

12-2012

The Relationship Between Extended Learning Time (ELT) and ELA Assessment Scores of Socio-Economically Disadvantaged Fourth Grade Students in New York State's Big Five Cities

Catalina Castillo
St. John Fisher College

How has open access to Fisher Digital Publications benefited you?

Follow this and additional works at: https://fisherpub.sjfc.edu/education_etd

 Part of the [Education Commons](#)

Recommended Citation

Castillo, Catalina, "The Relationship Between Extended Learning Time (ELT) and ELA Assessment Scores of Socio-Economically Disadvantaged Fourth Grade Students in New York State's Big Five Cities" (2012). *Education Doctoral*. Paper 128.

Please note that the Recommended Citation provides general citation information and may not be appropriate for your discipline. To receive help in creating a citation based on your discipline, please visit <http://libguides.sjfc.edu/citations>.

This document is posted at https://fisherpub.sjfc.edu/education_etd/128 and is brought to you for free and open access by Fisher Digital Publications at St. John Fisher College. For more information, please contact fisherpub@sjfc.edu.

The Relationship Between Extended Learning Time (ELT) and ELA Assessment Scores of Socio-Economically Disadvantaged Fourth Grade Students in New York State's Big Five Cities

Abstract

Since the concept of extended or expanded learning time (ELT) in its modern-day form began to develop approximately 50 years ago, there has been substantial controversy as to whether the application of ELT in a U.S. context could achieve the desired result of improved academic outcomes. Numerous empirical studies during the past 25 years have at least hinted that this could be the case, especially with regard to disadvantaged populations, but all of these studies have been criticized as being flawed in one respect or another, thus limiting their value with regard to demonstrating the efficacy of ELT. The purpose of this study, simply stated, is to help to fill a gap in the existing literature, with a quasi-experimental empirical study that is both quantitative and controlled. The investigator utilized post-treatment data, in the form of the ELA (English Language Arts) mean assessment scores of two groups of socio-economically disadvantaged fourth grade public school students attending both traditional public schools and charter schools in the so-called Big Five (Buffalo, New York City, Rochester, Syracuse and Yonkers). The results of the study, in brief, failed overall to support the hypothesis that ELT led to improved academic outcomes. The inability to lend support to a particular hypothesis does not in itself disprove the general assertion that ELT has the potential to enhance academic outcomes for U.S. students. That being said, however, the support of the negative hypothesis in this particular study—in combination with other recent dissertation studies—does at the very least call into question the assertions of those who state that the argument should have been considered settled long ago. In addition to suggesting the need for further research, the study results here suggest that it may be time for those who have previously looked to ELT as the main solution to begin more serious consideration of the alternatives.

Document Type

Dissertation

Degree Name

Doctor of Education (EdD)

Department

Executive Leadership

First Supervisor

Christopher Griffin

Second Supervisor

Michael Robinson

Subject Categories

Education

The Relationship Between Extended Learning Time (ELT) and ELA Assessment Scores
of Socio-Economically Disadvantaged Fourth Grade Students in New York State's Big
Five Cities

By

Catalina Castillo

Submitted in partial fulfillment
of the requirements for the degree
Ed.D. in Executive Leadership

Supervised by

Dr. Christopher Griffin

Committee Member

Dr. Michael Robinson

Ralph C. Wilson, Jr. School of Education

St. John Fisher College

December 2012

Dedication

A dissertation study is rarely the result of the efforts of the doctoral candidate alone. There are typically many individuals whose helpfulness and goodwill contribute to making the study possible. I would like to acknowledge in particular the efforts of several individuals. Dr. Alice Siegel, my executive mentor, is the one who referred me to the doctoral program in Executive Leadership at St. John Fisher College, and who subsequently provided me with the moral support that made it possible for me to tough things out until completion.

Three people were critical to the data and statistical aspect of the study: Gary Bergman, for data collection; Pamela Kuhens, for statistical analysis; and Dr. Charles Berger, for help with understanding and interpreting results. For editorial assistance, I am indebted to Dr. Daniel K. Berman, who made himself available at all times, including evenings and weekends, to good naturedly give me the help I needed.

My late father Abelardo Castillo, who was so devoted to me and gave so generously of himself to me during his lifetime, would have been immensely proud to see me receive my doctorate. My mother Melba Castillo contributed priceless support and motivation, while my daughter Christina Rubino selflessly accepted all the time I had to devote to completing the program, at her expense.

Last but not least, I would be remiss if I did not mention my committee chair, Professor Christopher Griffin, and my committee member, Professor Michael Robinson. My memorable experience with them and the lessons they taught me will stay with me for a lifetime.

Having given these acknowledgements, if I would be allowed the luxury of making an actual dedication, it would be to the students in the Big Five who have been not only the subject but the inspiration of this dissertation. I hope that in some small way at least, this study will contribute to the improvement of their learning situation and that of those who will follow them.

Biographical Sketch

Catalina Castillo has been principal for the Charter School of Educational Excellence (CSEE) since July 2006, where she serves the same type of socio-economically disadvantaged students that form the population of this dissertation study. She began her teaching career in the New York City Public Schools in 1985, as an elementary and middle school teacher. Her administrative experience date back to 1999, when she became the Program Specialist for Nassau BOCES Bilingual/ESL Technical Assistance Center (BETAC), in collaboration with the State Education Department/Office of Bilingual Education, providing technical assistance to educators and parents on policies and regulations, availability of funding, educational resources, and the implementation of higher learning standards for the 56 school districts in Nassau County, Long Island.

Later, Ms. Castillo served as the Assistant Principal of Roosevelt High School during the reorganization of the Roosevelt School District, in Roosevelt, NY in 2002 by NYSED, going on to become the principal of Roosevelt Middle School. Among her many accomplishments as a public educator, Ms. Castillo founded and directed C & M Learning Center, a small, successful private institute she opened in Richmond Hill, Queens, NY with her mother, a retired school teacher. C & M Learning Center gave Ms.

Castillo the opportunity to combine her entrepreneurial interests with her expertise in curriculum and instruction, to design programs relating to academics for children, adult literacy and technology (for both children and adults).

Under Ms. Castillo's leadership, CSEE has expanded its programs from elementary to middle school. Presently, CSEE is ranked as a top performing school in New York State and Yonkers, attracting students from all areas of Westchester County and New York City. In 2010, CSEE won the International Reading Association's Exemplary Reading Program Award for New York State and was recognized by the New York State Education Department's S3TAIR Project as a Validated Effective Practice Site, acknowledged for Best Practices in Literacy. CSEE was subsequently designated as a mentor school, for schools in need of improvement. Other accomplishments include closing the achievement gap, by raising test scores on New York State Assessments, and being granted two five-year charter renewals approved by the New York State Board of Regents in January 2009 and in February 2013.

Ms. Castillo has served as an adjunct professor for graduate education and leadership programs at Mercy College. She has also mentored and supervised both student teachers as well as aspiring administrators at Mercy College and Saint Thomas Aquinas College. Prior to her enrollment in the doctoral program in Executive Leadership at St. John Fisher College, she earned a Master of Science Degree in School Supervision and Administration from Mercy College, in addition to her Master of Science Degree in Teaching English to Students of Other Languages (TESOL), and a Bachelor of Science Degree in Education from St. John's University.

Abstract

Since the concept of extended or expanded learning time (ELT) in its modern-day form began to develop approximately 50 years ago, there has been substantial controversy as to whether the application of ELT in a U.S. context could achieve the desired result of improved academic outcomes. Numerous empirical studies during the past 25 years have at least hinted that this could be the case, especially with regard to disadvantaged populations, but all of these studies have been criticized as being flawed in one respect or another, thus limiting their value with regard to demonstrating the efficacy of ELT.

The purpose of this study, simply stated, is to help to fill a gap in the existing literature, with a quasi-experimental empirical study that is both quantitative and controlled. The investigator utilized post-treatment data, in the form of the ELA (English Language Arts) mean assessment scores of two groups of socio-economically disadvantaged fourth grade public school students attending both traditional public schools and charter schools in the so-called Big Five (Buffalo, New York City, Rochester, Syracuse and Yonkers).

The results of the study, in brief, failed overall to support the hypothesis that ELT led to improved academic outcomes. The inability to lend support to a particular

hypothesis does not in itself disprove the general assertion that ELT has the potential to enhance academic outcomes for U.S. students. That being said, however, the support of the negative hypothesis in this particular study—in combination with other recent dissertation studies—does at the very least call into question the assertions of those who state that the argument should have been considered settled long ago. In addition to suggesting the need for further research, the study results here suggest that it may be time for those who have previously looked to ELT as the main solution to begin more serious consideration of the alternatives.

Table of Contents

Dedication	ii
Biographical Sketch	iv
Abstract	vi
Table of Contents	viii
List of Figures and Tables	xi
Chapter 1: Introduction	1
Introduction	1
Problem Statement	6
Theoretical Rationale	10
Research Question	12
Potential Significance of the Study	13
Chapter Summary	15
Chapter 2: Review of the Literature	17
Introduction	17
Options for Expanding Learning Time	20
Extended Learning Time in Public School Systems	23
Charter Schools	34

Summer Learning Loss	51
Summer Learning Programs	56
After-School Programs	60
Empirical Research Review Articles	66
Recent Dissertation Studies	68
Advocacy Literature.....	74
Anti-ELT Literature	78
Chapter Summary	84
Chapter 3: Research Design Methodology	86
Introduction: General Perspective.....	86
Problem Statement	88
Research Question	91
Research Design.....	92
Research Context	96
Research Participants	102
Data Collection	104
Data Analysis	105
Chapter Summary	107
Chapter 4: Results.....	110
Introduction.....	110
Results & Findings.....	111
Chapter Summary & Conclusions	127
Chapter 5: Discussion	129

Introduction.....	129
Implications of Findings	130
Limitations	132
Recommendations.....	135
Conclusion	135
Personal Reflections.....	138
References.....	141

List of Figures and Tables

Figure 4.1:	School Day Hours Frequency Distribution Histogram.....	111
Figure 4.2:	School Day Hours Frequency Distribution Histogram (Non-ELT Group)	112
Figure 4.3:	School Day Hours Frequency Distribution Histogram (ELT Group).....	113
Figure 4.4:	School Day Hours Frequency Distribution Histogram (New-Non-ELT Group)	114
Figure 4.5:	School Day Hours Frequency Distribution Histogram (New-ELT Group).....	115
Figure 4.6:	Mean ELA Scores Frequency Distribution Histogram.....	116
Figure 4.7:	Trimmed Mean ELA Scores Frequency Distribution Histogram	117
Figure 4.8:	Trimmed Mean ELA Scores Frequency Distribution Histogram (Non-ELT Group)	118
Figure 4.9:	Trimmed Mean ELA Scores Frequency Distribution Histogram (ELT Group)	119
Figure 4.10:	Trimmed Mean ELA Scores Frequency Distribution Histogram (New-Non ELT Group).....	120
Figure 4.11:	Fourth Grade Enrollment Frequency Distribution Histogram	121
Figure 4.12:	Mean ELA Scores by ELT Box and Whisker Plot.....	123
Figure 4.13:	Mean ELA Scores by New-ELT Box and Whisker Plot.....	124

Figure 4.14:	School Day Hours and Mean ELA Score Scatterplot with Best-Fit Line.....	126
Table 4.1:	Distribution of Sample by Traditional / Charter and ELT Status for Two Definitions of ELT.....	127

Chapter 1: Introduction

Introduction

Large-scale, modern-day interest in the concept of extended or expanded learning time (ELT) in the United States may be traced to a watershed event in October 1957 (see for example Patall, Cooper, & Allen, 2010, p. 405). The unanticipated launching of the Sputnik 1, the first artificial satellite to be placed into the Earth's orbit, not only ignited the Space Race and marked the beginning of the Space Age. A part of the larger Cold War, which dominated the world geopolitically for the next several decades, the launch also ushered in a new era for many aspects of our existence, including education.

Sputnik was widely regarded in the U.S. as both an embarrassment and a “wake-up call,” alerting Americans to the possibility that the U.S.S.R. was overtaking the U.S. educationally, and may indeed make good on Soviet premier Nikita Khrushchev's famous “We will bury you!” threat issued the year before to Western ambassadors at a reception at the Polish embassy in Moscow. Sputnik served as a very graphic visual metaphor, from which one could easily imagine Khrushchev's barb to then U.S. Vice President Richard Nixon at the so-called Kitchen Debate: “When we catch up and pass you by, we'll wave to you” (Péteri, 2010, p. 225).

The Sputnik scare was echoed half a century later in December 2010 when the Program for International Student Assessment (PISA) test was administered to 15-year-old students

throughout the world by the Organization for Economic Cooperation and Development (OECD), a Paris-based group that includes the world's major industrial powers. Students in Shanghai, China, vastly outperforming the rest of the world, ranked number one across the boards, trouncing their U.S. counterparts, who came in 14th in reading, 17th in science, and 25th in math (Ellis, 2010).

“We have to see this as a wake-up call,” U.S. Secretary of Education Arne Duncan said the next week in an interview with *The New York Times*. “I know skeptics will want to argue with the results but we consider [these results] to be accurate and reliable, and we have to see them as a challenge to get better,” he added. “We can quibble or *we can face the brutal truth that we’re being out-educated*” (emphasis added). Cold War era metaphors were reinforced by Chester E. Finn, Jr., a former official in Ronald Reagan’s Department of Education, who commented: “Wow, I’m kind of stunned. I’m thinking Sputnik” (Dillon, 2010).

Approximately midway between these two watershed events—the launching of Sputnik 1 in October 1957 and the disturbing results of the PISA tests of December 2010—was another landmark event relating to U.S. education in general and the issue of extended learning time in particular. This landmark event was the publication in April 1983 of “A Nation at Risk: The Imperative for Educational Reform,” a report issued in April 1983 by President Ronald Reagan’s National Commission on Excellence in Education. The 18-member Commission, chaired by university academic and administrator David Pierpont Gardner, was drawn from education, government, and the private sector.

The report pointed to the disturbing decline of academic achievement among U.S. students. “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,” the report stated. “If an

unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war” (National Commission on Excellence in Education, 1983, p. 9). As part of its recommendations, the Commission proposed that school districts and state legislatures consider seven-hour school days, as well as a 200- to 220-day school year.

A decade later, “Prisoners of Time,” a 1994 report produced by the National Education Commission of Time and Learning (established by federal legislation), “reiterated the concern about America’s poor standing in international student achievement comparisons and suggested that little progress had been made since 1983’s ‘A Nation at Risk’” (Patall et al 2010, p. 402).

Apart from living in what is politically a communist country, the students in Shanghai who trounced their U.S. counterparts in 2010 share at least one thing in common with Soviet students from more than 50 years ago: Many more classroom hours, as well as a longer school year, than American students. According to the China Daily, “On average, China’s children spend 8.6 hours a day at school, with some spending 12 hours a day in the classroom” (Xinhua, 2007). This, compared to a conventional 6.5-hour school day for U.S. children.

The obvious question that presents itself now, as it did half a century ago, is whether more time in class would do for American children what it seems to be doing for students in other countries that are outperforming them: enhance academic outcomes. This is the key question around which the issue of extended learning time turns. As articulated in a landmark 1985 study:

The 180-day school term in the United States is significantly shorter than the 240-day term in Japan or Taiwan. Achievement of first graders in the U.S. also is behind that of similar students in Japan and Taiwan. The interpretation is directly made or implied that if we increase

the U.S. time allotments, student achievement in the U.S. will become comparable to that of Japanese or Taiwanese students (Karweit, 1985, p. 10).

In this article, Karweit expressed skepticism about the idea of increasing time in school as a way of enhancing academic outcomes. In essence, what she said is that it is simplistic to think that just by doing what is being done elsewhere, similar outcomes will be achieved:

Although differences in time allocations may vary with achievement differences, manipulating the time allocations may not drastically alter achievement because time per se may not be the cause of achievement differences. For example, nations that allocate more time to schooling probably do not have longer school terms by accident; school terms are longer because their societies attach greater importance to education. If greater support for education is the primary reason for greater achievement, manipulating a manifestation of this emphasis—the amount of school time—will not necessarily alter achievement (1985, p. 10).

Like many who have both preceded and followed her, Karweit pointed to the question as to whether the key here is not so much how many school hours are involved but rather how those hours are used: “If time spent and learning are not so strongly related, then a strategy of improving the quality and appropriateness of instruction may be more beneficial” (1985, p. 11). (Though the title of Karweit’s article—“Should We Lengthen the School Term?”—suggests a focus on length of school year, it is in fact just as much an analysis of the concept of length of school day—in other words, extended learning time or ELT).

In “Extending the School Day or School Year: A Systematic Review of Research (1985-2009),” a breathtakingly comprehensive synthesis of the empirical literature on the subject since the publication of the Karweit article 25 years earlier, Erika A. Patall and her coauthors Harris

Cooper and Ashley Batts Allen identified 15 empirical studies with various designs that have been conducted since 1985, evaluating each one of them.

They came to the conclusion that these research designs “are generally weak for making causal inferences” but that “findings suggest that extending school time can be an effective way to support student learning, particularly (a) for students most at risk of school failure and (b) when considerations are made for how time is used” (2010, p. 401). The 2010 study by Patall et al. is largely consistent with the 1985 study by Karweit, as each expressed skepticism about causal inferences and stressed the importance of how time is utilized. The main difference is that the empirical studies since 1985 have begun to validate, with qualifications, the practice of ELT.

In their analysis, Patall et al. criticized all 15 empirical studies for what they pointed to as flaws in their research designs. “It is fair to say that the effect of ED [extended day, equivalent to ELT] has yet to be fairly tested using well-controlled experimental or quasi-experimental designs from which strong causal implications could be drawn” (2010, p. 423). Key aspects of their critique included lack of a control group, lack of longitudinal strength and weaknesses in correspondence of studied populations (in other words, comparing “apples to apples”).

The methodology adopted here, detailed in Chapter 3, takes the Patall critique into consideration as much as the data set available to the researcher allows. Furthermore, the focus of this study responds to the expressed interest of Karweit, Patall and others, to the effect that ELT “may be particularly [effective] for at-risk students” (Patall et al. 2010, p. 423). In other words, the methodology proposed represents—overall—the kind of study that Patall and her coauthors asserted will help to advance our knowledge about the value of ELT. (The limitations will be acknowledged and described below.)

Problem Statement

The introductory section above presented compelling evidence of two problems. The first problem that was documented above is the problem of falling educational achievement in the U.S., relative to numerous other countries. The second problem documented above relates to a proposed solution to this first problem, a solution in the form of extended learning time (ELT). Specifically, the problem with ELT is that the effects of ELT have “yet to be fairly tested using well-controlled experimental or quasi-experimental designs from which strong causal implications could be drawn” (Patall et al. 2010, p. 423).

Having framed the topic in its historical and research context, we are now in a position to articulate in some detail the problem statement. Since the concept of extended or expanded learning time (ELT) in its modern-day form began to develop approximately 50 years ago, there has been substantial controversy as to whether the application of ELT in a U.S. educational environment could achieve the desired result of improved academic outcomes. Numerous empirical studies during the past 25 years have at least hinted that this could be the case, especially with regard to disadvantaged populations (Karweit, 1985; Patall et al., 2010) but all of these studies have been criticized as being flawed in one respect or another, thus limiting their value with regard to demonstrating the efficacy of ELT (Patall et al., 2010).

It bears mention that there is a substantial body of work, more popular than scholarly in nature, the premise of which is that there is no question as to the value of ELT and the need to implement it on a broad scale nationwide, as quickly as possible. The only question, according to this body of literature, is how to best accomplish this. The leading figure in this area is probably Chris Gabrieli, a part-time lecturer at the Harvard Graduate School of Education and

founder of the National Center for Time & Learning (NCTL, Website at timeandlearning.org), the country's leading advocacy organization for ELT and reform of the school calendar.

In September 2011, NCTL and the Center for American Progress (CAP) co-hosted “Time Well Spent,” a release event for an NCTL report by the same name. The release event featured U.S. Secretary of Education Arne Duncan and New York Education Commissioner John King. In her opening remarks, moderator Cindy Brown, CAP's Vice President for Education Policy, described ELT as a “*proven* strategy to increase student achievement.” Duncan, who was the first to speak after Brown, declared that “*we don't need to study this issue any more*” (emphases added). The way to close the achievement gap between U.S. students and those in other countries, Duncan said, is to “move the country further and faster” in the direction of wide-scale implementation of ELT (“Time Well Spent” Release Event, 2011).

The statements by Brown and Duncan quoted immediately above illustrate a gap between the academic and non-academic communities. (Although Gabrieli is a part-time lecturer at Harvard, his publications are distinctly nonacademic in nature. One simple illustration is the fact that the pages of his 2011 NCLT report, *Time Well Spent: Eight Powerful Practices of Successful, Expanded-Time Schools*, contain more graphics than text—for the most part, large photos of smiling children—and the work itself is undated.) In one very important sense, the purpose of this dissertation study is to narrow the gap between the assumptions made on the part of non-academic ELT advocates such as NCLT and the desire on the part of the academic research community for solid empirical evidence as to the value of this approach.

There are perhaps five major additional dimensions to the controversy over the implementation of ELT in the U.S. that serve to illustrate both its importance and complexity. These dimensions, taken together with the basic context given above, represent a detailed

articulation of the problem statement. The first of these dimensions may be stated as the economic challenges that the country currently faces. In an era of shrinking budgets, education is being hit particularly hard, and this trend is not likely to be reversed any time in the foreseeable future. Arguments can be made that ELT in the long run may save money. A better educated workforce is more productive, for example, and at-risk youth staying out of trouble will result in substantial long-term savings to society. In the short term, however, ELT clearly represents an additional expenditure (not just in terms of teacher salaries but also facilities and maintenance), at a time when additional expenditures are encountering resistance in the extreme.

The second of these dimensions to the controversy over the implementation of ELT in the U.S. that serve to illustrate both its importance and complexity relates to the truism that time engaged in any one activity means time that cannot be used toward other pursuits or activities. In this respect, ELT conflicts with informal learning, extracurricular activities, free time, family time and student employment (which relates back to the economic dimension, as less financial support from parents means that some students must work to generate income to make up for that, especially students from disadvantaged families).

A third dimension to the controversy concerns the possibility of administrator and teacher “burnout,” in the face of working extended hours (see for example Patall et al. 2010, p. 406). If this is true, then not only may ELT be said to be ineffective but it may be said to be deleterious and indeed counterproductive to educational efforts, as the quality of teaching and administration would suffer.

A fourth dimension to the controversy relates to potential negative effects for students participating in ELT programs: wasted time (allocated time does not necessarily translate into increased instruction), increased fatigue and boredom (leading to decreased effort) and increased

absenteeism, and even drop-out rates as a result (Patall et al., 2010, p. 406). In this sense, ELT is viewed as potentially counterproductive.

The fifth and final dimension considered here concerns the social dynamic of disadvantaged youth, for whom the stakes regarding academic outcomes are even greater than for others. For these children, lack of results or negative results can mean much more than just a difference in level of success or achievement. Potentially, this is a tragedy not just for the at-risk youth but society as well, with numerous ramifications, in many ways.

The fact that this study will contribute toward filling a void in existing research, as described above, makes this a problem worthy of being researched (Creswell, 2002). It is only through a well-designed empirical study, however, that the key question as to the efficacy of ELT in a U.S. context can be adequately addressed.

The introductory section above shows the connection between the topic of the study and real-world issues of exceptional importance, consistent with the mission statement of St. John Fisher College in general and the School of Education in particular, doing “whatever it takes to connect with and actively engage each and every child” (St. John Fisher College, Ralph C. Wilson, Jr. School of Education, Website Main Page, 2011).

At a “micro” level, only by preparing students to be competitive—in the world into which they will enter after completing whatever level of education they will complete—will we as educators be doing them justice. In an increasingly interconnected and competitive world, individuals who by virtue of their educational background are not competitive in the job market will be condemned to lives of struggle at best. At a “macro” level, society will also suffer, especially with regard to those individuals who may be considered socio-economically disadvantaged and therefore at-risk. These individuals have less of a support structure and are

more likely to fall through the social safety net. Left with few viable options, they are more likely to become a burden on society. At best, they will rely on government benefits. At worst, as a survival strategy, they may resort to socially deviant and criminal behavior.

In this light, the study purpose may be said to operate on two levels, academic and social. On the first level, the goal is to provide insight and help to fill a gap in the existing literature, as described above. On the second level, the goal is to contribute toward helping both individuals and society, in a very real and practical way. Otherwise stated, the purpose of this study is to help to fill a void in existing research by scientifically testing the efficacy of ELT, in the context of socio-economically disadvantaged populations of New York fourth graders, based on a research design that will be detailed below in the methodology section, Chapter 3.

Theoretical Rationale

For many scholars in the area of education who have closely researched the subject of ELT, the leading theorist in the realm of instructional time is educational psychologist John Bissell Carroll (1916-2003) (see for example Berliner, 1990). Carroll's now classic article, "Model of School Learning," was published in the Teachers College Record in 1963. In 1989, he published "The Carroll Model: A 25-Year Retrospective and Prospective View," in Educational Researcher.

In advancing the idea that student aptitudes reflect the rate at which an individual is capable of learning, Carroll brought about a fundamental change in thinking about teaching. In this new paradigm, Carroll suggested that instruction should focus on the time needed for different students to learn the same material. This contrasted with the dominant model by which all students are given the same amount of time to learn particular material.

Carroll called this learning rate (LR), the degree of learning, represented in the formula, also known as his Learning Time Equation: $LR \text{ (or degree of learning)} = f \left(\frac{\text{time spent learning}}{\text{time needed to learn}} \right)$. From this perspective, students are not viewed as “good” or “bad” learners but rather slower or faster learners, based on the amount of time they need as individuals, to learn particular subject matter. It could further be noted that a given student may be slower in one particular area but faster in another area, for which the individual student has greater natural aptitude or inclination. The important implication of Carroll’s paradigm is that all learners have the potential to learn but simply require different amounts of time for the process.

Carroll identified two factors affecting a student’s learning rate: (1) the perseverance of the individual student and (2) the opportunity for the student to learn. The first is of course under the control of the student, while the second is externally controlled, a function of the time allotted to learn by the educational system.

It was another educational psychologist, however, Benjamin Samuel Bloom (1913-1999), (like Carroll, a University of Chicago Ph.D.), who in 1968 fully developed the concept now known as Mastery Learning. Bloom—who also developed the famous “Learning in Action” taxonomy—took Carroll’s ideas a step further, by concluding that if aptitude could predict learning rate, then it should also be able to establish the degree of learning expected to arrive at some level of mastery. Given the opportunity to learn (sufficient time), in conjunction with instruction of sufficient quality, Bloom concluded that nearly all students are capable of learning.

This concept of Mastery Learning has serious implications with regard to the responsibilities assigned to teachers because, from this perspective, a student’s failure to learn may be traced to quality of instruction, rather than lack of ability on the part of the student. The challenge then becomes one of providing sufficient time and utilizing instructional strategies of

sufficient quality to enable all students to achieve the same level of learning or degree of mastery of the subject matter (Levin, 1985; Bloom, 1981).

Though Carroll's formula and related conceptualization do not offer a specific framework or research design for empirically testing the value of extended learning time, they nonetheless may be seen as representing a theoretical rationale that serves to explain the importance of and need for ELT.

Research Question

This detailed problem statement leads us, then, to the formulation of the research question that guides this study: Is there a statistically significant difference between the academic achievement of socio-economically disadvantaged fourth-grade students in the "Big Five" who are enrolled in ELT programs and those who are enrolled in standard programs, as measured by scores on the fourth-grade level New York State English Language Arts (ELA) assessment test? ("Big Five," ELA and other terms will be elaborated on below in the Research Context section in Chapter 3.)

The hypothesis and null hypothesis that follow from this research question are as follows.

Hypothesis: There is a statistically significant difference between the academic achievement of socio-economically disadvantaged fourth-grade students in the "Big Five" who are enrolled in ELT programs and those who are enrolled in standard programs, as measured by scores on the fourth-grade level New York State English Language Arts (ELA) assessment test.

Null hypothesis: There is no statistically significant difference between the academic achievement of socio-economically disadvantaged fourth-grade students in the "Big Five" who are enrolled in ELT programs and those who are enrolled in standard programs, as measured by scores on the fourth-grade level New York State English Language Arts (ELA) assessment test.

The research question articulated above is consistent in general with the principles outlined in *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (Cresswell, 2002) and specifically, with the parameters for research as stated by experts in this particular area.

In their landmark analysis cited above, Patall et al. criticized all previous empirical studies regarding ELT for what they pointed to as flaws in the research designs. “It is fair to say that the effect of ED [extended day, equivalent to ELT] has yet to be fairly tested using well-controlled experimental or quasi-experimental designs from which strong causal implications could be drawn” (2010, p. 423). Key aspects of their critique included lack of a control group, lack of longitudinal strength and weaknesses in correspondence of studied populations (in other words, comparing “apples to apples”).

The methodology adopted here is as consistent with the principles of the Patall critique as the data set available to the researcher allows. Furthermore, the focus of this study responds to the expressed interest of both Karweit (1985)—author of the previous landmark study, as described in Chapter 2 above—and Patall et al., to the effect that ELT “may be particularly [effective] for at-risk students” (Patall et al. 2010, p. 423). In other words, the methodology proposed here represents—overall—the kind of study that Patall and her coauthors asserted will help to advance our knowledge about the value of ELT.

Potential Significance of the Study

This study is designed to help to fill a gap in the empirical literature, for which research designs have been deemed “generally weak for making causal inferences” (Patall, 2010, p. 401). Although this study by itself will admittedly not fill the gap, it is intended to at least make a contribution in that direction. Together with other well-designed studies, it will help us move

forward toward certain conclusions with regard to the important question as to whether ELT merits implementation on a broad scale in U.S. schools.

Chapter 3 (on methodology) will detail various potential limitations to this study, limitations that we would be wise to bear in mind when considering the study results, whatever they may be. These limitations are inherent in any such study and do not negate the potential contribution in the direction of filling the existing gap in the empirical literature—in combination with other well-conceived studies—helping us to arrive at certain conclusions with regard to the important question as to whether ELT merits implementation on a broad scale in U.S. schools.

If empirical evidence demonstrates that ELT can indeed substantially enhance academic outcomes, this will have clear and obvious implications for policy decisions in the years ahead. If, on the other hand, solid empirical evidence demonstrates that ELT does not do for students what its proponents believe, then at least policy makers can turn their attention and energy to a serious examination of other possible solutions. Either way, progress of some sort will have been made. The fact that this study will contribute toward filling a void in existing research, as described above, makes this a problem worthy of being researched (Creswell, 2002).

One important dimension of the ELT controversy concerns the social dynamic of “at-risk” disadvantaged youth, for whom the stakes regarding academic outcomes are even greater than for others. For these children, lack of results or negative results can mean much more than just a difference in level of success or achievement. Potentially, this is a tragedy not just for the at-risk youth but society as well, with numerous ramifications, in many ways.

Chapter Summary

Certain key facts and issues are not in dispute:

- The overall decline of academic achievement by students in U.S. primary and secondary schools.
- The greater time that students in certain other more successful countries are spending in school.
- The success that some U.S. schools with extended learning schedules are enjoying.
- The dangers to society posed by development of an “underclass” of disadvantaged children who perform poorly in or drop out of school.
- Support for ELT on a theoretical level, by the work of John Carroll and Benjamin Bloom.

The missing piece of the puzzle, so to speak, is solid empirical evidence in support of ELT. This study is designed to help to fill a gap in the empirical literature, for which research designs have been deemed “generally weak for making causal inferences” (Patall, 2010, p. 401). Although this study by itself will admittedly not fill the gap, it is intended to at least make a contribution in that direction. Together with other well-designed studies, it will help us at least move in the direction of arriving at certain conclusions with regard to the important question as to whether ELT merits implementation on a broad scale in U.S. schools.

If empirical evidence demonstrates that ELT can indeed substantially enhance academic outcomes, this will have clear and obvious implications for policy decisions in the years ahead. If, on the other hand, solid empirical evidence demonstrates that ELT does not do for students what its proponents believe, then at least policy makers can turn their attention and energy to a serious examination of other possible solutions. Either way, progress will have been made.

Chapter 2 will provide a selective review of the relevant literature, while Chapter 3 will detail the methodology for the proposed study. Chapter 4 will present the results, and Chapter 5 will offer a discussion and conclusion.

Chapter 2: Review of the Literature

Introduction

Both proponents and opponents of extended learning time (ELT) are in general agreement that “time is one of many resources managed by schools for the purpose of educating children” (ECONorthwest, 2008, p. 1). At the outset of any literature review on this subject, it would also be helpful to acknowledge several other important points unlikely to be obvious to someone not steeped in the literature.

Extended learning time, also sometimes called expanded learning time (or referred to as extended or expanded learning opportunities, initialized as ELO), is a kind of umbrella term that can take several different forms and can also be broken down several different ways. On the most basic level, there is the dichotomy between adding time to existing school days (sometimes referred to as ED, for extended day), as opposed to adding days to the school year (sometimes referred to as EY, for extended year). To make matters even more confusing, there is the additional aspect of potentially extending the school week during the existing school year, from five days to six or seven.

There is the dichotomy between additional time that is part of the official school program and after-school programs (and summer school sessions) outside of the school’s formal curriculum. These after-school or outside-of-school programs may be operated by regular school

staff or separate program staff. They can be aligned with the regular school curriculum or they can stand alone. They can be run by the school district, by non-profit or for-profit entities. They can also be operated by partnerships between these two groups. They can be physically located within the schools themselves or at facilities somewhere in the community.

Time in school may be broken down into several different categories: *allocated time*, *allocated class time*, *instructional time*, *engaged time* and *academic learning time*. *Allocated time* refers to the total amount of time that students are scheduled to be in school, which is currently (on average, in the U.S.) 6.5 hours per day, 180 days per year. Only a portion of that time involves *allocated class time*, the time that students are present in their classrooms. Of the allocated class time, only a portion is devoted to *instructional time*, the amount of time a student spends in an instructional environment during the school day. *Engaged time* (also called *time on task*) is usually defined as the time during which the student is paying attention to materials or presentations with instructional goals.

Academic learning time (sometimes given the initialism ALT) is usually defined as that portion of allocated time in a subject-matter area in which the student is successfully engaged in the activities or with the materials to which the student is being exposed, relating to valued educational outcomes. *Enrichment activities* are compensatory activities designed to supplement academic learning. Enrichment activities are intended to “expand on students’ learning in ways that differ from the methods used during the school day” (Learning Point Associates). These distinctions illustrate the complexity of the subject of ELT, as the time can be apportioned and utilized in so many different ways.

Before delving into the substance of the actual literature review, it would also be helpful to acknowledge three other important points on which there is general agreement, apart from the

idea that time is one of many resources managed by schools for the purpose of educating children:

1. There is no automatic connection between time and learning. How well students learn depends on how effectively time is used. Both ELT advocates and skeptics agree on this point.
2. Extended learning time is most effective for disadvantaged children from low-income households, without the advantages enjoyed by children from families who have the resources to promote learning for their children outside of school. Though ELT skeptics are opposed to the wide-scale implementation of ELT on the basis of what they regard as the existing evidence, for the most part, they generally offer at least grudging acknowledgement that there is a role for ELT among students of low socio-economic status (SES), termed disadvantaged or at-risk.
3. It is far more challenging to extend the school year than extend the school day (though skeptics or opponents are not in favor of doing either). Extending the school week would presumably fall somewhere in between.

There are three basic stances taken with regard to available data and evidence. ELT advocates, such as current U.S. Secretary of Education Arne Duncan and the National Center for Time and Learning (NCTL), assert that there are ample data proving beyond a doubt the value of the ELT approach. ELT skeptics/opponents (depending on how one wishes to characterize this group) argue that current data actually make the opposite case, that the ELT approach is misguided, except perhaps in certain circumstances, with regard to socio-economically disadvantaged children. Empirically oriented academics and scholars take the position that

although there is some basis for believing that ELT may be desirable, there are currently few or no high-quality studies with sufficiently adequate research designs (experimental, longitudinal and controlled) to scientifically “prove”—or, for that matter, disprove—the case for ELT.

The development of the school calendar in the United States has a rich and varied history. For more than 150 years, there have been substantial discrepancies between rural and urban school calendars. In 1840, for example, schools in the major cities of Buffalo, Detroit and Philadelphia operated between 251-260 days a year, while schools in New York City were open nearly year-round, with only a two-week break in the month of August (Johnson & Spradlin, 2007; Weiss & Brown, 2003). It was not until the 1960s that the present school schedule involving 170-180 days, 5 days a week and 6.5 hours per day became the norm for most school systems (Silva, 2007).

The literature relating to ELT is correspondingly rich, far too vast to be covered comprehensively in this chapter. As a practical matter, then, the literature review here will focus on relatively recent publications, addressing the following key categories: options for extended learning time, ELT in public school systems (non-charter schools), charter schools, impact and implications of bad weather days, summer learning loss, summer learning programs, after-school programs, empirical research review articles, recent dissertation studies, advocacy literature, and anti-ELT literature (advocating the opposite perspective), for want of a better term. The chapter will conclude with a brief summary and preview of Chapter 3.

Options for Expanding Learning Time

The umbrella term *extended-day programs* encompasses a number of formats, including before-school programs, after-school programs, extended-day kindergarten, Saturday school, summer school, and intersession programs (Dodd & Wise, 2002). Within each category, there

are numerous variations. Terzian et al. (2009), for example, differentiate between *summer school programs* and *summer learning programs*. According to their definitions, summer school programs generally (a) concentrate exclusively on academic instruction, (b) emphasize review and remediation, (c) are attended by underperforming students, (d) are often mandatory, and (e) are presented in a half-day format. In contrast, summer learning programs are more likely to (a) involve the participants in enrichment and recreational activities, as well as activities designed to go along with activities designed to foster positive relationships with peers and adults, (b) synthesize remediation with enrichment and more advanced learning activities, (c) attract students of various skill levels, (d) be voluntary, and (e) extend over the course of an entire day.

Heckman and Sanger (2001) adopted a similar interpretation as Terzian et al. (2009), with regard to after-school programs. Heckman and Sanger (2001) distinguished between *schooling*—in which after-school programs are viewed as an extension of the regular school day—and *education*, by which after-school programs are designed to provide students with a variety of enrichment activities. According to Heckman and Singer, low-achieving students are often alienated from school and therefore feel compelled to spend more time in narrowly focused lessons that are likely to be counterproductive.

Studies have tended to support the effectiveness of after-school and summer learning programs that go beyond academic instruction and provide students with stimulating learning experiences (Afterschool Alliance, 2007, 2010a, 2010b; Cooper, 2003; Cooper et al., 2000; David, 2010; Heckman & Sanger, 2001; Little, 2009). Regardless of whether they are conducted during the summer months or the regular academic year, there appears to be general consensus that in order to be effective, successful ELT programs have these five characteristics in common: (a) bold leadership, (b) teacher commitment and leadership, (c) evidence-based and data-driven,

(d) supported by parents, partners and the community, and (e) focused on core academics and enrichment activities aligned with other goals and reforms (ECONorthwest, 2008, p. 2).

The most recent trend in extending school time to enhance academic performance goes beyond those programs, involving the redesign of the school calendar by extending the school day or school year (Dixon, 2011; Farbman, 2006, 2007, 2010; Farbman & Kaplan, 2005; Gewertz, 2009; Greifner, 2007; Huebner, 2010; Rocha, 2007; Silva, 2007; Task Force, 2007). A common theme among schools that have extended learning time is that it is part of a larger school reform effort.

Consistent with the definitions offered in the introduction above, Silva (2007) emphasized the distinctions between *allocated school time*, *allocated class time*, *instructional time* and *academic learning time*. Allocated class time and school time denote the number of hours that students are required to spend in school. Instructional time refers to the time formally dedicated to instruction or learning but it can easily be interrupted. Only academic learning time refers to the time students are actually immersed in learning. These distinctions are important in the implementation and evaluation of ELT. Aronson et al. (1999) emphasized that time simply expanding allocated time will be ineffective in improving academic achievement unless it is used so that it effectively engages students in learning.

Farbman (2006) turned to educational psychologist David Carroll (introduced in Chapter 1), who worked out a formula in the 1960s showing that the closer the alignment between “time spent” and “time needed” for learning, the more learning will take place. While there is widespread support for the idea that students who are academically and socioeconomically disadvantaged could benefit from more learning time, there is a divergence of opinion with

regard to whether and how to assure that extended educational time be translated into more *academic learning time*.

Extended Learning Time in Public School Systems

Wake County Public School System. Moving from the more general to the more specific, our discussion of the literature review relating to options for expanding learning time segues naturally to studies of the Wake County public school system. Among the states that are part of the Southern Regional Education Board (SREB), North Carolina is home to 104 schools that operate on a year-round calendar: the highest number of all the SREB states (Dixon, 2011). These schools represent about 4% of the state's 2,500 public schools. Almost half of these schools are located in Wake County, which began looking into year-round schools in 1987 and initiated a pilot project based on a year-round model in 1988. The endeavor began with a magnet elementary school with an enrollment of 267 students operating on a single-track, year-round calendar. A year later, the Wake County Public School System (WCPSS) launched a multi-track, year-round elementary school for 750 students. Since the inception of the pioneer magnet school, the number of year-round schools has expanded to 49 schools serving roughly 20,000 students.

Extending the amount of time students spend in learning activities is integral to the comprehensive reform effort undertaken by WCPSS. Another strategy implemented by the Wake County Schools is the Accelerated Learning Program (ALP), intended to neutralize the persistent gap between high performing and underperforming students, and to help all students reach grade level proficiency in reading and mathematics (Baenen, Lindblad, & Yaman, 2002). ALP extends the time students spend involved learning activities by providing instruction after school and on Saturdays. Serving more than 100,000 students, WCPSS is very diverse

ethnically, socioeconomically, and geographically. Approximately one-third of the students are minority and low SES (socio-economic status). ALP was originally piloted in grades 3-8 but by the second year of the program, it expanded to all grades from kindergarten through high school.

The evaluation project presented by Baenen et al. (2002) focused on the first year with limited grade levels. Out of 10,099 students who were eligible for the program, 73% participated. The participants were primarily students whose performance fell below grade level. While attendance was not limited to those students, the schools were only allowed to open the program if they had slots available after all the eligible students had been invited. ALP was offered to all special education students, who accounted for 43% of the ALP enrollment. Demographically, the ALP students were 58% African American and 30% white, with the remaining proportion divided among other ethnic groups. There were very few ELLs (English language learners), only 2.3%. Half the students were classified as low-income and slightly more than half participants were male (54%).

ALP provided the participants with up to 22 days of instruction over the course of the entire year (Baenen et al., 2002). On average, the schools provided the ALP students with 100 hours of instruction, although there were numerous individual variations among the schools, with the number of hours ranging from 35 to 505. Attendance in ALP was higher for elementary school students (72%) than middle school students (63%) and for the after-school sessions compared to the sessions offer on non-school days. The student achievement data showed that the ALP participants who initially scored at Levels I and II on the North Carolina assessment tests made good progress.

For the 2000-2001 academic year, the percentage of Level I and Level II students who achieved grade level proficiency in reading was 45% and in mathematics 48%. This marked a

substantial gain over the previous years when 39% of the students improved their reading performance and 41% improved in mathematics achievement. Additionally, the implementation of ALP decreased the proportion of students whose performance declined from grade level to below grade level, from about 6% to 4.5%. The combined patterns produced a net increase of 1,465 students who attained grade level performance (or better) in reading and 850 students who reached grade level performance in mathematics.

Baenen et al. (2002) noted that school improvement efforts resulted in positive learning gains for students who were not in ALP, as well as those in the program. However, the seventh and eighth grade ALP students surpassed those who received other forms of academic assistance. Only the third graders did not benefit from ALP, an outcome ascribed to problems with group techniques and coordination among the teachers. Certain features distinguished the schools where the underperforming students made the most impressive gains. These included the use of a broader repertoire of instructional strategies, consistent attendance in ALP throughout the entire year (including intersession and summer breaks), and superior staff recruitment. Of all the program outcomes, the most substantial gains were found for third grade and fifth grade reading achievement.

Massachusetts Expanded Learning Time (ELT) Initiative. Turning from the South to the Northeast, virtually all proponents of expanded learning time refer to the Massachusetts ELT initiative. Massachusetts has been at the vanguard of standards-driven education reform since 1993 (Farbman & Kaplan, 2005). Yet despite extensive investment in teaching and learning, the prospective benefits of expanding instructional time were largely ignored. To address this issue, Massachusetts 2020, with support from the private and nonprofit sector, undertook a year-long research project exploring schools that had adopted extended time policies.

The Knowledge is Power Program (KIPP) “is a national network of free, open-enrollment, college-preparatory public schools dedicated to preparing students in underserved communities for success in college and in life” (KIPP Website). KIPP Lynn, whose positive impact on the academic progress of disadvantaged students was documented by Angrist et al. (2010), was one of the schools in the study. KIPP Academy in Bronx, New York, included in the research of Hoxby et al. (2009) was the only schools in the Massachusetts 2020 study located outside of the state (Farbman & Kaplan, 2005). The study encompassed eight schools, five charter and three district schools, with various grade configurations. Three schools serve students in grades K-8, the two KIPP schools serve students in grades 5-8, two schools enroll students in grades 6-8, and the remaining school spans grades 7-12. The proportion of students receiving subsidized lunches ranges from 64% for the Young Achievers Science and Mathematics Schools (K-8) in Boston to 95% for KIPP Academy New York.

Notably, the two KIPP schools provide the highest number of hours of instruction per year (1,870). The school with the lowest number of hours was Trinity Middle School in Boston, with 1,281 hours, still 15% higher than a traditional district school. The schools were selected to represent various types, grade configurations, and locales. One school, University Park Campus School in Worcester, no longer had extended hours at the time of the study but was included due to its successful operation as an extended time school for its first six years (Farbman & Kaplan, 2005).

The schools were examined on a number of factors related to the expansion of educational time. Scheduling was the first issue explored. Farbman and Kaplan (2005) noted that on average, the students at these schools spent 6-20 hours more in school each week than students in traditional schools—without including the weekend or summer programs offered by

some of the schools. Though the schools employed different approaches to scheduling, certain general patterns emerged. These were: (1) longer classes or lesson times devoted to core academic subjects, (2) extra class periods for ELA and/or mathematics, (3) time for teachers to engage in professional development and planning, (4) enrichment and extracurricular activities, (5) tutoring and homework assistance, and (6) community building activities and events.

For some of the schools, allocating additional time for mathematics and ELA was the main reason for the time expansion. For example, when University Park operated as an extended time school from 1997 to 2003, the class periods for core academic subjects were 90 minutes long. Like their KIPP Academy counterparts, students at Roxbury Prep and Community Day Charter School spend two hours daily on English and two hours daily on mathematics. Farbman and Kaplan emphasize that the additional time allows the teachers to devote more time to ELA and mathematics instruction without sacrificing other academic subjects or enrichment activities.

Farbman and Kaplan (2005) observed several positive advantages of having additional educational time. These fell under the headings of increased time on task, greater breadth and depth of the curriculum, more opportunities for experiential learning, greater capacity for working with students of different ability levels at the same time and better relationships between the students and school adults. The increased time was especially beneficial for helping the students grasp mathematical concepts and allowing the students time for hands-on science learning activities.

For the schools such as Roxbury Prep that provide students with specialized tutoring programs, the extra time enabled students who entered the school at an academic disadvantage, including ELLs, to keep up with grade level material. In short, the extra time allows the teachers to provide their students with individualized instruction tailored to their ability level.

The expanded time also allows the teachers to cover a broader range of topics in-depth. Several English teachers expressed a decisive preference for the extended school schedule, commenting that they were frustrated by a traditional school schedule that forced them to choose between concentrating on reading or writing and grammar (Farbman & Kaplan, 2005). While they deemed it important to cover all these areas in their daily lessons, they found it virtually impossible to do so in a single five-minute period. The teachers also welcomed the extra time for enabling them to teach students of different ability levels in the same class. In fact, Farbman and Kaplan noted that this advantage of extended time invariably arose in the teachers' focus groups.

One of the reasons for infusing enrichment activities into after-school and summer learning programs is to provide economically disadvantaged children with learning opportunities that their more affluent peers routinely enjoy. Enrichment activities, often reflecting the children's cultural heritage or providing them with opportunities to help their communities, are infused into the schedules of the extended time schools. These activities are also typically linked with the academic curriculum. Thus rather than attempting to raise test scores by narrowing the curriculum, the schools provide the students with learning experiences that simultaneously enhance their understanding of core academic subjects while at the same time promoting creativity, curiosity, intellectual development, socio-cultural development, independent thinking, self-discipline, and self-confidence.

The study documented the superior academic performance of the students in the extended time schools in comparison with students of similar backgrounds in regular district schools (Farbman & Kaplan, 2005). At the four Boston schools, the proportion of students attaining proficiency on the MCAS surpassed that of the district. Using the sixth grade mathematics and

seventh grade ELA scores of students who qualified for free or reduced price lunch, the results showed only one exception: at Trinity, 14% of the low-income students reached proficiency in math, roughly equivalent to the 15% for the Boston school district. Roxbury Prep, which offers extensive tutoring, had the highest proportion of low-income students reaching proficiency, 59%. The figures for the other two schools for mathematics were 27% for Young Achievers and 48% for Murphy K-8 district school. At Roxbury Prep, a remarkable 89% of the low-income students reached proficiency in ELA, versus 42% for the Boston school district. The figures for the other extended time schools for seventh graders reaching proficiency in ELA were 43% for Young Achievers, 49% for Trinity and 51% for Murphy.

Farbman and Kaplan (2005) noted that during the time University Park High School had expanded educational time, its students outperformed students in other high schools to a significant degree, in spite of having a higher proportion of students receiving subsidized lunches. Changing back to more traditional school hours was not detrimental to the academic achievement of the University Park students, which some of the teachers attribute to the extra academic support the students received when the school had the extended time schedule. In addition to the Boston schools, Farbman and Kaplan also cited the superior academic performance of KIPP Academy New York, which ranks in the top 10% of New York City schools despite the economic disadvantage of nearly all the students.

Focus groups were an integral part of the Massachusetts 2020 research project. Farbman and Kaplan (2005) were somewhat surprised by the enthusiasm for the expanded time schedule expressed by the *students*, who said that the extended time provided them with superior academic preparation than the shorter school schedule. As a group, the high school students reported learning more during longer lessons. Even the younger students said they enjoyed

spending more time in learning activities. The researchers noted that the students in all the focus groups elaborated the differences they saw between their own school and the schools of some of their friends. Being ahead of their peers was a source of pride to them. In fact, they sometimes helped friends from other schools with their homework.

The teachers also reported advantages to being professionals in extended time schools. These included a sense that their ideas and concerns are respected and addressed, collegiality and camaraderie with other teachers, respect and support from school administrators, strong instructional leadership and professional development, feeling successful and confident in helping students learn and develop, and a strong disciplinary code that allows the teachers to focus on teaching and learning, as opposed to spending more time on classroom management (Farbman & Kaplan, 2005).

The parents expressed support for virtually all dimensions of the extended learning program. From a practical standpoint, the longer school day is an advantage to working parents. They were happy with the support their children received academically as well as the music, art and gym classes (cut back by many schools), and extracurricular activities. According to Farbman and Kaplan (2005), the intense demand for extended time schools highlights the positive attitudes of parents toward extended time schools. All the charter schools have long waiting lists and the Boston schools are among the most popular in the city. Based on the insight they gained from their focus groups, interviews and class observations at the schools, the researchers discerned five key features that drive the success of the extended time schools: strong leadership, emphasis on professional development and teaching quality, data-driven improvement, positive school culture and effective family involvement. On a general level, these are features of highly effective schools consistently found in the educational literature.

The Massachusetts 2020 project was a precursor to the ELT initiative. The ELT was officially launched in 2006 when planning grants for supporting districts in their redesign efforts were introduced in the school budget (Massachusetts, 2008). The *School Redesign: Expanded Learning Time Initiative* requires schools to add at least 25% more schools for the purpose of (1) providing students with more learning opportunities in core subject areas to support academic achievement, (2) integrating enrichment and applied learning opportunities into the school day to enhance students' engagement and motivation, and (3) providing educators with more opportunity for collaborative planning and professional development, as well as opportunities to work collaboratively with partnering community organizations.

A three-year evaluation of ELT is being conducted in two interrelated components: (1) a planning and implementation segment that examines the early decision making stages and subsequent implementation of ELT programs in the funded school districts, and (2) an outcomes evaluation (Massachusetts, 2008). The first year study (2007-2008) found higher enthusiasm for the project among students and teachers during the fall semester compared to the spring semester. Despite some logistical problems, however, the stakeholder groups, teachers, principals, parents, and community partners all expressed positive support of the philosophy of the ELT, even though there were practical challenges to deal with.

Close to the end of the first year, nearly two-thirds of the teachers surveyed said they experienced positive effects of the expanded time schedule on a number of facets of classroom instruction (Massachusetts, 2008). Additionally, more than half the teachers reported improvements in their students' academic performance and engagement. Among the students, the elementary school students were more enthusiastic about the program than were middle school students. Close to two-thirds of the elementary school students described themselves as

happy or very happy about the program, almost double the percentage of middle school students (35% or less). To the teachers, the biggest advantages of the program were having more time for teaching and learning, enrichment activities, and school safety. On the negative side, the drawbacks included fatigue on the part of students, teachers, and school staff, and scheduling programs. Preliminary data showed no impact of the program on student behavior and discipline, including attendance and truancy, as well as both in-school and out-of-school suspensions.

Bouley et al. (2011) presented implementation and outcome findings from the ELT evaluation after four years. For the 2009-2010 school year, the project involved 26 schools in 10 districts. These schools included 10 elementary schools, 11 middle schools, four K-8 schools, and one high school. Most of the schools have at least 50% minority and low-income enrollment, along with a history of student achievement that ranks below average. Each school is committed to adding 300 hours during the course of the school year but all have the freedom to redesign their own educational program. In fact, total school redesign is a requisite for the grant program. The schools can extend the school day, the school year or a combination of both. The longitudinal evaluation matches and compares student-level MCAS (Massachusetts Comprehensive Assessment System) data for ELA, mathematics and science, along with demographic and behavioral data, from the ELT schools and comparison schools.

The implementation survey relied primarily on survey results. The overwhelming majority of teachers (87%) in the ELT schools felt they had adequate time for teaching core subject areas, and 72% reported that the students had more time for enrichment activities (Bouley et al., 2011). There was less agreement on the extent that the ELT provided teachers with sufficient planning time (58%). Only 42% reported that the longer day resulted in more

collaborative planning time. There was some variation in the schools' implementation of the program. Out of the 26 schools, 22 integrated ELT into the school schedule and four schools added separate blocks of time to a regular school day. In ten schools, all teachers taught the longer school day. In the remaining schools, only some teachers taught the extended schedule.

Most of the schools concentrated on ELA and mathematics in allocating the additional time. Ten of the schools also devoted more time to science and social studies (Bouley et al., 2011). Twenty-two of the schools provided a synthesis of academic and non-academic enrichment activities. The remaining four schools provided one or the other. Interestingly, only half the teachers reported that elements of their teaching (such as covering more material or employing a greater variety of teaching techniques) improved due to the longer school day. Nearly all the teachers (93%) engaged in professional development activities and 45% spent upwards of 26 hours in professional development activities. Common planning time ranged from 1-5 hours weekly, with more time allocated at the middle school level. This seemed to be the weakest area of the ELT. Although a majority of teachers (69%) supported ELT, the support was not overwhelming and the respondents consistently reported obstacles to the successful implementation of ELT.

The only significant impact of ELT on the students' academic performance was positive improvement on the MCAS science scores of fifth graders during the second year of the program. Bouley et al. (2011) found no other evidence of statistically significant impacts on MCAS achievement scores. The effects of ELT on the students' behavior were inconsistent, as were the effects on the teachers' satisfaction. Indeed, Bouley et al. described the overall effects of ELT as "both inconsistent and interesting" (p. 5). According to the researchers, one possible reason for the minimal differences between the ELT schools and the matched comparison

schools is that the other schools are adopting “ELT-like” practices, a finding that emerged in the qualitative findings. In particular, the regular schedule schools are also devoting additional time to ELA and mathematics instruction. The evaluation of the ELT program is still ongoing.

Charter Schools

It is important to note that charter schools fall within the public school system. They are treated here in a separate category, reflecting the fact that some studies focus specifically on charter schools, which Stein and Rose (2011) consider ideally positioned to provide K-12 students with the advantages of extended learning time. The independence and flexibility granted to charter schools enables them to adopt innovative practices with the potential to enhance the learning experience of their students. As two examples of charters that incorporate extended learning time in their program models, Stein and Rose cite KIPP, along with the Edison schools network, which hails “A Better Use of Time” as one their main strategies for advancing student learning (Gill et al., 2005, p. 39).

Noting that there are few studies examining the effects of extended time protocols on the academic progress of charter school students, Stein and Rose (2011) explored the extent that charter schools have adopted such policies and their impact on their students’ skills in the areas of reading and mathematics. The data came from charter schools and traditional public schools that work with the Northwest Evaluation Association (NWEA) for interim achievement assessments and services. The sample was composed of 30 charter schools and 30 traditional public schools matched on socio-demographic profiles and grade composition. Drawn from six states, the schools spanned a range of urban, suburban, and rural locales. The student achievement data came from the records of all students in grades 2-5 from the fall of 2007 to the fall of 2008, thus encompassing three assessment points.

Overall, the findings revealed very few schools in either the charter school or traditional public school sector with mandates for extended time, during the school year or over the summer, incorporated into their policies (Stein & Rose, 2011). Schools operating on a year-round calendar were unusual. At the same time, the overwhelming majority of schools offered voluntary tutorial programs throughout the school year and over the summer. Despite the potential of charters for innovation, there were no significant differences in the policies and practices of the charter and conventional public schools related to extended instructional time.

Growth estimates from the three-tiered hierarchical linear growth models Stein and Rose (2011) employed showed evidence of “summer setback” (summer learning loss, treated in more detail below) in the students’ reading and mathematics achievement, which the researchers had expected, based on prior research (Alexander et al., 2001, 2007). Over the course of the school year, engagement in voluntary tutorials appeared to exert a significant positive impact on the students’ progress in mathematics but the same effect did not hold true for reading (Stein & Rose, 2011). Year-round schooling had an interesting but ultimately positive impact on both reading and mathematics. According to the analysis, students attending schools on a year-round basis progressed at a slower rate over the course of the academic year; however, with roughly 4.5 more weeks of school than their peers in schools using the traditional calendar, the students in year-round schools enjoyed a greater net growth from one fall to the next.

Based on their findings, Stein and Rose (2011) concluded that providing students with opportunities for voluntary participation in extra instruction represents a more positive strategy than mandating extended learning time, which was potentially counterproductive. The only decisive evidence for the advantages of extended learning time was the positive impact of the year-round calendar, which only a few of the schools employed. While the year-round schedule

did not fully neutralize the negative impact of the summer break on learning, the shorter summer resulted in a limited summer setback and thus a higher performance level in the fall.

Edison Schools. The Edison Schools network represents the largest education management organization (EMO) in the U.S. (Gill et al., 2005). Given its size and visibility, the network has also been a focal point in the controversy over EMOs, of which many are for-profit entities. In 2000, the Edison network asked the RAND Corporation to undertake an extensive analysis of the extent of the implementation of the program design model and its impact on the students' academic achievement. The data, including the students' reading and mathematics assessment scores, came from 23 elementary schools.

Edison employs two broad strategies to advance student achievement: (1) the provision of resources supporting a cohesive and comprehensive program design and (2) the use of accountability systems designed to assure that the resources for the design are properly implemented and utilized as intended (Gill et al., 2005). The resources on which Edison builds its reputation include a strong curriculum with empirically sound programs in reading and mathematics, as well as science, social studies, foreign language, music, and art. The aim of the curriculum is to provide all students with the opportunity for a "world class" education. The curriculum is supported by investment in professional development for teachers and principals, and a system of benchmarking that drives a data-driven approach to school decision making.

Maximizing instructional time is a strategic component of the effective use of resources by the Edison schools (Gill et al., 2005). The Edison schools set a standard of 198 school days per year, roughly 10% longer than the traditional 180-day school year. As an additional element, the school day lasts about one hour—or more—longer than a conventional public school day. Based on this model, students who attend Edison schools from the beginning of kindergarten

through twelfth grade would graduate high school with the equivalent of up to four additional years of instruction compared to their peers.

According to Gill et al. (2005), the additional time has several advantages. First, it allows the teachers to devote an ample amount of time to core academic subjects without giving up the enrichment programs that Edison deems an essential part of its “world class” program. While the teachers enjoy a good deal of flexibility in structuring the curriculum, elementary school teachers are expected to spend at least 90 minutes per day on reading activities and at least one hour on mathematics. Students who require additional instruction (usually based on their benchmark records or other assessment scores) in reading or other subjects are provided with tutorial assistance either on an individual basis or in small groups. During the weeks before high-stakes assessment tests, the after-school and Saturday sessions offered by the Edison schools “typically ramp up in intensity” (p. 40).

A second advantage of the extended school day is that the teachers have more opportunity for planning and organizing, and engaging in professional development activities. The teachers are given two free periods to allow them to “plan, collaborate, and learn” (Gill et al., 2005, p. 40). One period is allotted to a meeting of the teachers’ house team. Finally, as part of the Edison schools’ dedication to optimizing the use of time, a “character and ethics” curriculum is designed to foster a safe, disciplined learning environment based on the core values of courage, justice, wisdom, respect, responsibility, compassion, hope, and integrity. With teaching and modeling these values embedded in the school program, teachers have to deal with fewer discipline problems that divert attention from learning; hence, less time spent on classroom management means more time devoted to teaching and learning.

At the time of the evaluation, which extended through spring 2005, some of the Edison schools were still in the early stages of program implementation, though the overwhelming majority (87%) had been under contract for four years (Gill et al., 2005). The findings showed that between 2002 and 2004, the average proficiency rates escalated by 11 percentage points in reading and 17 percentage points in mathematics. For the same time frame, the proficiency rates of demographically similar schools increased by nine percentage points in reading and 13 percentage points in mathematics. Only in mathematics was the difference statistically significant. Using trend data, however, the analysis revealed that the main advantage for the Edison schools occurred after the third year of operation. While the gains for the Edison and the comparison schools were roughly equivalent for the first three years, during the fourth year, the Edison students demonstrated superior gains in both reading and mathematics, which tended to be sustained over time. There is no clear support for the extended day or extended school year per se but the results are consistent with the notion of optimizing the use of extended time to create an enriching learning experience.

Knowledge is Power Program (KIPP) Schools. Few advocates of extended learning time do not cite KIPP as an example of how extended learning time benefits students. KIPP was designed with the aim of boosting the academic performance of economically disadvantaged and minority students through the principle of what some educators call “No Excuses” (Angrist et al., 2010). An extended school day and extended school year are integral components of a program model that includes a focus on reading and mathematics, selective hiring of teachers, a strict code of discipline and a strong student work ethic. KIPP schools have been found to extend learning time by as much as 62% over the traditional school day and year (Rocha, 2007).

Operating at least 80 schools across the U.S., the KIPP network is not exempt from the controversy that has surrounded charter schools since their inception (Angrist et al., 2010). There is evidence that the KIPP schools produce notable gains in students' academic achievement. Critics, however, argue that the No Excuses model attracts a select group of students who tend to be high-achievers and motivated learners. They are skeptical that the KIPP schools benefit students who need the most assistance, particularly English language learners and special education students. To counter these claims, Angrist et al. (2010) undertook an evaluation of the only KIPP school in New England: KIPP Academy, located in Lynn, Massachusetts. KIPP Academy stands out because a high proportion of its students are Latinos with limited English proficiency and students with special needs.

On average, students attending the Lynn Public Schools (LPS) score roughly one-third of a standard deviation below the average for Massachusetts (Angrist et al., 2010). In fourth grade, the year before students enter KIPP Lynn, the average KIPP applicant has standardized test scores that fall far below the state average. The vast majority of KIPP Academy students are nonwhite, and close to 80% qualify for subsidized meals. Students with limited English proficiency (LEP) and students with disabilities each represent about 20% of the student enrollments of both the LPS and KIPP Lynn.

While each KIPP school creates its own curriculum, the schools share many features, which according to Angrist et al. (2010) should make their results applicable beyond a single school. The school year begins in August and the school day runs from 7:30 am to 5:00 pm. There are some Saturdays included in the school year as well. Parents or guardians, students, and teachers sign a "Commitment to Excellence," signifying their dedication to the school's policies, protocols, and strong work ethic. The students are rewarded with "paychecks" for good

work that they can spend on field trips and other perks. High expectations for performance and behavior are intrinsic to the “No Excuses” approach (Ross et al., 2007).

Under Massachusetts state regulations, charter schools are required to use a lottery system when they are oversubscribed (Angrist et al., 2010). Although KIPP Lynn was under-subscribed at its inception in 2004 and only marginally oversubscribed in 2005, the school subsequently had more than 200 applicants for only 90 available seats. This allowed Angrist et al. to use the 2005-2008 lotteries for a quasi-experimental design. Hoxby, Muraka, and Kang (2009) considered lottery-based admissions the “gold standard” for research comparing the performance of charter schools to traditional public schools. In lottery-based studies, charter school applicants are randomly divided into students who were “lotteried-in,” and thus attended their school of choice, and those who were “lotteried-out” and attended traditional public schools. This technique allows the investigators to match the students not only on concrete factors like socio-demographic characteristics and disability status but also on less tangible attributes such as motivation and educational aspirations.

Angrist et al. (2010) analyzed the students’ test data on English Language Arts and Mathematics on the Massachusetts Comprehensive Assessment System (MCAS) for grades 5-8, covering the spring assessments for 2006-2009. The findings revealed that the KIPP Lynn students enjoyed overall gains of 0.12 standard deviations in reading and 0.35 standard deviations in mathematics for each year they attended KIPP Academy. In fact, contrary to the claim that KIPP schools do not benefit ELLs or special education students, the students in these two groups derived the greatest advantage from KIPP. Overall, the students who entered KIPP Academy at the greatest academic disadvantage in both reading and mathematics made the most impressive progress.

Ross et al. (2007) conducted a case study of the KIPP: DIAMOND (Daring Individual Achievers Making Outstanding New Dreams) Academy (KIPP:DA) located in an inner city neighborhood in Memphis, Tennessee. As with many charter schools, the school began with the lowest grade level, in this case grade five, with plans to add an additional level each year up to grade eight. The school employed the extended day, 7:30 am to 5 pm, model on weekdays, with an additional four hours on Saturday and one month's school over the summer. The teachers provided the students and their families with their cell phone numbers so they were available not only in emergencies but also for homework support and other assistance. The case study concentrated on the 49 students who comprised the three fifth grade classes during the school's first year of operation. All the students were African American and 92% qualified for subsidized meals.

Given that Ross et al. (2007) explored KIPP:DA in an early stage of operation, academic achievement was not the focus of the mixed-methods case study. Rather, the study was designed to illuminate the features of school culture and climate that contribute to creating an excellent learning environment for students traditionally labeled "at risk." Interviews with both teachers and staff affirmed the positive powerful impact of high expectations. However, according to Ross et al., the students provided the most persuasive evidence. For example, when asked what the best thing was about the Academy, one student stated, "My grades. Last year I would get low grades like all Cs. This year I am getting As and Bs instead of Cs and Ds" (p. 149). Other students mentioned earning higher scores on the state's high-stakes assessments. A prominent theme was that high academic achievement would enable the students to go on to college. In fact, the teachers instill in their students the belief that "they are college-bound," in the words of one teacher who added, "We talk about it daily" (p. 149).

The student achievement data confirmed that attending KIPP:DA did have a positive impact on the students' achievement tests. While the fourth grade pretest scores of the KIPP:DA students and a matched control group were virtually identical, the KIPP:DA fifth graders surpassed their peers in traditional public schools by scoring significantly higher on four of the six fifth grade tests. The effect sizes ranged from +0.31 to + 0.63, with a median of +0.31 across all six of the assessments, signifying a moderate to strong effect. The advantage of attending KIPP:DA was less pronounced for English language arts than mathematics. This finding is not unusual in comparison studies and may reflect greater emphasis on language arts activities than mathematics in the conventional public schools.

Ross et al. (2007) found the academic gains especially impressive because they occurred during the first year of operation when KIPP:DA had to overcome many challenges. The evaluation of the Edison schools demonstrated that the positive benefits to the students accrued over time (Gill et al., 2005). The KIPP model surpasses other program models in both the use of extended time and the focus on core academic subjects. Nonetheless, Ross et al. (2007) emphasized that "teaching improvements and strong program implementation do not occur in a vacuum, merely because some new reform model has been selected" (p. 159). From their perspective, the overriding factor in the success of KIPP:DA was the positive school climate that served as a powerful motivational force for high quality teaching and learning, and hence kept the teachers, students, and parents committed to the intensive educational program.

The investigation into the five KIPP middle schools operating in the San Francisco Bay Area confirmed that the schools have a culture committed to high expectations and high academic achievement (Woodworth, David, Guha, Wang, & Lopez-Torkos, 2008). In fact, Woodworth et al. noted that the unique KIPP culture is evident in schools in their first year of

operation. The first KIPP school in the Bay Area opened in 2002, while the last one included in the analysis opened in 2004). The five schools serve more than 1,300 students in grades 5-8, primarily Latino and African American, with the proportion of students eligible for subsidized lunches ranging from 63% to 81%. The teachers in the KIPP schools have strong academic credentials and most come from nontraditional certification programs. Both teachers and principals are dedicated to the culture of high achievement. All five Bay Area KIPP schools allocate at least 85 minutes of their 9.5 hour school to ELA and mathematics. The time devoted to other subjects and enrichment activities varies across schools and grades.

Woodworth et al. (2008) evaluated the academic performance of the KIPP students via their scores on the CST and the SAT10, comparing the scores of the KIPP students with a matched comparison group of students from the Bay Area public schools in a series of analyses. The most stringent analysis is based on three schools for which the researchers had district-wide student-level data. For 80% of the students, Normal Curve Equivalent (NCE) changes in the SAT10 mathematics scores showed superior progress for the KIPP students. The positive gains tended to be more pronounced for the fifth and sixth graders, compared with the seventh and eighth grade students. The pattern observed for the students' ELA scores essentially paralleled that for their mathematics scores. For the 2006-2007 school year, higher proportions of KIPP students than regular public school students across all middle school grades attained the proficiency level on CST reading and mathematics, with only one exception. At one of the KIPP schools, 90% of the students reached the proficiency level, although there was a substantial degree of variation, depending on school, grade level, subject area, and cohort, with percentages ranging from 15% to 90%.

At the end of fifth grade, the students at the three KIPP schools significantly outperformed their district school peers on the CST in both ELA and mathematics. The differences in percentile ranks between the KIPP students and their matched peers ranged from 5.6 to 33.0 points with effect sizes ranging from 0.16 to 0.86 (Woodworth et al., 2008). The students who started KIPP in sixth grade also outperformed the district students, with an estimated advantage of 8.9 to 33.9 percentile points and effect sizes ranging from 0.24 to 0.88. What makes the KIPP students' performance even more impressive, according to Woodworth et al., is that the KIPP students were *lower* performers before entering KIPP. The analysis showed that lower performing students were more inclined to opt for the KIPP schools than other students of the same age in the same neighborhood, thus dispelling any assumption that their superior performance reflected an initial advantage. On average, the students who enrolled in fifth grade in the five KIPP schools in fall 2006 began with reading and mathematics scores ranking them from the 9th to the 60th percentile nationally.

Attrition tended to be relatively high in the KIPP schools, despite the impressive academic gains. The pattern Woodworth et al. (2008) observed was that the students who left the schools before the end of eighth grade had lower test scores before they enrolled in KIPP and made less academic progress in fifth grade. A possible explanation is that some lower performing students feel they are unable to keep up with the rigorous academic demands. However, the schools provide intensive intervention for students with academic difficulties. Ensuring that fifth graders perform at grade level is a top priority and those who fail to catch up to their class may have to repeat fifth grade. The combined results of Woodworth et al. (2008) and Angrist et al. (2010) suggest a positive impact of KIPP on the academic achievement of at-risk students.

New York City Charter Schools. Turning our attention now to the theme of charter schools in New York City, to Hoxby et al. (2009), the lottery assignments provide the ideal situation for evaluating the impact of charter schools in the nation's largest school system. The vast majority of charter school students (94%) attain their place in the school through a random lottery. Most of the city's charter schools are concentrated in the disadvantaged areas of the South Bronx and Harlem. Demographically, charter school students are most likely to be African American and low-income, with the schools located in communities where a high proportion of adults have no high school diploma or GED (40% versus 28% for New York City overall). Most charter schools are elementary or middle schools. Less than one-quarter of the city's charter schools are high schools.

Based on their analysis of student achievement data for standardized reading and mathematics assessments, Hoxby et al. (2009) concluded that on average, attending a charter school from kindergarten through eighth grade would neutralize 86% of the "Scarsdale-Harlem achievement gap" in mathematics and 66% of the achievement gap in English. Among the high school students, the charter school students had a greater chance of graduating with the prestigious Regents diploma and scoring higher on the Regents examination. For the younger students, in grades 3-8, the overwhelming majority of charter school students attended a school that exerted a positive impact on performance in English Language Arts. Only a small proportion of students attended a charter school with an adverse effect on ELA. Specifically, roughly 31% of the charter school students attended a school estimated to have a positive impact on ELA greater than 0.2 standard deviations, about 45% attended a charter schools with an estimated positive impact on ELA between 0.1 and 0.2, and about 16% attended a charter school

whose estimated impact on ELA was between 0 and 0.1 standard deviations. For the remaining 8% of charter school students, the estimated school effect on ELA was negative.

Certain features of the charter schools were associated with benefits to academic achievement. These features were a longer school year, more time dedicated to daily English instruction, a disciplinary policy based on small rewards and small punishments, teacher pay based on performance or responsibilities and a mission statement that gives the highest priority to academic achievement (Hoxby, 2009). The KIPP model (Ross et al., 2007) embodies all of these policies. KIPP is one of many charter schools programs in New York City (Hoxby et al., 2009).

With respect to extended learning time, the research team found that the average charter school student attended school 192 days per year (Hoxby et al., 2009). For a small number of charter schools, that figure increased to 200 to 220 days of school each year. In addition, the average charter school day is eight hours long, roughly 90 minutes longer than traditional public schools. The positive impact on ELA achievement of attending a charter school is not surprising: charter schools devote an average of 112 minutes to literacy learning activities each day, 22 minutes longer than the 90-minute block mandated for literacy learning in New York City elementary schools under the Children First initiative.

The charter schools also devote more time to mathematics instruction. Half the charter schools devote 90 minutes to mathematics instruction each day, compared to the New York City requirement of 60-75 minutes for students attending conventional public schools, depending upon grade level. Most charter schools provide Saturday Schools (in some cases mandatory, in others optional), with the overwhelming majority of charter schools offering after-school programs. While extended learning time is only one of several policies linked with the New

York City charter school students' superior academic performance, it is certainly an important aspect of the program model for most charter schools.

UCCS Donoghue Campus. Moving now from the Northeast to the Midwest, Lesnick, Hart, and Spielberger (2011) reported on the Extended Day Program adopted by the Donoghue Elementary School, a University of Chicago Charter School (UCCS). The program, which entailed a full redesign of the school schedule, is intended to enhance the students' intellectual and psychosocial development, resulting in higher academic achievement, motivation for learning, self-esteem, aspirations, and sense of purpose. The study covered the 2009-2010 academic year. The school utilizes STEP (Strategic Teaching and Learning Evaluation of Progress) as a literacy assessment tool for students in grades PreK-3 and the Fountas and Pinnell Assessment System (BAS) based at Lesley University to assess literacy learning in grades four and five. Thus, Donoghue educators often refer to their evaluation system as "STEP/Lesley." The achievement levels were reported in letters rather than numbers. The term "Intensity of Teacher Minutes" (ITM) denotes a formula for assessing the impact of additional time that takes into account various factors affecting the impact of instructional time.

Most of the Donoghue students were involved in more than one program that extended the school day. In fact, Lesnick et al. (2011) noted that data were not available for the "Early Bird" program, probably resulting in underestimation of the extent of the students' participation in extended time learning activities. STEP/Lesley is used to measure the UCCS students' reading levels four times per year. All students are expected to progress two or three levels during the course of the school year. During the 2009-2010 school year, nearly two-thirds of the students gained three levels or more, while more than half the K-5 students in each grade showed sufficient growth. The greatest degree of growth was observed for fifth graders where 84% of

the students advanced at least three reading levels. The accelerated reading progress is especially important given the fact that 64% of the students read below grade level at the onset of the school year. A drastic decline occurs between second and third grade, which is consistent with summer reading loss (Allington & McGill-Frantzen, 2003).

The overall results showed that most of the students receiving highest number of ITMs were the students who read below grade level at the beginning of the school year. According to Lesnick et al. (2011), this finding is consistent with the overall aim of the Extended Day Program. The study showed that the program allowed the students to receive highly individualized assistance and a substantial majority made excellent progress. The fifth graders, who demonstrated the greatest degree of progress, also had the highest level of ITMs, signifying extensive participation in extended learning opportunities.

Impact and Implications of Bad Weather Days. The weather of course does not discriminate between schools that are public or private, charter or non-charter. Unlike data that may be garnered from other studies relating to expanded learning options, data relating to bad weather days present a unique opportunity to assess student performance on the basis of existing data, in a non-ELT context, with a view toward evaluating the effect of days lost. It is a kind of reverse metric: Instead of measuring the difference between performance when days are added, the idea here is to measure differences in performance when days are lost.

School closings due to snow or other inclement weather that makes transportation difficult or dangerous offer a natural context for examining the academic effects of variations in the amount of time students spend in school. Few investigators have taken advantage of this opportunity, however, but this is the focus of research conducted by Marcotte and Hansen (2010). Centering their work on the states of Maryland and Colorado, Marcotte and Hansen

investigated associations between fluctuations in the number of days spent in school due to bad weather school closings and subsequent student performance on state assessment tests. The two states were selected because both have substantial year-to-year variations in bad weather school closings and, in addition, the severity of winter weather varies considerably among school districts throughout each state. Trend data enabled the researchers to control for changes in the characteristics of the schools and their students, patterns of academic performance and other related factors, as well as to analyze the effects over time.

In research reported in 2007 and 2008, Marcotte and Hansen (2010) estimated that for every additional inch of snowfall in winter, there was a decrease in the proportion of third, fifth, and eighth grade students who passed the mathematics assessment. The decrease ranged between 0.5 and 0.7 of a percentage point, just below 0.0025 standard deviations. Marcotte reported that in winters where the snowfall was average (about 17 inches) the segment of students reaching the proficiency level was approximately one percentage point lower than for winters with little or no snow. Hansen found similar effects on the mathematics performance of eighth graders in Colorado as a result of additional days with snowfall of more than four inches.

In a 2008 study, Marcotte and Hemelt examined school closings in Maryland with data from all school districts except one (Marcotte & Hansen, 2010). For each day school was closed, the percentage of students passing the mathematics assessments dropped by roughly one-third to one-half of a percentage point. The negative impact was most apparent for students in the lower grades. That same year, Hansen observed effects in Maryland that were virtually the same as those found by Marcotte and Hemelt, along with larger albeit statistically insignificant effects for Colorado.

Marcotte and Hanson (2010) cited other researchers whose work supports the relationship between instructional days and achievement test scores, although the evidence seems to be more consistent for mathematics than reading. The difference between subject matters may be explained by the fact that mathematical knowledge is more difficult to retain and less likely to be practiced recreationally outside of the classroom.

Sarah Hastedt at the University of Virginia reported that school closings that deprived students of ten days of instruction decreased the students' reading and mathematics performance on the Virginia Standards of Learning examinations by 0.2 standard deviations, equivalent to the effect Marcotte and Hansen observed in Maryland.

In contrast, test data from Wisconsin showed that additional days of school instruction resulted in increases in fourth graders' mathematics achievement scores but had no equivalent effect on reading. The researcher, David Sims, based his analysis on a Wisconsin law enacted in 2001, mandating school districts to start the school year on September 1. Since the time change affected some districts but not others, it allowed for analysis of the effects of additional school days. The superior effects of extended time on mathematics performance is actually consistent with the greater degree of summer learning loss in mathematics than reading reported by Cooper and his colleagues (Cooper et al., 2003; Cooper et al., 2000).

Hansen had a unique opportunity for further exploration of the effects of school days on assessment scores by virtue of the fact that the Minnesota Department of Education moved the date of the state assessments every year for six years. After analyzing the test data, Hansen estimated that the proportion of third and fifth grade students attaining the proficiency level on the mathematics assessment increased by one-third to one-half a percentage point for each additional day in school (Marcotte & Hansen, 2010).

For schools at risk for being sanctioned for not meeting adequate yearly progress (AYP) targets, the loss of learning time due to bad weather school closures could result in being unfairly penalized for something beyond the school's control. Marcotte and Hansen estimate that among the Maryland schools, 35 of the 56 schools that did not make AYP in mathematics for the 2002-2003 school year might have met their AYP goals if they had been open every day of their original schedule. By themselves, the findings of Marcotte and Hansen do not offer conclusive evidence regarding the value of additional learning time, however small, with regard to positive academic outcomes. In combination with other related research, as described above, their findings certainly point in the direction of the value of additional learning time for positive academic outcomes.

Summer Learning Loss

Summer learning loss was touched upon at various points in the paragraphs above. The existence of what is also referred to as “summer setback,” “summer learning loss” and “summer slide”—the phenomenon by which students during an extended summer recess will forget what they have learned during the school year, unless there is reminder and reinforcement through some out-of-school activity—may be added to the list of what are at this time considered to be generally acknowledged facts. Most schools that have adopted a year-round schooling model have done so for the purpose of counteracting summer learning loss (Huebner, 2010; St. Gerard, 2007).

In “Summer Loss: The Phenomenon No One Wants to Deal With,” Bracey (2002) pointed out that from 1996 to 2002 the topic attracted scant attention in the educational literature. A notable exception to this trend is the meta-analysis and research synthesis undertaken by Cooper and his colleagues (Cooper, 2003). In their extensively cited 1996 meta-analysis, Cooper

and his colleagues documented not only the reality of summer learning loss but the fact that the loss is the most apparent for students who are economically or academically disadvantaged (Cooper, 2003; Cooper et al., 2000). This finding supported the work of Barbara Heyns (1978, 1987), who is widely credited with stimulating interest in seasonal influences on learning. Evidence from the Beginning School Study (BSS) provides further support for the assertion that the traditional school calendar is especially detrimental to the academic advancement of low-income students (Alexander et al., 2001; Alexander, Entwisle, & Olsen, 2007).

The demand for summer learning programs far exceeds the availability of affordable and accessible options (Afterschool Alliance, 2010a). The vast majority of parents (83%) favor publicly funded summer programs, with support by African American, Latino, and low-income parents surpassing 90%. However, summer school programs represent just one of a number of strategies for expanding educational time. Like summer school programs, after-school programs are a staple of the American educational landscape. After-school programs were given a tremendous boost with the passage of the No Child Left Behind (NCLB) act, which led to investment in 21st Century Community Learning Centers (Afterschool Alliance, 2007; Jenner & Jenner, 2007). More innovative approaches include extending the traditional school year, changing to an intersession model, and providing year-round schooling (Cooper, 2008; National Center on Time & Learning, 2011; Rocha, 2007; Silva, 2007; St. Gerard, 2007; Task Force, 2007).

In their research synthesis of 39 studies, including 13 meeting the criteria for a meta-analysis, Cooper and his colleagues concluded that “summer learning loss equaled at least one month of instruction as measured by grade level equivalents on standardized test scores—on average, children’s test scores were at least one month lower when they returned to school in fall

than scores were when students left in the spring” (Cooper, 2003, p. 3). Low-income students and students who already experienced academic difficulties suffered the greatest degree of loss. The adverse effect of the long summer break on achievement was more pronounced in the realm of mathematics than reading, possibly because children are more likely to engage in reading activities or perhaps because reading skills are better retained, relative to math.

In her influential work on the topic of summer learning loss, Heyns (1978, 1987) found that the extent that children progressed in reading or lost ground during the summer was associated with the volume of books they read. Simply owning more books makes it more likely that children will read over the summer. Studies have found that low-income neighborhoods have far fewer retailers stocked with children’s books than do more affluent neighborhoods (Allington & McGill-Frantzen, 2003).

Public libraries can be a haven for children over the summer and most public libraries offer summer reading programs. Library programs are perennially threatened by budget cuts, however, and libraries in poor neighborhoods are most vulnerable to cutbacks in hours and programs (McGill-Franzen & Allington, 2003). Additionally, low-income children may not have the transportation to go to a library farther from home or the neighborhood might be too dangerous for them to walk to a library even if one is nearby. Libraries in low-income *schools* are frequently not accessible during the summer months (Allington & McGill-Frantzen, 2003).

The Beginning School Study (BSS) was a 20-year longitudinal study of the academic and social development of children beginning in the first grade and extending through high school and beyond. BSS contains data from a panel of children in Baltimore City Public Schools (BCPS), as well as data from these children’s parents, teachers, and schools. The purpose of the

study was to observe various patterns among a group of average urban school children, including issues relating to summer learning loss.

Alexander et al. (2001, 2007) turned to BSS data to explore seasonal influences on the academic achievement of economically disadvantaged students. The 790 BSS participants were students in the Baltimore City Public Schools (BCPS). The California Achievement Test (CAT) was used to assess the students on Reading Comprehension and Math Concepts at the onset of the BSS in 1982 when they were in the first grade. Alexander et al. (2001) drew their analysis from the interaction of the students' CAT scores and their socio-demographic backgrounds. The results showed the influence of both school and family characteristics on the children's academic development. The most striking finding was that the role of the school was magnified "when support for academic learning outside the school is weak" (p. 183).

The general trend showed that the low-income students made sufficient progress during the school year. However, before they began school and during the summer months, they did not have access to educational resources to support and sustain their achievement (Alexander et al., 2001). Learning losses incurred over the summer exacerbated the disadvantages in literacy and mathematical development that the low-income students had when they entered school in the fall.

In subsequent research, Alexander et al. (2007) analyzed the cumulative impact of seasonal influences on the BSS students' reading growth based on the CAT Reading Comprehension. This analysis provided even more compelling evidence of the detrimental effect of the summer break on the students' academic development. During the school year, the low-SES (socio-economic status) students did not just keep up with their more affluent peers but they *surpassed* them in academic growth. The gains disclosed by the analysis equaled 191.3

points for the low-income students and 187.0 points for the higher income students. Alexander et al. noted that this pattern contradicts the prevailing assumptions about learning in low-income schools. However, the data clearly showed that the disparity between the high- and low-income groups occurred during the summer as opposed to during the course of the school year. While the students from the highest income families continued to advance academically over the summer, the students in the lowest income groups made inconsistent progress, with a cumulative net loss. Specifically, they made progress during some summers and slid back during others. In the end, the losses overtook the gains.

Alexander et al. (2007) acknowledged that due to changes in assessment protocols, resulting in the abandonment of the CAT assessment after the eighth year of the BSS, there were some gaps in the data. Nonetheless, the results showed that in year nine of the project, the low-income students had fallen approximately 73 points behind their higher income peers, a difference of about 0.88 standard deviations (SD). According to Alexander et al., roughly one-third of the difference (26.5 points) existed before the students began school in 1982. The rest of the difference accrued during elementary and middle school, “with the largest single component, 48.5 points, being the cumulative summer learning gap from the five elementary years” (p. 21). Allington and McGill (2003) asserted that the evidence consistently points to “summer reading setback as the most potent explanation for the widening of the reading achievement gap between rich children and poor children across the span of the elementary years” (p. 71).

In summary, virtually since the inception of the standardized school calendar, educators have been aware that students lose ground over the long summer break. Heyns (1978, 1987) brought attention to the issue of summer learning loss—in particular, summer reading loss, which is more pronounced for students who have less access to books. Subsequent research

confirmed that summer learning loss is a real phenomenon that intensifies disparities in academic achievement based on socio-economic status (Alexander et al., 2001, 2007; Allington & McGill-Frantzen, 2003; Cooper, 2003; Cooper et al., 2000).

Summer Learning Programs

A much studied example of a type of program specifically designed to combat summer learning loss is Building Educated Leaders for Life (BELL), a multifaceted accelerated summer learning program initiated in 1992 by a group of Latino and African American Harvard Law School students. The program was designed with the goals of enhancing academic performance, family involvement, academic self-perceptions, and prosocial behavior among economically disadvantaged students and their families (Capizzano, Bischoff, Woodroffe, & Chaplin, 2007; Chaplin & Capizzano, 2006). As a community-based organization, BELL provides supplemental learning activities to low-income students in New York, Boston, Baltimore, and Washington, D.C. Chaplin and Capizzano's (2006) evaluation was based on the 2005 summer program when the program adopted *Summer Success Reading* and *Summer Success Math*, also used in the summer program. The program's academic curricula are infused with culturally sensitive elements.

In studies of summer programs, the lack of random assignment has been criticized as a methodological flaw (Cooper et al., 2000). To overcome this issue, the BELL program allowed the research team to use random assignments to decide which applicants were accepted at two Boston and one New York City sites, which were used for evaluation (Chaplin & Capizzano, 2006). Although the program is open to all students beginning grades 1-7 the next fall, the recruitment efforts target economically disadvantaged minority students with academic difficulties. The investigators were able to access the academic data for 835 applicants,

representing 78% each of the program group and the control group. A somewhat smaller percentage of parents responded to the survey. Reading comprehension and vocabulary were assessed by the Gates-MacGinitie Reading Tests. Academic self-concept was assessed via the Academic Perceptions Inventory (API) in reading and mathematics for the youngest students (grades 1-2), and the Perception of Ability Scale Score (PASS) was used for students in grades 3-7. Questions drawn from the parent survey of the Social Skills Rating System (SSRS) were used to assess the nature of parent involvement and children's social behavior.

Close to two-thirds of the students selected through the random assignment lottery participated in the BELL program with high rates of attendance, while program participation for the control group was minimal. During July, however, the control group children engaged in a variety of academic activities. To Chaplin and Capizzano (2006), this signified the high level of interest in advancing their children's academic development by the families who apply to the BELL program. On a broader level, this finding reflects the widespread desire of parents, especially low-income parents, for high quality summer learning experiences for their children (Afterschool Alliance, 2010a, 2010b).

Both groups of children read books and participated in academic activities over the summer (Chaplin & Capizzano, 2006). Nevertheless, the data showed that the BELL program participants increased the time spent in academic activities by 6.4 hours per week and the number of books read by 3.9, reflecting an increase of about 50%. The parents observed their children reading numerous books over the summer, thus demonstrating that low-income children eagerly spend their summers reading when they have access to books.

In fact, the children's acceptance into the experimental group had a significant and fairly substantial effect on the number of books the children read (Chaplin & Capizzano, 2006). The

time demands of the BELL program translated into a decrease in other activities, which could be said to have mixed effects. The most notable decreases were found for activities such as watching television, playing computer games, and doing chores. At the same time, the children also spent less time engaged in cultural activities or working with computers, and there were smaller declines for activities such as music, arts, and athletics. This effect actually runs counter to the goal of a comprehensive summer learning program, which ideally balances academic instruction and recreational activities (Terzian et al., 2009). However, the full BELL program does include cultural and recreational activities (Capizzano et al., 2007). Based on attendance patterns, the families seemed to give precedence to academic activities.

Determining the impact of BELL based on the test data was complicated by the fact that the control group students had 16 more days of school, while the BELL students had 14 days of program participation. After adjusting for the number of days in school, however, the analysis showed an estimated significant positive advantage equal to about 5.2 points on the extended Gates-MacGinitie reading test score for the BELL program participants (Chaplin & Capizzano, 2006). Program involvement did not have a similar positive impact on the students' academic self-concepts or social behaviors.

Chaplin and Capizzano suggest that the lack of a positive effect on the participants' academic self-concept might be a transient effect due to heightened sensitivity to their reading difficulties. With the exception of the first graders, all the students performed far below grade level on the literacy assessments. One possibility in view of the students' reading over the summer is that the students will be motivated to boost their reading performance when they return to school in the fall. Indeed, the program involvement positioned them to do so. The

overall findings suggest that the BELL participants gained the equivalent of one month of reading progress compared to their peers in the control group.

Capizzano et al. (2007) presented a detailed case study of the BELL program sites based on a synthesis of observations, interviews, focus group discussions, and program documents. The complete weekly program was composed of eight hours of literacy instruction, four hours of mathematics instruction, 12 hours of various enrichment activities such as art, music, dance, and gym, and two hours of activities such as field trips. Attendance was lowest on Friday when there were no academic activities. The teachers lauded the small class size and the autonomy they had in organizing their learning activities. The teaching assistants (primarily interns) admired the program's holistic philosophy of child development.

Virtually all the teachers had positive opinions of the Voices of Love (VLF) reading and writing curriculum, the culturally sensitive feature of the literacy program (Capizzano et al., 2007). The one flaw in the program, from the teachers' perspective, was that they lacked sufficient resources for individualizing learning for students who needed intensive remediation. Even with the intern present, it proved challenging to accommodate students with a wide spectrum of ability levels in one classroom, especially students with disabilities and English language learners (ELLs). It is noteworthy that the BELL program attracts highly competent and caring teachers.

Terzian et al. (2009) are somewhat ambivalent with regard to the overall impact of BELL. As Chaplin and Capizzano (2006) acknowledged, the program did not improve the children's academic self-concept or social skills. Terzian et al. (2009) also classify BELL as "not proven to work," or having no impact on the participants' mathematics performance. However, this was based on the parents' reports that the program did not help their children

solve math problems independently, rather than on teachers' reports or performance data. Conversely, BELL did show a definite positive impact on the children's reading performance and the number of books they read over the summer.

After-School Programs

21st Century Learning Centers. As mentioned in the introductory section above, after-school programs represent another important dimension of ELT.

The 21st Century Community Learning Centers Program was established by Congress to award grants to rural and inner-city public schools, or consortia of such schools, to enable them to plan, implement, or expand projects that benefit the educational, health, social services, cultural, and recreational needs of the community. School-based community learning centers can provide a safe, drug-free, supervised, and cost-effective after-school, weekend or summer haven for children, youth and their families (Department of Education Federal Register, 1999).

Jenner and Jenner (2007) elaborated findings from a statewide evaluation of 21st Century Learning Centers in Louisiana serving socio-economically and academically disadvantaged students. Employing data from the four regions, New Orleans, Baton Rouge, Grant Parish, and Bienville Parish, the study examined the academic progress of the first cohort of students to attend Learning Center after-school programs. The students were 80% low-income and 80% minority. Their mean test scores on the Iowa Test of Basic Skills (ITBS) for the fall semester were roughly 10 points below the national average in all subject areas. Overall, the Learning Center participants had lower level of academic achievement than comparison group students did, though the performance of both groups of students fell below the national average. The greatest degree of disparity between the program participants and non-participants was in reading, where the discrepancy approached eight points.

The students' scores on the ITBS were used as the measure of academic improvement. Based on results that favored the program participants, Jenner and Jenner (2007) concluded that participating in a 21st Century Learning Center after-school program for at least 30 days was academically advantageous for at-risk students. Specifically, the findings showed that "program-wide, individual subject data indicate that program impacts are positive and significant in reading, language, and social studies" (p. 230). The positive impact was especially pronounced for reading. Although all groups of students enjoyed gains from the programs, minority students and "moderate achievers" seemed to derive the greatest degree of benefit from the programs. The most substantial gains were observed for students who attended the programs most frequently. LA's BEST also provides compelling evidence of a dose effect for after-school program attendance (Huang et al., 2009).

Jenner and Jenner (2007) charted the progress a hypothetical student could make by attending an after-school program at least 30 days during the school year. Over a three-year span, the student's reading level would be more than half a grade higher than that of a student who was not involved with the after-school program. Highlighting the effect of program attendance on outcomes, Jenner and Jenner stressed that after-school programs must be designed to be attractive to students and parents. Students in focus groups said they are drawn to programs that provide enrichment and recreational activities. The implication is that, "Instruction, tutoring, and other academic curricula will be influential only if the students continue to attend" (p. 232).

Jenner and Jenner (2007) also noted that feedback from both the students' and teachers' focus groups suggest that being immersed in an enriched learning environment was an important aspect of the students' academic progress. Beyond the positive benefits of the time spent in

instruction, the students gained intellectually from being exposed to novel ideas, spending more time reading or being read to, expanding their vocabulary, and interacting with adults.

According to Jenner and Jenner, the superior progress of the students in reading and ELA rather than science and mathematics is evidence of this effect. They interpret their findings as persuasive evidence that the four Learning Centers are successfully accomplishing their designated goals.

Based on their national evaluation, Dynarski et al. (2004) were less enthusiastic than Jenner and Jenner (2004) about the benefits of 21st Century Learning Centers. In 1999, the research team was commissioned to evaluate the programs on five indicators: after-school supervision, location and activities, academic performance and achievement, behavior, personal and social development, and safety. The first year analysis began with information from approximately 1,000 elementary school students in 18 schools located in seven school districts, and 4,300 middle school students from 61 schools in 32 districts. The elementary school study was based on random assignment, while the middle school study used a matched comparison group design. For the second year of the study, the investigators expanded the elementary school study to include more schools, producing a total sample of 2,308 elementary school students. The middle school students, consisting of 1,782 program participants and 2,482 comparison students, were followed a second year.

The elementary school students who attended the 21st Century Learning Centers reported feeling safer and were more inclined to help other children after school. The after-school programs, however, had no discernable impact on the students' reading or mathematics performance (Dynarski et al., 2004). The middle school students who attended the programs outperformed their non-participant peers in social studies but not in ELA, mathematics, or

science. At the same time, the middle school program participants had fewer absences and were more likely to aspire to a college education. Program participation for the middle school students tended to be low. Although large national program evaluations are important, they fail to capture features that make some programs more successful than others. The evidence from the Louisiana parishes demonstrated the *potential* benefits of 21st Century Learning Centers on student achievement (Jenner & Jenner, 2007).

LA's BEST. LA's BEST (Better Educated Students for Tomorrow) grew out of a community-based initiative in the 1980s, expanding from 10 sites to 76 sites by 2000 (Heckman & Sanger, 2001). Funded by private donors as well as local, district, and federal agencies, the program sites are selected on a needs basis, giving priority to communities marked by low SES and low academic achievement. Latino students and students who qualify for free meals comprise the overwhelming majority of program participants. The multifaceted after-school program provides the participants with a safe and supportive environment, high quality learning opportunities through the integration of an educational support structure, educational enrichment activities to supplement and intensify the effects of the regular program, a variety of recreational activities, and interpersonal skills and self-esteem building. The learner-centered framework is based on three key principles: building on the knowledge the students bring to the program, promoting the students' appreciation of their own ideas and experiences, and planning activities based on the students' interests.

During the last several decades, LA's BEST has undergone systematic evaluation. A key factor in its success is that students must formally enroll in the program and be regular participants. Indeed, the studies have documented a "dose effect," whereby regular program attendance produces substantial gains in intellectual growth (Heckman & Sanger, 2001; Huang et

al., 2009). The long-term duration of the program also enables investigators to gauge the program's effects over time. The results of a 10-year longitudinal study demonstrated that students who had been involved with LA's BEST for at least four years displayed better school attendance, and fifth and sixth grade students were absent significantly fewer days than their peers who were not involved with the program. From the perspective of extending learning time, by increasing regular school attendance, the program went beyond extending the school day in providing the participants with additional learning time.

To Heckman and Sanger (2001), the most striking finding is the powerful impact of LA's BEST on the students' attitudes and motivation. The overwhelming majority of the students (more than 85%) said they liked school better because of their program involvement. The students especially enjoyed the clubs and field trips, which further enhance their motivation for learning. After two years of program involvement, the students' classroom grades displayed an overall increase of 28%, with science grades showing the greatest increase. A plausible explanation for this effect is that the program participants were exposed to science learning experiences that are often shortchanged in the course of a regular school day.

The regular LA's BEST participants also enjoyed substantial gains in reading, language arts, and mathematics. Especially notable was the fact that English language learners (who constitute a growing number of LAUSD students) participating in LA's BEST were likely to be reclassified as English language proficient (Heckman & Sanger, 2001). As interpreted by Heckman and Sanger:

LA's BEST students did not perform better on the norm-referenced tests because they did more drill-and-practice activities in the after-school program. Instead, they performed better on these tests because they had gained confidence in using what they already knew, in being

mindful of their thoughts and ideas, and in pursuing their own interests. They became better students at school and more important, became better citizens of the world (p. 48).

Subsequent program evaluation confirmed and extended the initial positive findings of the 10-year report. The 2009 report focused on the degree of the students' program involvement and their performance on the English-language arts and mathematics components of the California Standards Test (CST; Huang et al., 2009). This study extended the findings of the 2008 study *Examining the Relationship between LA's BEST Program Attendance and Academic Achievement of LA's BEST Students*, which reported that students whose participation surpassed 100 days per year made more progress in mathematics than their peers whose program attendance was limited to 1 to 20 days per year. A significant difference in mathematics achievement was observed consistently in two separate groups of students tracked over four years, with the effect remaining even after controlling for potentially confounding factors. The magnitude of the results led the investigators to conduct a parallel study based on students who participated in LA's BEST during the years from which baseline data were collected but not during the study period.

The analysis encompassed roughly 6,000 students whose original records were from 2002-2003 or 2003-2004 and who were followed for three years (Huang et al., 2009). The students were divided into four separate groups: (1) students who attended LA's BEST at the baseline but not during the follow-up period, (2) students who attended the program an average of 1 to 20 days during the follow-up, (3) students attending the program from 21 to 99 days during the follow-up, and (4) students who attended the program 100 days or more during the follow-up. Huang et al. surmised that the results for the regular program attendees and non-attendees would parallel those of the respective groups in the 2008 report.

The findings confirmed the researchers' assumptions (Huang et al., 2009). The regular program participants showed significant gains on the CST mathematics compared to students with no or minimal program involvement during the follow-up period. These results held regardless of disparities in the students' background characteristics. Regular program involvement did not produce an equivalent positive impact on the students' performance in English Language Arts. However, Huang et al. pointed out that at least two-thirds of the LA's BEST participants are ELLs and speak a language other than English at home. They noted that a myriad of factors related to the home and neighborhood environment influenced children's language development.

Neighborhood effects on children's reading development have consistently been reported (Allington & McGill-Frantzen, 2003; Heyns, 1978, 1987; McGill-Frantzen & Allington, 2003). Adding an English language component to the multi-dimensional program is one potential strategy for improving the ELA performance of the ELLs. Integrating English language learning into peer social interactions and interactions with staff to advance the students' English communication skills are additional strategies that can be adopted by any educational program.

Empirical Research Review Articles

To understand the literature of extended learning time since the late 1950s, one must pay particular attention to two landmark publications. The first is the most extensive review of the empirical literature on ELT as of its time, conducted by Nancy L. Karweit and published in *Educational Researcher*, some 25 years ago (1985). The second is a comprehensive survey of the literature in this area in the 25 years since then (Patall et al., 2010). In contrast with the specific subject-area categories explored above, this represents a methodological category, that of empirical research review articles.

In her 1985 publication, Karweit expressed skepticism about the idea of increasing time in school as a way of enhancing academic outcomes. In essence, what she said is that it is simplistic to think that just by doing what is being done elsewhere, similar outcomes will be achieved:

Although differences in time allocations may vary with achievement differences, manipulating the time allocations may not drastically alter achievement because time per se may not be the cause of achievement differences. For example, nations that allocate more time to schooling probably do not have longer school terms by accident; school terms are longer because their societies attach greater importance to education. If greater support for education is the primary reason for greater achievement, manipulating a manifestation of this emphasis—the amount of school time—will not necessarily alter achievement (1985, p. 10).

Like many who have both preceded and followed her, Karweit pointed to the question as to whether the key here is not so much how many school hours are involved but rather how those hours are used: “If time spent and learning are not so strongly related, then a strategy of improving the quality and appropriateness of instruction may be more beneficial” (1985, p. 11). Though the title of Karweit’s article—“Should We Lengthen the School Term?”—suggests a focus on length of school year, it is in fact just as much an analysis of the concept of length of school day (in other words, extended learning time or ELT).

“Extending the School Day or School Year: A Systematic Review of Research (1985-2009)” is a breathtakingly comprehensive synthesis of the literature on the subject since the publication of the Karweit article, which Erika A. Patall and her coauthors Harris Cooper and Ashley Batts Allen regarded as the study in the footsteps of which they followed. It is for this reason that their timeframe begins in 1985. As Patall et al. pointed out, “At that time [1985] only

correlational evidence was available for review and there were no studies in which the effect of lengthening the school year or the school day had been examined in either an experimental or a longitudinal design” (Patall et al. 2010, p. 414).

Patell and her coauthors identified 15 empirical studies with various designs that have been conducted since 1985, thoroughly evaluating each one of them. They came to the conclusion that these research designs “are generally weak for making causal inferences” but that “findings suggest that extending school time can be an effective way to support student learning, particularly (a) for students most at risk of school failure and (b) when considerations are made for how time is used” (2010, p. 401). It is evident from this summary that the 2010 study by Patall et al. is largely consistent with the 1985 study by Karweit, as each expressed skepticism about causal inferences and stressed the importance of how time is utilized. The main difference is that the empirical studies since 1985 are said to have begun to validate, with qualifications, the practice of ELT.

In their analysis, Patall et al. criticized all 15 empirical studies for what they pointed to as flaws in their research designs. “It is fair to say that the effect of ED [extended day, equivalent to ELT] has yet to be fairly tested using well-controlled experimental or quasiexperimental designs from which strong causal implications could be drawn” (2010. p. 423). Key aspects of their critique included lack of a control group, lack of longitudinal strength, and weaknesses in correspondence of studied populations (in other words, comparing “apples to apples”).

Recent Dissertation Studies

As comprehensive as the Patall et al. synthesis was, there are several recent dissertation studies in the realm of ELT that were not included (in most cases, probably because they may have been too recent). In alphabetical order, by the author’s last name, the list of six dissertation

studies is as follows: Bonnie Adams Barrett (Ed.D.), *The Success of Extended Day Programs on Improving the Reading Performance of At-Risk Students* (Texas Southern University, 2005); Paddy Sertich Domier (Ph.D.), *Every Second Counts: School Week and Achievement* (Capella University, 2009); Debbie Elder (Ed.D.), *Extended Learning Time through Afterschool Programs: A Secondary Analysis of a Midwestern Afterschool Program* (University of Kansas, 2009); Robin Marie Lee-Myricks (Ed.D.), *Extended Learning Time and the Academic Performance Outcomes for Participating At-Risk Middle School Students* (Walden University, 2010); Kristi N. Little (Ed.D.), *Effects of an Intervention After-School Program on Academic Achievement among Middle School Students* (Walden University, 2009); and Cheri Ogden (Ed.D.), *Measuring the Effectiveness of After-School Programs Via Participants' Pre and Posttest Performance Levels on the Georgia Criterion Referenced Competency Test* (Liberty University, 2008). Each of these will be covered, individually and in the same order, below.

The Success of Extended Day Programs on Improving Reading Performance. In her 2005 Texas Southern University dissertation study, *The Success of Extended Day Programs on Improving the Reading Performance of At-Risk Students*, Bonnie Adams Barrett (Ed.D.) investigated the success of an extended day program in improving the reading performances of students who were identified as at-risk for failure on the Texas Assessment of Knowledge and Skills (TAKS) reading test.

Her study specifically explored the success of the Extended Day Program in preparing minority third-grade students to pass the TAKS Reading Test on the first administration. The success of African American and Hispanic students who participated in the extended day program was compared to that of Caucasian students who also participated in the Extended Day

Program. Results from the students' Iowa Test of Basic Skills (I.T.B.S.) were used as a pretest, while a t-test and an ANOVA were applied to the reading scale scores of the TAKS test.

The results indicated no significant differences between any of the ethnic groups revealed. On this basis, Barrett concluded that the extended day program was an effective tool for preparing minority students to pass the Texas Assessment of Knowledge and Skills Reading Test.

Every Second Counts. In his 2009 Capella University dissertation study, *Every Second Counts: School Week and Achievement*, Paddy Sertich Domier (Ph.D.) looked at schools in the state of Colorado that have participated in the four-day school schedule during the school years 2005-2008, finding that there were no effects of the four-day school schedule on third grade reading, writing, and math scores compared to those scores in comparably sized schools operating on a more traditional five-day schedule.

In addition, the study found no relationship between third-grade Colorado Student Assessment Program (CSAP) assessments on a four-day or five-day schedule. According to the study results based on quantitative research, third-grade students following a four-day school week scored better than or equal to the state CSAP percentage proficient and above for 2005-2008.

Extended Learning Time through Afterschool Programs. In her 2009 University of Kansas dissertation study, *Extended Learning Time through Afterschool Programs: A Secondary Analysis of a Midwestern Afterschool Program*, Debbie Elder (Ed.D.) conducted a quantitative and qualitative assessment of the relationship between additional learning time (afterschool program attendance) and teacher assigned classroom grades. The goal of the afterschool

program in this study was to capture more learning time and provide an academic support system.

The student sample consisted of 96 students in first through fourth grade of a Midwestern afterschool program. The factor of extended learning time was analyzed through attendance, as suggested in a review of afterschool program measurement by Simpkins (2005). The threshold model (depicted by an inverted U-shaped scatter plot) in Marsh & Kleitman (2002), guided the relational analyses and found a strong to minimal relationship between attendance and grades (GPA) in six of the sixteen scatter plots. Each grade (1-4) was analyzed separately for Year 1 and Year 2 in reading and math. The threshold model may demonstrate that too little or too much afterschool program attendance is not advantageous in grade improvement (Marsh & Kleitman, 2002; Simpkins, 2004). In the author's words, "This study opens the opportunity for practitioners and researchers to further examine the relationship of attendance and grades (GPA) through documented time in specific treatment (activities)."

Extended Learning Time and the Academic Performance Outcomes. In her 2010 Walden University dissertation study, *Extended Learning Time and the Academic Performance Outcomes for Participating At-Risk Middle School Students*, Robin Marie Lee-Myricks (Ed.D.) reported her quantitative study for the purpose of discovering the relationship between participation in SES (in this context, meaning supplemental educational services) and academic outcomes for at-risk middle school students, comparing them to similar students who did not participate in SES.

The theoretical framework of the study was based on Blankstein's principles of creating school cultures and opportunities for learning where all students succeed. Lee-Myricks's study included a sample of 621 at-risk middle school students who were eligible to participate in SES.

Matched convenience sampling was used to randomly assign 120 students to the experimental group who participated in SES, and 120 students to the control group who opted not to participate in SES although they were eligible. Analysis of covariance with pre and post-treatment Criterion Referenced Competency Test scores tested whether participation in SES correlated to academic gains in reading and mathematics.

Significant gains in mathematics were achieved by students who participated in SES. These same analyses, however, failed to reveal significant gains in the content area of reading. “The potential for positive social change,” Lee-Myricks reported, “is that these findings could be a catalyst for the discussion between educators, administrators, and parents empowering them as they make decisions to use SES (supplemental educational services) as a means to support at-risk students as they strive to succeed academically.”

Effects of an Intervention After-School Program. In her 2009 Walden University dissertation study, *Effects of an Intervention After-School Program on Academic Achievement among Middle School Students*, Kristi N. Little (Ed.D.) investigated the effectiveness of an after-school intervention program on remediating basic skills to middle school students identified as at risk of failure in school by quantitatively comparing the standardized test scores made in reading and mathematics on the Georgia Criterion Referenced Competency Test (CRCT) between the students who participated in the program with those who did not. Subsidiary questions assessed effectiveness among only the participating students in terms of socioeconomic status, ethnicity, participation levels, and attendance using t-tests and Analysis of Variance (ANOVA) statistical tests.

The change in CRCT scores for program participants was significantly higher for reading scores and higher for mathematics scores, but not to a statistically significant degree. In contrast,

non-participants scored significantly lower on both reading and mathematics scores from one year to the next. Analysis of only participating students revealed no significant differences yet still provided strong evidence that the “Warrior After School” academic intervention program positively impacted CRCT scores of at-risk participants. The author concluded that, “The study adds to the body of empirical evidence on the effectiveness of after-school programs, especially at the middle school level as a means to close the gap in academic deficiencies before the high school years.”

Measuring the Effectiveness of After-School Programs. In her 2008 Liberty University dissertation study, *Measuring the Effectiveness of After-School Programs Via Participants’ Pre and Posttest Performance Levels on the Georgia Criterion Referenced Competency Test*, Cheri Ogden (Ed.D.) measured the effectiveness of two after-school programs in one middle school in a medium-sized county in Georgia. The school had failed to demonstrate Adequate Yearly Progress for eight years and had been offering supplemental services for six years. The after-school programs are funded, with students offered opportunities to participate based on low performance on the annual assessment, the Georgia Criterion Referenced Competency Test. The effectiveness of the after-school programs was assessed based on the percentage of program participants who moved from Level 1 (not meeting standard) to Level 2 (meeting) or Level 3 (exceeding).

Control groups were established for each after-school program. Consideration was also given to the participants’ frequency of attendance in each program, to determine whether participants who attended frequently improved more than participants who attended infrequently. The author concluded that, “Program participants failed to demonstrate improved achievement

greater than nonparticipants and increased attendance in the programs did not seem to positively impact student achievement.”

Advocacy Literature

The literature on ELT seems to divide itself naturally into three main categories. The first category, the largest, is the scholarly literature, overviewed above, that is for the most part focused on empirical analysis. These authors, mainly academics, are primarily concerned with objective assessments as to the efficacy of ELT. They report their results, whatever the results happen to be. The second category may best be described as the literature of advocacy. This category is populated by individuals and organizations with a specific agenda to promote the use of ELT. They have made up their minds as to the value of ELT and believe that additional analyses to gauge its efficacy are simply a waste of time. The third category, which will be overviewed in the next section, is composed of individuals and organizations who take a perspective that is opposite to that of those in the second category. Individuals and organizations in the third category—which we call anti-ELT, for want of a better term—are convinced that ELT is at best worthless and, at worst, harmful, a misguided effort on the part of those who are poorly informed.

Chris Gabrieli and the National Center for Time and Learning (NCTL). The most prominent individual and organization, at the vanguard of the advocacy movement for ELT, generating a substantial body of written work, are Chris Gabrieli and the group he founded, the National Center for Time & Learning (NCTL, Website at timeandlearning.org). Although Gabrieli is a part-time lecturer at the Harvard Graduate School of Education, his publications are distinctly nonacademic in nature.

One simple illustration is the fact that the pages of his 2011 NCLT report, *Time Well Spent: Eight Powerful Practices of Successful, Expanded-Time Schools*, contain more graphics than text (for the most part, large photos of smiling children) and the work itself is undated. “Between January and June, 2011,” according to the report’s executive summary, “NCTL identified 30 academically high-performing schools with longer school days and years, and then we studied how these schools have capitalized on more learning time to yield impressive student outcomes” (p. 5). Critics would say that although the report contains much interesting information and material, it reveals its bias in the fact that it has selectively focused on a group of successful schools, with no control groups and no questioning as to whether the success might be explained by factors other than ELT (such as parental involvement and the overall learning “culture” that these schools have created).

Time to Learn. Together with Warren Goldstein, a professor of history at The University of Hartford, Gabrieli co-authored *Time to Learn: How a New School Schedule Is Making Smarter Kids, Happier Parents, and Safer Neighborhoods* (Jossey-Bass, 2008). In their introduction, they explained that the “accountability movement” has propelled us into “an educational universe governed by the No Child Left Behind Act (NCLB).” “In this new world, schools are responsible for ‘adequate yearly progress’ in which their students are expected to increase their scores on state-administered standardized tests to the point that 100 percent of students in grades 3 through 8 become ‘proficient’ in mathematics and reading by the year 2014.” Although real educational spending doubled between 1975 and 2002, according to the National Assessment of Educational Progress (popularly known as “the nation’s report card”), “seventeen-year-olds’ reading scores remained completely flat from 1971 to 2004, while their math scores only increased 2.6 percent between 1978 and 1992, and then stayed flat until 2004”

(Gabrieli & Goldstein, 2008, p. 4). Clearly stating their position later in the introduction, the authors wrote: “We’ve written this book to give the new school schedule an additional boost” (p. 16).

Fall 2011 Special Issue of *New Directions for Youth Development*. The most recent addition to the advocacy literature is a fall 2011 special issue of the *New Directions for Youth Development* journal, edited by Helen Janc Malone, also published by Jossey-Bass (a Wiley imprint). The issue represents a collection of nine articles, reflecting the “growing support within education circles to use *time* as an important resource for improving student learning outcomes in high-poverty schools” (Malone, 2011, p. 1).

The purpose of this issue is to concentrate specifically on school-community partnerships through a blended construct, expanded learning time and opportunities (ELTO), whereby expanded learning time (ELT) schools work with community organizations offering expanded learning opportunities (ELOs) as equal partners to provide a seamless, longer learning day that best meet both the academic and developmental needs of students in resource-poor communities (Malone, 2011, pp. 1-2).

It deserves to be specifically pointed out that ELT advocates have been working diligently to resolve perhaps the single largest major issue relating to the implementation of ELT: the problem of limited and even shrinking financial resources on the part of schools and school districts, to fund ELT efforts. Their solution, simply stated, is to go outside of schools and school districts, to partner with a variety of organizations, public and private, to make ELTO feasible.

Overview of Federal Government Support for ELT. Apart from several groups that have formed a kind of informal coalition with NCLT in its advocacy of ELT (the Center for

American Progress, the Harvard Family Research Project, and Massachusetts 2020, all non-profits), it could be argued that the federal government—under both Democratic and Republican leadership—has functioned as the major advocate for ELT, since the publication of “A Nation at Risk: The Imperative for Educational Reform,” a report issued in April 1983 by President Ronald Reagan’s National Commission on Excellence in Education.

The report pointed to the disturbing decline of academic achievement among U.S. students. “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,” the report stated. “If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war” (The National Commission on Excellence in Education, 1983, p. 9). As part of its recommendations, the Commission proposed that school districts and state legislatures consider seven-hour school days, as well as a 200- to 220-day school year.

A decade later, under President Bill Clinton, “Prisoners of Time,” a 1994 report produced by the National Education Commission of Time and Learning (established by federal legislation), “reiterated the concern about America’s poor standing in international student achievement comparisons and suggested that little progress had been made since 1983’s ‘A Nation at Risk’” (Patall et al, 2010, p. 402).

No Child Left Behind (NCLB) is a 2001 United States Act of Congress originally proposed by the administration of President George W. Bush immediately after he took office in January of the same year. NCLB, which received overwhelming bipartisan support in Congress, supports standards-based education reform, on the premise that setting high standards and establishing measurable goals can improve individual outcomes in education. The Act requires

that states develop basic skills assessments and administer them to all students in certain grades, as a condition of receiving federal funding for schools (standards being set by each individual state, in absence of any national achievement standard).

The mantle of federal government support for ELT has been passed from the Reagan Administration to successive administrations of both Democrats and Republicans, to the present day, at which time it is being carried on behalf of the Obama Administration by U.S. Secretary of Education Arne Duncan. At the release event for NCLT's *Time Well Spent* report, Secretary Duncan in his keynote address stated:

The fact that our school calendar is still based on an agrarian economy is stunning to me and the fact that we have been so slow to move is just absolutely unacceptable. What this report demonstrates is that [ELT] is not just a good idea theoretically but is [actually] getting results We don't need to study this issue any more. We don't need another study on summer reading loss Does every child need a huge amount of additional time? Honestly, not necessarily. There are lots of middle class children who can go to the park or museum or go to ballet and go to a piano lesson after school and that's OK. But on a targeted basis, going to students where those opportunities are not the norm, where students don't have those chances, in tough economic climates like this ... this is a resource that has been undertapped If we can move the country further, faster, in this, we have a real way that we can close the achievement gap (Center for American Progress, 2011).

Anti-ELT Literature

As explained above, the third and final main category into which the literature naturally divides itself is composed of individuals and organizations who take a perspective that is opposite to that of the advocates of ELT. Individuals and organizations in this third category—

which we call anti-ELT, for want of a better term—are convinced that ELT is at best worthless and, at worst, harmful, a misguided effort on the part of those who are poorly informed. Their specific agenda is to block the promotion and proliferation of ELT.

In recent years, a number of research groups have tasked themselves with the specific purpose of opposing the implementation of ELT programs. Perhaps the three most prominent of these groups may be said to be (in alphabetical order) the John Locke Foundation, McKinsey & Company, and the Texas Comprehensive Center (a division of SEDL, formerly the Southwest Educational Development Laboratory), each of which has generated one or more policy papers relating to ELT.

John Locke Foundation. In August 2007, the John Locke Foundation—created in 1990 and based in Raleigh, North Carolina—published a policy paper entitled, “Better Instruction, Not More Time,” in which it labeled ELT as a “fad” and asserted that there is no reliable evidence to demonstrate any statistically significant correlation between learning time and academic outcomes (Stoops, 2007). The report claimed that “it would cost taxpayers as much as an additional \$656,500 per year to implement a longer school day at a typical North Carolina elementary school, though the paper did not reveal how this figure was derived. Like the Texas Comprehensive Center paper, this one relied heavily on an article by Baker et al. (2004), which will be covered in some detail below.

McKinsey & Company. McKinsey & Company, a global management consulting firm, was originally founded in Chicago in 1926. In September 2007, it published a paper entitled, “How the World’s Best-Performing School Systems Come Out on Top” (Barber & Mourshed, 2007). According to the company’s website, the purpose of the report was to address the

question, “Why is it that some school systems consistently perform and improve faster than others?”

To find out why some schools succeed where others do not, McKinsey studied 25 of the world’s school systems, including 10 of the top performers. The experience of these top school systems suggest that three things matter most:

- Getting the right people to become teachers;
- Developing them into effective instructors; and
- Ensuring the system is available to deliver the best possible instruction for every child (McKinsey & Company Website).

The McKinsey report goes a critical step beyond the other policy papers, not only asserting, by omission, that ELT and ELO have no place in improving academic outcomes, but by quoting from a lecture by one Michael Barber in London in 2007, to the effect that “the PISA scores of the top performing systems show a low correlation between outcomes and the home background of the individual student.” As supporting evidence, a scatter graph from PISA is featured on the same page (Barber & Mourshed, 2007, p. 37).

Texas Comprehensive Center at SEDL. In its 2011 briefing paper, “Impact of Class Time on Student Learning,” the Texas Comprehensive Center at SEDL relies primarily on three sources to make its case against ELT. The first is a 2004 review by Baker et al., which will be treated separately below, in which it is asserted that “the research does not show a strong relationship at the cross-national level between achievement test scores and amount of instructional time” (Texas Comprehensive Center, 2011, p. 2). The second main source on which the paper bases its case against ELT is the article by Patall et al. covered in some detail above, in the section on Empirical Research Review Literature, which is reported to come to the

conclusion that “the research in this area is weak and ... it is difficult [therefore] to make strong causal inferences” (Texas Comprehensive Center, 2011, p. 3). The third main source on which the paper bases its case against ELT is an article by Coleman and Freehorn (1993), which offered three reasons for the anti-ELT position:

1. cost savings do not occur until school population grows to 115% of building capacity,
2. modification of the calendar leads to teacher burnout for those who teach intersessions—time that teachers would normally use for a break, and
3. modified calendars can disrupt extra curricular activities (Texas Comprehensive Center, 2011, p. 4).

Comparison & Contrast. In contrast with the McKinsey paper, the Texas Comprehensive Center paper allowed that “extended learning time can be used effectively as a strategy for improving the performance and learning of disadvantaged and minority students” (Texas Comprehensive Center, 2011, p. 6).

In a similar vein, the John Locke Foundation report concluded that although it is not the panacea that advocates make it out to be, an extended school day and year may be well suited for students who could benefit from high-quality supplemental instruction. The North Carolina public school system should give parents the option to send their child to a school with an alternative schedule, which may include longer or shorter days, if parents believe it to be in the best interest of their child’s education. Otherwise, the measure becomes one in a long list of one size fits all reforms that invariably fail to deliver on the promise of increasing student achievement (Stoops, 2007, p. 5).

It is notable that even opponents of ELT overwhelmingly allow for the possibility that ELT and ELO (or ELTO, to use the latest initialism, offered by the editors of Jossey-Bass, in *New Directions for Youth Development*, discussed above) may be appropriate for disadvantaged students from challenged socio-economic backgrounds, who represent the core constituency of U.S. schools in urban areas today.

“Instructional Time and National Achievement: Cross-National Evidence.” With rare exception (the McKinsey paper being the only example that this researcher encountered), publications opposed to ELT rely heavily on one particular study, “Instructional Time and National Achievement: Cross-National Evidence,” appearing in the September 2004 issue of *Prospects*, a journal of comparative educational policies and practices, co-published by Springer Science and Business Media and UNESCO (the United Nations Educational, Scientific and Cultural Organization), with a stated focus on policy implementation (*Prospects Website*). The article’s main author is David P. Baker, professor of education and sociology at Pennsylvania State University. His three co-authors were doctoral students, working in a supporting capacity.

As the title suggests, Baker et al. examined the question as to whether there is any correlation between academic achievement, especially in mathematics, and instructional time on a cross-national level. Their article makes the important point that when looking across national borders, there are far too many variables affecting the quality of time for quantity of instruction to be a meaningful figure. There are significant differences in pedagogy, curriculum, and student culture. When each hour of school looks so different across the world, comparing the number of those hours is an essentially futile exercise. *[Baker] does not, however, deny the power of instructional time as a resource within a given nation in which quality of time is reasonably uniform.* The lesson is a universal one, that students must receive a quantity of instruction

sufficient to learn and high enough quality instruction that they learn effectively [emphasis added] (Massachusetts 2020, p. 4).

In their conclusion, Baker et al. offered the following recommendation to makers of policy: “Do not waste resources in marginal increases in instructional time, as long as the system falls within world norms. If there is a choice between using resources to increase time versus improving teaching and the curriculum, give priority to the latter” (p. 331). Closely examined, this conclusion contains two problems, with regard to an anti-ELT position. First, the aspect of world norms is open to a certain degree of interpretation. Secondly—perhaps more importantly—proponents of ELT have never argued for an increase in learning time in the context of mediocre instructional quality. The idea is excellence in instruction, coupled with an increase in learning time and opportunities.

Summary of Opposition to ELT and Rebuttal by Advocates. Be that as it may, Patall et al. have reported that, “Parents and teachers have a history of divided opinion on the notion of extending school hours,” with recent opinion polls showing the public “almost evenly divided about extending school time, with 48% in favor and 49% opposed.

Today, the strongest opposition to extending school comes from middle-class and affluent parents who value the summer vacation for their children and question the value of additional school time. Opposition also comes from industries, including transportation, child care, food service, and tourism, whose profitability depends on the long summer break and afternoon hours during which students are free (p. 405).

Apart from the weaknesses in documentation for the efficacy of ELT and the issue of increased costs—which proponents have addressed largely by advocating partnerships that will subsidize the additional expenses—Patall et al. summarize the anti-ELT position clearly and

concisely: there is cause for concern with regard to potential teacher and student burnout, as well as “reduced opportunities for students to participate in extra-curricular or work activities.”

There is a concern that teachers, as well as principals and other school leaders, will be overloaded by longer hours and extra days. Furthermore, extended school hours would mean fewer opportunities for students to participate in extracurricular activities (e.g., music lessons, sports, Boy and Girl Scouts, etc.) or to maintain employment after school or during the summer. These too provided valuable learning experiences. [Some have] suggested that without increasing incentives, and in particular intrinsic rewards for students to put forth effort to learn, increasing allocated time may actually have negative effects on various academic outcomes. That is, students may be “turned off” to learning by the increased costs in terms of their time and effort. Similarly, other scholars have suggested that increasing school time could result in other undesirable student outcomes, including increased student fatigue and boredom, greater absenteeism, and increased drop-out rates (p. 408).

To this, ELT proponents, such as Gabrieli and the National Center for Time and Learning, argue that there is ample evidence in their recent publications (cited above) to document that when properly executed, ELT and ELO obviate these issues. Furthermore, they have stressed that ELT produces desirable financial and social returns over the long term, lowering expenditures on other social programs and remedial education, increasing future productivity and earnings, as well as reducing crime (Patall et al., 2010, p. 408). The long-range result for society is therefore substantial savings.

Chapter Summary

This chapter began by presenting several important points unlikely to be obvious to someone not steeped in the literature, beginning with an explanation of several dichotomies

relating to the term extended learning time. This was followed by a clarification of several important points on which there is general agreement, apart from the idea that time is one of many resources managed by schools for the purpose of educating children.

We then delineated the three basic stances taken with regard to available data and evidence, comprising the categories of advocates, skeptics/opponents, and empirically oriented academics and scholars.

It was acknowledged that the rich literature relating to ELT is far too vast to be covered comprehensively in all its dimensions in this chapter. It was disclosed that, as a practical matter, the literature review here will focus on relatively recent publications, addressing the following key categories: options for extended learning time, ELT in public school systems (non-charter schools), charter schools, impact and implications of bad weather days, summer learning loss, BELL summer learning program, after-school programs, empirical research review literature, empirical dissertation studies, advocacy literature, and anti-ELT literature (advocating the opposite perspective), for want of a better term.

These sections were all covered, in consecutive order. We ended by examining, first, the position of ELT advocates, followed by the position of ELT opponents and finally, a rebuttal of the opponents' position, by ELT advocates.

The next chapter will be concerned with the study's research design methodology. After the introduction, setting forth the general perspective, we will cover: problem statement, research question, research design, research context, research participants, data collection, data analysis and limitations of the study, followed by a brief summary.

Chapter 3: Research Design Methodology

Introduction: General Perspective

What will America's place be in the world during the years and decades ahead? Will it continue to fall behind other countries in many key areas or will it experience a resurgence that will restore it to its former position of superiority? Will the education we give our children, including those who may be considered at-risk (vulnerable) and disadvantaged, prepare them well to be truly competitive in the new global marketplace or will we fail them in this important regard? The issue of extended learning time (ELT) lies at the heart of this critical set of questions, for two reasons. First, education—the education of the youngest generation—is undeniably the foundation on which the long-term success of any country depends. Second, ELT offers one potential solution in the United States for making tremendous progress, relatively quickly, in the critical area of education.

Fifteen-year-old students in Shanghai in December 2010 vastly outperformed the rest of the world on the PISA (Program for International Student Assessment) test, ranking number one across the boards, internationally. They trounced their U.S. counterparts, who came in 14th in reading, 17th in science, and 25th in math (Ellis, 2010). Shanghai was the only test site in China, which has just begun to participate in the PISA.

The Chinese students in Shanghai share at least one thing in common with Sputnik-era Soviet students from more than 50 years ago, apart from living in what is politically a communist country: Many more classroom hours, as well as a longer school year, than their American counterparts. According to the *China Daily*, “On average, China’s children spend 8.6 hours a day at school, with some spending 12 hours a day in the classroom” (Xinhua, 2007). This, compared to a conventional 6.5-hour school day for U.S. children.

The obvious question that presents itself now, as it did half a century ago, is whether more time in class would do for American children what it seems to be doing for students in other countries that are outperforming them: enhance academic outcomes. This is the key question around which the issue of extended learning time turns. If empirical evidence demonstrates that ELT can indeed substantially enhance academic outcomes, this will have clear and obvious implications for policy decisions in the years ahead. Simply stated, U.S. primary and secondary schools should promptly reorganize, to intelligently implement ELT. If, on the other hand, solid empirical evidence demonstrates that ELT does not do for students what its proponents believe, then at least policy makers can turn their attention and energy to a serious examination of other possible solutions. Either way, progress will have been made.

This study is designed to help to fill a gap in the empirical literature, for which research designs have been deemed “generally weak for making causal inferences” (Patall et al., 2010, p. 401). Although this study by itself will not fill the gap, it will at least make a contribution in that direction. Together with other well-designed studies, it will help us arrive at an answer to the important question as to whether ELT merits implementation on a broad scale in U.S. schools.

Problem Statement

Having framed the topic in its historical context, we will now articulate in some detail the problem statement. Since the concept of extended or expanded learning time (ELT) in its modern-day form began to develop approximately 50 years ago, there has been substantial controversy as to whether the application of ELT in a U.S. context could achieve the desired result of improved academic outcomes. Numerous empirical studies during the past 25 years have at least hinted that this could be the case, especially with regard to disadvantaged populations (see Karweit, 1985 & Patall et al., 2010) but all of these studies have been criticized as being flawed in one respect or another, thus limiting their value with regard to demonstrating the efficacy of ELT (Patall et al., 2010).

There are perhaps five major additional dimensions to the controversy over the implementation of ELT in the U.S. that serve to illustrate both its importance and complexity. These dimensions, taken together with the basic context given above, represent a detailed articulation of the problem statement. The first of these dimensions may be stated as the economic challenges that the country currently faces. In an era of shrinking budgets, education is being hit particularly hard and this trend is not likely to be reversed any time in the foreseeable future. Arguments can be made that ELT in the long run may save money. A better educated workforce is more productive, for example, and at-risk youth staying out of trouble will result in substantial long-term savings to society. In the short term, however, ELT clearly represents an additional expenditure (not just in terms of teacher salaries but also facilities and maintenance), at a time when additional expenditures are encountering resistance in the extreme.

The second of these dimensions to the controversy over the implementation of ELT in the U.S. that serve to illustrate both its importance and complexity relates to the truism that time

engaged in any one activity means time that cannot be used toward other pursuits or activities. In this respect, ELT conflicts with informal learning, extracurricular activities, free time, family time and student employment (which relates back to the economic dimension, as less financial support from parents means that some students must work to generate income to make up for that, especially students from disadvantaged families).

A third dimension to the controversy concerns the possibility of administrator and teacher “burnout,” in the face of working extended hours (see for example Patall et al., 2010, p. 406). If this is true, then not only may ELT be said to be ineffective but it may be said to be deleterious and indeed counterproductive to educational efforts, as the quality of teaching and administration would suffer.

A fourth dimension to the controversy relates to potential negative effects for students participating in ELT programs: wasted time (allocated time does not necessarily translate into increased instruction), increased fatigue and boredom (leading to decreased effort) and increased absenteeism and even drop-out rates as a result (Patall et al., 2010, p. 406). In this sense, ELT is viewed as potentially counterproductive.

The fifth and final dimension considered here concerns the social dynamic of disadvantaged youth, for whom the stakes regarding academic outcomes are even greater than for others. For these children, lack of results or negative results can mean much more than just a difference in level of success or achievement. Potentially, this is a tragedy not just for the at-risk youth but society as well, with numerous ramifications, in many ways.

The fact that this study will contribute toward filling a void in the existing literature, as described above, makes this research project worthy of being conducted (Creswell, 2002). It is

only through a well-designed empirical study, however, that the key question as to the efficacy of ELT in a U.S. context can be adequately addressed.

The introductory section above shows the connection between the topic of the study and real-world issues of exceptional importance, consistent with the mission statement of St. John Fisher College in general and the School of Education in particular, doing “whatever it takes to connect with and actively engage each and every child” (St. John Fisher College School of Education Website Main Page).

At a “micro” level, only by preparing students to be competitive—in the world into which they will enter after completing whatever level of education they will complete—will we as educators be doing them justice. In an increasingly interconnected and competitive world, individuals who by virtue of their educational background are not competitive in the job market will be condemned to lives of struggle at best. At a “macro” level, society will also suffer, especially with regard to those individuals who may be considered socio-economically disadvantaged and therefore at-risk. These individuals have less of a support structure and are more likely to fall through the social safety net. Left with few viable options, they are more likely to become a burden on society. At best, they will rely on government benefits. At worst, they may resort to socially deviant and criminal behavior, as a survival strategy.

In this light, the study purpose may be said to operate on two levels, academic and social. On the first level, the goal is to provide insight and help to fill a gap in the existing literature, as described above. On the second level, the goal is to contribute toward helping both individuals and society, in a very real and practical way.

Research Question

This detailed problem statement leads us, then, to the formulation of the research question that guides this study: Is there a statistically significant difference between the academic achievement of socio-economically disadvantaged fourth-grade students in the “Big Five” who are enrolled in ELT programs and those who are enrolled in standard programs, as measured by scores on the fourth-grade level New York State English Language Arts (ELA) assessment test? (“Big Five,” ELA and other terms will be elaborated on in the Research Context section below.)

The hypothesis and null hypothesis that follow from this research question are as follows.

Hypothesis: There is a statistically significant difference between the academic achievement of socio-economically disadvantaged fourth-grade students in the “Big Five” who are enrolled in ELT programs and those who are enrolled in standard programs, as measured by scores on the fourth-grade level New York State English Language Arts (ELA) assessment test.

Null hypothesis: There is no statistically significant difference between the academic achievement of socio-economically disadvantaged fourth-grade students in the “Big Five” who are enrolled in ELT programs and those who are enrolled in standard programs, as measured by scores on the fourth-grade level New York State English Language Arts (ELA) assessment test.

The research question articulated above is consistent in general with the principles outlined in *Educational Research: Planning, Conducting and Evaluating Quantitative and Qualitative Research* (Cresswell, 2002) and specifically, with the parameters for research as stated by experts in this particular area.

In their landmark analysis, detailed in the previous chapter’s literature review, Patall et al. criticized all previous empirical studies regarding ELT for what they pointed to as flaws in the research designs. “It is fair to say that the effect of ED [extended day, equivalent to ELT] has

yet to be fairly tested using well-controlled experimental or quasi-experimental designs from which strong causal implications could be drawn” (2010, p. 423). Key aspects of their critique included lack of a control group, lack of longitudinal strength and weaknesses in correspondence of studied populations (in other words, comparing “apples to apples”).

The methodology adopted here is as consistent with all the principles of the Patall critique as the data set available to the research allows, as will be detailed further in the sections below. Furthermore, the focus of this study responds to the expressed interest of both Karweit (1985)—author of the previous landmark study, as described in Chapter 2 above—and Patall et al., to the effect that ELT “may be particularly [effective] for at-risk students” (Patall et al., 2010, p. 423). In other words, the methodology proposed here represents—in the main—the kind of study that Patall and her coauthors asserted will help to advance our knowledge about the potential value of ELT. (The limitations will be acknowledged and described below.)

Research Design

To describe the overall research design, this quantitative study will be quasi-experimental, as the investigator will utilize post-treatment data, in the form of the ELA mean scores of two groups of socio-economically disadvantaged fourth grade public school students attending both traditional public schools and charter schools in the so-called Big Five (the five largest cities in the state of New York: Buffalo, New York City, Rochester, Syracuse and Yonkers).

The term quasi-experimental refers to a design in which the subjects of study or observation are not randomly assigned to different groups for the purpose of measuring outcomes, as in an experiment that is randomized, but rather categorized on the basis of pre-existing characteristics or qualities. The word traditional is used here to mean schools that follow a conventional, non-ELT, academic schedule, typically a 6.5-hour day.

The term public school refers to all schools offered to or mandated for all children by the government—whether national, regional or local—provided by an institution of civil government and subsidized (paid for), in whole or in part, by revenue from state taxes. The term charter school refers to publicly funded yet independent schools established by parents, teachers or community groups, under the terms of a charter with a local or national authority.

Charter schools, which typically offer ELT programs, are part of the public education system and, as such, will be included in the study. For purposes of this study, public elementary schools will be all public schools that are located in the Big Five that offer programs for students up to the fourth grade.

The investigator will utilize demographic and student assessment data, to conduct a statistical analysis comparing mean ELA scores of students who participate in ELT programs with the mean scores of students who attend programs that follow a conventional 6.5-hour school day schedule.

For purposes of this study, ELT programs will refer to traditional public and charter school programs that extend beyond the conventional 6.5-hour school day. Traditional public and charter schools that implement conventional school day schedules will refer to schools that operate up to 6.5 hours per day.

This study will gather data on two distinct populations, represented as Group A and Group B. Group A will refer to students who attend schools with conventional 6.5-hour schedules, while Group B will refer to students who attend schools with ELT programs, seven or more hours in length.

With regard to the demographic aspect, it should be noted that the traditional public and charter schools in the Big Five cities are urban schools with similar populations, typically

consisting predominantly of students who may be considered disadvantaged and at-risk. Data available at the New York State Report Cards database described below will be used to select only those schools at which at least 80% of the students qualify for free and reduced lunches, a key indicator of socio-economic family status. The study population of both Group A and Group B will therefore be similar in terms of being urban and disadvantaged, as well as fourth-grade level.

All schools that have not had 80%+ free/reduced lunch for three consecutive years will be eliminated from the study. This can be done based on the data set itself. Further eliminated will then be any schools that have not operated continuously during the three years under consideration (2008-2009, 2009-2010 and 2010-2011) as either ELT or traditional programs.

The reason for selecting fourth graders for the study is that fourth grade is a benchmark grade and as such, weights heavily on the AYP (annual yearly progress) for the New York State Report Cards. The grade four tests are much more comprehensive and therefore more challenging than all of the other grades. ELA tests in other grades are formatted and timed differently (e.g., test items and mean score ranges). It is also worth noting that when a school implements ELT, the extended time relates overwhelmingly—in principle, at least—to classroom instruction.

The raw data will consist of three years of fourth-grade ELA testing results for the school years 2008-2009, 2009-2010 and 2010-2011 (scheduled for release on February 28, 2012). The source for the data will be the New York State Report Cards database, which makes all data publicly available through its website (<https://reportcards.nysed.gov>).

Each year's database contains multiple tables (files) with information needed for the study. These include: Demographic Factors, BEDS Day Enrollment, ELA Grade 4 Sub Group

Results and BOCES Similar Schools. For each school year included in the study, these tables will be combined and then filtered, based upon the required criteria: public (including charter) schools that have a free and reduced lunch rate of 80% or above, with three years of consecutive data available at the fourth grade level. Any school that does not meet the criteria for the study for three years (free/reduced lunch, ELT/non-ELT, etc.) will be eliminated from the convenience sample. What this also means is that any school that has not operated continuously during the three years under consideration (2008-2009, 2009-2010 and 2010-2011) as either ELT or traditional program will not be included in the study.

The four categories of schools whose data will be analyzed are Traditional Public ELT, Traditional Public Non ELT, Charter School ELT and Charter School Non ELT. Because the best way to combine all three years of data is through Microsoft Access, this program will be selected to organize the data. After all of the source data have been combined into a single consolidated data set, the best tool to perform the analysis will be SPSS (Statistical Package for the Social Sciences), which includes the statistical tools necessary to evaluate the research question, by testing the associated hypotheses.

Prior to analysis, ELA mean scores will be examined and trimmed. The distribution will be examined for outliers, defined as values lying outside three standard deviations from the mean. Such values will be excluded from all analysis involving mean scores.

A two-tailed independent samples t Test will be used to determine whether mean scores differ between Group A and Group B. The alpha level for the analysis will be set at .05 to determine with 95% probability that the differences observed in the mean scores of students in Group A and Group B are not due to chance. Setting the significance level at .05 will ensure that whatever is observed in the data has a strong likelihood of not being attributable to chance. A

two-tailed Spearman's rho correlation will be used to look for a relationship between mean scores and school day hours.

As described above, the methodology proposed here is an example overall of the kind of study that Patall and her coauthors stated will help to advance our knowledge about the value of ELT, as much as the data set to which the researcher has access will allow: quasi experimental, utilizing a control group, and with a high degree of correspondence in terms of sample population groups (disadvantaged urban dwelling fourth graders in the Big Five cities of the state of New York). It cannot be longitudinal, in the strict sense of the term, as the data set allows us to follow only particular schools and not particular students. The population in question—at-risk youth—is universally deemed to be the category of students who potentially stand the most to benefit from ELT. Society, in turn, stands the most to benefit from their success, as explained earlier.

The sections that follow will elaborate on various specifics of the proposed design.

Research Context

The location of the study, the situational demographics and other descriptors inherent in the setting and important to the study have been covered above. To reiterate the main points: The location will be the Big Five cities of the state of New York (Buffalo, New York City, Rochester, Syracuse and Yonkers). Demographically, the population under study will be fourth graders from schools reporting at least 80% eligibility with regard to free and reduced lunches, as reported through the official New York State Report Cards database, which makes all data publicly available through its website (<https://reportcards.nysed.gov/>).

The research context section is an appropriate juncture at which to elaborate on several additional terms used above: AYP (adequate yearly progress) for New York State Report Cards Database, Big Five and the term “urban,” and English Language Arts (ELA) assessment.

AYP (adequate yearly progress) for New York State Report Cards. In the context of the drive to improve academic outcomes through greater transparency and accountability on the part of educational institutions, AYP (adequate yearly progress) has been defined by the Public Education Network and National Coalition for Parent Involvement in Education (NCPIE) as “the key measure in determining whether a public school or school district is making [sufficient] ‘annual progress’ towards the academic goals established by each [individual] state.” States are individually “responsible for setting goals that call for ‘continuous and substantial improvement’ of each public school district and public school, with the ultimate outcome that all students must meet the state’s standards for proficiency in language arts and math by the year 2014” (PEN & NCPIE).

In NCPIE’s formulation, AYP is based on four main mutually aligned pillars: (1) the development of state content and achievement standards, (2) state assessments each year in grades 3-8 and once in high school, in reading/language arts and math (administered to at least 95% of the eligible students, to determine whether students are reaching the desired standards), (3) assessment data disseminated widely to parents and the community on an annual basis to inform them with regard to the progress their public schools are making and (4) a means, including rewards and sanction, of holding school districts and schools accountable for meeting AYP goals (PEN & NCPIE).

Adequate Yearly Progress (AYP) is a tool required by NCLB (the No Child Left Behind Act of 2001), to determine which school districts and schools are making adequate academic

progress. At the same time, its purpose is to identify those schools in need of improvement, corrective action or restructuring because they are not making the required progress. All states that accept Title I funding (which at this time is every state) must establish AYP goals for every public school district and for every school in the state. Each state is required to assess and report on the AYP performance of each school in the state, even for those schools and school districts that do not qualify as Title I entities. Sanctions are applied for those Title I schools that fail to meet AYP goals. (Sanctions do not apply to non-Title I schools.)

Every state is required to develop a single accountability system based on that state's assessment system, for all public schools in the state. This involves establishing a "starting point" based on performance of its lowest-achieving demographic group or of the lowest achieving schools in the state, whichever is higher. On that basis, the state then sets the bar or level of student achievement that a school must reach after two years, in order to continue to demonstrate AYP.

Test scores are "disaggregated," in the sense that each school district and every school must report the AYP on student bodies both as a whole and also in terms of four different subgroups: (1) economically disadvantaged students, (2) special education students, (3) limited English proficient students (also known as ELL, for English Language Learners) and (4) students from major racial/ethnic groups.

Each individual subgroup must meet the AYP expectations set by the state and each subgroup must have at least 95% of its members tested. Any subgroup that does not meet AYP goals or does not satisfy the assessment participation rate of 95% is determined to be non-compliant with regard to AYP. Each state is given the discretion of determining how large a subgroup must be in order to be reported for AYP purposes. NCLB states that disaggregated

data “shall not be required in a case in which the number of students in a category is insufficient to yield statistically reliable information or results would reveal personally identifiable information about an individual student” (PEN & NCPIE).

In the context of this study, NCLB reporting requirements represent a tremendous boon, as this reporting requirement is what accounts for the existence of these data and makes it possible to collect the publicly reported data necessary for this study.

Big Five and the term urban. “Financing Education in New York’s ‘Big Five’ Cities,” an online report from the Office of the New York State Comptroller, offers substantial insight with regard to the Big Five cities in the context of public education at the primary and secondary levels. Though the publication is undated, the most recent year from which data are drawn is 2003. In this report, New York State Comptroller Alan G. Hevesi states that the Big Five cities (Buffalo, New York City, Rochester, Syracuse and Yonkers) are in a state of fiscal distress and this in turn “affects their dependent school systems, which already face significant challenges associated with the socio-economic composition of their students and the age of their facilities.” Together, the schools in these cities account for more than 40% of the state’s public school enrollment, the vast majority being poor, minority and limited with regard to English language proficiency. Stress and expense are exacerbated by new federal and state performance standards, as described immediately above, which “are particularly difficult for these schools to achieve” (Hevesi, p. 2).

The Big Five districts are not independent entities, unlike other school districts in the State. Although they have varying degrees of independence with regard to programmatic control (except in New York City, where education is now effectively under the direct control of the municipal government), these school districts are all fiscally dependent on their cities, meaning

that “they cannot levy taxes or determine independently how much they will spend on instructional programs and services. It also means that education in these cities must be funded within constitutional tax and debt limits for the big cities” (Hevesi, p. 2).

New York’s large urban areas—the Big Five cities under discussion here—are characterized by more poverty, more diverse populations with larger numbers of immigrants than the rest of the State. These demographics are not only reflected by typically magnified in the public school populations because more affluent parents tend to send their children to private schools. “Students in these districts are significantly more likely than their counterparts in other areas of the State to be indigent and of limited English proficiency.” They also attend school less often, are suspended more frequently, have a lower graduate rate and a lower college attendance rate than students in other districts in the State (Hevesi, p. 3).

The financial situation surrounding the Big Five school districts is actually quite complex, made difficult by new performance standards at both the State and federal levels, the No Child Left Behind (NCLB) Act of 2001, described above, and a Court of Appeals ruling known as CFE (*Campaign for Fiscal Equity, Inc. v. the State of New York*)—in which it was held that New York State has unconstitutionally denied students in the New York City public schools a sound basic education, as a result of allowing schools to be underfunded—all in the context of an economic downturn, regionally, nationally and globally. All of this has led the Comptroller to raise the question as to “whether a system in which the largest and most disadvantaged school populations are financially dependent upon fiscally stressed cities is even reasonable” (Hevesi, p. 12). What is most relevant for purposes of this study is the background information as to the meaning of the term Big Five and its relationship to urban educational challenges, specifically with regard to disadvantaged populations, as discussed immediately above.

English Language Arts (ELA) assessment. Students in grades 3 to 8 are required to take the State ELA test each spring, to determine how well they are doing with regard to the New York State Learning Standards for their grade level. Although students who have been in the United States for less than one year are not required to take the ELA in their grade, they are required to begin taking the test after their first year. Some students with disabilities are allowed to take the New York State Alternate Assessments (NYSAA) in place of the ELA, if this has been specified on their Individualized Education Plans (IEPs) (NYCDOE).

The ELA test is a timed test containing a number of different types of questions. Multiple choice questions are based on short passages, requiring responses to open-ended questions based on articles, poems or stories, in written or audio format. Correct answers are converted into a “scale score,” which makes it possible to compare performance across different grades. These scores are divided into four performance levels. Students scoring at levels 1 and 2 are deemed not to have achieved the necessary standards and as a result, may not be promoted to the next grade. Those who score at level 3 or 4 are considered to have met or exceeded State Learning Standards. At the individual level, reports are used to identify areas in which the student needs additional help (or, in some cases, more challenging material). In the aggregate, school-wide results are used by educators to identify ways in which instruction needs to be improved (NYCDOE).

New York State Report Cards Database. The New York State Report Cards provide enrollment, demographic, attendance, suspension, dropout, teacher, assessment, accountability, graduation rate, post-graduate plan, career and technical education, and fiscal data for public and charter schools, districts, and the State. The report cards consist of three parts: Accountability and Overview Report (AOR), Comprehensive Information Report (CIR), and Fiscal

Accountability Supplement. For each reporting year, a companion database containing data statewide and by county, Need/Resource Capacity Index, district, and school in many of the above areas is also provided for statistical analysis purposes (<https://reportcards.nysed.gov>). These Report Cards are comprised of data submitted by local school district officials to the New York State Education Department (NYSED) by the reporting deadline (NYSED IRS, 2011).

Research Participants

The study population will be socio-economically disadvantaged fourth grade public school students in the Big Five school districts in New York State. Group A will consist of students who attend schools with conventional 6.5-hour schedules, while Group B will refer to students who attend schools with ELT programs, seven or more hours in length.

The reason for selecting fourth graders for the study, as mentioned above, is that fourth grade is a benchmark grade and as such, weights heavily on the AYP (annual yearly progress) for the New York State Report Cards. The grade four tests are much more comprehensive and therefore more challenging than all of the other grades. ELA tests in other grades are formatted and timed differently (e.g., test items and mean score ranges). It is also worth noting that when a school implements ELT, the extended time relates overwhelmingly—in principle, at least—to classroom instruction.

The schools that will be included in this study will be identified after the investigator determines which traditional and charter public schools in the Big Five cities meet the criteria for the study (i.e., have student bodies with at least 80% eligibility with regard to free and reduced lunches, identifying their families as socio-economically disadvantaged).

In addition to school populations with less than 80% eligibility with regard to free and reduced lunches, any schools without three consecutive years of data (such as charter schools that have been operational for less than three years) will be eliminated from the sample.

Though the exact number of participants is not known at this time, the fact that the Big Five cities will be involved means that the sample size should be substantial enough not to raise any issues in that regard. The fact that only public record data will be used also simplifies the process, as there are no issues with regard to treatment of human subjects.

As mentioned above, New York's large urban areas—the Big Five cities under discussion here—are characterized by more poverty, more diverse populations with larger numbers of immigrants than the rest of the State. These demographics are not only reflected but typically magnified in the public school populations because more affluent parents tend to send their children to private schools. “Students in these districts are significantly more likely than their counterparts in other areas of the State to be indigent and of limited English proficiency.” They also attend school less often, are suspended more frequently, have a lower graduate rate and a lower college attendance rate than students in other districts in the State (Hevesi, p. 3).

Numerous studies in both the U.S. and other countries have shown that students from this type of background, who may be described as either socio-economically disadvantaged or at-risk (because they are socio-economically disadvantaged), pursue higher education in substantially lower numbers than students from more affluent, privileged backgrounds. This can negatively impact the lifelong personal and career development of an individual, as well as the individual's children, as the pattern tends to repeat itself from one generation to the next (see for example Forsyth & Furlong, 2003).

Although there is no universally accepted standard definition of the term at-risk (or “at risk”), as it is applied to youth or other demographic groups (Moore, 2006), it is used here in its most basic sense, to mean vulnerable. In this context, the vulnerability is the result of socio-economic circumstances, whereby children whose families are poor and lacking formal education (and often English-language proficiency, as well as familiarity with U.S. society in general and the educational system in particular) are ill-positioned and unlikely to receive the support they need to succeed educationally, thereby placing them at a disadvantage.

Data Collection

The simplicity and straightforward nature of the data collection procedure is considered one of the study’s strong points. Public record demographic and assessment test data will be collected directly from the New York State Report Card database. The data will be anonymous as far as individual students are concerned.

With regard to determining school hours, the investigator or a research assistant will use a two-step process for all the schools whose student bodies prove to have a minimum 80% eligibility level with regard to free and reduced lunches, identifying their families as socio-economically disadvantaged. The first step of the process will involve checking the school’s websites for hours of instruction, if available online. The second step will be to confirm that information by direct telephone contact. This will serve as a check on the information that appears online, to make sure it is accurate.

The telephone script is very simple:

Good morning, my name is [name of person calling, either researcher or assistant]. I am conducting a telephone survey of school hours for public schools in the Big Five Cities of

New York State. Can you please tell me what the official school hours are for your school? Were these the same school hours for 2008 to 2011?

Due to the very straightforward nature of the data collection process in both cases (from the New York State Report Cards database and with regard to school hours), there should be no issues as far as reliability and validity of data collection instruments.

Data Analysis

The research design was selected for simplicity and reliability. This quantitative study will be focused solely on data collected through the New York State Report Card database, in order to reduce subjectivity. The study will not be influenced by observations, interviews, surveys or the investigator's personal participation in the study. (The benefits of a quantitative approach are described in greater detail in the Summary section, below.)

Using the NYS Report Card Databases for each year of the study, a Microsoft Access view will be created with the following fields for all public and charter schools in the Big Five:

- School BEDS Code
- School Name
- School Address and Phone Number
- Time in School: (1) traditional time and (2) ELT
- Type of School: (1) public traditional and (2) charter
- School District
- School Percent and Number Free Lunch
- School Percent and Number Reduced Lunch
- Grade 4 Register
- Number Tested in Grade 4

- Mean Scale Score

The four categories of schools whose data will be analyzed are Traditional Public ELT, Traditional Public Non ELT, Charter School ELT and Charter School Non ELT. Schools with under 80% free and reduced lunch will be eliminated from the sample. Categories for the five districts will be identified by number, in alphabetical order (consistent with the concept of objective impartiality): (1) Buffalo, (2) New York City, (3) Rochester, (4) Syracuse and (5) Yonkers. The length of the school day for each of these schools will then be determined, as described above. Access and Excel will then be used to organize and analyze the data, respectively.

Statistical techniques will be utilized to conduct an analysis of the mean ELA scores of students to determine whether there is a statistically significant difference between the performance of students in Group A and Group B. Specifically, a two-tailed T-Test will be used to determine whether mean scores differ between Group A and Group B.

The alpha level for the analysis will be set at .05 to determine with 99% probability that the differences observed in the mean scores of students in Group A and Group B are not due to chance. Setting the significance level at .05 will ensure that whatever is observed in the data has a strong likelihood of not being attributable to chance.

This approach will enable the investigator to directly address the research question: Is there a statistically significant difference between the amount of time that socio-economically disadvantaged fourth-grade students in the “Big Five” spend in school and their performance on the New York State English Language Arts (ELA) assessment test for the fourth-grade level, when comparing ELT and non-ELT learners?

Chapter Summary

The issue of extended learning time (ELT) lies at the heart of a critical set of questions. One of these is the question as to whether the education we give our children, including those who may be considered at-risk (vulnerable) and disadvantaged, will prepare them well to be truly competitive in the new global marketplace or, rather, we will fail them in this important regard. It is also a question with important implications regarding America's place in the world.

The puzzle to be solved that presents itself now, as it did half a century ago in the aftermath of the Sputnik phenomenon, is whether more time in class would do for American children what it seems to be doing for students in other countries that are outperforming them: enhance academic outcomes. This is the key question around which the issue of extended learning time turns.

This study is designed to help to fill a gap in the empirical literature, for which research designs have been deemed “generally weak for making causal inferences” (Patall, 2010, p. 401). Although there are numerous potential limitations to this study, as acknowledged above, they do not negate the potential contribution in the direction of filling the existing gap in the empirical literature—in combination with other well-conceived studies—helping us to arrive at certain conclusions with regard to the important question as to whether ELT merits implementation on a broad scale in U.S. schools.

If empirical evidence demonstrates that ELT can indeed substantially enhance academic outcomes, this will have clear and obvious implications for policy decisions in the years ahead. If, on the other hand, solid empirical evidence demonstrates that ELT does not do for students what its proponents believe, then at least policy makers can turn their attention and energy to a serious examination of other possible solutions. Either way, progress will have been made. The

fact that this study will contribute toward filling a void in existing research, as described above, makes this a problem worthy of being researched (Creswell, 2002).

One important dimension of the ELT controversy concerns the social dynamic of “at-risk” disadvantaged youth, for whom the stakes regarding academic outcomes are even greater than for others. For these children, lack of results or negative results can mean much more than just a difference in level of success or achievement. Potentially, this is a tragedy not just for the at-risk youth but society as well, with numerous ramifications, in many ways.

The methodology adopted here is consistent with key principles implicit in the Patall critique: utilizing a control group, quasi-experimental and with a high degree of correspondence in terms of sample population groups. Furthermore, the focus of this study responds to the expressed interest of both Karweit (1985)—author of the previous landmark study, as described in Chapter 2 above—and Patall et al., to the effect that ELT “may be particularly [effective] for at-risk students” (Patall et al. 2010, p. 423). In other words, the methodology proposed here represents—in the main, as much as the available data set allows—the kind of study that Patall and her coauthors, as well as others, have asserted will help to advance our knowledge about the value of ELT.

The investigator will retrieve the demographic and assessment test data from the New York State Report Cards database. Determination as to whether a qualifying school is ELT or non-ELT will be made through a two-step process, finding that information on the school’s website (if it exists there) and then confirming that information through a telephone call to the school. The data will then be organized and statistically analyzed as described in the section immediately above.

There are a number of advantages to the quantitative research approach adopted here. First, the design enables others to replicate the results. Second, the quantitative method makes it possible to clearly summarize large amounts of data, as well as to facilitate good comparisons over time and across categories. Third, quantitative research allows for greater accuracy and objectivity of results, generating summaries of information that support a certain level of generalizations regarding the phenomenon or phenomena under study. Fourth, quantitative research serves to eliminate researcher bias. Fifth, quantitative research offers an effective method for finalizing results to prove or disprove a particular hypothesis.

Chapter 4: Results

Introduction

To briefly recap the methodology detailed in the preceding chapter, statistical techniques will be utilized to conduct an analysis of the mean ELA scores of students to determine whether there is a statistically significant difference between the performance of students in what have been described as Group A (comprised of students who attend schools with conventional 6.5-hour schedules) and Group B (comprised of students who attend schools with ELT programs, seven or more hours in length). Specifically, a two-tailed T-Test will be used to determine whether mean scores differ between these two groups.

The alpha level for the analysis will be set at .05 to determine with greater than 99% probability that the differences observed in the mean scores of students in Group A and Group B are not due to chance. Setting the significance level at .05 will ensure that whatever is observed in the data has a strong likelihood of not being attributable to chance.

This approach will enable the investigator to test the hypothesis: There is a statistically significant difference between the academic achievement of socio-economically disadvantaged fourth-grade students in the “Big Five” who are enrolled in ELT programs and those who are enrolled in standard programs, as measured by scores on the fourth-grade level New York State English Language Arts (ELA) assessment test.

Results & Findings

Descriptive Statistics. Of the 1,329 schools included in the study, 985 were defined as standard programs (less than a 7-hour school day) and 344 were defined as Extended Learning Time or ELT (a 7-hour or longer school day).

The length of the school day was reported as ranges of the times of day from the start to the end of the school day. These times were converted into the number of school day hours for each school. Schools had school day lengths ranging from 5.15 to 8.50 hours. The mean school day length was 6.47 (SD = 0.43) and the median was 6.20 ($n = 1,324$). The distribution of these values was deemed to be non-normal—that is to say, not approximating a bell curve.

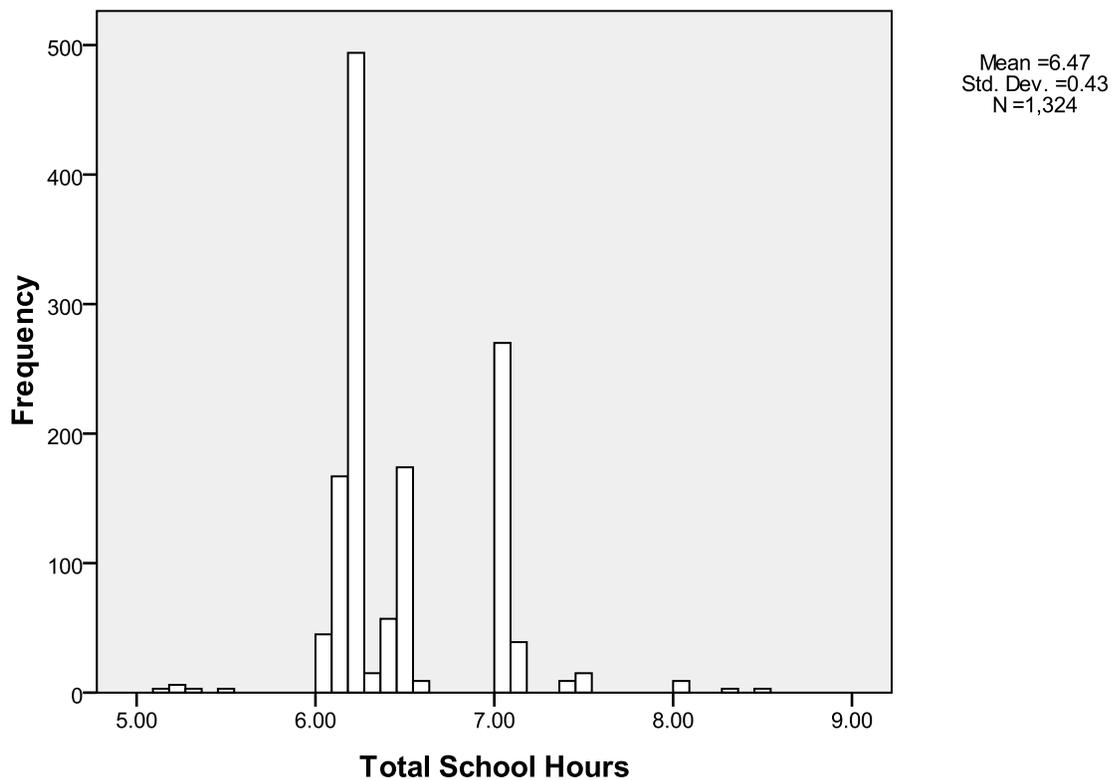


Figure 4.1: School Day Hours Frequency Distribution Histogram

When the database was split on ELT status, the mean school day length for non-ELT schools was 6.24 hours (SD = .193) and the median was 6.20 (n = 985). The mean school day length for ELT schools was 7.10 hours (SD = .262) and the median was 7.00 (n = 344). As with the unsplit distribution of school day hours, neither of these distributions can be considered normal.

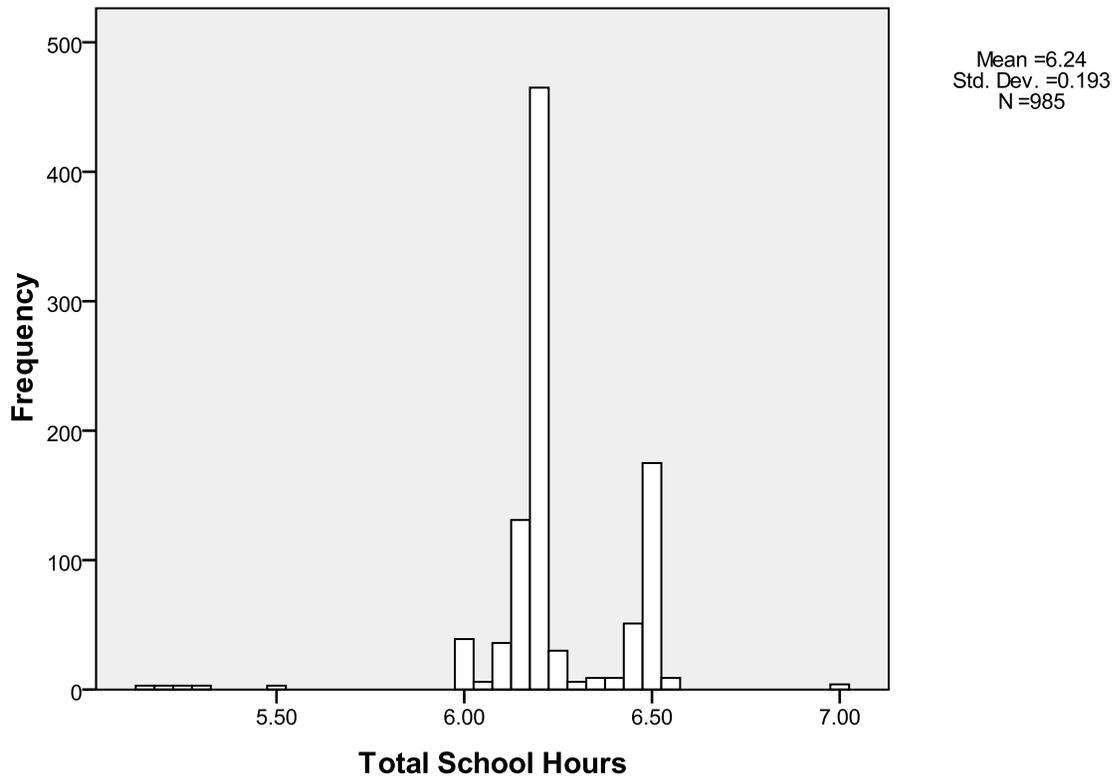


Figure 4.2: School Day Hours Frequency Distribution Histogram (Non-ELT Group)

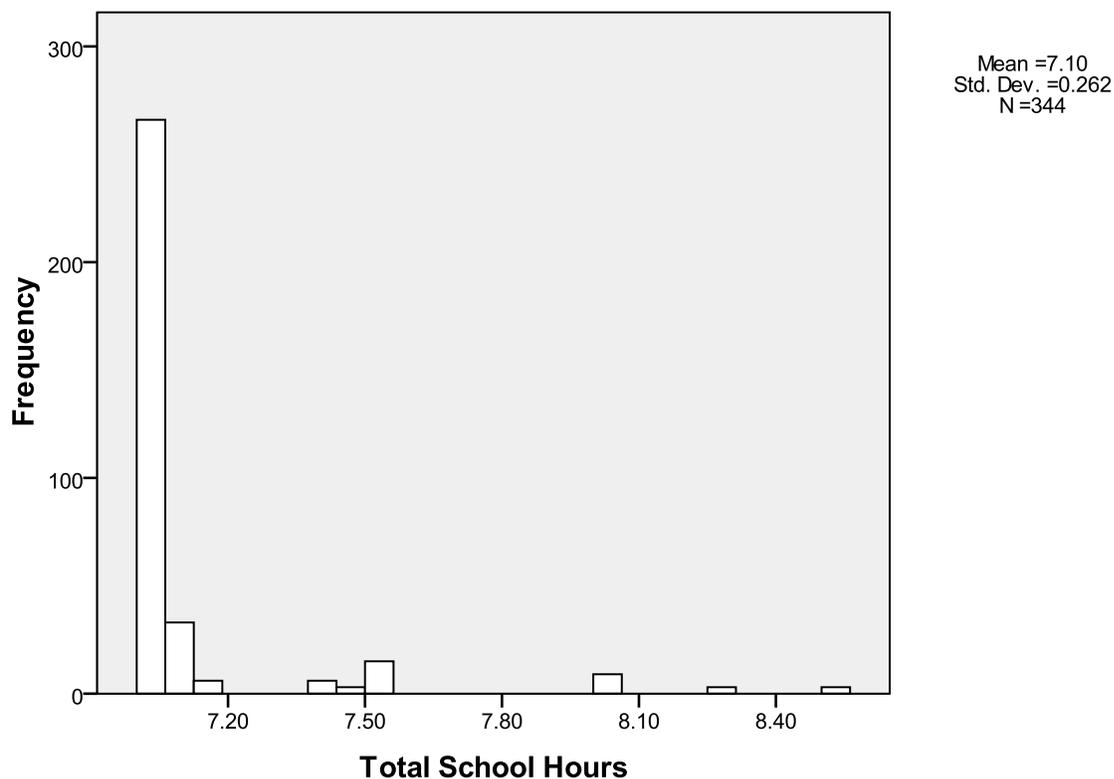


Figure 4.3: School Day Hours Frequency Distribution Histogram (ELT Group)

An Alternate Definition of ELT. Using the data collected in this study, an alternate definition of ELT was created, post hoc. The thinking behind this decision originated with the fact that the sample was grouped in ELT status more heavily on the side of non-ELT (n = 985) than ELT (n = 344). The purpose of creating the alternate definition of ELT (“New-ELT”) was to more deeply explore the data by taking a perspective on ELT that diverges from the generally accepted or standard definition. The new ELT groupings were defined using the median of the study data as a cut-point to create two roughly evenly sized groups (New-Non-ELT and New-ELT).

As noted above, schools reported school day lengths ranging from 5.15 to 8.50 hours. The distribution of values in the school day hours variable were deemed to be non-normal. Mean school day hours was 6.47 and the median was 6.20. Creating New-ELT groups using 6.20

created a group of schools with school days of shorter than or equal to 6.20 hours ($n = 692$) and another group of schools with school days longer than 6.20 hours ($n = 633$). The actual difference between this definition of ELT and the accepted/standard one amounts to exactly 18 minutes of a school day.

When the database was split on New-ELT status, the mean school day length for New-non-ELT schools was 6.15 hours ($SD = .141$) and the median was 6.20 ($n = 692$). The mean school day length for ELT schools was 6.80 hours ($SD = .376$) and the median was 7.00 ($n = 637$). As with the unsplit distribution of school day hours, neither of these distributions can be considered normal.

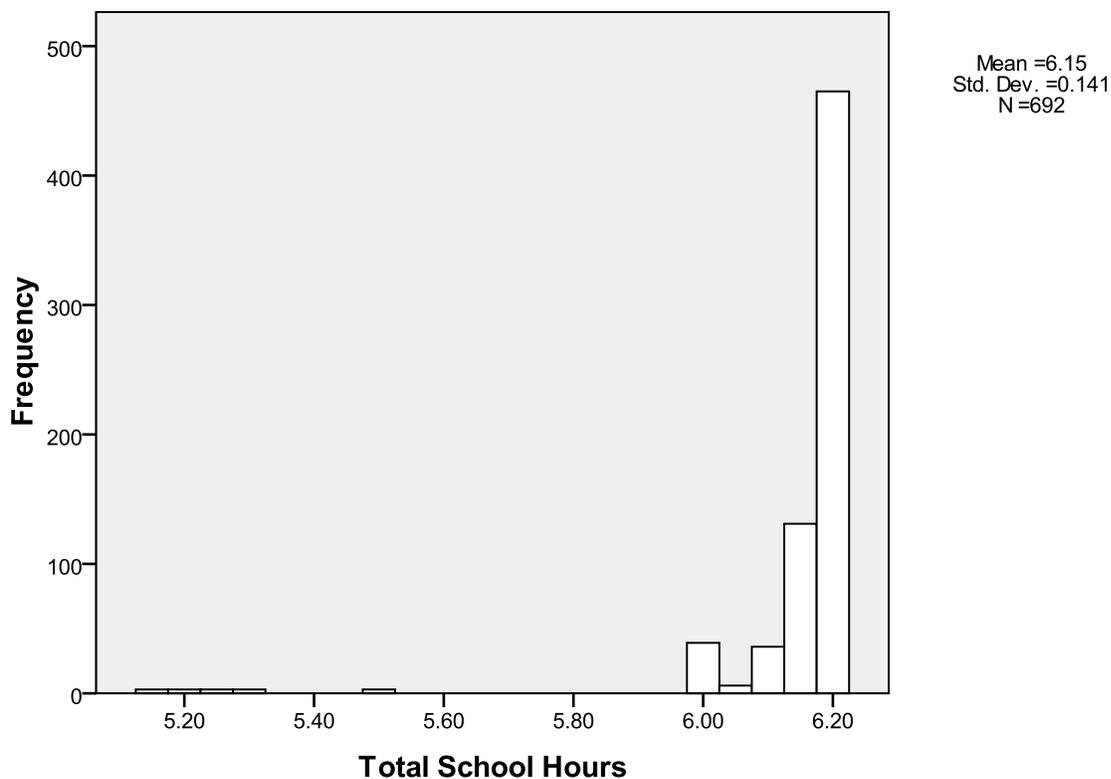


Figure 4.4: School Day Hours Frequency Distribution Histogram (New-Non-ELT Group)

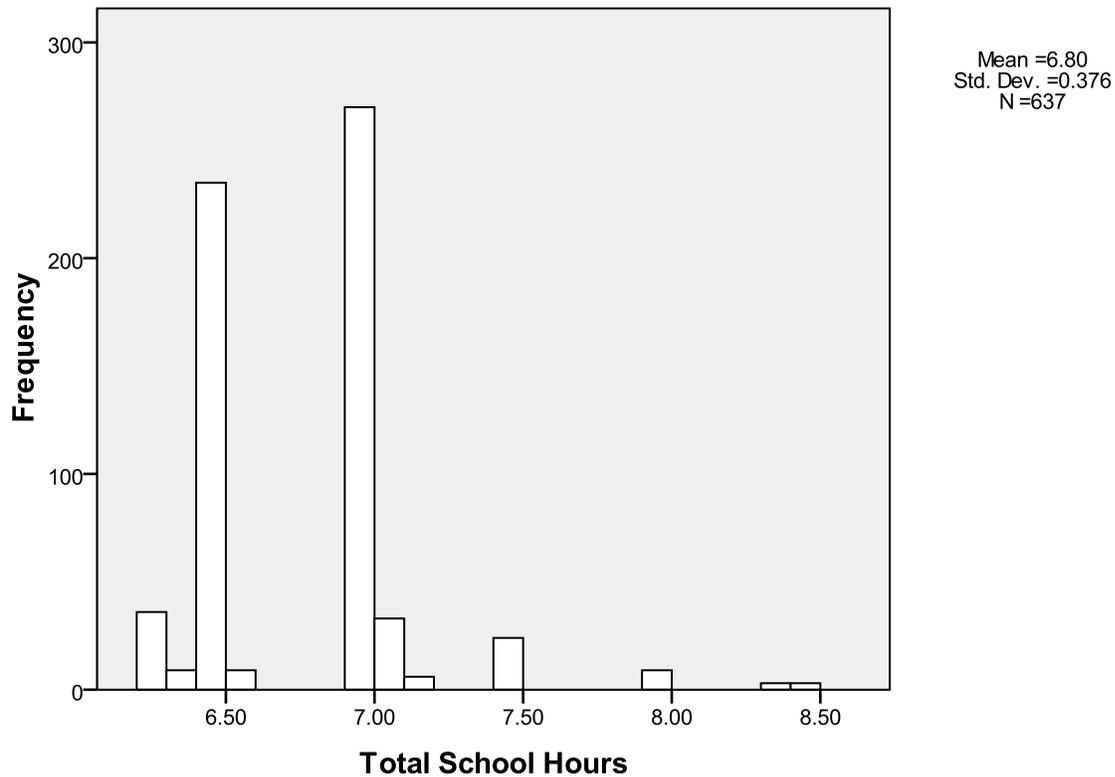


Figure 4.5: School Day Hours Frequency Distribution Histogram (New-ELT Group)

Mean Fourth-Grade ELA Scores. ELA mean scores for schools included in this study ranged from 618 to 696, with a mean of 659.84 (SD = 11.289). The distribution was judged to be normal by comparison of measures of central tendency (median = 659, mode = 659) and a visual inspection of the distribution in a histogram.

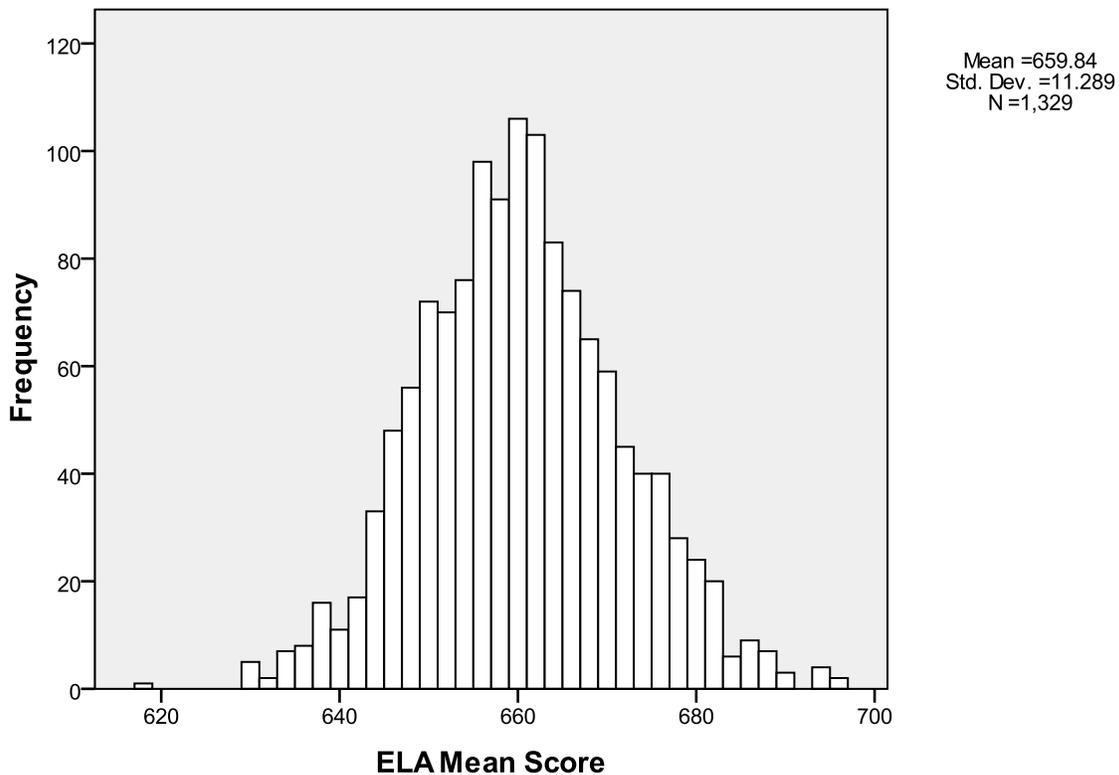


Figure 4.6: Mean ELA Scores Frequency Distribution Histogram

Outliers for mean ELA score were defined as any points lying at or outside of the third standard deviation ($z\text{-score} \geq 3$ or $z\text{-score} \leq -3$) and were excluded from analysis. This resulted in the exclusion of five scores. The new distribution had a minimum of 629, a maximum of 693, and a mean of 659.76 (SD = 11.084). According to the study’s original definition of ELT, all five of the excluded scores were from schools with standard (non-ELT) programs; according to the study’s alternate definition of ELT (New-ELT), one of the excluded scores was from schools with standard (New-Non-ELT) programs and four were from schools with extended-day (New-ELT) programs.

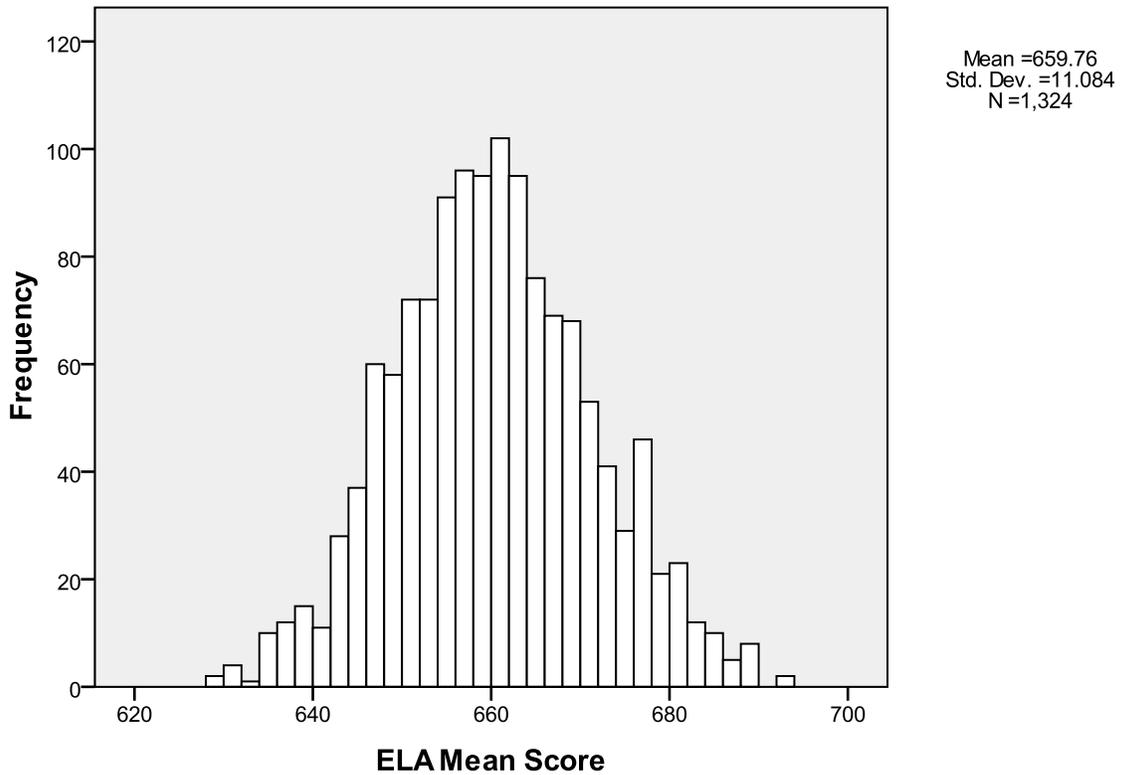


Figure 4.7: Trimmed Mean ELA Scores Frequency Distribution Histogram

When the database was split on ELT status and outliers omitted, the mean ELA Mean Score for non-ELT schools was 659.51 ($SD = 11.109$, $n = 980$). For the non-ELT group, ELA scores ranged from 629 to 693. The mean ELA Mean Score for ELT schools was 660.47 ($SD = 10.994$, $n = 344$). For the ELT group, ELA scores ranged from 629 to 688. As with the unsplit distribution of ELA Mean Score, both of these distributions can be considered normal.

Histogram

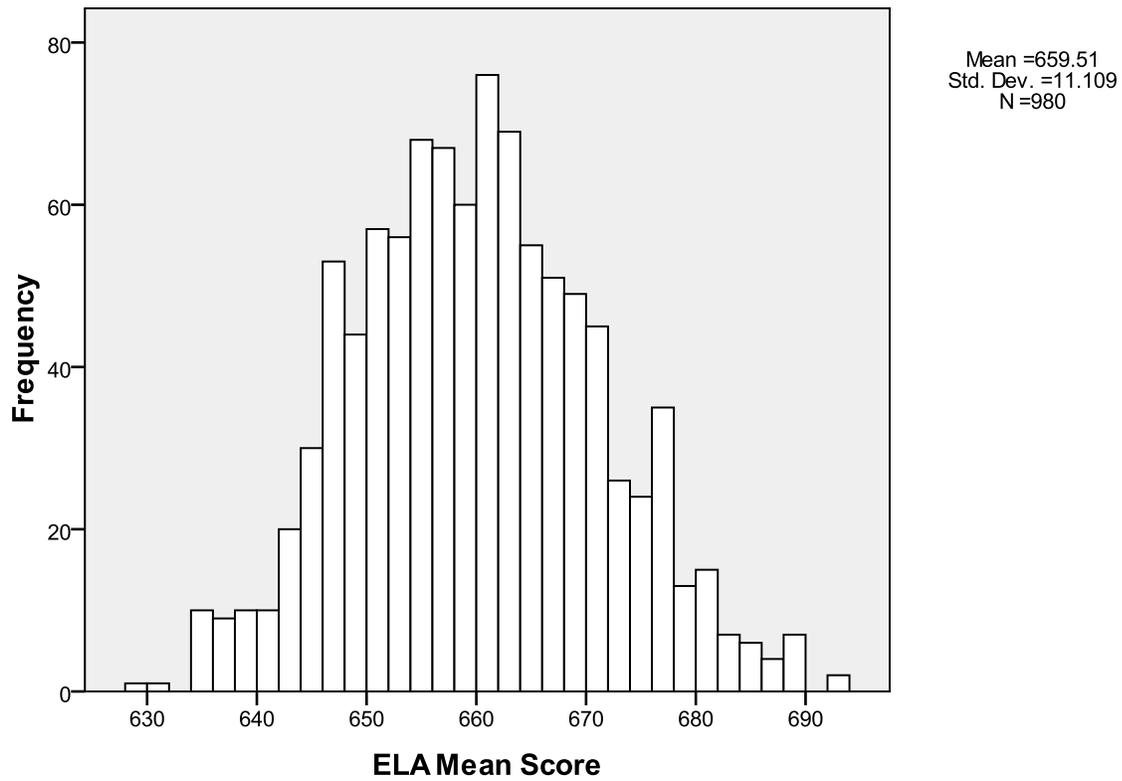


Figure 4.8: Trimmed Mean ELA Scores Frequency Distribution Histogram (Non-ELT Group)

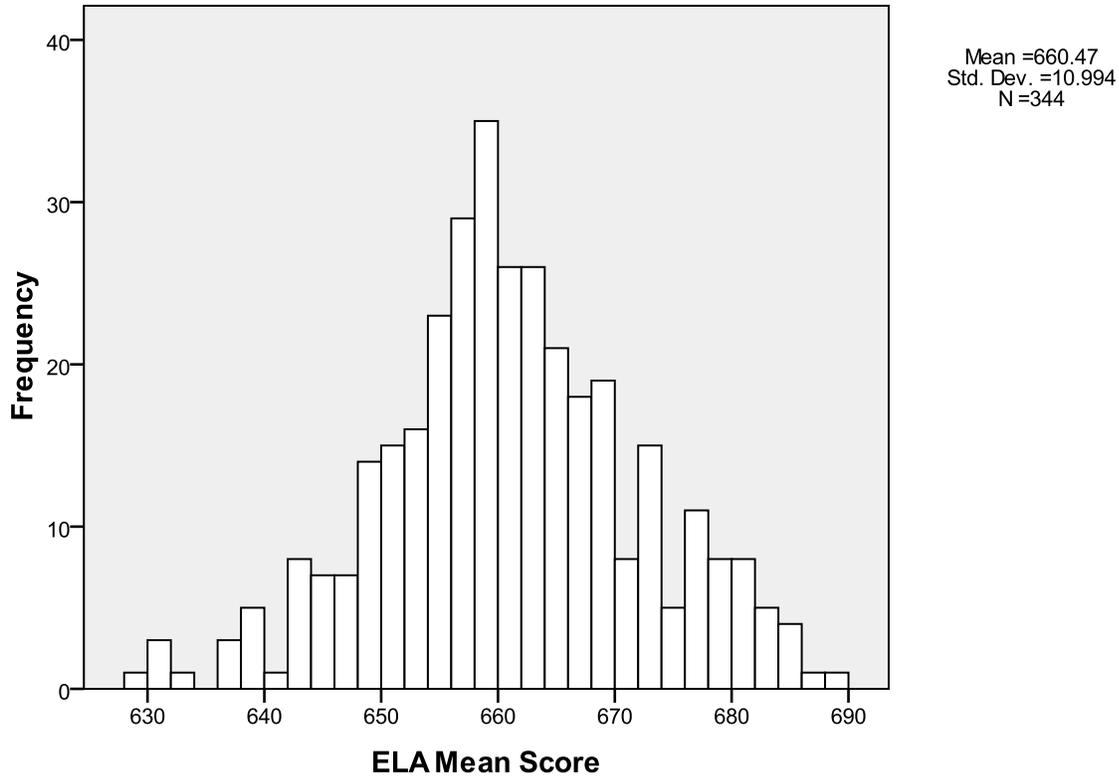


Figure 4.9: Trimmed Mean ELA Scores Frequency Distribution Histogram (ELT Group)

When the database was split on New-ELT status, the mean ELA Mean Score for New-non-ELT schools was 659.14 ($SD = 10.721$, $n = 691$). For the New-Non-ELT group, ELA Mean Scores ranged from 630 to 689. The mean ELA Mean Score for New-ELT schools was 660.44 ($SD = 11.436$, $n = 633$). For the New-ELT group, ELA Mean Scores ranged from 629 to 693. As with the unsplit distribution of ELA Mean Score, both of these distributions can be considered normal.

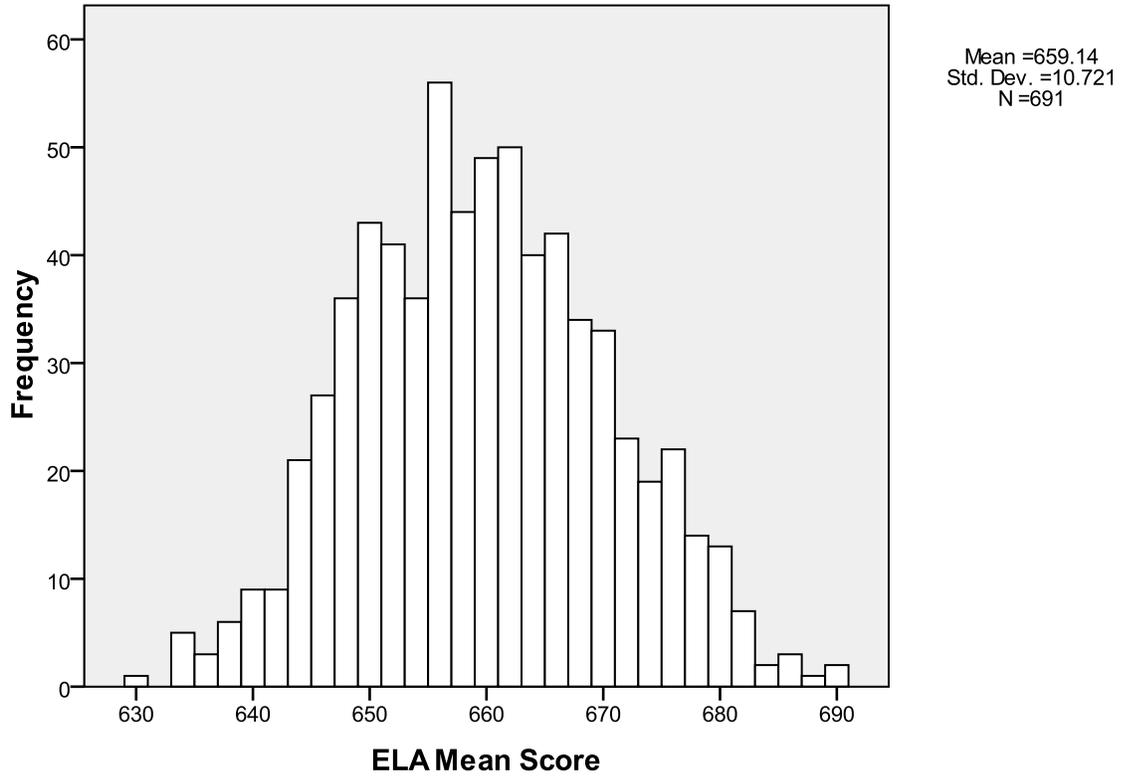


Figure 4.10: Trimmed Mean ELA Scores Frequency Distribution Histogram (New-Non ELT Group)

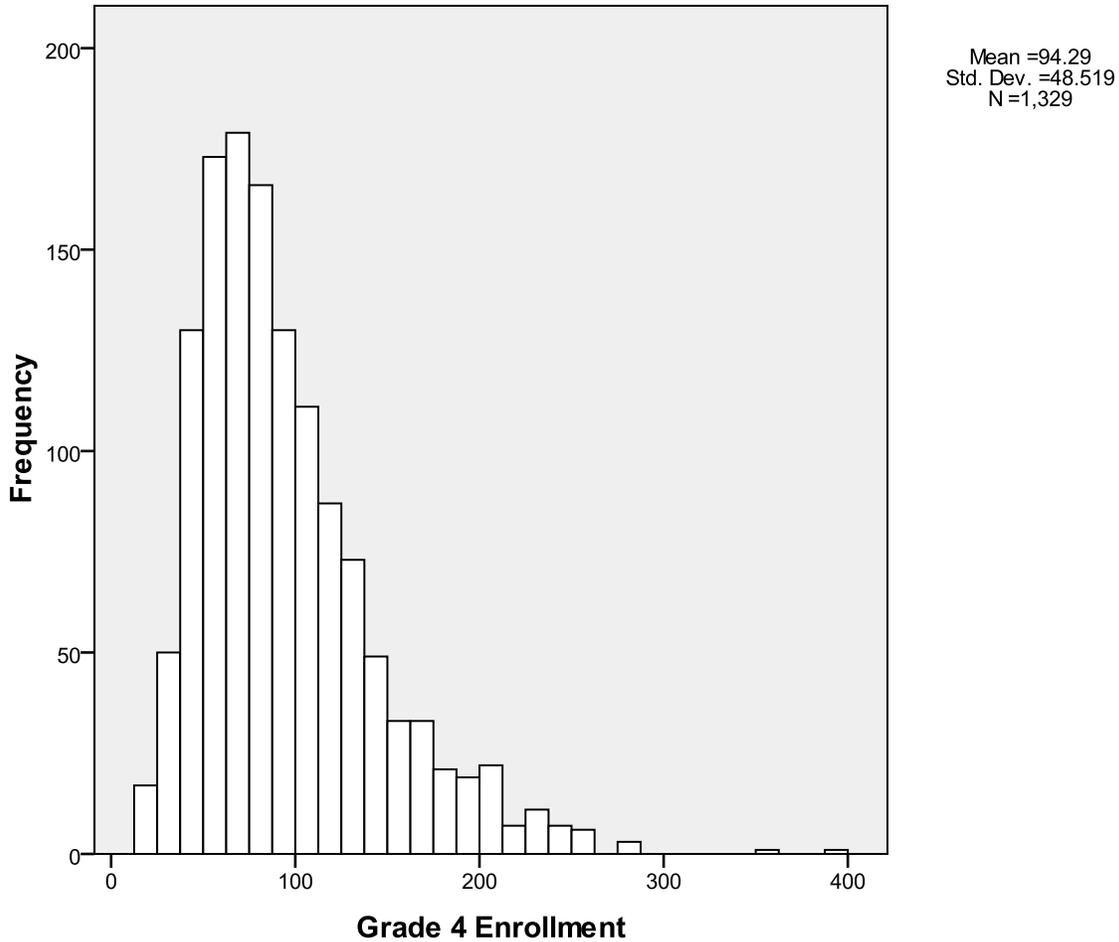


Figure 4.11: Fourth Grade Enrollment Frequency Distribution Histogram

Hypothesis Testing. *There is a statistically significant difference between the academic achievement of socio-economically disadvantaged fourth-grade students in the “Big Five” who are enrolled in ELT programs versus those who are enrolled in standard programs, as measured by scores on the fourth-grade level New York State English Language Arts (ELA) assessment test.*

As noted earlier, when the database was split on ELT status, the mean ELA Mean Score for non-ELT schools was 659.51 ($SD = 11.109$, $n = 980$). For the non-ELT group, ELA scores ranged from 629 to 693. The mean ELA Mean Score for ELT schools was 660.47 ($SD = 10.994$,

$n = 344$). For the ELT group, ELA scores ranged from 629 to 688. As with the unsplit distribution of ELA Mean Score, both of these distributions can be considered normal.

An independent-samples t test was conducted to test for a significant difference between ELT program schools and standard program schools on mean fourth-grade ELA score. The two groups were considered to have equal variances according to a Levene's test ($p > .05$). While the ELT group was higher than the standard group by .964 points, the t test showed no statistically significant difference between the two groups ($t = -1.388$, $df = 1,322$, $p > .05$). Based on the current definition of ELT, we are obliged to retain the null hypothesis: There is no statistically significant difference between the academic achievement of socio-economically disadvantaged fourth-grade students in the "Big Five" who are enrolled in ELT programs and those who are enrolled in standard programs, as measured by scores on the fourth-grade level New York State English Language Arts (ELA) assessment test.

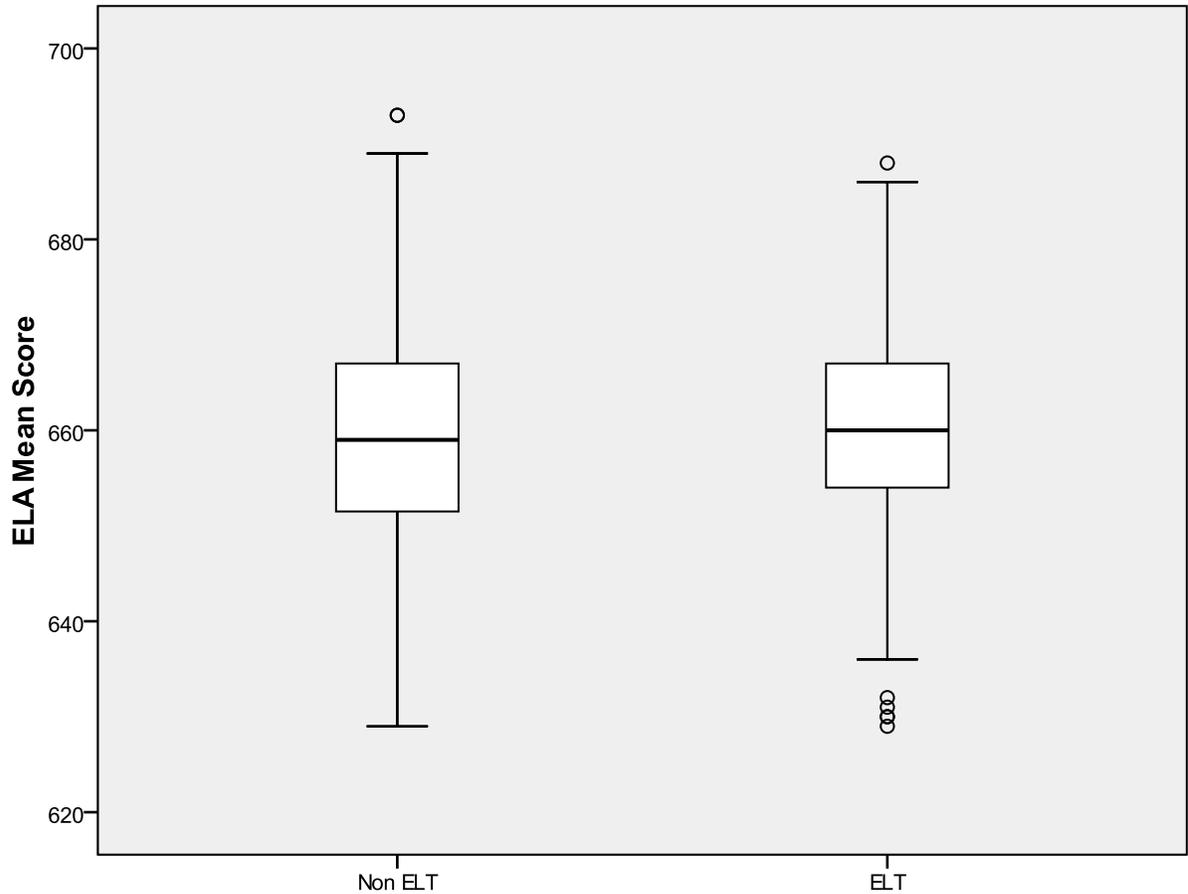


Figure 4.12: Mean ELA Scores by ELT Box and Whisker Plot

As noted earlier, when the database was split on New-ELT status, the mean ELA Mean Score for New-non-ELT schools was 659.14 ($SD = 10.721$, $n = 691$). For the New-Non-ELT group, ELA Mean Scores ranged from 630 to 689. The mean ELA Mean Score for New-ELT schools was 660.44 ($SD = 11.436$, $n = 633$). For the New-ELT group, ELA Mean Scores ranged from 629 to 693. As with the unsplit distribution of ELA Mean Score, both of these distributions can be considered normal.

Using the alternate definition of ELT (school days longer than 6.2 defined as New-ELT), an independent samples t test was conducted to look for a significant difference between ELT program schools and standard program schools on ELA Mean Score. The two groups were

considered to have equal variances according to a Levene's test ($p > .05$). The ELT group was higher than the standard group by 1.3 points. The t test showed a statistically significant difference between the two groups ($t = -2.135$, $df = 1,322$, p value of $.030 < .05$).

This result indicates that a real difference on mean ELA scores may exist for schools with longer versus shorter school days based on the alternate definition of ELT. However, because the actual mean difference is quite small, caution must be exercised in the interpretation of this finding.

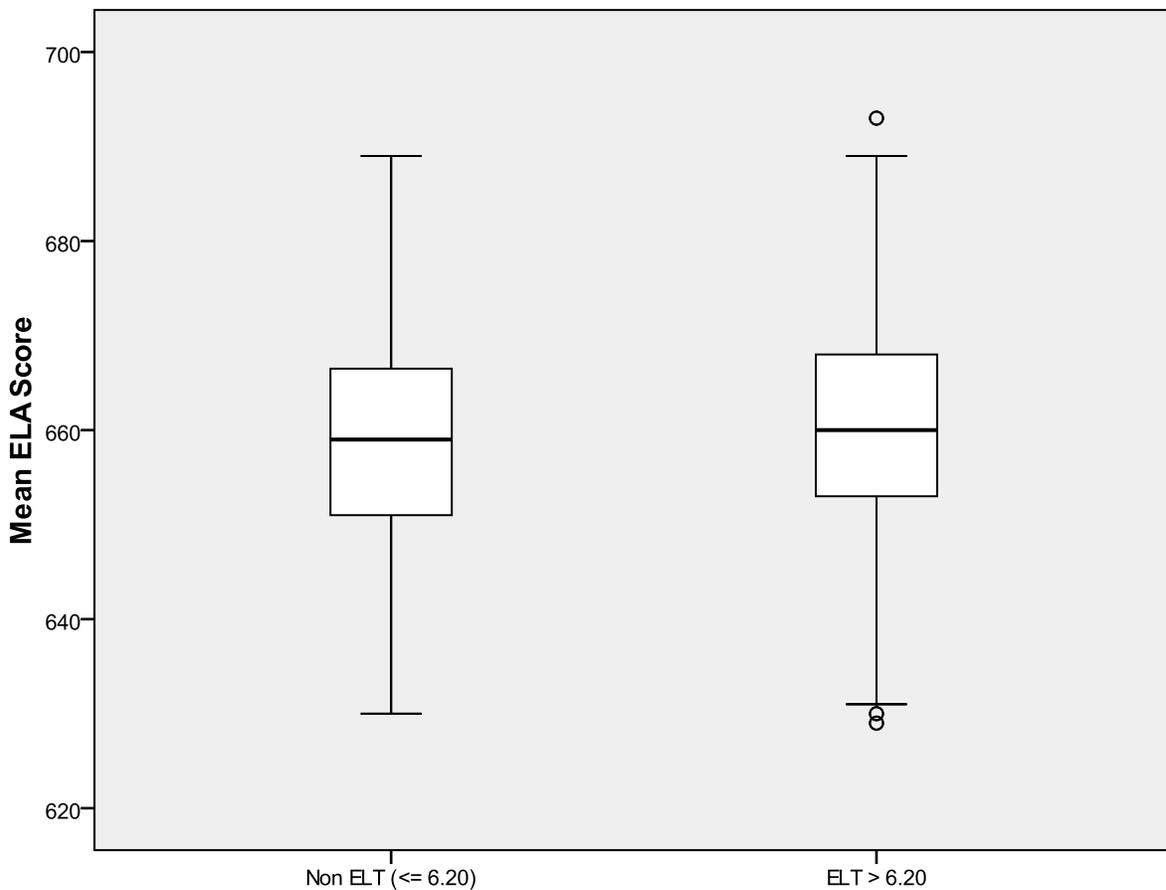


Figure 4.13: Mean ELA Scores by New-ELT Box and Whisker Plot

A Spearman's rho correlation was selected for use because of the non-normal nature of the distribution of the school day hours variable. It bears mention that the Spearman's rho coefficient can range from -1.00 to 1.00. A positive coefficient indicates the values of one variable vary in the same direction as the other variable, while a negative coefficient indicates the values of one variable varies in the opposite direction of the other variable.

A two-tailed correlation was conducted to test for a relationship between length of school day (in hours) and ELA Mean Score. The correlation was significant ($\rho = .095$, $p = .001$, $n = 1,324$). The rho value indicates a very weak relationship between these two variables. To a very small degree, when school day hours increase in the sample, so too does ELA Mean Score.

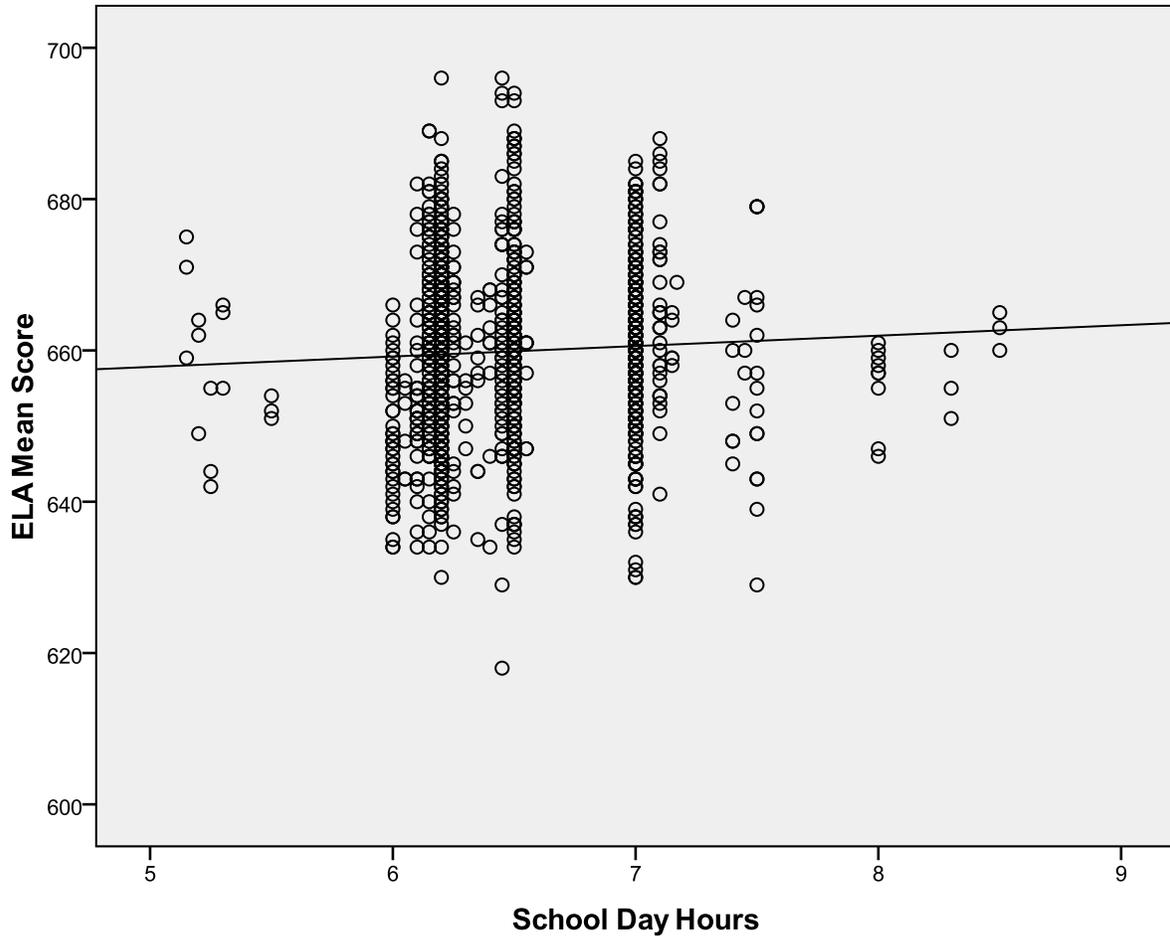


Figure 4.14: School Day Hours and Mean ELA Score Scatterplot with Best-Fit Line

The researcher desired to perform independent samples t tests comparing non-ELT and ELT institutions (by both the original and the new definitions) on mean ELA score separately for charter schools and non-charter (i.e., traditional) schools, yielding four t tests. Exploration of the data revealed that, among charter schools, there were fewer than 10 non-ELT institutions.

Table 4.1: Distribution of Sample by Traditional / Charter and ELT Status for Two Definitions of ELT

		ELT defined as ≥ 7 hours	ELT defined as > 6.2 hours
Traditional ($n = 1,300$)	ELT	326	612
	Non-ELT	974	688
Charter ($n = 24$)	ELT	18	21
	Non-ELT	6	3

The t tests, separate for charter and traditional schools, yielded no statistically significant results for any of the four proposed relationships ($p > .05$). This is a situation in which we may be lacking the statistical power required to find a significant relationship that may exist in reality.

Chapter Summary & Conclusions

By way of specific conclusions, the following observations are offered:

1. ELT, defined as school days 7 hours or longer, did not significantly impact mean ELA scores.
2. ELT, defined as school days longer than 6 hours and 12 minutes (or 6.2 hours), impacted mean ELA scores, with ELT schools (mean ELA score = 660.53) having a higher average of mean ELA scores than non-ELT schools (mean ELA score = 659.19) by 1.34 points.

3. ELT, defined in both ways, did not significantly impact mean ELA scores in separate tests on traditional and charter schools.

By way of summary, it may be said that the findings of this study suggest that further research is required to determine whether ELT has real value for student learning.

Chapter 5: Discussion

Introduction

What, as previously asked in a rhetorical fashion above, will America's place be in the world during the years and decades ahead? Will it continue to fall behind other countries in many key areas or will it experience a resurgence that will restore it to its former position of superiority? Will the education we give our children, including those who may be considered at-risk (vulnerable) and disadvantaged, prepare them well to be truly competitive in the new global marketplace or will we fail them in this important regard? The issue of extended learning time (ELT) lies at the heart of this critical set of questions, for two reasons. First, education—the education of the youngest generation—is undeniably the foundation on which the long-term success of any country depends. Second, ELT offers one potential solution in the United States for making tremendous progress, relatively quickly, in the critical area of education.

Does more time in class offer the prospect of doing more for American children what it for a long time has seemed to many to be doing for students in other countries that are outperforming them: enhance academic outcomes? This is the key question around which the issue of extended learning time turns and the question at the core of this study. The results, as described in detail in the preceding chapter, fail overall to support this assertion. The inability to lend support to a particular hypothesis does not in itself disprove the general assertion that ELT

has the potential to enhance academic outcomes for U.S. students. That being said, however, the support of the negative hypothesis in this particular study does at the very least call into question the assertions of ELT proponents who state that the argument should have been considered settled long ago.

Implications of Findings

Recall mention above of a substantial body of work, more popular than scholarly in nature, the premise of which is that there is no question as to the value of ELT and the need to implement it on a broad scale nationwide, as quickly as possible. The only question, according to this body of literature, is how to best accomplish this. The leading figure in this area is probably Chris Gabrieli, a part-time lecturer at the Harvard Graduate School of Education and founder of the National Center for Time & Learning (NCTL, Website at timeandlearning.org), the country's leading advocacy organization for ELT and reform of the school calendar.

In September 2011, NCTL and the Center for American Progress (CAP) co-hosted "Time Well Spent," a release event for an NCTL report by the same name. The release event featured U.S. Secretary of Education Arne Duncan and New York Education Commissioner John King. In her opening remarks, moderator Cindy Brown, CAP's Vice President for Education Policy, described ELT as a "*proven* strategy to increase student achievement." Duncan, who was the first to speak after Brown, declared that "*we don't need to study this issue any more*" (emphases added). The way to close the achievement gap between U.S. students and those in other countries, Duncan said, is to "move the country further and faster" in the direction of wide-scale implementation of ELT ("Time Well Spent" Release Event, 2011).

Apart from several groups that have formed a kind of informal coalition with NCLT in its advocacy of ELT (the Center for American Progress, the Harvard Family Research Project, and

Massachusetts 2020, all non-profits), it could be argued that the federal government—under both Democratic and Republican leadership—has functioned as the major advocate for ELT, since the publication of “A Nation at Risk: The Imperative for Educational Reform,” a report issued in April 1983 by President Ronald Reagan’s National Commission on Excellence in Education.

The mantle of federal government support for ELT has been passed from the Reagan Administration to successive administrations of both Democrats and Republicans, to the present day, at which time it is being carried on behalf of the Obama Administration by U.S. Secretary of Education Arne Duncan. At the release event for NCLT’s *Time Well Spent* report, Secretary Duncan in his keynote address stated:

The fact that our school calendar is still based on an agrarian economy is stunning to me and the fact that we have been so slow to move is just absolutely unacceptable. What this report demonstrates is that [ELT] is not just a good idea theoretically but is [actually] getting results We don’t need to study this issue any more (Center for American Progress, 2011).

One of the most serious implications of the findings of this study is that enthusiastic proponents of ELT, including those within government, would be well advised to reconsider their position to the effect that the issue has long been settled and there is no need for further study as to the value in a U.S. context of ELT, which should be expeditiously implemented without further discussion. A related implication, discussed elsewhere in this study, is that educators must seriously consider non-ELT-related ideas for the purposes of improving academic outcomes.

Limitations

It is appropriate at this point to review the potential limitations of this study. Because the study is based on test results of students at the fourth grade level in five city school districts in New York State, from populations deemed to be socio-economically disadvantaged, it is not feasible to draw conclusions beyond this particular population. It is possible that studies focusing on different populations (other grade levels, in other regions and not socio-economically disadvantaged) would arrive at different conclusions regarding the potential value of ELT programs. Otherwise stated, this scenario does not lend itself to generalizing the results to a larger population.

Another potential issue with generalizability (making predictions based on a recurring experience) may be said to be “internal,” as opposed to the “external” generalizability to outside populations. That is to say, the three years of data analyzed may not necessarily be representative of past or future years. In the words of an authoritative source, “The choice of a purposeful sample [limits] the generalizability of any findings to populations other than the participants” (Creswell, 2003).

The study presumes that the overwhelming majority of additional time in school as a result of ELT is devoted productively, for classroom instruction. In a larger sense, the inherent presumption is that ELT is being utilized intelligently, as opposed to simply being squandered, with students physically present in school but not engaged in genuine learning activities. To whatever significant extent this is not the case, the results of the study may be considered invalid or possibly even misleading. In other words, if ELT is not being utilized intelligently, then results showing that ELT learners are not performing better on the ELA test than non-ELT

learners is not a reflection of the potential value of ELT but simply the educators charged with implementing the program.

Similarly, even if the educators charged with implementing ELT programs are diligent in terms of the energy and conscientiousness to which they are attempting to implement the programs, it is nonetheless possible that poor results with regard to test scores are more a reflection of their method of implementing ELT, rather than a sweeping invalidation of ELT regardless of method of implementation. In other words, lack of any significant differences in test scores between ELT and non-ELT learners may possibly be considered simply a reflection of a problem in approach and methodology. The results would not necessarily mean that all approaches to ELT would be similarly ineffective.

Even in a best-case scenario in which the implementation of ELT in the school populations involved in the study represents an optimal approach, any study's results are only as good as the data on which they are based. To whatever extent the data reporting is flawed, this would translate into unreliable results (though the researcher encountered no basis for believing that there are any issues in this regard here).

Likewise, there is a certain assumption that the assessment tool, the ELA test, and the way it is scored accurately reflect student learning or lack thereof. To whatever extent the assessment tool does not accurately measure student academic outcome, this too would translate into unreliable results regarding the value of ELT.

A further limitation relates to the subject matter of the assessment tool. Even in a best-case scenario in which the English Language Arts test is well-conceived, properly administered, protected from significant manipulation (such as cheating), accurately evaluated and reported, there is always the possibility that learning outcomes in this subject area differ significantly from

learning outcomes in other subject areas (e.g., math and science). Any conclusions drawn from the results of test scores in one particular area would have to be considered with this potential limitation in mind.

Finally, there are two particular questions identified above in our earlier discussion of five major additional dimensions to the controversy over the implementation of ELT in the U.S. that serve to illustrate both its importance and complexity, questions with potential implications for limitations to the study. The first of these questions is, to what extent are budgetary restraints impacting the effectiveness of ELT programs? It is entirely within the realm of possibility that the failure of particular ELT programs to achieve their desired results may be traced to a dearth of financial resources supporting the effort. Examples of items affected by budgetary restraints that could potentially impact the effectiveness of ELT programs include: textbooks, classroom supplies and equipment (such as computers and software) and personnel. The less a classroom feels “state of the art,” with high-tech tools that students are familiar with outside the classroom, the less likely the students are to be inspired to learn. The mere existence of ELT is less important, after all, than the quality of the program.

The situation is similar with regard to the second question: How does the possibility of administrator and teacher “burnout” factor into the picture? It is entirely within the realm of possibility that the failure of particular ELT programs to achieve their desired results may be traced to burnout on the part of teachers and administrators, who otherwise (if not feeling burned out) might bring to bear the qualities that would make an ELT program successful.

In short, there are numerous potential limitations to this study, limitations that we would be wise to bear in mind when considering the study results. These limitations are inherent in any such study and do not negate the potential contribution in the direction of filling the existing gap

in the empirical literature—in combination with other well-conceived studies—helping us to arrive at certain conclusions with regard to the important question as to whether ELT merits implementation on a broad scale in U.S. schools.

Recommendations

As offered by way of summary in the preceding chapter, it may be said that the findings of this study suggest that further research is required to determine whether ELT has real value for student learning. Beyond this recommendation with regard to future research, several ideas with regard to recommendations in a broader sense are explored in the conclusion below: Better use of class-time hours in a non-ELT context, a new strategy for getting American society to attach the kind of importance to education that exists in other countries and cultures, and more innovative approaches to instructional techniques and methodology. Administrators of ELT schools would be well-advised to think very carefully with regard to how time is utilized.

Conclusion

Regardless of the position adopted with regard to the implementation of ELT in U.S. schools—even if one takes the position that this study and others like it (such as the most recent dissertation studies reviewed in Chapter 2) tend to discredit the efficacy of ELT in a U.S. context—disappointing academic outcomes still need to be addressed. This in turn leads to the question: If not ELT, then what is the answer?

It is perhaps instructive to consider the remarks made by Karweit in her landmark 1985 study, quoted in Chapter 1, in which she expressed skepticism with regard to the idea of increasing time in school as a way of enhancing academic outcomes. In essence, what she said is that it is simplistic to think that just by doing what is being done elsewhere, similar outcomes will be achieved:

Although differences in time allocations may vary with achievement differences, manipulating the time allocations may not drastically alter achievement because *time per se may not be the cause of achievement differences*. For example, nations that allocate more time to schooling probably do not have longer school terms by accident; *school terms are longer because their societies attach greater importance to education*. If greater support for education is the primary reason for greater achievement, manipulating a manifestation of this emphasis—the amount of school time—will not necessarily alter achievement (emphases added, p. 10).

Like many who have both preceded and followed her, Karweit pointed to the question as to whether the key here is not so much how many school hours are involved but rather how those hours are used: “If time spent and learning are not so strongly related, then a strategy of improving the quality and appropriateness of instruction may be more beneficial” (p. 11).

In a way, ELT—in spite of the many challenges involved in its implementation—has represented a relatively easy solution to the problem of academic underachievement. In the sense that it was largely mechanical and logistical (“we just need to find the will and the resources to implement it”), it has represented a sort of “magic pill” or “silver bullet” solution. The solution that may more likely be appropriate, as implied by Karweit and others more than a quarter century ago, is much more difficult because it involves a change in *attitudes*. How do we get people, parents and students, to attach greater importance to education? How do we get society to assign greater importance to education, in the context of a culture that is so highly attracted to entertainment, sports, and anything that involves making lots of money?

The other part of the solution as implied by Karweit and others is that educators are

failing in their mission to prompt students to achieve their full potential. For educators, this is potentially a bitter pill to swallow. It's much easier, after all, to blame underachievement on lack of resources, including time, than it is on one's own classroom performance.

This relates back to Bloom's concept of Mastery Learning, as presented in Chapter 1. There are serious implications with regard to the responsibilities assigned to teachers because, from this perspective, a student's failure to learn may be traced to quality of instruction, rather than lack of ability on the part of the student (Bloom, 1981).

As challenging as all of this may be, as the evidence against the value of ELT as a solution to academic underachievement in the U.S. mounts, it may be time for those who have previously looked to ELT as the main solution to begin more serious consideration of the alternatives.

The impetus for the research that led to these findings, as modest as they may be, ties in directly with the mission of St. John Fisher College, which emphasizes the reflective use of research as the basis for informing practice. The study provided an opportunity for the doctoral candidate to focus the dissertation on actual problems within her organization, making the dissertation highly relevant and practical (as stated in the first page of the Overview of the school's *Dissertation Proposal Guidelines for the Ed.D. Program in Executive Leadership*). As such, it has been a privilege to be part of a collaborative community dedicated to teaching, learning, and scholarship in a student-centered educational environment. To be engaged in a life of intellectual inquiry, professional integrity, and civic responsibility, where diversity and service to others are valued and practiced (verbiage adopted by The Board of Trustees, June 2012, as articulated on the school's Website) speaks very much to the underlying motivation for this study, which seeks in particular to address the issue of social justice as it relates to children from

families of the socio-economically disadvantaged.

Personal Reflections

My interest in the topic of ELT was first prompted by a comment that a superintendent of one of the Big Five New York City school districts made during a meeting we had together several years ago. He asserted that if his students were in school for 360 hours more a year as my students were, the standardized test scores for his students would be just as good or better than the scores of my charter school students. There seemed to be no doubt in the mind of this experienced educator that ELT was the reason for the superior performance of the students at my school, relative to his, which served similar populations.

As an educator—specifically, a charter school principal serving students in kindergarten through the eighth grade in one of the so-called Big Fives—my mission has been to discover and implement ways to improve student academic outcomes. When I became the instructional leader of my charter school in 2006, ELT was already in progress. My challenge, as I perceived it, was to schedule the instructional program in such a way as to keep students engaged in meaningful learning, while limiting teacher burn-out.

The failure of the data analysis in this study to validate the efficacy of an ELT approach did come as a surprise to me, as it was not what I had been expecting, based both on what I had been reading in the literature, as well as my own direct professional experience. Thankfully, one of the lessons I learned from my graduate studies is the necessity of approaching any topic of study objectively, utilizing scientific method and not allowing oneself to be influenced by existing preconceptions. I am grateful for having had this ethic instilled in me, so that I could arrive at a set of conclusions that opened my eyes to new possibilities.

Sometimes, spiritually as well as professionally, we experience the most growth from

revelations that jar us out of our existing preconceptions and related complacency, as uncomfortable as this may initially feel. At least, this has been my personal experience in life. That being said, the success with an ELT approach in my own school in terms of positive academic outcomes, relative to schools without this approach (as alluded to in the conversation with the superintendant described above), seems hard to dispute, at an intuitive level. Now I am faced with reconciling the results of my dissertation study with my on-the-job experience.

In the process of personal reflection, there are two main ways that have occurred to me with regard to how these two seemingly different interpretations might be reconciled. The first is to examine the possibility that—for the various reasons discussed in my study above (primarily in the limitations section)—although this study fails to prove the universal efficacy of ELT, it does not categorically disprove the efficacy of ELT in all situations.

The other main way that has occurred to me with regard to how the two interpretations might be reconciled begins by asking how we, the administrators and teachers at my charter school, may possibly have misinterpreted the results of ELT at our educational institution. Had we all fallen victim to some kind of placebo effect, whereby we believed that ELT was responsible for positive outcomes when in fact there were other reasons? Is it possible, for example, that students were performing well simply because they were expected to be performing well, the way that children placed in honors classes tend to do better than they would in regular classes? Experienced educators understand that when more is expected of students, these students will indeed perform better.

As I continue my personal reflections in this area, I will be taking a harder and (I hope) a more objective look at what goes on around me in the school at which I serve. Though I have no definitive answer at this time, thanks to the experience of conducting this dissertation study, I at

least have in mind some of the questions I must be asking. Knowing the questions, I believe, will enable me eventually to arrive at even better answers. The end result will speak to that which is essential for success at any school, charter or other: positive and continuous improvement of educational outcomes for the students, as well as more fulfilling careers for the teachers and administrators who serve them.

References

- Addressing Achievement Gaps Symposium. (2010, Winter). After the bell rings: Learning outside of the classroom and its relationship to academic achievement. *ETS Policy Notes*, 18(1). Retrieved from <http://www.ets.org>
- Afterschool Alliance. (2007, September). *Expanding learning opportunities: It takes more than time*. Issue Brief No. 29. Retrieved from <http://www.afterschoolalliance.org>
- Afterschool Alliance. (2008). *Evaluations backgrounder: A summary of formal evaluations of the academic impact of afterschool programs*. Retrieved from http://www.afterschoolalliance.org/Evaluations%20Backgrounder%20Academic_08_FIN_AL.pdf
- Afterschool Alliance. (2010a). *America after 3pm. Special report on summer: Missed opportunities: Unmet demand*. Retrieved from <http://www.afterschoolalliance.org>
- Afterschool Alliance. (2010b, June). *Summer: A season when learning is essential*. Issue Brief No. 43. Retrieved from <http://www.afterschoolalliance.org>
- Alexander, K. L., Entwisle, D.R., & Olson, L.S. (2001). Schools, achievement, and inequality: A seasonal perspective. *Educational Evaluation and Policy Analysis*, 23, 171-191.
- Alexander, K. L., Entwisle, D.R., & Olson, L.S. (2007). Summer learning and its implications: Insights from the Beginning School Study. *New Directions for Youth Development*, 114, 11-31. doi:10.1002/yd.210
- Allington, R. L. & McGill-Franzen, A. (2003). The impact of summer setback on the reading achievement gap. *Phi Delta Kappan*, 85, 68-75.
- American Educational Research Association. (2007). Time to Learn. Research Points, Winter, Volume 5, Issue 2. Retrieved from <http://www.aera.net/?id=314>
- Angrist, J. D., Dynarski, S.M., Kane, T.J., Pathak, P.A., & Walters, C.R. (2010, February). *Who benefits from KIPP?* Working Paper No. 15740. Cambridge, MA: National Bureau of

Economic Research. Retrieved from
http://www.kipp.org/files/dmfile/NationalBureauofEconomicResearch_Feb2010.pdf

- Aronson, J. Z. (1995). *Stop the clock: Ending the tyranny of time in education: Policy perspectives on time and learning*. (Report No. EA026687). San Francisco: Far West Laboratory for Educational Research and Development. (ERIC Document Reproduction Service No. ED381895)
- Aronson, J. Z., Zimmerman, J., & Carlos, L. (1999). *Improving student achievement by extending school*. (Report No. EA030111). San Francisco: WestEd. (ERIC Document Reproduction Service No. ED435127)
- Baenen, N. R., Lindblad, M., & Yaman, K. (2002). *Can extended learning opportunities improve student achievement?* (Report No. TM034218). Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA. (ERIC Document Reproduction Service No. ED466479)
- Baker, D. P., Fabrega, R., Galindo, C., & Mishook, J. (2004, Sept.). "Instructional time and national achievement: Cross-national evidence." *Prospects*, 34, 3, 311-334.
- Barber, M. & Mourshed, M. (2007, Sept.). *How the world's best-performing schools come out on top*. (No location given): McKinsey & Company. Retrieved from <http://mckinseysociety.com/how-the-worlds-best-performing-schools-come-out-on-top/>
- Barrett, B. A. (2005). *The Success of Extended Day Programs on Improving the Reading Performance of At-Risk Students*. Texas Southern University doctoral dissertation.
- Berliner, D. C. (2007). Time to learn. *American Educational Research Association*, 5 (2), 1-4. Retrieved from <http://www.journalhomepage.com/full/url/>
- Berliner, D. C. (1990). What's all the fuss about instructional time? *The Nature of Time in Schools, Theoretical Concepts, Practitioner Perceptions*. Retrieved from <http://courses.ed.asu.edu/berliner/readings/fuss/fuss>
- Bernier, K. C. (2008). Expanding learning time: how the edwards middle school in Boston partnered with citizen schools to transform the learning day. Retrieved from http://www.naesp.org/resources/1/A_New_Day_for_Learinng_Resources/Moving_Ideas_to_Action/ExpandedLearningTime.pdf
- Bloom, B. S. (1981). *All our children learning*. New York: McGraw-Hill.
- Bouley, B., Gamse, B., Checkoway, A., Maree, K., & Fox, L. (2011). *Evaluation of Massachusetts Expanded Learning Time (ELT) Initiative: Implementation and outcomes*

- after four years*. 2011 SREE Conference Abstract. Retrieved from <http://www.sree.org/conferences/2011/program/downloads/abstracts/91.pdf>
- Bracey, G. (2002). Summer loss: The phenomenon no one wants to deal with. *Phi Delta Kappan*, 84, 12-13.
- Capizzano, J., Bischoff, K., Woodroffe, N., & Chaplin, D. (2007). *Ingredients of a successful summer learning program: A case study of the Building Educated Leaders for Life (BELL) Accelerated Learning Program*. Retrieved from <http://www.eric.ed.gov/PDFS/ED497332.pdf>
- Carroll, J. B. (1963). "Model of school learning." *Teachers College Record*, 64, 723-733.
- Carroll, J. B. (1989). "The Carroll Model: A 25-year retrospective and prospective view." *Educational Researcher*. v18 n1 p26-31 Jan-Feb 1989.
- Center for American Progress. (2005). Education Task Force: Report. Retrieved from <http://www.americanprogress.org/projects/education/report.html>
- Center for American Progress (2011, Sept. 30). *Time Well Spent* release event. Audio file retrieved from National Center on Time & Learning Website, <http://timeandlearning.org>
- Chaplin, D. & Capizzano, J. (2006). *Impact of a summer learning program: A random assignment study of Building Educated Leaders for Life (BELL)*. Retrieved from <http://www.eric.ed.gov/PDFS/ED493056.pdf>
- Coleman, R. W., & Freehorn, C. L. (1993). "A comparative study of multi-track year-round education and the use of relocatables." Paper presented at the annual meeting of NAYRE (National Association for Year-Round Education), San Diego, CA.
- Cooper, H. (2003, May). Summer learning loss: The problem and some solutions. *ERIC Digest*. Retrieved from <http://www.eric.ed.gov>
- Cooper, H. (2008, September 15). Is the school calendar dated? Summer learning loss and the achievement gap. *Teachers College Record*. Retrieved from <http://www.tcrecord.org/Content.asp?ContentID=15375>
- Cooper, H., Charlton, K., Valentine, J. C., & Muhlenbruck, L. (2000). Making the most of summer school: A meta-analytic and narrative review. *Monographs of the Society for Research in Child Development*, 65, 1-18.
- Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Pearson Education, Inc.
- Creswell, J. W. (Ed.) (2007). *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, CA: Sage Publications, Ltd.

- Creswell, J. W. (2008). *Research design: Qualitative, quantitative and mixed methods approaches*. (3rd ed.). Thousand Oaks, CA: Sage.
- Currie, J. (1884). *The Principles and Practice of Common School Education*. Cincinnati, OH: R. Clarke. Retrieved from http://www.amazon.com/gp/product/0217766595?SubscriptionId=0QCHRJVSKG6F3BRGBNG2&tag=pbs_00005-20&linkCode=xm2&camp=2025&creative=165953&creativeASIN=0217766595#reader0217766595
- David, J. L. (2010, November). Some summer programs narrow learning gaps. *Educational Leadership*, pp. 78-80.
- Davis, J. and Farbman, D. (2006). *The Promise of Extended-Time Schools for Closing The Achievement Gap*. Massachusetts 2020 Foundation. Retrieved from [http://www.mass.2020.org/Promise%20of%20ETS%20\(Speech%20to%20NAYRE%2002.0\).doc](http://www.mass.2020.org/Promise%20of%20ETS%20(Speech%20to%20NAYRE%2002.0).doc)
- Davis, J., Gabrieli, C. (2009). It's about time: 180 six-hour days no longer meet the needs of students. *Progressive Policy Institute*. Retrieved from <http://www.progressivefix.com/tag/expanded-learning-time>
- Dillon, S. (2010, December 7). Top test scores from shanghai stun educators. *The New York Times*. Retrieved from: <http://www.nytimes.com/2010/12/07/education/07education.html?pagewanted=all>
- Dixon, A. (2011, January). *Focus on the alternative school calendar: Year-round school programs and update on the four-day school week*. Atlanta, GA: Southern Regional Education Board. Retrieved from http://publications.sreb.org/2011/11S01_Alt_Cal.pdf
- Dodd, C. & Wise, D. (2002, September/October). Extended-day programs: Time to learn. *Leadership*, pp. 24-25.
- Domier, P. S. (2009). *Every Second Counts: School Week and Achievement*. Capella University doctoral dissertation.
- Dynarski, M., James-Burdumy, S., Moore, M., Rosenberg, L., Deke, J., & Mansfield, W. (2004). *When schools stay open late: The national evaluation of the 21st Century Community Learning Centers Program: New findings*. U.S. Department of Education, National Center for Education Evaluation and Regional Assistance. Washington, DC: U.S. Government Printing Office. Retrieved from <http://www.ed.gov/ies/ncee>
- ECONorthwest/The Chalkboard Project (2008). *A review of research on extended learning time in K-12 schools*. Retrieved from <http://chalkboardproject.org/images/PDF/Extended%20Learning%20final%20rev.pdf>

- Elder, D. (2009). *Extended Learning Time through Afterschool Programs: A Secondary Analysis of a Midwestern Afterschool Program*. University of Kansas doctoral dissertation.
- Ellis, R. (2011, November 2). How shanghai students stunned the world. *MSNBC Nightly News*. Retrieved from: http://www.msnbc.msn.com/id/44642475/ns/nightly_news/t/how-shanghais-students-stunned-world/
- Farbman, D. (2006, January 9). The promise of extended-time schools for promoting student achievement: A case study. *Teachers College Record*. Retrieved from <http://www.tcrecord.org> ID No. 12274
- Farbman, D. (2007, May). A new day for kids. *Educational Leadership*, pp. 62-65.
- Farbman, D. (2010, February). A report on expanded-time schools in America. *Education Digest*, pp. 17-19.
- Farbman, D. & Kaplan, C. (2005). *Time for a change: The promise of extended-time schools for promoting student achievement*. Massachusetts 2020. Retrieved from [http://www.mass2020.org/files/file/Time-for-a-change\(1\).pdf](http://www.mass2020.org/files/file/Time-for-a-change(1).pdf)
- Forsyth, A., & Furlong, A. (2003). *Socio-economic disadvantage and experience in higher education*. Bristol, UK: Policy Press. Print.
- Funkhouser, J., Fiester, L., O'Brien, E., & Weiner, L. (1995). Using Time in New and Better Ways. *Extending Learning Time for Disadvantaged Students - Volume 1 Summary of Promising Practices*. Retrieved from <http://www2.ed.gov/pubs/Extending/vol1/pt1.html>
- Gabrieli, C. (2010). More Time, More Learning. *Educational Leadership*. April. Retrieved from <http://www.timeandlearning.org/research/publications.html>.
- Gabrieli, C. & Goldstein, W. (2008). *Time to learn: How a new school schedule is making smarter kids, happier parents, and safer neighborhoods*. San Francisco: Jossey-Bass (John Wiley & Sons, Inc.).
- Gewertz, C. (2009, March). Consensus on increasing learning time builds. *Education Digest*, pp. 48-54.
- Gill, B. P., Hamilton, L.S., Lockwood, J. R., Marsh, J. A., Zimmer, R. W., Hill, D., & Pribesh, S. (2005). *Inspiration, perspiration, and time: Operations and achievement in Edison Schools*. RAND Corporation. Retrieved from http://www.rand.org/content/dam/rand/pubs/monographs/2005/RAND_MG351.pdf
- Greifner, L. (2007, January). Panel favors extended view of learning. *Education Week*, pp. 1, 25.

- Heckman, P. E. & Sanger, C. (2001, April). LA's BEST—beyond school as usual. *Educational Leadership*, pp. 46-49.
- Hevesi, A. G. (n.d.). Financing education in New York's "big five" cities. Local government issues in focus: A research series from the office of the New York State comptroller. Retrieved from <http://www.osc.state.ny.us/localgov/pubs/research/financingeducation.pdf>
- Heyns, B. (1978). *Summer learning and the effects of schooling*. New York: Academic Press.
- Heyns, B. (1987). Schooling and cognitive development: Is there a season for learning? *Child Development*, 58, 1151-1160.
- Hoxby, C., Murarka, S., & Kang, J. (2009). *How New York City's charter schools affect achievement. August 2009 Report*. Cambridge, MA: New York City Charter Schools Evaluation Project. Retrieved from http://www.nber.org/~schools/charterschoolseval/how_NYC_charter_schools_affect_achievement_sept2009.pdf
- Huang, D., Leon, S., Harven, A. M., La Torre, D., & Mostafavi, S. (2009). *Exploring the relationship between LA's BEST program attendance and cognitive gains of LA's BEST students*. Los Angeles, CA: National Center for Research on Evaluation, Standards, and Student Testing (CRESST). Retrieved from <http://www.cse.ucla.edu/products/reports/R757.pdf>
- Huebner, T. A. (2010, April). Year-round schooling. *Educational Leadership*, pp. 83-84.
- Huitt, W. (2006). Overview of Classroom Processes. Educational Psychology Interactive. Valdosta, GA: Valdosta State University. Retrieved from <http://chiron.valdosta.edu/whuitt/col/process/class.html>
- Jackson, P. (1985). Time-off-task at a time-on-task conference. In C. W. Fisher & D. C. Berliner (Eds.), *Perspectives on Instructional Time*. New York and London: Longman.
- James, W. (1983). *Talks to Teachers on Psychology and to Students on Some of Life's Ideals*. Cambridge, MA: Harvard University Press. (Original work published 1904).
- Jenner, E. & Jenner, L. W. (2007). Results from a first-year evaluation of academic impacts of an after-school program for at-risk students. *Journal of Education for Children Placed at Risk*, 12, 213-237.
- Johnson, S. P., & Spradlin, T. E. (2007). Alternatives to the traditional school-year calendar. *Education Policy Brief*, 5, 3. Retrieved from http://ceep.indiana.edu/projects/PDF/PB_V5N3_Spring_2007_EPB.pdf
- Karweit, N. (1985). Should we lengthen the school term? *Educational Researcher*, 14

(6), 9-15. doi: 10.3102/0013189X014006009

Learning Point Associates (n.d.). Academic enrichment project staff development tool. Retrieved from <http://afterschool.org>

Lee-Myricks, R. M. (2010). *Extended Learning Time and the Academic Performance Outcomes for Participating At-Risk Middle School Students*. Walden University doctoral dissertation.

Lesnick, J., Hart, B., & Spielberger, J. (2011). *More time for learning: Student participation in extended day programming at the UCCS Donoghue Campus during the 2009-10 school year*. Chicago: Chapin Hall at the University of Chicago. Retrieved from http://www.chapinhall.org/sites/default/files/More%20Time%20for%20Learning_03_16_11.pdf

Levin, D. (1985). *Improving student achievement through mastery learning programs*. San Francisco: Jossey-Bass.

Little, K. N. (2009.). *Effects of an Intervention After-School Program on Academic Achievement among Middle School Students*. Walden University doctoral dissertation.

Little, P. M. (2009). *Supporting student outcomes through expanded learning opportunities*. Cambridge, MA: Harvard Family Research Project. Retrieved from <http://www.hfrp.org/out-of-school-time/publications-resources/supporting-student-outcomes-through-expanded-learning-opportunities>

Long Beach Island Unified School District. (2000). Research Summary: Extended School Day and Extended School Year Programs. Office of Research, Planning, and Evaluation. Retrieved from http://www.lbschools.net/research/studies/research_summaries/ExtendedYearWrittenSummary.pdf

Malone, H. J. (Ed.) (2011, Fall). Expanded learning time and opportunities. *New directions for youth development*, 131.

Marcotte, D. E. & Hansen, B. (2010, Winter). Time for school? *Education Next*, pp, 53-59. Retrieved from <http://educationnext.org/time-for-school/>

Massachusetts 2020 (n.d.). *Research digest: Comparing instructional time*. Retrieved from <http://www.mass2020.org/files/file/Research%20Brief4%20-%20Comparing%20Instructional%20Time.pdf>

Massachusetts Department of Education. (2008). *Report to the legislature on school redesign: Expanding learning time to support student success*. Retrieved from <http://www.doe.mass.edu>

McGill-Franzen, A. & Allington, R. (2003). Bridging the summer reading gap. *Instructor*,

112(8), 17-19.

McKinsey & Company Website (2011). <http://mckinseysociety.com/how-the-worlds-best-performing-schools-come-out-on-top/>

Miller, B. (2007). *The Learning Season: The Untapped Power of Summer to Advance Student Achievement*. Nellie Mae Education Foundation. Retrieved from http://www.nmefdn.org/uploads/Learning_Season_FR.pdf

Moore, K. A. (2006, October). Defining the term “at risk.” *Child trends research-to-results brief*. Online PDF. Retrieved from <http://www.childtrends.org/Files/DefiningAtRisk%5B1%5D.pdf>

Mullis, I., et al. (2001). *Mathematics Benchmarking Report: TIMSS 1999 – 8th Grade* (Boston, MA: Boston College/International Association for the Evaluation of Education Achievement, April 2001). Retrieved from http://timss.bc.edu/timss1999b/mathbench_report/t99b_math_report.html

National Center on Time & Learning. (2011). *Learning time in America: Trends to reform the American school calendar. A snapshot of federal, state, and local action*. Boston. Retrieved from <http://www.timeandlearning.org>

National Center on Time & Learning. (n.d.). *Time well spent: Eight powerful practices of successful, expanded-time schools*. Boston. Retrieved from <http://www.timeandlearning.org>

National Commission on Excellence in Education (1983). *A nation at risk: The imperative for educational reform. A report to the nation and the secretary of education*, United States Department of Education. Washington, D.C.

New York City Department of Education (NYCDOE). (2011). *New York State Language Arts (ELA) test*. New York City Department of Education website. Retrieved from [http://schools.nyc.gov/Accountability/resources/testing/New+York+State+English+Language+Arts+\(ELA\)+Test.htm](http://schools.nyc.gov/Accountability/resources/testing/New+York+State+English+Language+Arts+(ELA)+Test.htm)

New York State Department of Education. (2008). *Part 100 regulations*. Retrieved from <http://www.p12.nysed.gov/part100/pages/1001.html#t>

New York State Department of Education. (2010). *Regents approve scoring changes to grade 3-8 Math and English Tests*. Retrieved from http://www.oms.nysed.gov/press/Regents_Approve_Scoring_Changes.html

New York State Department of Education (2010). *Grade 3-8 Math and English Test Results Released: Cut Scores Set to New College-Ready Proficiency Standards*. Retrieved from http://www.oms.nysed.gov/press/Grade3-8_Results07282010.html

- New York State Education Department (NYSED), Information and Reporting Services (IRS). (2011, October 5). The New York State school report card. New York State Education Department website. Retrieved from <http://www.p12.nysed.gov/irs/reportcard>
- Ogden, C. (2008). *Measuring the Effectiveness of After-School Programs Via Participants' Pre and Posttest Performance Levels on the Georgia Criterion Referenced Competency Test*. Liberty University doctoral dissertation.
- Patall, E. A., Cooper, H., & Allen, A. B. (2010, September). Extending the school day or school year: a systematic review of research. *Review of Educational Research*, 80 (3), 401-436. doi: 10.3102/0034654310377086
- Péteri, G. (2010). *Imagining the west in eastern europe and the soviet union* [Google eBook version]. Retrieved from: http://books.google.com/books?id=P6QcGqvyYBIC&pg=PA154&lpg=PA154&dq=Imagining+the+West+in+Eastern+Europe+and+the+Soviet+Union&source=bl&ots=rzXLi7CZH4&sig=Z4uAECCyvQEF3k7ewDikw6N24PY&hl=en&ei=iCe8TrbEKqL10gGu9uTeCQ&sa=X&oi=book_result&ct=result&resnum=3&ved=0CDMQ6AEwAg#v=onepage&q&f=false
- Phillips, D. C. (1985). The Uses and Abuses of Truisms. In C. W. Fisher & D. C. Berliner(Eds.), *Perspectives on Instructional Time*. New York and London: Longman. *Prospects* website (2011). <http://www.springer.com/education+%26+language/journal/11125>
- Public Education Network (PEN) & National Coalition for Parent Involvement in Education (NCPPIE). (n.d.). What is AYP? *NCLB Action Briefs*. Retrieved from <http://www.ncpie.org/nclbaction/ayp.html>
- Rocha, E. (2007). *Choosing more time for students: The what, why, and how of expanded learning*. Center for American Progress. Retrieved from http://www.americanprogress.org/issues/2007/08/pdf/expanded_learning.pdf
- Ross, S. M., McDonald, A. J., Alberg, M., & McSparrin-Gallagher, B. (2007). Achievement and climate outcomes for the Knowledge is Power Program in an inner-city middle school. *Journal of Education for Children Placed at Risk*, 12, 137-165.
- Roza, M. and Hawley, L. (2008). Taking Stock of the Fiscal Costs of Expanded Learning Time. Center for American Progress. Retrieved from http://erstrategies.org/resources/details/taking_stock_of_the_fiscal_costs_of_expanded_learning_time/
- Silva, E. (2007). On the clock: rethinking the way schools use time. *Education Sector: Independent Analysis, Innovative Ideas*. Retrieved from <http://www.educationsector.org/publications/clock-rethinking-way-schools-use-time>

- St. Gerard, V. (2007, April). Year-round schools look better all the time. *Education Digest*, pp. 56-58.
- St. John Fisher College, Ralph C. Wilson, Jr. School of Education (2011). Website Main Page: <http://www.sjfc.edu/academics/education/about/index.dot>
- Sims, D. (2008). Strategic Responses to School Accountability Measures: It's All in the Timing. *Economics of Education Review*, 27, 1. Retrieved from <http://econpapers.repec.org/article/eeeecoedu/default27.htm>
- Stein, M. L. & Rose, B. A. (2011). *Choosing more school: Extended time policies and student achievement across seasons in charter and traditional public schools*. 2011 SREE Conference Abstract. Retrieved from <http://www.sree.org/conferences/2011/program/downloads/abstracts>
- Stoops, T. (2007). "Better instruction, not more time: a longer school day and year will be North Carolina's best education fad." *Spotlight*, 328, 1-5. Raleigh, NC: John Locke Foundation.
- Terzian, M., Moore, K. A., & Hamilton, K. (2009). *Effective and promising summer learning programs and approaches for economically-disadvantaged children and youth: A white paper for the Wallace Foundation*. Retrieved from <http://www.wallacefoundation.org/KnowledgeCenter/KnowledgeTopics/CurrentAreasofFocus/Out-Of-SchoolLearning/Documents/Effective-and-Promising-Summer-Learning-Programs.pdf>
- Texas Comprehensive Center (2011). *Impact of class time on student learning*. Austin, TX: SEDL.
- Thorndike, E. L. (1913). *Educational Psychology: The Psychology of Learning* (Vol. 2). New York: Teachers College. Retrieved from <http://books.google.com/books?id=DgQNAQAIAAJ&ots=2e3EM5MFkt&dq=Thorndike%252C%20E.%20L.%20%281913%29.%20Educational%20Psychology%253A%20The%20Psychology%20of%20Learning%20%28Vol.%202%29.&lr&pg=PA1%23v=onepage&q&f=false#v=onepage&q&f=false>
- Time, Learning, and Afterschool Task Force. (2007). *A new day for learning*. Retrieved from <http://www.edutopia.org/anewdayforlearning>
- Warren, A. (n.d.). *Mastery Learning: A Basic Introduction*. Retrieved from <http://allen.warren.net/ml.htm>
- Weiss, J., & Brown, R. S. (2003). Telling tales over time: Constructing and deconstructing the school calendar. *Teachers College Record*, 105, 1720-1757. doi: 10.1046/j.1467-9620.2003.00307.x
- Woelfel, K. (2005, December). Learning takes time for at-riskers. *Education Digest*, pp. 28-30.

Woodworth, K. R., David, J.L., Guha, R., Wang, H., & Lopez-Torkos, A. (2008). *San Francisco Bay Area KIPP schools: A study of early implementation and achievement. Final report.* Menlo Park, CA: SRI International. Retrieved from <http://policyweb.sri.com/cep/projects/displayProject.jsp?Nick=kipp>

Xinhua. (2007, May 13). China's children too busy for playtime. *China Daily*. Retrieved from: http://www.chinadaily.com.cn/china/200705/13/content_871182.htmcontent_871182.htm