine hours of engaged testing time over five days, and includes open-ended questions, essays, and performance events based on Maryland’s Learner Outcomes. (p. 12)

Unlike the MSPAP, a second assessment, the Maryland Functional Testing Program (MFTP) was intended to measure student accountability and school accountability (Ysseldyke et al., 1997). Ysseldyke et al. explained that the MFTP consisted of four pass or fail minimal competency examinations, which included citizenship, mathematics, reading, and the Maryland
Writing Test. Passing the MFTP was required to receive a high school diploma. Students initially took it in Grade 9, but later students began taking the test as early as Grade 6.

In 2003, the Maryland School Assessment (MSA) replaced the MSPAP (MSDE, 2003a). The MSA generates student scores and school scores utilized to drive improved instruction, determines whether a school meets state standards, and identifies schools that require local or state reconstitution (MSDE, 2003a). The MSA “is given each year in early March in reading and math at grades 3 through 8. Beginning in spring 2007, the MSA/Science [was] field-tested in grades 5 and 8” (MSDE, 2003b, ¶1). Students can prepare for the MSA through the Voluntary State Curriculum (MSDE, 2007). In another change, the High School Assessment (HSA) replaced the MFTP (Ysseldyke et al., 1997) as the state graduation exit test. The HSA was first administered in the 2001-02 school year (MSDE, 2003a) and consists of four assessments: algebra, biology, English, and government (MSDE, 2008). The HSA is “based on the High School Core Learning Goals, which were created in 1996 and are part of the curriculum in all Maryland public schools” (MSDE, 2007, p. 12). According to the MSDE (2007), a student must pass the HSA to receive a Maryland High School Diploma.

Florida

Public education in Florida harvested little attention until 1831 when the Florida Education Society aimed “to diffuse information on the educational status and needs of the people, and to pave the way for the establishment of a general system of instruction” (Cochran, 1921, p. 13-14). The society and its branches quickly disappeared and the thrust for public education died (Cochran, 1921). Nevertheless, Florida attempted numerous times between 1845 and 1868 to establish a public education system (Cochran, 1921). “In 1849 an act was passed providing for the establishment of common schools for all white children of the State between
five and eighteen years of age” (Cochran, 1921, p. 32). Scott (1944) wrote that Blacks received no schooling prior to 1865. “In 1865, shortly after the abolition of slavery, Northern benevolent associations began the program of establishing schools for the Freedmen throughout the state, and by the end of the year these agencies had established 30 schools” (Scott, 1944, p. 170).

After the Civil War, like much of the South, Florida needed assistance (Roberts, 1965). “One of the most pressing problems was education. Whatever system had existed before the Civil War, it was nearly extinct by 1865” (Roberts, 1965, p. 350). Roberts added that an act was passed in 1866 to organize schools for Blacks and Florida’s 1868 constitution sanctioned a common school system for Whites. Florida’s 1885 constitution mandated that Blacks and Whites receive an equal education, but in separate schools (Cochran, 1921). In addition to determining what individuals served on the state board of education and county boards of education, Florida’s 1889 school law demonstrated progress:

It gave the county boards sole authority to employ and assign teachers; directed them to prescribe the elementary courses of study for their respective counties; and authorized them to establish and maintain county high schools. It provided for local school supervisors to take the place of the old local school-boards; made provision for special school-districts; and provided for county and district school-taxes. (Cochran, 1921, p. 110)

However, Florida continued its dual educational system for Blacks and Whites until 1954 (Borman et al., 2004)

Tyler, Lapan, Moore, Rivers, and Skibo (1978) referred to Florida as one of the first states to study and institute public school accountability procedures. Section 229.551, Florida Statutes (Florida Department of Education [FLDOE], 2004; FLDOE, 2005a), ordered the FLDOE to enrich the quality and effectiveness of education in 1968 (FLDOE, 2004; FLDOE, 2005a; FL DOE, 2005b). Chapter 70-399, Laws of Florida (Impara, 1972; FLDOE, 2004; FLDOE, 2005a), empowered the Commissioner of Education to devise a system that assessed
the effectiveness of public school educational programs in 1970 (FLDOE, 2004; FLDOE, 2005a; FLDOE, 2005b). Accordingly, in 1971, “The Educational Accountability Act was passed (Section 229.57, F.S.) to implement the Commissioner’s plan for educational assessment in Florida, called the Statewide Assessment Program” (FLDOE, 2004, p. 1). The FLDOE (2005a) noted four significant points of the Educational Accountability Act:

1. The establishment of major or ultimate, specific, uniform, statewide educational objectives for each grade level and subject area, including, but not limited to, reading, writing, and mathematics in the public schools.
2. A uniform statewide system of assessment based in part on criterion-referenced tests and in part on norm-referenced tests to determine periodically pupil status, pupil progress, and the degree of achievement of established educational objectives.
3. Procedures for comparing statewide results to national indicators of student performance.
4. An annual public report of the assessment results by grade and subject area for each school district and the State, with an analysis and recommendations concerning the costs and differential effectiveness of instructional programs. (¶34)

The first measurement of performance on statewide reading objectives ensued in the 1971-72 school year with a sample of 53,000 Grade 2 and Grade 4 students, who represented each school in the state (Haynes & Impara, 1972). The measuring device was the State Student Assessment Tests (SSAT), a CRT, Florida’s original statewide assessment (FLDOE, 2005b).

The FLDOE (2008) reported that the Florida Legislature endeavored to provide to every public school student an education suitable to his or her need. As part of the reform initiatives, the Florida Education Finance Program (FEFP) commenced in 1973. The FLDOE stated that FEFP considered varying factors: (a) local property taxes, (b) educational program costs, (c) living costs, and (d) equivalent educational program costs as a result of the scattered student population. By 1974, Florida amended the Educational Accountability Act to include mandatory assessments of all Grade 3 and Grade 6 students in reading, mathematics, and writing in the
1974-75 school year and all Grade 3, 4, 5, and 6 students in 1976 (FLDOE, 2005a). The FLDOE (2005b) wrote that further amendments to the Educational Accountability Act occurred:

In 1976, the Florida Legislature expanded the Educational Accountability Act to require assessments in Grades 3, 5, 8, and 11 and the nation’s first high school graduation test, a functional literacy test, to be given in Grade 11. The Act also called for organizing educational objectives used in test development into Minimum Student Performance Standards (MSPS), which would have wider applications for curriculum and instructional planning. (p. 8)

Florida public schools underwent comprehensive changes due to the School Improvement and Accountability Act of 1991, branded as Blueprint 2000 (FLDOE, 2004). “The system set high standards, holding schools accountable for improved student performance. Components of the 1991 legislation on school improvement and accountability included school improvement planning, standards and assessment, local flexibility, reporting, rewarding success, and correcting failure” (Florida Leaders.net, 2003, ¶1). As a result, the Florida Commission on Education Reform and Accountability was originated to supervise implementation of Blueprint 2000 (Florida State Legislature, 1996). In 1995, the Florida Comprehensive Assessment Design, founded by the Florida Commission on Education Reform, requested a fresh statewide assessment system, later called the Florida Comprehensive Assessment Test (FCAT) (FLDOE, 2005b). “The FCAT, administered to students in Grades 3-11, consists of criterion-referenced tests (CRT) in mathematics, reading, science, and writing, which measure student progress toward meeting the Sunshine State Standards (SSS) benchmarks” (FLDOE, 2005c, ¶1).

Adoption of the SSS occurred in 1996, and detailed learning expectations for the PreK-2, 3-5, 6-8, and 9-12 grade clusters in the arts, foreign languages, health and physical education, language arts, mathematics, science, and social studies (FLDOE, 2005b). Also, the FLDOE (2005b) added that the SSS were extended to incorporate Grade-Level Expectations in language arts, mathematics, science, and social studies for Grades 3-8 as a result of Florida’s A+ Plan For
Education in 1999. Within its accountability system, Florida’s A+ Plan for education called for annual learning gains and testing in Grades 3-10 (FCAT), which incorporated a science assessment in Grades 5, 8, and 10; NRTs in Grades 3-10; utilizing the FCAT for graduation; and individually calculating student growth over a year (FLDOE, 2004). According to Goldhaber and Hannaway (2004), “In many ways, the accountability program begun by Florida in 1999 was a precursor to the type of accountability systems that NCLB is now requiring states to implement” (p. 599).

Summary

Texas, North Carolina, Kentucky, Maryland, and Florida each followed a similar course in terms of instituting an accountability system. Louisiana observed closely and followed suit after Act 478 (see Table 2.7). Despite an initial commitment to state tests in 1976 (Hunter & Williams, 1983), which was earlier than Texas, North Carolina, and Kentucky, Louisiana failed to produce and sustain such a test for over two decades. Texas, North Carolina, Kentucky, Maryland, and Florida progressively improved their accountability systems, serving as models for many. Not depicted in Table 2.7, but of particular note, Texas ranked schools and accredited districts after 1993 (Kuehlm, 2004), North Carolina sought yearly student growth after 1995 (NCSBE, 2007), and Kentucky rewarded and sanctioned schools after 1990 (Kentucky’s Systemic Reform, 1995). By 2005, Louisiana administered its state assessments, the Louisiana Educational Assessment Program (LEAP) and the Graduation Exit Exam (GEE), based on state curriculum objectives referred to as Grade-Level Expectations (GLEs). Also, both schools and districts in Louisiana earned scores and were awarded or sanctioned according to growth. Nevertheless, while Texas, North Carolina, Kentucky, Maryland, and Florida heavily influenced Louisiana’s accountability system, Louisiana adopted and/or adapted more components from
Kentucky and Florida than the other three states. For example, Louisiana presently has Distinguished Educators, like Kentucky, and a high school graduation examination, like Florida, the nation’s first state to do so (FLDOE, 2005b).

Table 2.7 Particulars and Influence of the Texas, North Carolina, Kentucky, Maryland, and Florida Accountability Systems on Louisiana

<table>
<thead>
<tr>
<th>Year That Testing was Mandated</th>
<th>TX</th>
<th>NC</th>
<th>KY</th>
<th>MD</th>
<th>FL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name(s) and Type(s) of Initial State Test(s) (i.e., CRT or NRT)</td>
<td>TABS (CRT)</td>
<td>MCT (CRT) &amp; CAT (NRT)</td>
<td>CTBS (NRT)</td>
<td>ITBS (NRT), Non-Verbal Battery of the Cognitive Abilities Test (NRT), &amp; Functional Reading Test (CRT)</td>
<td>SSAT (CRT)</td>
</tr>
<tr>
<td>Name(s) of the State Test(s) Administered in 2005</td>
<td>TAKS</td>
<td>End-of-grade Tests &amp; End-of-course Tests</td>
<td>KCCT</td>
<td>MSA</td>
<td>FCAT</td>
</tr>
<tr>
<td>Name of the State Curriculum Objectives Utilized in 2005</td>
<td>TEKS</td>
<td>Standard Course of Study</td>
<td>Core Content for Assessment</td>
<td>Voluntary State Curriculum</td>
<td>SSS</td>
</tr>
<tr>
<td>The State’s Overall Influence on the LA Accountability System (i.e., Low, Medium, or High)</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
</tr>
</tbody>
</table>
CHAPTER 3: THE FRUITS OF ACT 478

“As Governor Jindal has pointed out, ‘Our greatest investment is our children.’”
(“Bobby Jindal Governor,” 2009, ¶14)

According to Cambre (2009), Louisiana expended millions of dollars on several programs calculated to improve student achievement between 1997 and 2005. Interested in ascertaining the goals, longevity, funding sources, and funding levels of major programs, Cambre stated, “The criteria used to identify each program included: state funding that averaged at least $2 million per year; programs that affected teachers and students for school improvement purposes; and, programs that remained in place for at least two school years” (p. xii). It is imperative to recall that Cambre collected no data after the end of the 2004-2005 school year due to the devastating effects of Hurricanes Katrina and Rita on Louisiana. Table 3.1 illustrates the nine programs and total state allocations reported by Cambre.

<table>
<thead>
<tr>
<th>Program</th>
<th>Years</th>
<th>Total State Funds (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Based Tutorial Program</td>
<td>1997-2005</td>
<td>19.0</td>
</tr>
<tr>
<td>Distinguished Educator Program</td>
<td>1998-2005</td>
<td>20.5</td>
</tr>
<tr>
<td>K-3 Reading and Mathematics Initiative</td>
<td>1997-2005</td>
<td>139.6</td>
</tr>
<tr>
<td>Learning-Intensive Networking Communities for Success</td>
<td>2002-2005</td>
<td>6.9</td>
</tr>
<tr>
<td>Local Teacher Quality</td>
<td>2002-2005</td>
<td>9.9</td>
</tr>
<tr>
<td>Louisiana Teacher Assistance and Assessment Program</td>
<td>1997-2005</td>
<td>29.1</td>
</tr>
<tr>
<td>Regional Education Service Centers</td>
<td>1997-2005</td>
<td>37.1</td>
</tr>
<tr>
<td>Remediation</td>
<td>1998-2005</td>
<td>103.3</td>
</tr>
<tr>
<td>State Testing and Accountability</td>
<td>1997-2005</td>
<td>124.6</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>490.0</td>
</tr>
</tbody>
</table>

With the exception of the Distinguished Educators, Learning-Intensive Networking Communities for Success (LINCS), and Local Teacher Quality (LTQ) programs, all programs were in effect by 1997. The K-3 Reading and Math Initiative received the most funds and LINCS received the least. Moreover, Cambre found each program to primarily impact one of three levels: Regional Education Service Centers and Distinguished Educators influenced the school level; K-3 Reading and Math Initiative, Louisiana Teacher Assessment and Assistance
Program (LATAAP), LINCS, and LTQ influenced the teacher level; and Community Based Tutorial Program (CBTP), Remediation, and State Testing and Accountability influenced the student level. The following is a detailed description of the State Testing and Accountability program, followed by a cursory description of the eight remaining programs.

State Testing and Accountability

The LDE (2008a) noted that the public education and accountability system in Louisiana encouraged school improvement in four ways:

1. Clearly establishing the state's goals for schools and students;
2. Creating an easy way to communicate to schools and the public how well a school is performing;
3. Recognizing schools for effectiveness in demonstrating growth in student achievement; and
4. Focusing attention, energy, and resources on those schools that need help in improving student achievement. (¶1)

Reaching this point took time. As previously mentioned, Louisiana citizens grew frustrated with the public education system which led to Act 478 of the Louisiana Legislature in 1997. Act 478 created the School and District Accountability Advisory Commission, hereafter called the Commission, giving it the responsibility of recommending to BESE a statewide school and district accountability system. As noted, the Louisiana School and District Accountability System was fashioned based on the Commission’s study of the accountability systems of Texas, North Carolina, Kentucky, Maryland, and Florida, which are discussed in Chapter 2.

When NCLB took effect, Louisiana’s accountability system met most of its requirements (LDE, 2003a) and needed changes were easily made. Thus, on May 17, 2003, the Louisiana School and District Accountability System earned approval from the United States Department of Education (LDE, 2008d). “Louisiana’s Accountability System is an annual system; important decisions are made every year to evaluate the performance of Louisiana public schools” (LDE,
2006a, p. 2). Built by the LDE, Figure 3.1 lists the five key components of the Louisiana accountability system.

![Figure 3.1 Key Components of the Louisiana School and District Accountability System](source: Adapted from “Exhibit 1: The Building Blocks of the School Accountability System in Louisiana” in 2004-2005 Louisiana State Education Progress Report by LDE (2006a).

Each of these components is summarized below, based on the 2004-05 academic year.

**Challenging Curriculum and Content Standards, Benchmarks and Grade-Level Expectations**

As illustrated in Figure 3.1, challenging curriculum and content standards, benchmarks and grade-level expectations construct the foundation of the Louisiana accountability system. Initiated in 1997, the LDE strove to enhance the public school curriculum with content standards, detailing foundational skills outlined via benchmarks, for all students in the K-4, 5-8, and 9-12 grade ranges (LDE, 2006a). The LDE (2006a) elaborated that, “In order to be prepared for the demands of the classroom and for the increasingly competitive job markets, students must demonstrate competency in certain foundation skills (communication, problem solving, resource access and utilization, linking and generating knowledge, and citizenship)” (p. 2-3). The resulting comprehensive curriculum and Grade-Level Expectations (GLEs) were established in 2003, highlighting the knowledge and understandings students in prekindergarten through Grade 12 should have mastered at the conclusion of each grade level in English language arts, mathematics, science, and social studies (LDE, 2004a). Created in alignment with content standards and GLEs, the LDE (2008e) explained that the Louisiana Comprehensive Curriculum
Assessment Program

The second key component of the Louisiana accountability system is the testing program. Initial testing of Louisiana students occurred in 1999 with testing for high school students and students with disabilities subsequently instituted (LDE, 2006a). Based on content standards, the CRT program is composed of two high-stakes tests, the Louisiana Educational Assessment Program (LEAP) for Grade 4 and Grade 8 students and the Graduate Exit Exam (GEE) for Grade 10 and Grade 11 students (LDE, 2007). Regarding the NRT program, the LDE (2006a) stated:

The norm-referenced tests (NRT), or The Iowa Tests, compare the performance of Louisiana students to the performance of students nationally. The Iowa Tests are administered to students in grades 3, 5, 6, 7, and 9. Additionally, The Iowa Tests are administered to Option 2 students (grade 8 repeaters on a high school campus), and to Options (PreGED/Skills) Program students. (p. 3)

The LDE (2006a) also noted that the students not participating in either the CRT or NRT due to significant disabilities are administered the LEAP Alternate Assessment (LAA).

School, District, and State Performance Monitoring and Reporting

The third key component of the Louisiana accountability system concerns monitoring and reporting. According to Bulletin 111 – The Louisiana School, District and State Accountability System, “Every school shall participate in a school accountability system based on student achievement as approved by the Louisiana State Board of Elementary and Secondary Education” (Louisiana State Board of Elementary and Secondary Education [BESE], 2007, p. 1). Schools comprised Grades K-8, regardless of grade configuration, began the accountability system during the 1998-99 academic year and schools that housed Grades 9-12 began the accountability system during the 2000-01 academic year (LDE, 2008b). Annually, each Louisiana public school
receives a School Performance Score (SPS), a composite score based on test scores, attendance, and dropout rates (LDE, 2006a; LDE, 2008b). Table 3.2 illustrates SPS indicators with corresponding weights.

Table 3.2 SPS Indicators and Corresponding Weights

<table>
<thead>
<tr>
<th>Accountability Indicator</th>
<th>Weighting Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEAP/GEE Tests</td>
<td>60% (Grades 4, 8, 10, &amp; 11)</td>
</tr>
<tr>
<td>The Iowa Tests</td>
<td>30% (Grades 3, 5, 6, 7, 8-Option 2, &amp; 9</td>
</tr>
<tr>
<td>Dropouts</td>
<td>5% (Grades 7-12)</td>
</tr>
<tr>
<td>Attendance</td>
<td>5% (Grades 7-12) or 10% (Grades K-6)</td>
</tr>
</tbody>
</table>


The SPS “shall range from 0.0 to 120.0 and beyond, with a score of 120.0 indicating a school has reached Louisiana’s 2014 goal” (BESE, 2007, p. 1). An SPS can exceed 140, however. To achieve annual yearly progress (AYP) on the SPS, a Baseline SPS of at least 60 is mandatory (LDE, 2006a). As a result of the SPS, schools receive Performance Labels and Growth Labels, which began during the 1998-99 and 2000-01 academic years, respectively (LDE, 2008b).

Similarly, beginning during the 2000-01 school year, districts receive a District Performance Score (DPS) representative of all SPS data in the district (LDE, 2006a; LDE, 2008b). Like schools, districts are given Performance Labels as a result of the DPS (LDE, 2006a). District Performance labels range from Academically Unacceptable to Five Stars (LDE, 2006a). Table 3.3 delineates the SPS and DPS Performance Labels.

Table 3.3 SPS and DPS Performance Labels

<table>
<thead>
<tr>
<th>School Performance Label</th>
<th>SPS and DPS Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five Stars</td>
<td>140.0 or above</td>
</tr>
<tr>
<td>Four Stars</td>
<td>120.0 – 139.9</td>
</tr>
<tr>
<td>Three Stars</td>
<td>100.0 – 119.9</td>
</tr>
<tr>
<td>Two Stars</td>
<td>80.0 – 99.9</td>
</tr>
<tr>
<td>One Star</td>
<td>60.0 – 79.9</td>
</tr>
<tr>
<td>Academically Unacceptable</td>
<td>Below 60</td>
</tr>
</tbody>
</table>


In addition to Performance labels, Growth Labels are assigned to schools. These labels include School in Decline, No Growth, Minimal Academic Growth, Recognized Academic Growth, and
Exemplary Academic Growth (LDE, 2006a; LDE, 2008b). Further, data are analyzed for both schools and districts to verify AYP for subgroups (LDE, 2006a). “To make AYP for the Subgroup Component of Louisiana’s School Accountability System, all required subgroups of a school must meet test participation and academic performance requirements, and the whole school must meet requirements for an additional academic indicator” (LDE, 2008b, p. 2-5). The additional academic indicator includes either the attendance rate and/or non-dropout rate (LDE, 2006a). District subgroup performance scores (GPS) are calculated for each subgroup, based on test scores, attendance, and dropout indexes (LDE 2008b). “The subgroups included racial/ethnic student groups, students that are economically disadvantaged, students that have disabilities, and students with Limited English Proficiency (LEP)” (LDE, 2008b, p. 1-34). Also, districts are given a District Responsibility Index (DRI) Label, which is not annually released (LDE, 2006a). “The DRI focuses on responsibilities of local school boards and district administrators and is comprised of four indicators (School Improvement, LEAP Passing Rate, Summer School, and Certified Teachers)” (LDE, 2006a, p. 4). Lastly, the annual release of accountability results occurs via several reports designed for the school, district, and state levels: *School Report Card for Parents, School Report Card for Principals, School Accountability Results Report, School Accountability Subgroup Component Report, District Report Card, Superintendent’s Diagnostic Report, District Composite Reports, Louisiana State Education Progress Report,* and *Minimum Foundation Program Accountability Report* (LDE, 2006a). Each school’s scores are also released to the press and are printed in major newspapers in the state.

**Assistance to Low Performing Schools and Districts**

The fourth key component of the state accountability system is the provision of assistance when student performance is low. Five levels of School Improvement (SI), SI 2 through SI 6,
exist to assist schools that failed to achieve performance and growth goals (LDE, 2006a, LDE 2006b).

New for 2004-2005 is the addition of Academic assistance (formerly School Improvement Level 1). Academic Assistance has six levels, AA 1 through AA 6. A school in Academic Assistance shall receive additional support and assistance, with the expectation that extensive efforts shall be made by students, parents, teachers, principals, administrators, and the school board to improve student achievement at the school. (LDE, 2006a, p. 6)

AA was designed for schools with an SPS from 60 to 120 that failed to meet growth goals (LDE, 2006a). Schools with an SPS under 60 and schools that do not achieve Subgroup Performance AYP goals enter SI (LDE, 2006a, LDE 2006b). The LDE (2006b) added:

When schools meet growth requirements, are no longer identified as Academically Unacceptable schools, and/or pass the subgroup component, they could exit SI. It is also possible for schools to move to higher levels of SI. The higher the SI level, the more support and assistance the school receives from the district and the state. The remedies required for a given level of SI depend on the Title I status of the school and these are additive in nature as a school moves to higher levels. (p. 2-6)

Moreover, DRI Labels serve as an evaluation tool for districts (LDE, 2006a). “Districts that receive the lowest DRI Label, Unresponsive, and/or fail to achieve AYP in the subgroup component complete a self-assessment that is submitted to the LDE” (LDE, 2006a, p. 7). The LDE (2006a) continued, noting that depending on a district’s results, the LDE can (a) mandate a District Dialogue with BESE, (b) mandate the implementation of a District Improvement Plan, (c) conduct a district audit, and/or (d) allow BESE to take action.

Recognition and Rewards

The fifth key component of the state accountability system serves as means of positive reinforcement. To promote the attainment of growth targets, schools reaching Exemplary Academic Growth and Recognized Academic Growth receive cash rewards (LDE, 2006a; LDE,
Districts not receiving cash rewards are highlighted via the aforementioned Growth Labels (LDE, 2006a).

For the 2004-2005 school year, the state of Louisiana allocated 4.7 million dollars in the executive budget to be used as rewards for those schools receiving the *Exemplary Academic Growth* or the *Recognized Academic Growth* labels. Each individual school that received the *Exemplary Academic Growth* label received $15.09 per student, but never less than $5,000. Schools that received the *Recognized Academic Growth* label received $10.06 per student, but never less than $2,500. (LDE, 2006a, p. 7)

From its origins to its present intricacies, the state testing and accountability system is perhaps the most complex and important fruit of Act 478. Consequently, said program commands considerable attention. As previously noted, this chapter continues with a concise depiction of the eight remaining programs identified by Cambre (2009): (a) Community Based Tutorial Program, (b) Distinguished Educators, (c) K-3 Reading and Mathematics Initiative, (d) Learning-Intensive Networking Communities for Success, (e) Local Teacher Quality, (f) Louisiana Teacher Assistance and Assessment Program, (g) Regional Education Service Centers, and (h) Remediation.

Community Based Tutorial Program

Implementation of the Community Based Tutorial Program (CBTP) began in Baton Rouge at the Greater Beach Grove Baptist Church in 1985 with an initial funding of $100,000 (LDE, 2008f). *A Guide to the Louisiana Department of Education* depicted the CBTP:

The Community-Based Tutorial Program (CBTP) provides an alternative educational approach for students who are “at-risk” of dropping out of school. The strategy is to provide additional instructional time with a reduced teacher-student ratio to allow for individualized instruction in math, writing and reading. The sites recruit tutors and provide a facility to house the programs. This program establishes partnerships between the home, school, church, community organizations, and the Department of Education. (LDE, 2003b, p. 154)

Today, over 115 sites provide at least 3,000 urban and rural students enrichment activities, homework assistance, and LEAP preparation (LDE, 2008f).
Distinguished Educators

Modeled after Kentucky, the Louisiana Distinguished Educator Program evolved in 1999 with the intent of providing Distinguished Educators (DEs) to struggling schools to aid with the improvement of curriculum implementation, instruction, and assessments to assist the schools to reach Growth Targets set by the Louisiana School and District Accountability System (LDE, 2008g). Moreover, DEs work daily for two to four years with an assigned school under Corrective Action that is outside of their home district (LDE, 2003b). According to the LDE (2008g), DEs hold several expectations:

1. Model effective instructional leadership strategies
2. Assist school personnel in improving student achievement as measured by LEAP…
3. Assist a school staff in collecting, analyzing, and interpreting school data reports
4. Assist a school staff in the most effective use of its resources
5. Facilitate the development and implementation of a school curriculum that aligns with Grade-Level Expectations (GLEs) and Louisiana’s Comprehensive Curriculum
6. Monitor, assess and assist teaching and learning in the classroom
7. Promote and support professional learning communities among the school staff
8. Improve communications and involvement among and between students, staff, parents, and the community
9. Network and share information with district personnel, Regional Service Center staff, Louisiana Department of Education staff, and other Distinguished Educators
10. Attend school improvement team meetings and parent/community involvement meetings at the assigned school;
11. Participate in professional growth activities, including ongoing training provided by the Louisiana Department of Education
12. Make recommendations to local superintendents and school boards to improve student achievement (¶5)

Louisiana RS 17:10.4, the Distinguished Educators Program, of the Louisiana Legislature states that when the term of a DE expires, the employee is ensured a comparable position to the one he or she held prior, while the time spent serving as a DE counts toward general compensation benefits, retirement benefits, and seniority.
The K-3 Reading and Mathematics Initiative started in 1997 (LDE, 2005a; LDE, 2008h) on the premise that, “The basic building blocks of language such as vocabulary knowledge, letter recognition, and phonemic awareness develop during the early years and are significant predictors of a child’s ability to do well in school” (LDE, 2005a, p. 36). Nonetheless, funding to public school districts for the K-3 Reading and Mathematics Initiative declined from $30 million in 1997 to approximately $6.5 million in 2006-07 (LDE, 2008h). The LDE (2003b) elaborated:

The K-3 Reading and Mathematics Initiative is designed to reduce the percentage of K-3 students performing below grade level in reading and math. The program directly impacts students at-risk of reading or math difficulties through in-school intervention programs such as retired teachers’ tutoring, master teachers working with individuals and small groups, after-school programs, and extended year programs. The target population is students at risk for failure in the areas of reading or mathematics, but funding may also be used to improve reading and math instruction for all K-3 students. (p. 89)

According to the LDE, local districts receive technical assistance, including K-3 application workshops, literacy workshops, Developmental Reading Assistance training, finding professional development providers, finding scientifically based instructional resources and approaches, K-3 proposal assistance, and site visits.

Learning-Intensive Networking Communities for Success

Cambre (2009) wrote that Learning-Intensive Networking Communities for Success (LINCS) originated as a component of the INCLASS program in 2000-01 which was designed to improve classroom teaching.

LINCS is a professional development process which builds a foundation for whole-school implementation of quality professional development. The school-based professional learning communities serve to address the needs of a school, its teachers, and their students. The process allows for continued growth of the instructional practices of teachers with an emphasis on improving student performance. LINCS serves as a catalyst for effective implementation of multiple professional development programs. The goal is for each school to build a culture of a community of learners capable of independently continuing its growth. (LDE, 2008i, ¶1)
The LDE (2003b) reported critical elements of LINCS: (a) teachers and content leaders receive support from regional coordinators; (b) teachers receive follow-up activities from content leaders; (c) school leadership and content teams partake in rigorous professional development; (d) the ongoing meeting of Whole-Faculty Study Groups to improve content knowledge, plan, examine research, examine student progress, and share; and (e) the comprehensive evaluation of programs.

Local Teacher Quality

The state provides funds to public districts and qualified nonpublic districts to support teachers seeking both certification and highly qualified status via the 8(g) Local Teacher Quality Block Grant (LDE, 2008j). Amendment 8(g) to the Outer Continental Shelf Lands Act passed by Congress in 1953 granted coastal states a percentage of money earned from offshore development (LDE, 2008k). LDE (2008k) added that Louisiana voters decided to send the state’s 27% of the 8(g) money to an education trust fund, the Louisiana Education Quality Trust Fund, with all interest from the fund, the Louisiana Quality Education Support Fund, dedicated solely to education.

The Local Teacher Quality (LTQ) program resulted when BESE and LDE staff sought an alternate plan for using 8(g) funds (BESE, 2002). The LTQ consisted of two parts, the aforementioned LTQ Block and the LTQ Pilot (BESE, 2002). While the LTQ Block allows districts to spend money on tuition for non-certified teachers, alternate certification routes for teachers not teaching in their certification area, additional degrees or training for non-certified teachers, and professional development (BESE, 2002), the LTQ Pilot differs:

The Local Teacher Quality Pilot Program will directly aid districts with certification shortages and teachers pursuing certification with personalized recruitment and certification counseling and assistance. The LDE will review transcripts, approve district
certification plans, and identify funding streams and university/non-university alternate certification pathways. (BESE, 2002, p. 16)

Louisiana Teacher Assistance and Assessment Program

Prior to the economic crisis in 2009, new teachers who begin service in a Louisiana public school for the first time were required to participate in the Louisiana Teacher Assistance and Assessment Program (LaTAAP) (BESE, 2008; LDE, 2008l; LDE, 2008m). Although the program was suspended prior to the 2009-10 academic year, it was in effect from 1999-2005, years included in the present study. Bulletin 1943 – Policies and Procedures for Louisiana Teacher Assistance and Assessment listed the two purposes of LaTAAP:

1. It is the purpose of the teacher assistance and assessment program to provide new teaching employees of the public school systems in this state with a planned program of leadership and support from experienced educators during the most formative stages of a teacher's experience in Louisiana schools.
2. It is further the purpose of the assistance and assessment program to provide assurance to the state, prior to the issuance of a permanent Louisiana teacher certificate, that the new teaching employee demonstrates competency in the understanding and use of the Louisiana Components of Effective Teaching, determined by the state to be the basis for effective professional performance. (BESE, 2008, p. 2)

The LDE (2008l) discussed LaTAAP in depth. During the first semester and lasting for two years, each new teacher is assigned a mentor. Mentors support new teachers by directing professional development opportunities that promote teaching competencies. During the second semester, the mentor and principal, or designee, assess the new teacher in an advisory capacity to highlight strengths and needs for further professional development. During the third semester, the principal, or designee, and an external assessor collect data on the new teacher, which is utilized for certification recommendations. Furthermore, the LDE wrote that, “After participating in the LaTAAP for four semesters, a new teacher who does not demonstrate
competence will be denied regular certification and will be required to leave teaching in Louisiana public schools for at least two years” (p. 6)

Regional Education Service Centers

As expressed in Louisiana R.S. 17:3781, Regional Education Service Centers, the LDE will establish and create no more than eight regional service centers. BESE determines the locations of each center provided that each location is within roughly 30 miles of a four-year public university that possesses a college of education.

Regional service center programs and services shall be determined by the state superintendent of education with the approval of the State Board of Elementary and Secondary Education and may include support services, technical assistance services, and any other instructional or professional development program or service provided by the Department of Education to city and parish school systems which can be more effectively or efficiently coordinated through a regional center. (Regional Service Centers, 1988, §3784)

The LDE (2005a) confirmed that eight Regional Education Service Centers helped over 64,000 district and school educators in 2003-04. According to the LDE, “Topics addressed included School Improvement Planning and Implementation, Reading First, Accountability, Curriculum and Assessment, instructional leadership, Early Childhood, Safe and Drug-Free Schools and Communities, the Title I Program, and Special Education” (p. 75).

Remediation

As stated in the Louisiana Remedial Education Act (1987):

The purpose of this Part is to provide supplemental funds for the delivery of supplemental remedial instruction adapted for those eligible students in the elementary and secondary schools of this state as set forth in the city and parish school board pupil progression plans approved by the State Board of Elementary and Secondary Education. (§395)

Based on LEAP performance, eligible students in Grade 4 and Grade 8 receive summer remediation and school year remediation in English language arts and mathematics (LDE, 2008n). The LDE (n.d.a) asserted that summer remediation was designed for students that failed
to take the spring LEAP, students that did not attain the *Basic/Approaching Basic* combination on the English language arts and mathematics sections, disabled students that participated in LAA 2, and nonpublic or homeschooled Grade 4 and Grade 8 students that failed to take the spring LEAP or did not attain the *Basic/Approaching Basic* combination on the English language arts and mathematics sections. The LDE (n.d.a) explained that school year remediation was designed for Grade 4 and Grade 8 students who repeated the grade due to failing LEAP and for initial Grade 4 and Grade 8 students who attained *Approaching Basic or Unsatisfactory* on the Grade 3 or Grade 7 iLEAP. Additionally, the LDE (2008a) held that, based on GEE performance, districts could schedule remediation classes for students during the summer or school year. Eligible students include those who scored *Unsatisfactory* on the English language arts, mathematics, science, or social studies sections of LEAP, while State Content Standards drive the remedial instruction.
CHAPTER 4: METHODOLOGY

“Despite a popular stereotype that depicts researchers as spectacled, stoop-shouldered women and men who endlessly hunch over computers and crunch numbers, every day thousands of men and women of all ages conduct educational research in a variety of settings.”

(Gay & Airasian, 2003, p. 1)

Purpose

As discussed previously, the United States expended unprecedented sums of money after the launch of Sputnik to improve its public education system but produced mundane results, at best, when internationally compared. In the mid 1960s, the Elementary and Secondary Education Act (ESEA) allocated federal dollars to improve learning outcomes for low income students. Despite billions of dollars allocated continuously since 1965, ESEA also produced inadequate results. The most recent version of ESEA, No Child Left Behind, makes public the achievement gap between White students and their Black and Hispanic peers. Beginning in the mid 1980s and continuing today, states passed numerous laws aimed at improving educational outcomes and enforcing accountability. In Louisiana, one such law is Act 478. By some, Act 478 was seen as an answer to the plea for a better public education system by denizens of the state (Louisiana District and School Accountability Advisory Commission, 1998; LDE, 2008a). This act initiated the allocation of $490 million from 1997 to 2005 to nine specific programs designed to enrich student achievement (Cambre, 2009). Simply stated, Act 478 strongly contributed to the transformed public education landscape in Louisiana. Therefore, this study aimed to discover whether the Louisiana public education system improved between 1997 and 2005 in terms of three indicators: (a) student achievement, (b) student matriculation, and (c) student disciplinary actions. In doing so, differences among Black and White students on said
indicators were investigated since these ethnicities compromise most of the student population in the Louisiana public education system.

Research Questions

1. What trends are evident regarding statewide student achievement between 1997 and 2005?
   a. What trends occurred with student achievement on Grades 4 and 8 NAEP reading and mathematics assessments?
   b. What trends occurred with student achievement on Grades 4 and 8 LEAP ELA and mathematics assessments?
   c. What trends occurred with student rankings on Grades 3, 7, and 9 Iowa Tests of Basic Skills (ITBS) assessments?
   d. What trends occurred with student achievement on the American College Testing Program (ACT)?

2. What trends are evident regarding statewide student matriculation between 1997 and 2005?
   a. What trends occurred with student in-grade retention in K-12?
   b. What trends occurred with student dropouts in Grades 9-12?

3. What trends are evident regarding statewide student disciplinary actions between 1997 and 2005?
   a. What trends occurred with student suspensions and expulsions in PK-12?
   b. What trends occurred with juvenile arrests?

4. What trends are evident regarding achievement, matriculation, and disciplinary actions for Black students and for White students between 1997 and 2005?
a. What trends occurred with student achievement on Grades 4 and 8 NAEP reading and mathematics assessments?
b. What trends occurred with student achievement on Grades 4 and 8 LEAP ELA and mathematics assessments?
c. What trends occurred with student rankings on Grades 3, 7, and 9 Iowa Tests of Basic Skills (ITBS) assessments?
d. What trends occurred with student in-grade retention in K-12?
e. What trends occurred with student dropouts in Grades 9-12?
f. What trends occurred with student disciplinary actions in PK-12?

Trend Analysis

To answer the research questions, the trend analysis method was employed. As noted, Johnson and Christensen (2004) defined a trend study as, “a form of longitudinal research in which independent samples (samples composed of different people) are taken from a general population over time and the same questions are asked of the samples of participants” (p. 344). Hinkle, Wiersma, and Jurs (2003) explained that a trend analysis discovers (a) whether treatment groups linearly increase or decrease with amplified independent variable levels, (b) whether a trend is linear, and (c) what equation is necessary to fit data from a nonlinear trend. Rosenberg (1997) discussed the importance of trends in regards to public health:

Public health agencies have a long tradition of monitoring trends in rates of disease and death and trends in medical, social, and behavioral risk factors that may contribute to these adverse events. Trends in observed rates provide invaluable information for needs assessment, program planning, program evaluation, and policy development activities. Examining data over time also permits making predictions about future frequencies and rates of occurrence. (p.1)

Rosenberg asserted that when trend data are considered error-free and accurately reflect population parameters, statistical assessments are not warranted. According to Rosenberg, such
trends can be reported “as is” via tables and graphs, and comparisons and predictions can be generated. However, Rosenberg cautioned that if “the focus of trend analysis is on data from small areas, small populations, or for a narrow range of time, it is necessary to draw from both the classic descriptive methods and the statistical approaches used in research studies” (p. 1).

Subjects

Student Achievement

Trends in student achievement are based on several tests described in this subsection. These tests include NAEP, LEAP, the Iowa Tests of Basic Skills (ITBS), the Iowa Tests of Educational Development (ITED), and the American College Test (ACT).

NAEP reflected academic achievement at the national level until 1988, but trial state assessments began in 1990 and became the norm by 1996 (U.S. Department of Education, 2006). NCLB mandated “states who receive Title I funding to participate in state NAEP in reading and mathematics at grades 4 and 8 every other year. State participation in other state NAEP subjects, science and writing, remains voluntary” (U.S. Department of Education, 2006, ¶3). NAEP results for the main assessments (i.e., arts, civics, economics, geography, mathematics, reading, science, U.S. history, and writing) are based on representative samples of Grades 4, 8, and 12 students (U.S. Department of Education, 2009). In order for a state to have NAEP results produced, “The weighted participation rate for the initial school sample must be greater than or equal to 85 percent for results to be published. Prior to 2003, the requirement was 70 percent” (U.S. Department of Education, 2002, ¶1). Results include scale scores and three achievement levels: Basic, Proficient, and Advanced (U.S. Department of Education, 2008d). NAEP results are not reported at either the individual student or school levels (U.S. Department of Education, 2006b; U.S. Department of Education, 2009). For this study, Louisiana NAEP results included

Since 1999, LEAP administrations occur each spring for Grade 4 and Grade 8 students to measure their mastery of the state content standards (LDE, 2007). According to the LDE (2007), LEAP assessments must (a) be aligned with the state content standards, (b) display the thoroughness of NAEP, and (c) provide students with one of five achievement ratings instead of a pass or fail score: Advanced, Mastery, Basic, Approaching Basic, or Unsatisfactory. The LDE continued:

From 1999 through 2003, students in grade 4 were required to score Approaching Basic or above on both the English Language Arts and the Mathematics tests to progress to grade 5. As of spring 2004, grade 4 students are required to score Basic or above on either the English Language Arts or the Mathematics test and Approaching Basic or above on the other to progress to grade 5.

From 1999 through 2005, students in grade 8 were required to score Approaching Basic or above on both the LEAP English Language Arts and Mathematics tests to progress to grade 9. As of spring 2006, grade 8 students must score Basic or above on either the English Language Arts or the Mathematics test and Approaching Basic or above on the other test to progress to grade 9. (p. 1)

For this study, statewide LEAP results included Grade 4 ELA, Grade 4 mathematics, Grade 8 ELA, and Grade 8 mathematics each spring from 1999 to 2005. During these years, the number of school districts in the state increased. Louisiana had 68 public school districts in 2005 (see Table 4.1).

The norm-referenced ITBS is standardized nationally, which permits comparisons between local students and the national sample (LDE, n.d.b). The LDE (2005b) noted that ITBS was part of the Louisiana Statewide Norm-referenced Testing Program (LSNRTP), “established in 1986 as a component of the Louisiana Educational Assessment Program. The primary goal of
the LSNRTP is to provide parents, students, educators, and policy makers with normative data that can be used for evaluating student, school, and district performance” (p. 1). Eligible Louisiana students in Grades 3, 5, 6, and 7 completed Form M of the ITBS and Grade 9 students completed Form M of the Iowa Tests of Educational Development (ITED) each spring from 1999 to 2002 (LDE, 2005b). “The spring 2003 administration introduced the Iowa/03, a new form of The Iowa Tests. For the spring 2005 administration, approximately 272,000 students were tested with the Iowa/03” (LDE, 2005b, p.1). Tests for Grades 3, 5, 6, and 7 included language, mathematics, reading, science, social studies, and sources of information, while tests for Grade 9 included expression, literary interpretation, science, social studies, sources of information, studies materials, and vocabulary (LDE, n.d.b). For this study, statewide ITBS results included results for Grades 3, 7, and 9 each spring from 1999 to 2005.

A student’s potential to perform college-level work in the areas of English, mathematics, reading, and science is measured by the American College Test (ACT) (LDE, 2006b). “The American College Testing Program emerged in the 1950s, and the organization itself was founded in 1959. At the time, U.S. political and demographic developments were inspiring major changes in attitudes about, and approaches to, higher education” (ACT, 2009a, ¶1). ACT composite scores range from 1 to 36 and represent an average performance across four assessments that cover the aforementioned areas (LDE, 2006b). For this study, students who were or who would have been members of the graduating class for any given year are included in these averages. In other words, the aggregated composite scores include test scores for (1) 12th graders who took the test in the current year and (2) 12th graders who took the test as 11th graders and elected not to retake it as seniors. If a student took the test in both the 11th and 12th grades, only the 12th grade score has been included in the averages. (LDE, 2006b, p. 134)

Accordingly, statewide ACT results included composite scores each year from 1994 to 2005.
Table 4.1 2005 Louisiana Public School Districts

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acadia Parish</td>
<td>Natchitoches Parish</td>
</tr>
<tr>
<td>Allen Parish</td>
<td>Orleans Parish</td>
</tr>
<tr>
<td>Ascension Parish</td>
<td>Ouachita Parish</td>
</tr>
<tr>
<td>Assumption Parish</td>
<td>Plaquemines Parish</td>
</tr>
<tr>
<td>Avoyelles Parish</td>
<td>Point Coupee Parish</td>
</tr>
<tr>
<td>Beauregard Parish</td>
<td>Rapides Parish</td>
</tr>
<tr>
<td>Bienville Parish</td>
<td>Red River Parish</td>
</tr>
<tr>
<td>Bossier Parish</td>
<td>Richland Parish</td>
</tr>
<tr>
<td>Caddo Parish</td>
<td>Sabine Parish</td>
</tr>
<tr>
<td>Calcasieu Parish</td>
<td>St. Bernard Parish</td>
</tr>
<tr>
<td>Caldwell Parish</td>
<td>St. Charles Parish</td>
</tr>
<tr>
<td>Cameron Parish</td>
<td>St. Helena Parish</td>
</tr>
<tr>
<td>Catahoula Parish</td>
<td>St. James Parish</td>
</tr>
<tr>
<td>Claiborne Parish</td>
<td>St. John the Baptist Parish</td>
</tr>
<tr>
<td>Concordia Parish</td>
<td>St. Landry Parish</td>
</tr>
<tr>
<td>DeSoto Parish</td>
<td>St. Martin Parish</td>
</tr>
<tr>
<td>East Baton Rouge Parish</td>
<td>St. Mary Parish</td>
</tr>
<tr>
<td>East Carroll Parish</td>
<td>St. Tammany Parish</td>
</tr>
<tr>
<td>East Feliciana Parish</td>
<td>Tangipahoa Parish</td>
</tr>
<tr>
<td>Evangeline Parish</td>
<td>Tensas Parish</td>
</tr>
<tr>
<td>Franklin Parish</td>
<td>Terrebonne Parish</td>
</tr>
<tr>
<td>Grant Parish</td>
<td>Union Parish</td>
</tr>
<tr>
<td>Iberia Parish</td>
<td>Vermilion Parish</td>
</tr>
<tr>
<td>Iberville Parish</td>
<td>Vernon Parish</td>
</tr>
<tr>
<td>Jackson Parish</td>
<td>Washington Parish</td>
</tr>
<tr>
<td>Jefferson Parish</td>
<td>Webster Parish</td>
</tr>
<tr>
<td>Jefferson Davis Parish</td>
<td>West Baton Rouge Parish</td>
</tr>
<tr>
<td>Lafayette Parish</td>
<td>West Carroll Parish</td>
</tr>
<tr>
<td>Lafourche Parish</td>
<td>West Feliciana Parish</td>
</tr>
<tr>
<td>LaSalle Parish</td>
<td>Winn Parish</td>
</tr>
<tr>
<td>Lincoln Parish</td>
<td>City of Monroe</td>
</tr>
<tr>
<td>Livingston Parish</td>
<td>City of Bogalusa</td>
</tr>
<tr>
<td>Madison Parish</td>
<td>Zachary Community</td>
</tr>
<tr>
<td>Morehouse Parish</td>
<td>City of Baker</td>
</tr>
</tbody>
</table>

NOTE: Zachary Community and City of Baker opened as public school districts for the first time during the 2003-04 academic year.

Student Matriculation

LDE (2006b) discussed retention at length. The LDE stated that as part of the state’s accountability system, Louisiana retained students in grade to combat social promotion.

Grade-level retention was defined as students who failed to progress to the next grade. Student grade placement in the previous school year was compared with the grade placement in the reporting school year. If a student had the same grade placement in both years, the student was determined as retained. For example, if a student was shown as a 7th grader in both 1998-99 and 1999-00, this student would be identified as retained and, therefore, included in the number of students retained for 1999-00. (LDE, 2006b, p. 93)
Thus, students utilized in this study were enrolled both school years for a minimum of one day and represented grades K-12 unless they graduated the prior school year (LDE, 2006b). Furthermore, statewide retention data included percentages for K-12 each year from 1999 to 2005.

“Despite notable improvement over the past nine years, Louisiana still has among the lowest high school graduation rate and student achievement in the country” (Lussier, 2007, ¶3).

The LDE (2008b) defined dropout:

For any given year (the "current year") a dropout is a student who (1) was enrolled at the end of the previous year (therefore expected to return in current year), and who does not enroll on or before October 1 of current year, and therefore becomes a current year dropout or (2) a student who attended school at any point in the current year, and then exits (during the current year), and who does not re-enter school on or before October 1 of following year, and therefore becomes a current year dropout. (p. 113)

For this study, statewide dropout data included percentages for Grades 9-12 each year from 1996-2005.

Student Disciplinary Actions

Attention to suspension and expulsion data is as imperative as attention to retention and dropout data because in order for students to learn, they must be present (LDE, 2003a). The LDE (2008b) defined in-school expulsion, in-school suspension, out-of-school expulsion, and out-of-school suspension:

*In-school Expulsion*—a student temporarily removed from his/her usual classroom placement to an alternative setting for a period of time specified by the LEA; no interruption of instructional services occurs.

*In-school Suspension*—a student temporarily removed from his/her usual classroom placement to an alternative setting for a minimum of one complete school day; no interruption of instructional services occurs.

*Out-of-school Expulsion*—the removal (exit) of a student from school for a determined number of days with no provision of instructional services.
Out-of-school Suspension—a student temporarily prohibited from participating in his/her usual placement within school, with no provision of instructional service; only suspensions resulting in removal for at least one full day are included. (p. 103)

For this study, numbers utilized to calculate percentages for disciplinary actions were based on “the count of students receiving one or more of the specified discipline types (in-school expulsion, in-school suspension, out-of-school expulsion, out-of-school suspension)” (LDE, 2003a). The data included percentages for PK-12 and non-graded students each year from 1997-2005.

In terms of arrests, the FBI discussed arrests via its Uniform Crime Reporting Program (UCRP):

The Uniform Crime Reporting (UCR) Program counts one arrest for each separate instance in which a person is arrested, cited, or summoned for an offense. The Program collects arrest data on 29 offenses, as described in Offense Definitions. Because a person may be arrested multiple times during the year, the UCR arrest figures do not reflect the number of individual people who have been arrested. Rather, the arrest data show the number of times that persons are arrested, as reported by law enforcement agencies to the UCR Program. (U.S. Department of Justice, 2006a, ¶1)

The 29 offenses reported by the UCRP consist of criminal homicide; forcible rape; robbery; aggravated assault; burglary; larceny-theft; motor vehicle theft; arson; other assaults; forgery and counterfeiting; fraud; embezzlement; stolen property: buying, receiving, or possessing; vandalism; weapons: carrying, possessing, etc.; prostitution and commercialized vice; sex offenses except forcible rape, prostitution and commercialized vice; drug abuse violations; gambling; offenses against the family and children; driving under the influence; liquor laws; drunkenness; disorderly conduct; vagrancy; all other offenses except traffic; suspicion; curfew and loitering law violations; and runaways (U.S. Department of Justice, 2006b). For this study, statewide arrests for persons under age 18 include totals each year from 1999-2005.
Data Collection

The collection of data for this study received approval from the Institutional Review Board (see Appendix). Data referencing statewide student achievement were electronically collected from two public sources: (a) NAEP Data Explorer and (b) LDE website. The NAEP Data Explorer allows users to “create statistical tables, charts, and maps to help you find answers. Explore the results of decades of assessment of students' academic performance, as well as information about factors that may be related to their learning” (U.S. Department of Education, n.d.e, ¶1). The LDE website houses a significant amount of data. Additionally, data reflecting achievement differences between Black and White students were obtained from the above sources.

Data referencing statewide student matriculation were electronically requested and received from an LDE employee. Data reflecting matriculation differences between Black and White students were obtained from the same source.

Data referencing statewide student disciplinary actions were electronically collected from two public sources: (a) LDE website and (b) FBI website. Data reflecting differences between Black and White students were electronically requested and received from an LDE employee.

Analysis

A total of 30 graphs were constructed via Microsoft Office Word 2007 to reflect statewide trends in (a) student achievement; (b) matriculation; (c) disciplinary actions; and (d) achievement, matriculation, and disciplinary actions disaggregated by race, specifically Black and White. Hence, 12 graphs depict statewide student achievement; two graphs depict statewide student matriculation; two graphs depict statewide student disciplinary actions; and 14 graphs
depict statewide achievement, matriculation, and disciplinary actions with trends for Black and White students disaggregated.

On each graph, the $x$ axis displays years. In some instances, data were not available as far back as 1997. In other instances, data for earlier years were available and such data were incorporated. However, no data were collected for the years following 2005 because of the fluctuating population following Hurricanes Katrina and Rita. Depending on the graph, the $y$ axis displays various values: scale scores for NAEP; percentiles for ITBS; composite scores for ACT; raw numbers for juvenile arrests; and percentages for LEAP, retention, dropouts, and disciplinary actions.

Adhering to the advice of Rosenberg (1997) both classical and statistical approaches were utilized to study 24 of the 30 graphs; the classical approach was solely utilized to study the six graphs that displayed ITBS composite national percentile rankings. Rosenberg described classical methods as naturally examining the graphs when the data displayed represents “true underlying population parameters” (p. 1). Since the years displayed would qualify for what Rosenberg deemed “a narrow range of time” (p.1), the statistical analysis, average annual percent change, was computed. Rosenberg (1997) explained that average annual percent change examines year to year changes while determining the speed of the changes. On page 17 of her article, Rosenberg depicted a formula to compute the average annual percent change (see Figure 4.1). For this study, said formula was utilized except that Rate was substituted for NAEP scale scores, LEAP percentages of students that scored basic or above, ACT average composite scores, percentage of retained students, percentage of dropouts, percentage of students that received one or more disciplinary actions, and juvenile arrest numbers.
Figure 4.1 Formula for Average Annual Percent Change

\[
\frac{\left(\sum_{i=2}^{n} \frac{Rate_{Year\ i}}{Rate_{Year\ i-1}} - 1\right) \times 100}{n - 1}
\]


NOTE: \( n \) = total number of years
CHAPTER 5: RESULTS

“Louisiana has hundreds of poorly-performing public schools, a high dropout rate and far too many adults without any type of post-secondary degree. Many of our bright, educated young people leave Louisiana in search of higher wages and more exciting job opportunities, but we are not replacing them with other people who see a promising future in our state.”

(“Council for a Better Louisiana,” 2009, p.3)

The present examined the effects of the Louisiana accountability program on three student outcomes: achievement, matriculation, and behavior. Findings with regard to each of these outcomes are discussed in this chapter.

Student Achievement

The first major research question of this study targeted statewide student achievement between 1997 and 2005 and was subdivided into four specific questions:

1. What trends occurred with student achievement on Grades 4 and 8 NAEP reading and mathematics assessments?

2. What trends occurred with student achievement on Grades 4 and 8 LEAP ELA and mathematics assessments?

3. What trends occurred with student rankings on Grades 3, 7, and 9 Iowa Tests of Basic Skills (ITBS) assessments?

4. What trends occurred with student achievement on the American College Testing Program (ACT)?

National Assessment of Educational Progress

The scale scores for Louisiana on the Grade 4 reading NAEP ranged from 197 to 209 (see Figure 5.1). Louisiana produced its lowest scale score, 197, in 1994 and its highest scale score, 209, in 2005. The largest increase between scale scores for consecutive testing years was seven
points: Louisiana increased its scale score from 200 in 1998 to 207 in 2002. The largest decrease between scale scores for consecutive testing years was seven points: Louisiana decreased its scale score from 204 in 1992 to 197 in 1994. From 1992 to 2005, Louisiana’s scale score increased five points. During this time, the average annual percent change was 0.8%, which also revealed an increase.

The scale scores for Louisiana on the Grade 4 mathematics NAEP ranged from 204 to 230 (see Figure 5.2). Louisiana produced its lowest scale score, 204, in 1992 and its highest scale score, 230, in 2005. Louisiana’s scale score increased each testing year. The largest increase between scale scores for consecutive testing years was nine points: Louisiana increased its scale score from 209 in 1996 to 218 in 2000. From 1992 to 2005, Louisiana’s scale score increased 26 points. During this time, the average annual percent change was 3%, which also revealed an increase. Grade 4 mathematics scale scores were trending upwards when the state accountability testing program was implemented.

The scale scores for Louisiana on the Grade 8 reading NAEP ranged from 252 to 256 (see Figure 5.3). Louisiana produced its lowest scale score, 252, in 1998 and its highest scale score, 256, in 2002. The largest increase between scale scores for consecutive testing years was four points: Louisiana increased its scale score from 252 in 1998 to 256 in 2002. The largest decrease between scale scores for consecutive testing years was three points: Louisiana decreased its scale score from 256 in 2002 to 253 in 2003. From 1998 to 2005, Louisiana’s scale score increased one point. During this time, the average annual percent change was 0.33%, which also revealed a slight increase.

The scale scores for Louisiana on the Grade 8 mathematics NAEP ranged from 246 to 268 (see Figure 5.4). Louisiana produced its lowest scale score, 246, in 1990 and its highest
scale score, 268, in 2005. Louisiana’s scale score increased each testing year. The largest increase between scale scores for consecutive testing years was seven points: Louisiana increased its scale score from 252 in 1996 to 259 in 2000 and from 259 in 2000 to 266 in 2003. From 1990 to 2005, Louisiana’s scale score increased 22 points. During this time, the average annual percent change was 2%, which also revealed an increase. Grade 8 mathematics scale scores were trending upward when the state accountability testing program was implemented.

Louisiana Educational Assessment Program

The percentage of Louisiana students, that scored Basic or above on the Grade 4 ELA LEAP, ranged from 55 to 64 (see Figure 5.5). Louisiana produced its lowest percentage, 55, in 1999 and 2000 and its highest percentage, 64, in 2005. The largest increase between percentages for consecutive testing years was four points: Louisiana increased its percentage from 55 in 2000 to 59 in 2001 and from 60 in 2004 to 64 in 2005. The largest decrease between percentages for consecutive testing years was two points: Louisiana decreased its percentage from 59 in 2001 to 57 in 2002. From 1999 to 2005, Louisiana Grade 4 students scoring at Basic or above in ELA increased by nine percentage points. During this time, the average annual percent change was 2.83%, which also revealed an increase. Important to note is that NAEP samples students from public and non-public schools; LEAP is administered to the state population of public school students in the given grade.

The percentage of Louisiana students, that scored Basic or above on the Grade 4 mathematics LEAP, ranged from 42 to 61 (see Figure 5.6). Louisiana produced its lowest percentage, 42, in 1999 and its highest percentage, 61, in 2005. The largest increase between percentages for consecutive testing years was eight points: Louisiana increased its percentage from 50 in 2002 to 58 in 2003 and from 53 in 2004 to 61 in 2005. The largest decrease between
percentages for consecutive testing years was five points: Louisiana decreased its percentage from 58 in 2003 to 53 in 2004. From 1999 to 2005, Louisiana’s percentage increased 19 points. During this time, the average annual percent change was 7%, which also revealed an increase.

The percentage of Louisiana students, that scored Basic or above on the Grade 8 ELA LEAP, ranged from 43 to 54 (see Figure 5.7). Louisiana produced its lowest percentage, 43, in 1999 and its highest percentage, 54, in 2000. The largest increase between percentages for consecutive testing years was 11 points: Louisiana increased its percentage from 43 in 1999 to 54 in 2000. The largest decrease between percentages for consecutive testing years was five points: Louisiana decreased its percentage from 52 in 2003 to 47 in 2004. From 1999 to 2005, Louisiana’s percentage increased seven points. During this time, the average annual percent change was 3%, which also revealed an increase.

The percentage of Louisiana students, that scored Basic or above on the Grade 8 mathematics LEAP, ranged from 38 to 53 (see Figure 5.8). Louisiana produced its lowest percentage, 38, in 1999 and its highest percentage, 53, in 2004. The largest increase between percentages for consecutive testing years was nine points: Louisiana increased its percentage from 38 in 1999 to 47 in 2000. The largest decrease between percentages for consecutive testing years was five points: Louisiana decreased its percentage from 46 in 2001 to 41 in 2002. From 1999 to 2005, Louisiana’s percentage increased 13 points. During this time, the average annual percent change was 5.83%, which also revealed an increase.

Iowa Tests of Basic Skills

The composite national percentile ranking for Louisiana Grade 3 students on the ITBS ranged from 45 to 57 (see Figure 5.9). Louisiana produced its lowest percentile ranking, 45, in 1999 and its highest percentile ranking, 57, in 2004 and 2005. With the exception of tied
percentile rankings in 2001 and 2002, 50, and 2004 and 2005, 57, Louisiana’s percentile ranking increased each testing year. The largest increase between percentile rankings for consecutive testing years was five percentiles: Louisiana increased its percentile ranking from 50 in 2002 to 55 in 2003. From 1999 to 2005, Louisiana’s percentile ranking increased 12 percentiles.

The composite national percentile ranking for Louisiana Grade 7 students on the ITBS ranged from 44 to 49 (see Figure 5.10). Louisiana produced its lowest percentile ranking, 44, in 1999 and its highest percentile ranking, 49, in 2005. With the exception of tied percentile rankings in 2001 and 2002, 47, and 2003 and 2004, 48, Louisiana’s percentile ranking increased each testing year. The largest increase between percentile rankings for consecutive testing years was two percentiles: Louisiana increased its percentile ranking from 44 in 1999 to 46 in 2000. From 1999 to 2005, Louisiana’s percentile ranking increased five percentiles.

The composite national percentile ranking for Louisiana Grade 9 students on the ITBS ranged from 44 to 50 (see Figure 5.11). Louisiana produced its lowest percentile ranking, 44, in 1999 and its highest percentile ranking, 50, in 2001. The largest increase between percentile rankings for consecutive testing years was four percentiles: Louisiana increased its percentile ranking from 46 in 2000 to 50 in 2001. The largest decrease between percentile rankings for consecutive testing years was two percentiles: Louisiana decreased its percentile rankings from 50 in 2001 to 48 in 2002. From 1999 to 2005, Louisiana’s percentile ranking increased five percentiles.

American College Testing Program

The average composite score for Louisiana students on the ACT ranged from 19.4 to 19.8 (see Figure 5.12). Louisiana produced its lowest average composite score, 19.4, in 1994, 1995, 1996, and 1997 and its highest average composite score, 19.8, in 2004 and 2005. The average
composite scores tied in 1994, 1995, 1996, and 1997 at 19.4; in 1999, 2000, 2001, 2002, and 2003 at 19.6; and in 2004 and 2005 at 19.8. The largest increase between average composite scores for consecutive testing years was 0.2 points: Louisiana increased its average composite score from 19.6 in 2003 to 19.8 in 2004. From 1994 to 2005, Louisiana’s average composite score increased 0.4 points. During this time, the average annual percent change was 0.27%, which also revealed a slight increase.

The average composite score for students across the nation on the ACT ranged from 20.8 to 21. The nation produced its lowest average composite score, 20.8, in 1994, 1995, 2002, and 2003 and its highest average composite score, 21, in 1997, 1998, 1999, 2000, and 2001. The largest increase between average composite scores for consecutive testing years was 0.1 point: the nation increased its average composite score from 20.8 in 1995 to 20.9 in 1996, from 20.9 in 1996 to 21 in 1997, and from 20.8 in 2003 to 20.9 in 2004. The largest decrease between average composite scores for consecutive testing years was 0.2 points: the nation decreased its average composite score from 21 in 2001 to 20.8 in 2002. From 1994 to 2005, the nation’s average composite score increased 0.1 point. During this time, the average annual percent change was -0.09%, which revealed a decrease.

Student Matriculation

The second major research question of this study targeted statewide student matriculation between 1997 and 2005 and was subdivided into two specific questions:

1. What trends occurred with student in-grade retention in K-12?
2. What trends occurred with student dropouts in Grades 9-12?
Retention

The percentage of retained Louisiana K-12 students ranged from 7.7 to 10.7 (see Figure 5.13). Louisiana produced its lowest percentage, 7.7, in 1998 and its highest percentage, 10.7, in 2001. The state accountability testing program was used for promotional purposes for the first time in 2000. Students retained in grade would be reflected in the 2001 data. The largest increase between percentages for consecutive years was 2.3 points: Louisiana increased its percentage from 8.4 in 2000 to 10.7 in 2001. The largest decrease between percentages for consecutive years was 0.6 points: Louisiana decreased its percentage from 10.7 in 2001 to 10.1 in 2002. From 1998 to 2005, Louisiana’s percentage increased 1.9 points. During this time, the average annual percent change was 3.57%, which also revealed an increase.

Dropouts

The percentage of Louisiana dropouts in Grades 9-12 ranged from 6.6 to 10.9 (see Figure 5.14). Louisiana produced its lowest percentage, 6.6, in 2002 and its highest percentage, 10.9, in 1997. The largest increase between percentages for consecutive years was 0.4 points: Louisiana increased its percentage from 6.6 in 2002 to 7 in 2003 and from 7 in 2003 to 7.4 in 2004. The largest decrease between percentages for consecutive years was 1.2 points: Louisiana decreased its percentage from 7.8 in 2001 to 6.6 in 2002. From 1997 to 2005, Louisiana’s percentage decreased 3.9 points. During this time, the average annual percent change was -5%, which also revealed a decrease.

Student Disciplinary Actions

The third major research question of this study targeted statewide student disciplinary actions between 1997 and 2005 and was subdivided into two specific questions:

1. What trends occurred with student suspensions and expulsions in PK-12?
2. What trends occurred with juvenile arrests?

Disciplinary Actions

The percentage of Louisiana PK-12 students that received one or more disciplinary actions ranged from 13.15 to 18.91 (see Figure 5.15). Louisiana produced its lowest percentage, 13.15, in 1997 and its highest percentage, 18.91, in 2005. The largest increase between percentages for consecutive years was 1.98 points: Louisiana increased its percentage from 13.15 in 1997 to 15.13 in 1998. The largest decrease between percentages for consecutive years was 0.45 points: Louisiana decreased its percentage from 15.28 in 1999 to 14.83 in 2000. From 1997 to 2005, Louisiana’s percentage increased 5.76 points. During this time, the average annual percent change was 4.88%, which also revealed an increase.

Arrests

The number of arrested Louisiana juveniles ranged from 23,806 to 42,419 (see Figure 5.16). Louisiana produced its lowest number, 23,806, in 2005 and its highest number, 42,419, in 1999. The largest increase between numbers for consecutive years was 5,048 arrests: Louisiana increased its number from 32,334 in 2000 to 37,382 in 2001. The largest decrease between numbers for consecutive years was 11,249 arrests: Louisiana decreased its number from 35,055 in 2004 to 23,806 in 2005. From 1999 to 2005, Louisiana’s number decreased 18,613 arrests. During this time, the average annual percent change was -7.83%, which also revealed a decrease.

Arrest data are compiled on a calendar year basis. The hurricanes struck the state in late August and mid September 2005. Thousands of people left New Orleans following Hurricane Katrina which may contribute to the decline in 2005 juvenile arrests.
Achievement, Matriculation, and Disciplinary Actions for Black and White Students

The fourth major research question of this study targeted statewide achievement, matriculation, and disciplinary actions for Black students and for White students between 1997 and 2005 and was subdivided into six specific questions:

1. What trends occurred with student achievement on Grades 4 and 8 NAEP reading and mathematics assessments?
2. What trends occurred with student achievement on Grades 4 and 8 LEAP ELA and mathematics assessments?
3. What trends occurred with student rankings on Grades 3, 7, and 9 Iowa Tests of Basic Skills (ITBS) assessments?
4. What trends occurred with student in-grade retention in K-12?
5. What trends occurred with student dropouts in Grades 9-12?
6. What trends occurred with student disciplinary actions in PK-12?

National Assessment of Educational Progress

On the Grade 4 reading NAEP, scale scores ranged from 178 to 195 for Blacks and from 213 to 223 for Whites (see Figure 5.17). Whites outperformed Blacks on all assessments, whereas the scale score difference increased from 26 points in 1992 to 28 points in 2005. The smallest difference between the scale scores of Blacks and Whites occurred in 1992 at 26 points and the largest difference between the scale scores of Blacks and Whites occurred in 1998 at 38 points. The highest score for Blacks is 18 points lower than the lowest score for Whites. The gain for Blacks is six points and the gain for Whites is eight points. During this time, the average annual percent change for both Blacks and Whites was 0.6%, which revealed an increase.
On the Grade 4 mathematics NAEP, scale scores ranged from 187 to 219 for Blacks and from 218 to 242 for Whites (see Figure 5.18). Whites outperformed Blacks on all assessments. However, the scale score difference decreased from 31 points in 1992 to 22 points in 2005. The smallest difference between the scale scores of Blacks and Whites occurred in 2005 at 22 points and the largest difference between the scale scores of Blacks and Whites occurred in 1992 at 31 points. The highest score for Blacks is one point higher than the lowest score for Whites. The gain for Blacks is 32 points and the gain for Whites is 23 points. During this time, the average annual percent change was 4.25% for Blacks and 2.5% for Whites; both revealed an increase.

On the Grade 8 reading NAEP, scale scores ranged from 236 to 240 for Blacks and from 262 to 268 for Whites (see Figure 5.19). Whites outperformed Blacks on all assessments. However, the scale score difference decreased from 26 points in 1998 to 24 points in 2005. The smallest difference between the scale scores of Blacks and Whites occurred in 2005 at 24 points and the largest difference between the scale scores of Blacks and Whites occurred in 2003 at 29 points. The highest score for Blacks is 22 points lower than the lowest score for Whites. The gain for Blacks is four points and the gain for Whites is two points. During this time, the average annual percent change was 0.67% for Blacks and 0.33% for Whites; both revealed an increase.

On the Grade 8 mathematics NAEP, scale scores ranged from 229 to 252 for Blacks and from 259 to 281 for Whites (see Figure 5.20). Whites outperformed Blacks on all assessments. However, the scale score difference decreased from 30 points in 1990 to 29 points in 2005. The smallest difference between the scale scores of Blacks and Whites occurred in 2005 at 29 points and the largest difference between the scale scores of Blacks and Whites occurred in 2000 at 36 points. The highest score for Blacks is seven points lower than the lowest score for Whites. The
gain for Blacks is 23 points and the gain for Whites is 22 points. During this time, the average annual percent change was 2% for Blacks and 1.6% for Whites; both revealed an increase.

Louisiana Educational Assessment Program

On the Grade 4 ELA LEAP, the percentage of students that scored Basic or above ranged from 37 to 52 for Blacks and from 71 to 78 for Whites (see Figure 5.21). Whites outperformed Blacks on all assessments. However, the percentage difference decreased from 34 points in 1999 to 26 points in 2005. The smallest difference between the percentages of Blacks and Whites occurred in 2005 at 26 points and the largest difference between the scale scores of Blacks and Whites occurred in 1999 at 34 points. The highest percentage for Blacks is 19 points lower than the lowest percentage for Whites. The percentage gain for Blacks is 15 points and the percentage gain for Whites is seven points. During this time, the average annual percent change was 5.83% for Blacks and 1.67% for Whites; both revealed an increase.

On the Grade 4 mathematics LEAP, the percentage of students that scored Basic or above ranged from 22 to 47 for Blacks and from 59 to 77 for Whites (see Figure 5.22). Whites outperformed Blacks on all assessments. However, the percentage difference decreased from 37 points in 1999 to 30 points in 2005. The smallest difference between the percentages of Blacks and Whites occurred in 2005 at 30 points and the largest difference between the scale scores of Blacks and Whites occurred in 1999 and 2004 at 37 points. The highest percentage for Blacks is 12 points lower than the lowest percentage for Whites. The percentage gain for Blacks is 25 points and the percentage gain for Whites is 18 points. During this time, the average annual percent change was 15% for Blacks and 4.67% for Whites; both revealed an increase.

On the Grade 8 ELA LEAP, the percentage of students that scored Basic or above ranged from 25 to 35 for Blacks and from 59 to 70 for Whites (see Figure 5.23). Whites outperformed
Blacks on all assessments, whereas the percentage difference increased from 34 points in 1999 to 35 points in 2005. The smallest difference between the percentages of Blacks and Whites occurred in 2004 at 31 points and the largest difference between the scale scores of Blacks and Whites occurred in 2003 at 38 points. The highest percentage for Blacks is 24 points lower than the lowest percentage for Whites. The percentage gain for Blacks is eight points and the percentage gain for Whites is nine points. During this time, the average annual percent change was 6% for Blacks and 3.17% for Whites; both revealed an increase.

On the Grade 8 mathematics LEAP, the percentage of students that scored Basic or above ranged from 17 to 33 for Blacks and from 56 to 73 for Whites (see Figure 5.24). Whites outperformed Blacks on all assessments. However, the percentage difference decreased from 39 points in 1999 to 37 points in 2005. The smallest difference between the percentages of Blacks and Whites occurred in 2005 at 37 points and the largest difference between the scale scores of Blacks and Whites occurred in 2001 at 42 points. The highest percentage for Blacks is 23 points lower than the lowest percentage for Whites. The percentage gain for Blacks is 15 points and the percentage gain for Whites is 13 points. During this time, the average annual percent change was 12.83% for Blacks and 4% for Whites; both revealed an increase.

Iowa Tests of Basic Skills

On the Grade 3 ITBS, the composite national percentile ranking ranged from 35 to 43 for Blacks and from 64 to 69 for Whites (see Figure 5.25). Whites outperformed Blacks on all assessments. However, the difference decreased from 29 percentiles in 2002 to 26 percentiles in 2005. The smallest difference between Blacks and Whites occurred in 2003, 2004, and 2005 at 26 percentiles and the largest difference between Blacks and Whites occurred in 2002 at 29 percentiles. The highest percentile ranking for Blacks is 21 percentiles lower than the lowest
percentile ranking for Whites. The gain for Blacks is eight percentiles and the gain for Whites is five percentiles.

On the Grade 7 ITBS, the composite national percentile ranking ranged from 33 to 37 for Blacks and from 59 to 61 for Whites (see Figure 5.26). Whites outperformed Blacks on all assessments. However, the difference decreased from 27 percentiles in 2002 to 24 percentiles in 2005. The smallest difference between Blacks and Whites occurred in 2005 at 24 percentiles and the largest difference between Blacks and Whites occurred in 2002 at 27 percentiles. The highest percentile ranking for Blacks is 22 percentiles lower than the lowest percentile ranking for Whites. The gain for Blacks is four percentiles and the gain for Whites is one percentile.

On the Grade 9 ITBS, the composite national percentile ranking ranged from 33 to 35 for Blacks and from 57 to 60 for Whites (see Figure 5.27). Whites outperformed Blacks on all assessments, whereas the difference increased from 23 percentiles in 2002 to 25 percentiles in 2005. The smallest difference between Blacks and Whites occurred in 2002 and 2004 at 23 percentiles and the largest difference between Blacks and Whites occurred in 2005 at 25 percentiles. The highest percentile ranking for Blacks is 22 percentiles lower than the lowest percentile ranking for Whites. The gain for Blacks is zero percentiles and the gain for Whites is two percentiles. During this time, the average annual percent change was zero for Blacks.

Retention

The percentage of retained Louisiana K-12 students ranged from 9.6 to 14.8 for Blacks and from 6 to 7 for Whites (see Figure 5.28). Each year, a higher percentage of Blacks was retained, whereas the difference between percentages increased from 3.5 in 1998 to 6.4 in 2005. The smallest difference between percentages for Blacks and Whites occurred in 1998 at 3.5 and the largest difference between percentages for Blacks and Whites occurred in 2001 at 7.8. The
highest percentage for Whites is 2.6% lower than the lowest percentage for Blacks. The gain for Blacks is 3.3% and the gain for Whites is 0.4%. During this time, the average annual percent change was 5.14% for Blacks and 1.29% for Whites; both revealed an increase.

Dropouts

The percentage of Louisiana dropouts in Grades 9-12 ranged from 8.8 to 13.1 for Blacks and from 4.8 to 9.1 for Whites (see Figure 5.29). Each year, a higher percentage of Blacks dropped out, whereas the difference between percentages increased from 4 in 1997 to 4.5 in 2005. The smallest difference between percentages for Blacks and Whites occurred in 2000 and 2001 at 3.9 and the largest difference between percentages for Blacks and Whites occurred in 2004 at 5.2. The highest percentage for Whites is 0.3% higher than the lowest percentage for Blacks. The gain for Blacks is -3.7% and the gain for Whites is -4.2%. During this time, the average annual percent change was -3.88% for Blacks and -7% for Whites; both revealed a decrease.

Disciplinary Actions

The percentage of Louisiana PK-12 students that received one or more disciplinary actions ranged from 17.1 to 25.83 for Blacks and from 9.84 to 12.75 for Whites (see Figure 5.30). Each year, a higher percentage of Blacks received one or more disciplinary actions, whereas the difference between percentages increased from 7.26 in 1997 to 13.08 in 2005. The smallest difference between percentages for Blacks and Whites occurred in 1997 at 7.26 and the largest difference between percentages for Blacks and Whites occurred in 2005 at 13.08. The highest percentage for Whites is 4.35% lower than the lowest percentage for Blacks. The gain for Blacks is 8.73% and the gain for Whites is 2.91%. During this time, the average annual percent change was 5.38% for Blacks and 3.38% for Whites; both revealed an increase.
Figure 5.1 Louisiana Grade 4 Reading NAEP Scale Scores, 1992 to 2005
SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online: http://nces.ed.gov/nationsreportcard/nde/
Note: Accommodations were not allowed in 1992 and 1994.
Figure 5.2 Louisiana Grade 4 Mathematics NAEP Scale Scores, 1992 to 2005

SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online: http://nces.ed.gov/nationsreportcard/nde/

Note: Accommodations were not allowed in 1992 and 1996.
Figure 5.3 Louisiana Grade 8 Reading NAEP Scale Scores, 1998 to 2005
SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online:
http://nces.ed.gov/nationsreportcard/nde/
Figure 5.4 Louisiana Grade 8 Mathematics NAEP Scale Scores, 1990 to 2005

SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online: http://nces.ed.gov/nationsreportcard/nde/

Note: Accommodations were not allowed in 1990, 1992 and 1996.
Figure 5.5 Percentages of Louisiana Students That Scored Basic or Above on Grade 4 LEAP ELA Assessments, 1999 to 2005
SOURCE: Adapted from “LEAP, iLEAP, GEE, and The Iowa Tests: Multi-Year Statewide Test Results Summary” by LDE (2008p).
Figure 5.6 Percentages of Louisiana Students That Scored Basic or Above on Grade 4 LEAP Mathematics Assessments, 1999 to 2005
SOURCE: Adapted from “LEAP, iLEAP, GEE, and The Iowa Tests: Multi-Year Statewide Test Results Summary” by LDE (2008p).
Figure 5.7 Percentages of Louisiana Students That Scored Basic or Above on Grade 8 LEAP ELA Assessments, 1999 to 2005

SOURCE: Adapted from “LEAP, iLEAP, GEE, and The Iowa Tests: Multi-Year Statewide Test Results Summary” by LDE (2008p).
Figure 5.8 Percentages of Louisiana Students That Scored Basic or Above on Grade 8 LEAP Mathematics Assessments, 1999 to 2005
SOURCE: Adapted from “LEAP, iLEAP, GEE, and The Iowa Tests: Multi-Year Statewide Test Results Summary” by LDE (2008p).
Figure 5.9 ITBS Composite National Percentile Rankings for Louisiana Grade 3 Students, 1999 to 2005
Figure 5.10 ITBS Composite National Percentile Rankings for Louisiana Grade 7 Students, 1999 to 2005
Figure 5.11 ITBS Composite National Percentile Rankings for Louisiana Grade 9 Students, 1999 to 2005
Figure 5.12 ACT Average Composite Scores for Louisiana and the Nation, 1994 to 2005

Figure 5.13 Percentages of Retained Louisiana K-12 Students, 1998 to 2005
SOURCE: Data was electronically requested and received from an LDE employee.
Figure 5.14 Percentages of Louisiana Dropouts in Grades 9-12, 1997 to 2005
SOURCE: Data was electronically requested and received from an LDE employee.
Figure 5.15 Percentages of Louisiana Students That Received One or More Disciplinary Actions in PK-12, 1997 to 2005
SOURCE: Data was electronically requested and received from an LDE employee.
Figure 5.16 Louisiana Juvenile Arrests, 1999 to 2005
Figure 5.17 Louisiana Grade 4 Reading NAEP Scale Scores for Black and White Students, 1992 to 2005

SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d,e) and available online: http://nces.ed.gov/nationsreportcard/nde/

Note: Accommodations were not allowed in 1992 and 1994.
Figure 5.18 Louisiana Grade 4 Mathematics NAEP Scale Scores for Black and White Students, 1992 to 2005
SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online: http://nces.ed.gov/nationsreportcard/nde/
Note: Accommodations were not allowed in 1992 and 1996.
Figure 5.19 Louisiana Grade 8 Reading NAEP Scale Scores for Black and White Students, 1998 to 2005
SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online:
http://nces.ed.gov/nationsreportcard/nde/
Figure 5.20 Louisiana Grade 8 Mathematics NAEP Scale Scores for Black and White Students, 1990 to 2005

SOURCE: Created via NAEP Data Explorer by U.S. Department of Education (n.d.e) and available online: http://nces.ed.gov/nationsreportcard/nde/

Note: Accommodations were not allowed in 1990, 1992 and 1996.
Figure 5.21 Percentages of Louisiana Black and White Students That Scored Basic or Above on Grade 4 LEAP ELA Assessments, 1999 to 2005
Figure 5.22 Percentages of Louisiana Black and White Students That Scored Basic or Above on Grade 4 LEAP Mathematics Assessments, 1999 to 2005

Figure 5.23 Percentages of Louisiana Black and White Students That Scored Basic or Above on Grade 8 LEAP ELA Assessments, 1999 to 2005
Figure 5.24 Percentages of Louisiana Black and White Students That Scored Basic or Above on Grade 8 LEAP Mathematics Assessments, 1999 to 2005

Figure 5.25 ITBS Composite National Percentile Rankings for Louisiana Black and White Grade 3 Students, 2002 to 2005

Figure 5.26 ITBS Composite National Percentile Rankings for Louisiana Black and White Grade 7 Students, 2002 to 2005
Figure 5.27 ITBS Composite National Percentile Rankings for Louisiana Black and White Grade 9 Students, 2002 to 2005
Figure 5.28 Percentages of Louisiana Black and White Students Retained in K-12, 1998 to 2005
SOURCE: Data was electronically requested and received from an LDE employee.
Figure 5.29 Percentages of Louisiana Black and White Dropouts in Grades 9-12, 1997 to 2005

SOURCE: Data was electronically requested and received from an LDE employee.
Figure 5.30 Percentages of Louisiana Black and White Students That Received One or More Disciplinary Actions in PK-12, 1997 to 2005
SOURCE: Data was electronically requested and received from an LDE employee.
CHAPTER 6: CONCLUSION

“If Louisiana’s goal is to invigorate its economy, increase personal income for its citizens and improve their quality of life, the state must take a pro-active role to build on the many natural assets we have inherited, but also create the new ones we will need to succeed in the future. The key is innovation. Louisiana must be a place where innovation occurs. Where it grows. Where it becomes pervasive.”

(Council for a Better Louisiana, 2009, p. 2)

Overview

When Sputnik reached space, the United States rallied to flex its academic muscles. From Congressional passage of National Defense Education Act (NDEA) in 1958, to President Johnson’s landmark ESEA in 1965, to President Bush’s NCLB in 2002, the United States demanded the world’s strongest public education system. Said reforms and countless others in between were accompanied by substantial monetary allocations, but failed to yield the anticipated results. When compared internationally, U.S. students have remained in the middle, variously scoring above and below international averages on three paramount achievement tests: (a) PIRLS, (b) TIMSS, and (c) PISA.

During this time, Louisiana answered the United States’ call to educational reform. Over 100 years after Louisiana opened its first public school system in New Orleans in 1841, Louisiana initiated statewide testing with the Louisiana State Assessment Program, the result of the educational reform legislation passed in 1976. Not only did the reforms introduce statewide testing, but they also called for minimum standards, curriculum guides, and remediation. In 1988, Governor Roemer continued the attack on Louisiana’s poor national academic reputation with the Children First Act. The wide-ranging Children First Act advocated accountability via the Progress Profiles Program. By 1997, the frustration of Louisianans with the previous failed attempts to right the academic ship resulted in Act 478 of the Louisiana Legislature. Act 478
introduced a statewide accountability system which included high stakes tests known as the Louisiana Educational Assessment Program, commonly referred to as LEAP. LEAP was developed after an extensive examination of successful accountability systems in five states. Thus, the Louisiana accountability system is a gumbo filled with ingredients from North Carolina, Kentucky, Florida, Texas, and Maryland. Nevertheless, since the inception of state NAEP results in 1990, Louisiana has consistently performed in the bottom tier of the U.S. Southern Region on the Grade 4 and Grade 8 NAEP reading and mathematics assessments.

Interested in the web of academic programs launched or modified to increase student achievement after Act 478, Cambre (2009) examined the goals, longevity, funding sources, and funding levels of several programs associated with the state accountability system. The Cambre study is bounded by the years 1997 to 2005, with 1997 marking the naissance of Act 478 and 2005 marking the last year LEAP was administered prior to devastating effects of Hurricanes Katrina and Rita. Nine programs were identified:

1. Community Based Tutorial Program
2. Distinguished Educator Program
3. K-3 Reading and Mathematics Initiative
4. Learning-Intensive Networking Communities for Success
5. Local Teacher Quality
6. Louisiana Teacher Assistance and Assessment Program
7. Regional Education Service Centers
8. Remediation
9. State Testing and Accountability

Cambre found that total state allocation for the nine programs during the years of her study was $490 million. She concluded her work by stating that Louisiana had yet to evaluate the effectiveness of the nine programs and recommended that such an evaluation be undertaken.

The present study responded to Cambre’s (2009) recommendation using statewide data to determine whether the Louisiana public education system improved in certain student outcomes
between 1997-2005. Specifically, three indicators were examined: (a) student achievement, (b) student matriculation, and (c) student disciplinary actions. These data presented all students taking LEAP and/or NAEP statewide. With one exception, the data were disaggregated by race, Black and White, so comparisons would be made. The exception is juvenile arrest records for which disaggregated data were not available. Four major research questions, each with sub-questions, guided this study:

1. What trends are evident regarding statewide student achievement between 1997 and 2005?
   a. What trends occurred with student achievement on Grades 4 and 8 NAEP reading and mathematics assessments?
   b. What trends occurred with student achievement on Grades 4 and 8 LEAP ELA and mathematics assessments?
   c. What trends occurred with student rankings on Grades 3, 7, and 9 Iowa Tests of Basic Skills (ITBS) assessments?
   d. What trends occurred with student achievement on the American College Testing Program (ACT)?

2. What trends are evident regarding statewide student matriculation between 1997 and 2005?
   a. What trends occurred with student in-grade retention in K-12?
   b. What trends occurred with student dropouts in Grades 9-12?

3. What trends are evident regarding statewide student disciplinary actions between 1997 and 2005?
   a. What trends occurred with student suspensions and expulsions in PK-12?
b. What trends occurred with juvenile arrests?

4. What trends are evident regarding achievement, matriculation, and disciplinary actions for Black students and for White students between 1997 and 2005?
   a. What trends occurred with student achievement on Grades 4 and 8 NAEP reading and mathematics assessments?
   b. What trends occurred with student achievement on Grades 4 and 8 LEAP ELA and mathematics assessments?
   c. What trends occurred with student rankings on Grades 3, 7, and 9 Iowa Tests of Basic Skills (ITBS) assessments?
   d. What trends occurred with student in-grade retention in K-12?
   e. What trends occurred with student dropouts in Grades 9-12?
   f. What trends occurred with student disciplinary actions in PK-12?

The quantitative research methodology, trend analysis, was utilized to answer the research questions. Publicly accessible data obtained via the Internet and the Louisiana Department of Education produced a total of 30 graphs. The trends analyzed in this study were reported but not interpreted in Chapter 5. The present chapter presents a discussion of the trend results.

Student Achievement

Mathematics

Louisiana students performed better in mathematics than ELA, as reflected in both the NAEP and LEAP assessments. In mathematics, Grade 4 and Grade 8 results on the NAEP assessments trended upward each year between 1992 and 2005. Over these 13 years, mathematics scale scores climbed 26 points for Grade 4 students; over 15 years, from 1990 to 2005, mathematics scale scores for Grade 8 students increased by 22 points. Thus, the difference
in NAEP mathematics achievement for students in Grade 4 compared to those in Grade 8 was a four point difference. On the LEAP mathematics assessments, Grade 4 and Grade 8 students also made gains, but the gains were not as large. From 1999 to 2005, Grade 4 students scoring at Basic and above increased by 19 percentage points, while the comparable gain for Grade 8 students was 13 percentage points, a 6 percentage point difference between the two grade levels. In mathematics on both NAEP and LEAP, gains for eighth graders were slightly lower than gains for fourth graders.

The curious difference in NAEP and LEAP scores may be explained by sampling and by the use of scale scores for NAEP and percentage increase for LEAP. Regarding sampling, NAEP samples statewide including public, non-public, and home-schooled students. LEAP, on the other hand, tests the statewide population of public school students in Grades 4 and 8. Given that statewide, the percentages of Black and White public school students differ by approximately two percentage points and that Black students start with a lower score, the gains on the LEAP mathematics test are affected more strongly by the lower scores of Black students which may account for the smaller increase. Additionally, items on LEAP correspond to the state curriculum that is taught daily; items on NAEP do not reflect a particular state curriculum. As is evident in the figures showing data disaggregated by race for both NAEP and LEAP, White students started with higher scores than Black students and maintained that advantage. However, an arguably more important question is why the percentage of students scoring at Basic and above on LEAP is smaller for Grade 8 than for Grade 4 students. A similar phenomenon is found in the LEAP ELA results.
NAEP reports scores for reading rather than English language arts. From 1992 to 2005, 13 years, Grade 4 scale scores in reading showed a small five point change, although the trend line from 1994 to 2005 is generally upward. From 1998 to 2005, 7 years, Grade 8 scale scores on NAEP increased by one point. The data do not explain why the Grade 8 NAEP trend is essentially flat. Student achievement on LEAP ELA suggests stronger gains for Grade 4 and Grade 8 students. From 1999 to 2005, Grade 4 students scoring at Basic or above showed a gain of nine percentage points. The percentage increase for Grade 8 students was seven percentage points. For both grades, the gain is small given the span of years.

Although the gains for Grade 4 and Grade 8 students are similar and show an increase, the results nevertheless suggest a problem. In 1999, 55% of Grade 4 students scored at or above Basic, compared to 64% in 2005. However, in 1999, 43% of Grade 8 students scored at or above Basic, compared to 50% in 2005. In other words, by 2005, the percentage of Grade 8 students scoring at Basic or above was smaller than the percentage of Grade 4 students scoring at or above Basic 6 years earlier in 1999. Students in Grade 8 in 2005 would have been in Grade 2 in 1999. Based on the assumption that Grade 2 students in 1999 were essentially the same students in Grade 8 in 2005, most of their schooling experiences would have occurred while the Louisiana accountability program was in operation. The LEAP mathematics and ELA results suggest that something was happening between Grade 4 and Grade 8 that dampened achievement, but what was happening is not explained in the data.

The above speculation is supported by the ITBS results. Data from the ITBS, a norm-referenced test, were reported as composite percentile rankings. Between 1999 and 2005, the percentile ranking of Grade 3 students rose from the 45th percentile to the 57th percentile, an
increase of 12 percentiles. During these same years, the percentile rankings for both Grades 7 and 9 students rose from the 44th percentile to the 49th percentile, an increase of 5 percentiles. Thus, the NRT results support the suggestion that school experiences may have a depressing effect on student achievement as students move from Grades 3 and 4 to Grades 7, 8, and 9.

Various explanations include that the K-3 Reading and Math Initiative successfully improved students’ proficiency in these two areas contributing to improvements in NAEP and LEAP outcomes for Grade 4 students between 1999 and 2005. However, if this is the case, the benefits to youngsters in Grades K-3 were diminished as students moved through school to Grade 8. Other potential causes of the smaller increase in scores after Grades 3 and 4 include: (a) benefits yielded from the K-3 Reading and Math Initiative were not supported in Grades 5-9; (b) as students matured and moved into middle schools, academics competed poorly with peer acceptance for students’ attention; (c) teachers at higher grade levels were content oriented and less student oriented; and (d) students were exposed to more negative school experiences.

Further investigation as to why these particular characteristics exist in the trend data is fertile ground for future research.

It is alarming that since 1990, the academic performance of Louisiana Grade 4 and Grade 8 students on reading and mathematics NAEP assessments has remained among the weakest in the Southern Region. Louisiana students persistently score below the Southern Regional average and the U.S. average. Given that the academic performance of U.S. students is mediocre in several international comparisons and that Louisiana students rank near the bottom on national comparisons, a concern of policymakers and educators should be how Louisiana high school graduates will be able to compete in the international context.
Achievement Gap Between Black and White Students

White students outperformed Black students each year on the NAEP, LEAP, and ITBS. Except for the Grade 4 mathematics NAEP scores, trends showed that the highest performance by Black students did not exceed the lowest performance by White students on the three measures of achievement used in this study. Overall, the NAEP achievement gap between Black and White students decreased minimally. The Grade 4 mathematics achievement gap on NAEP demonstrated the most improvement, narrowing from 31 points in 1992 to 22 points in 2005. By 2005, the gap decreased on the NAEP Grade 8 reading scores by two points and the Grade 8 NAEP mathematics scores by one point. For the same years, 1992 to 2005, the gap increased on NAEP scores for Grade 4 reading by two points.

The LEAP achievement gap between Black and White students decreased more in Grade 4 than in Grade 8. The Grade 4 ELA LEAP gap closed from 34 points in 1999 to 26 points in 2005 and the Grade 4 mathematics LEAP gap closed from 37 percentage points in 1999 to 30 points in 2005. By 2005, the gap decreased on the Grade 8 mathematics LEAP by two percentage points, but increased on the Grade 8 ELA LEAP by one percentage point. Regarding the ITBS composite national percentile rankings, the achievement gap between Black and White students decreased from 2002 to 2005 for Grades 3 and 7 by three percentiles, but increased for Grade 9 by two percentiles; that is, the trend for these grades was essentially flat. As mentioned above, perhaps Louisiana’s achievement gap is linked to a misunderstanding of cultures by educators. Fifteen years ago, Cochran-Smith (1995) advocated that teachers, both old and new, along with teacher educators, work as a community “to explore and reconsider their own assumptions, understand the values and practices of families and cultures that are different from their own, and construct pedagogy that takes these into account in locally appropriate and
culturally sensitive ways” (p. 495). Similarly, eighteen years ago, Ogbu (1987) argued that according to comparative and historical research, teachers and administrators held lower expectations for minority students, even when educational services and the curriculum were equally dispersed. Another potential cause is that minority students are often taught by weak teachers. “Research has shown that when it comes to the distribution of the best teachers, poor and minority students do not get their fair share” (Peske & Haycock, 2006, p. 1).

Student Matriculation

Data used to calculate retention-in-grade and drop out trends were obtained from a competent authority, the LDE. However, in both instances, the trends for Louisiana were inconsistent with national trends.

Retention

The trend showed that retention percentages steadily climbed from 1998 to 2001 and peeked in 2001 at almost 11%. According to Cambre (2009), testing in Louisiana became high stakes in 2000. Students not passing LEAP in 2000 would be reflected as retained in-grade in 2001. In 2002, the retention percentage dropped by 0.6 points and then fluctuated within a range of 0.5 points from 2002 to 2005, with nearly 10% of students retained in-grade each year according to LDE data. This retention rate seems low in light of national retention rates which were estimated at 15% to 20% annually (Darling-Hammond, 2004). Some researchers connect the increase in retention rates nationally with the NCLB mandate that schools meet adequate yearly progress (AYP). According to Choi, Seltzer, Herman, and Yamashiro (2007), the AYP metric compares cohorts from year to year, which can produce spurious results in districts that concentrate efforts on students most likely to increase their scores with additional assistance while students with the greatest needs receive little assistance. Choi et al. explained:
by concentrating on the proportion of students achieving a particular cut point, the score
needed to be considered proficient, current AYP requirements unintentionally encourage
some schools under great pressure to meet AMO [annual measurable objectives] goals to
triage their efforts to focus on moving students who are closest to the threshold over it,
virtually ignoring their lowest performing students. Moreover, schools whose low-
performing subgroups fail to meet the minimum group size may meet AYP without
addressing the needs of these students. (p. 22)

To the extent the Louisiana schools and districts implement as an unofficial policy the
concentration of instructional efforts on students most likely to move from below to above the
cut point, low achieving Black students may feel marginalized, increasing their alienation from
school.

A higher percentage of Black students than White students were retained each year from
1998 to 2005. In 1998, the difference in the percent of Black and White students retained in-
grade was three and one-half percentage points. In 2001, the percent of White students retained in-
grade (7%) represented an increase of almost one percentage point; for Black students that
same year, the increase was almost four percentage points, spiking to 14.8%, over twice that of
White students. Given that LEAP became high stakes in 2000, the percent of students retained in-
grade in 2001 is likely a reflection of the effects of students failing LEAP. By 2005, the
percent of Black students retained in-grade had decreased to 12.9%, a two percentage point
decline, while the percentage of White students retained fell one-half percentage point to 6.5%.
From 2001 to 2005, the percent of Black and White students retained in-grade fell steadily, but
the disparity in retention between Black and White students remained large with almost a six and
one-half percentage point difference in 2005, nearly double the difference reported in 1998. For
Black students to be retained while their white peers are promoted to the next grade may also
contribute to a sense of alienation from school, manifest for older students by dropping out.
Dropouts

Data obtained from the LDE reflected student dropout rates in high school, that is, Grades 9-12. These data did not reflect the number or percentage of Grade 8 students who did not enroll in high school. That is, the data did not reflect students who failed LEAP in Grade 8 and dropped out. The likelihood is that many Grade 8 students from low-income families who failed LEAP dropped out of school (Mancuso, 2004). Although it is illegal in Louisiana to drop out of school before one’s 18th birthday, this law is not well enforced. State dropout data showed percentages steadily trending down from 1997 to 2005, going from nearly 11% in 1997 to 7% in 2005.

Here again, the Louisiana data do not comport with national data. Rothstein (2004), for example, reported that “about 50% of black students get regular diplomas, vs. about 75% of whites” (p. 109). To rephrase Rothstein in terms of dropouts, about half of Black students and about 25% of White students drop out of school, percentages that are much higher than those reported by the LDE. Similarly, Darling-Hammond (2006) noted that nationwide, graduation rates have ranged between “75% and 80%...for more than two decades” (p. 14). Students who are retained in-grade are substantially more likely to drop out of school (Bali, Anagnostopoula, & Roberts, 2005) than students who are not retained even when achievement levels are the same. The retention rate reported by the LDE is higher than the dropout rate reported, counter to national trends. Moreover, inconsistent with the retention data, the drop out data declined from 1997 to 2005, with the difference between Black and White students remaining about the same; however, the dropout rate for Black students was nearly 10% compared to 5% for White students.
Student Disciplinary Actions

Student disciplinary actions were studied two ways; suspension and expulsion from school as a result of student misbehavior and FBI juvenile arrest data. These findings are considered separately.

Disciplinary Actions

Suspension and expulsion from school are the strongest disciplinary actions a school can administer for student misbehavior. Data regarding suspension and expulsion were obtained from the LDE. During the years included in this study, suspension and expulsion were reported to the state in the same manner. In 1998, LDE reporting requirements were stated as follows: “The suspension and expulsion indicators are based on district reported data submitted to the LDE via the Student Information System (SIS)” (LDE, 1998, p. 3-12). This quotation closely mirrors the language used by the LDE in 2006: “The suspension and expulsion indicators are based on student-level data submitted by LEAs [local education agencies] to the Louisiana Department of Education’s Student Information System (SIS)” (LDE, 2006b, p. 3-6).

Although there was a minimal decrease in the percentage of students receiving one or more such disciplinary actions in 2000, the overall percentage trended upward from 1997 to 2005. This upward trend is more strongly influenced by the increase in suspensions and expulsions for Black students (8.73%) than for White students (2.91%). Thus, each year Black students were severely disciplined more often than White students. LEAP appears to have played a role in the rate of suspensions and expulsions for Black students. After 2000 (the year in which LEAP became high stakes), the rate of change was greater for Black students than for their White peers.
The Louisiana accountability system failed to close the achievement gap as shown by several measures, retained Black students in-grade at a higher rate than White students, and had a consistently higher dropout rate for Black students than White students. The various programs reported by Cambre (2009) that were funded through the state accountability system to foster student achievement, failed to do so for Black students. Nonetheless, Black and White students were expected to learn the state curriculum content at the same achievement level even though Grade 4 Black students scoring at Basic and above on LEAP lagged their White peers by 34 percentage points in ELA and by 37 percentage points in mathematics in 1999 when LEAP was first administered statewide.

Between 1999 and 2005, the increase in Grade 4 ELA for White students scoring at Basic and above was 7 percentage points, while the increase for Grade 4 Black students was 15 percentage points, more than double that for White students. In mathematics, scores at Basic and above for White students increased by 18 percentage points, while scores for Black students increased by 25 percentage points. Thus, in both of these promotional subjects, the rate of improvement for Black students outpaced that for White students, yet fewer Black than White students met the cutoff score. Given these data, it is quite possible that Black students felt the system was unfair and responded by misbehaving. Despite the higher rate of score increases by Black students, they were subject to suspensions and expulsions at a higher rate than White students. By 2005, the difference in the percent of Black versus White students who were suspended or expelled was over 13 percentage points, almost doubled that of 1997, when the difference was just over 7 percentage points. The explanation that Black students felt the system was unfair to them becomes more compelling in light of the above discussion that students
nearest the cutoff score often received more support for their learning than did students further from the cutoff score.

A study of a large metropolitan school district in a Midwestern city by Nichols (2004) discussed the effects of an increased number of disciplinary actions for minority students:

The analysis of the data from this study also suggests that the relationship between higher rates of in-school suspension, out-of-school-suspension, and expulsion for poor minority students in the elementary and middle school grades may begin the process of negative educational and behavioral expectations for these students, their parents, and their teachers. When these types of inappropriate, early intervention strategies are inequitably used in an attempt to control what is perceived as negative student behavior, they may potentially set the stage for continued negative perceptions of the educational environment at the high school level, and in effect support negative achievement expectations of poor, minority students. (p. 419)

Thus, an increased number of disciplinary actions for Black students in Louisiana potentially served as a catalyst for academic failure for Black students whose scored further from the cut point, inducing Black students to drop out of school prior to the ninth grade.

As the Nichols (2004) study indicates, the phenomenon of disciplining Black and White students differently is found across the United States. For example, Wallace, Goodkind, Wallace, and Bachman (2008) wrote:

Consistent with past research, we found that race differences in the most punitive disciplinary practices (i.e., suspension and expulsion) are particularly large for Black students. For example, Black boys are 30% more likely than White boys to be sent to the office or detained and they are 330% (3.3 times) more likely than White boys to be suspended or expelled. Among girls, the race gap in discipline is even larger. Black girls are approximately twice as likely as White girls to be sent to the office or detained but they are more than five times more likely than White girls to be suspended or expelled. (p. 57)

These Louisiana and national data suggest that, at best, teachers and school administrators lack cultural competence in understanding the behavior of Black students. At worst, the data suggest that for teachers and administrators a subtle form of racism was at play, one that penalized Black students more harshly than White students for the same behaviors. Taylor and Clark (2009),
citing Cartledge, Tillman, & Johnson (2001), wrote that Black students were “punished with out-of-school suspensions at a higher rate than that of White students and for less serious infractions” (p. 115). In Louisiana and throughout the country, the disparate academic and disciplinary treatment of Black and minority students must move beyond the scholarly literature and into the practice of school professionals. Despite changes in how students’ achievement may be calculated in Race to the Top, a central thrust of President Obama’s education reform agenda, the pervasive underestimation of the abilities of Black students and misunderstanding their behaviors will not change without the dismantling of deficit thinking (Skrla & Scheurich, 2001) in states, districts, and schools.

Juvenile Arrests: FBI Data

Outside of school, juvenile offenses that result in arrest are recorded by the FBI. Overall, arrest numbers for Louisiana juveniles improved. Despite an increase in juvenile arrest numbers in 2001, the trend stabilized at just more than 35,000 between 2002 and 2004 and then decreased sharply from 2004 to 2005. Juvenile arrest numbers in 2005 were almost half that of 1999. A possible explanation for the decline in 2005 is that the FBI data represented a calendar year. Much of New Orleans was vacated after Hurricane Katrina in August 2005 and much of Southwestern Louisiana was vacated after Hurricane Rita in September 2005. Thus, the population decrease across the southern part of the state, and particularly in the state’s largest urban area, New Orleans, which had a decades-long high crime rate, was substantially reduced in the last four months of 2005 affecting the juvenile crime rate.

Implications, Conclusions, and Recommendations

The results of this study have important social justice implications. Cambre (2009) reported that the Louisiana allocated $490 million to fund nine programs during the years
included in this study. Considering the wide and persistent gaps found for each indicator included in the present study, Louisianans might hold policymakers, rather than students, accountable for the nearly half billion dollars allocated over the seven years that did not close the achievement gap. Margaret Spellings, U.S. Secretary of Education in the George W. Bush administration, praised NCLB for improving the academic performance of all U.S. students, while minimizing achievement gaps. Spellings and like-minded policymakers at the state and national levels have yet to acknowledge the millions of children left behind by both NCLB and state accountability systems such as the one in Louisiana. The evidence presented in this study is clear and consistent. Most White students started so far ahead of most Black students that greater gains by Black students did not enable them to catch up. Louisianans might ask what social justice issues are at play that support such lackluster results.

Plato contemplated social justice millennia ago when he advocated that courage, justice, moderation, and wisdom fashion an ideal state (Zajda, Majhanovich, & Rust, 2006). Zajda, and colleagues, wrote that “most conceptions of social justice refer to an egalitarian society that is based on the principles of equality and solidarity, that understands and values human rights, and that recognises the dignity of every human being” (p. 9-10).

Low-income children of color can learn, as 40 years of research on effective schools make evident. Was this research not taken into account as the Louisiana accountability system was designed and implemented because those who designed the system unwittingly applied deficit thinking? Considering that over 123,000 students who attend the approximately 400 non-public schools in the state (Broughman, Swaim, & Keaton, 2009) are not required to take or pass LEAP tests again raises issues of social justice. The Cowen Institute for Public Education Initiatives (2009) elaborated: “Nationwide, private school enrollment is approximately 11% of
total K-12 enrollment while in Louisiana it is nearly 16%. In Jefferson and Orleans Parishes, the state’s largest metropolitan area, nearly 33% of K-12 students are enrolled in private schools” (p. 3). Students who graduate from non-public schools receive a diploma recognized as equal to that received by students graduating from a public school (Approval of Private Schools, 1975). The present study adds credence to Berliner’s (2005) report that the international academic performance of white U.S. students is near the top, while the international academic performance of African American and Hispanic U.S. students is near the bottom. The United States in general, and Louisiana in particular, have taken no serious steps in the last half century to change this disparity.

According the multiple types and sources of data analyzed in this study, one conclusion is that the Louisiana accountability system did not lead to noteworthy improvements in statewide student outcomes across three important indicators of success. Although there were learning increases for both Black and White students, the achievement gap remained approximately the same across these years. Thus, several concerns arise in addition to those associated with social justice.

One of the most important concerns is the use of a single high stakes test to measure student learning, a practice psychometricians discourage. A second concern is captured in the position statement from the American Educational Research Association (AERA) (2000) opposing the use of such tests:

If high-stakes testing programs are implemented in circumstances where educational resources are inadequate or where tests lack sufficient reliability and validity for their intended purposes, there is potential for serious harm. Policy makers and the public may be misled by spurious test score increases unrelated to any fundamental educational improvement; students may be placed at increased risk of educational failure and dropping out; teachers may be blamed or punished for inequitable resources over which they have no control; and curriculum and instruction may be severely distorted if high
test scores per se, rather than learning, become the overriding goal of classroom instruction. (¶ 4)

The warning from AERA that curriculum distortion will result from high stakes tests is shared by other researchers. Ravitch and Cortese (2009) fault NCLB for narrowing the curriculum in U.S. schools and, subsequently, the academic competitiveness of American students versus the students of other industrialized nations.

While American students are spending endless hours preparing to take tests of their basic reading and math skills, their peers in high-performing nations are reading poetry and novels, conducting experiments in chemistry and physics, making music, and studying important historical issues. We are the only leading industrialized nation that considers the mastery of basic skills to be the goal of K-12 education. (p. 35-36)

With a narrowed curriculum, teachers lose their pedagogical autonomy, while students become disengaged. When students are disengaged, misbehaviors tend to surface.

A third concern is that, exemplary teachers and administrators, who are desperately needed in Louisiana, are less likely to accept positions in high-poverty schools and in districts in which teachers are deskilled by a prescriptive curricula so tightly aligned to the high stakes tests that teacher creativity is discouraged if not precluded. School rewards and sanctions based on test results perpetuate this problem prompting talented educators to “opt for school placements where students are easy to teach, and school stability is high” (Darling-Hammond, 2004, p. 1058).

Several recommendations are in order based on the findings of this study. Research and development of holistic approaches to measuring student learning is recommended. If, as researchers report, a constricted curriculum that allows little teacher latitude in creating engaging learning opportunities for students is harming rather than helping Louisiana students learn, policy changes that correct this situation are needed. Research that investigates root causes for the persistent disparities in learning, retention, and disciplinary actions between Black and White
students in Louisiana are needed. Concomitantly, an examination of the declining academic performance of Louisiana students each year after Grade 4 may produce insights that policymakers can use to reverse the decline. Research is also needed to evaluate how Louisiana reports retention and dropout data in relation to national statistics. Finally, a study of student learning, student matriculation, and student disciplinary actions in the years following Hurricanes Katrina and Rita is recommended.

Louisiana policymakers and educational leaders may have acted with sincere intent to transform the public school landscape with the passage of Act 478 and subsequent the development and implementation of the state accountability system. The state did not set out to re-invent the wheel, but studied accountability programs in states that had been nationally recognized for their accomplishments. However, nearly $500 million later, it is a shame that such effort harvested so little in a state that so badly needs an outstanding system of public education.
REFERENCES


Center on Education Policy. (2007, June). *Answering the question that matters most: Has student achievement increased since No Child Left Behind?* Washington, DC: Author.


Maryland State Department of Education. (2007). *A parent’s guide to achievement matters most: Maryland’s plan for preK-12 education.* (ERIC Document Reproduction Service No. ED497759)


179


APPENDIX: APPLICATION FOR EXEMPTION FROM INSTITUTIONAL OVERSIGHT

Application for Exemption from Institutional Oversight

Unless qualified as meeting the specific criteria for exemption from Institutional Review Board (IRB) oversight, all LSU research projects using living humans as subjects, or samples, or data obtained from humans, directly or indirectly, with or without their consent, must be approved or exempted in advance by the LSU IRB. This form helps the PI determine if a project may be exempted, and is used to request an exemption.

---

Applicant/please fill out the application in its entirety and include the completed application as well as parts A-E; listed below, when submitting to the IRB. Once the application is completed, please submit two copies of the completed application to the IRB Office or to a member of the Human Subjects Screening Committee. Members of this committee can be found at http://www.lsu.edu/screeningmembers.shtml

---

A Complete Application Includes All of the Following:

(A) Two copies of this completed form and two copies of part B thru E.
(B) A brief project description (adequate to evaluate risks to subjects and to explain your responses to Parts 1&2)
(C) Copies of all instruments to be used.
(D) The consent form that you will use in the study (see part 3 for more information.)
(E) Certificate of Completion of Human Subjects Protection Training for all personnel involved in the project, including students who are involved with testing or handling data, unless already on file with the IRB. Training link: (http://phrp.nihtraining.com/users/login.php)

1) Principal Investigator: Dianne L. Taylor, Ph.D. - Associate Professor Ph: 225-578-2192
Dept: ETPP
Ph: 225-578-2043
E-mail: dtaylor@lsu.edu

2) Co Investigator(s): please include department, rank, phone, and e-mail for each
*If student, please identify and name supervising professor in this space

Jonathan Anthony Szymanski - Graduate Student
Home: 225-448-5044 Cell: 225-715-4390 E-mail: jszymas@tigers.lsu.edu
Supervising Professor: Dianne L. Taylor, Ph.D. - ETPP - Associate Professor - dtaylor@lsu.edu

3) Project Title: The State of Education in Louisiana: Trend Analyses of Student Achievement, Student Matriculation, and Student Behavior in the Accountability Era

4) Proposal? (yes or no) No

If Yes, LSU Proposal Number

Also, if YES, either

- This application completely matches the scope of work in the grant
- OR

More IRB Applications will be filed later

5) Subject pool (e.g. Psychology students) None

*Circle any "vulnerable populations" to be used: (children <18; the mentally impaired, pregnant women, the ages, other). Projects with incarcerated persons cannot be exempted.

6) PI Signature (no per signatures)

Date 12-08-09

** I certify my responses are accurate and complete. If the project scope or design is later changes, I will resubmit for review. I will obtain written approval from the Authorized Representative of all non-LSU institutions in which the study is conducted. I also understand that it is my responsibility to maintain copies of all consent forms at LSU for three years after completion of the study. If I leave LSU before that time the consent forms should be preserved in the Departmental Office.

Screening Committee Action: Exempted Not Exempted Category/Paragraph

Reviewer Kristin A. Gandolfo signature Date 12-08-09

Part 1: Determination of "Research" and Potential For Risk

This section determines whether the project meets the Department of Health and Human Services (HSS) definition of research involving human subjects, and if not, whether it nevertheless presents more than "minimal risk" to human subjects that makes IRB review prudent and necessary.
Over 50 years after *Sputnik*, the United States continues to enact educational reforms in its pursuit of academic superiority. Such reforms require extensive manpower and numerous resources. For example, after the Louisiana Legislature passed Act 478 in 1997, 490 million in state dollars was distributed by 2005 to nine specific programs designed to enrich student achievement. Thus, the purpose of this study is to examine the results of Louisiana’s public education system since Act 478. In doing so, Louisiana will be measured against the U.S. Southern Region in terms of dollars expended and student achievement. Attention is given to the development and major precepts of Louisiana’s accountability system. Statewide student trends for achievement, matriculation, and behaviors from 1997-2005 will be illustrated. Also, differences among Black and White students on said indicators will be illustrated since these ethnicities compromise most of the student population in Louisiana. This study will produce 30 trends, whereas each will be statistically analyzed via the average annual percent change. Data for this study is publicly accessible and will be acquired from four sources: (a) NAEP Data Explorer, (b) Louisiana Department of Education (LDE) website, (c) Federal Bureau of Investigation website, and (d) an LDE employee. Moreover, this study is driven by four principal research questions:

1. What trends are evident regarding statewide student achievement between 1997 and 2005?
   a. What trends occurred with student achievement on Grades 4 and 8 NAEP ELA and mathematics assessments?
   b. What trends occurred with student achievement on Grades 4 and 8 LEAP ELA and mathematics assessments?
   c. What trends occurred with student rankings on Grades 3, 7, and 9 Iowa Tests of Basic Skills (ITBS) assessments?
   d. What trends occurred with student achievement on the American College Testing Program (ACT)?

2. What trends are evident regarding statewide student matriculation between 1997 and 2005?
   a. What trends occurred with student retention in Grades K-12?
   b. What trends occurred with student dropouts in Grades 9-12?

3. What trends are evident regarding statewide student behaviors between 1997 and 2005?
   a. What trends occurred with student discipline actions in PK-12?
   b. What trends occurred with juvenile arrests?
4. What trends are evident regarding achievement, matriculation, and behaviors for Black and White students between 1997 and 2005?
   a. What trends occurred with student achievement on Grades 4 and 8 NAEP ELA and mathematics assessments?
   b. What trends occurred with student achievement on Grades 4 and 8 LEAP ELA and mathematics assessments?
   c. What trends occurred with student rankings on Grades 3, 7, and 9 Iowa Tests of Basic Skills (ITBS) assessments?
   d. What trends occurred with student retention in Grades K-12?
   e. What trends occurred with student dropouts in Grades 9-12?
   f. What trends occurred with student discipline actions in PK-12?
This is to certify that

**Jonathon Szymanski**

has completed the **Human Participants Protection Education for Research Teams** online course, sponsored by the National Institutes of Health (NIH), on 10/03/2005.

This course included the following:

- key historical events and current issues that impact guidelines and legislation on human participant protection in research.
- ethical principles and guidelines that should assist in resolving the ethical issues inherent in the conduct of research with human participants.
- the use of key ethical principles and federal regulations to protect human participants at various stages in the research process.
- a description of guidelines for the protection of special populations in research.
- a definition of informed consent and components necessary for a valid consent.
- a description of the role of the IRB in the research process.
- the roles, responsibilities, and interactions of federal agencies, institutions, and researchers in conducting research with human participants.

National Institutes of Health

A Service of the National Cancer Institute

VITA

Jonathon Anthony Szymanski was born in Bellville, Texas, in May 1976. He graduated from Brazos High School in Wallis, Texas, in 1994. He attended Wharton County Junior College before transferring to Texas A&M University. He earned a Bachelor of Science degree in kinesiology from Texas A&M University in 1999.

Jonathon started his educational career in 2000 as the physical education teacher at Wessendorff Middle School in Rosenberg, Texas. He began graduate courses in education at the University of Houston-Victoria before transferring to the University of Saint Thomas. He earned a Master of Education degree in educational administration from the University of Saint Thomas in 2003. Immediately upon acceptance into the Doctor of Philosophy program in educational leadership and research at Louisiana State University in 2003, he moved to Baton Rouge, Louisiana. He earned a Doctor of Philosophy degree from Louisiana State University in 2010. Along the way, he earned a Master of Arts degree in educational research methodology from Louisiana State University in 2007.

Today, Jonathon is the principal of Port Allen Middle School in Port Allen, Louisiana. He climbed to the principal position after six dedicated years in the West Baton Rouge Parish School System. Since 2003, he served as a physical education teacher, acting assistant principal, dean of students, summer credit recovery assistant principal, assistant principal, and summer credit recovery principal. He resides in Baton Rouge, Louisiana, with his wife, Lisa. In his spare time, he enjoys exercising, hunting, and traveling.