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Lifelong learning characteristics and academic achievement of eighth -grade students: Lessons for educators in preparing students for global citizenship

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ABSTRACT

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by

Lynn Q. Bruno

Dissertation Submitted in Partial Fulfillment
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ABSTRACT

Researchers have expressed concern that current educational reform and its focus on psychometrics does not address the skills students will need to prosper in the 21st century. Several researchers have attempted to identify and measure those skills. The purpose of this quasi-experimental mixed-methods study was: (a) to test for a strong link between the emotional components of learning and academic achievement, and (b) to determine if direct teaching of the learning domains as identified by the Effective Lifelong Learning Inventory (ELLI) strengthens learning confidence. Using a convenience sample of 103 eighth-grade students at a Midwest suburban middle school, this study sought to determine if a correlation existed between growth in students' learning profiles and their growth in academic achievement in reading and mathematics, as measured by the Measure of Academic Progress (MAP) test. Pre- and posttests on the ELLI and the MAP tests, student self-assessments, and student, parent, and teacher surveys comprised the data. Data analysis consisted of independent *t*-tests to determine variation in growth between the treatment and control groups for the ELLI and MAP tests, and a one-way ANOVA to determine differences in growth in learning domains and in academic performance between the two groups. The *t*-tests indicated a significant difference between groups on the ELLI but not the MAP tests. A statistically significant correlation was found between growth in resilience and mathematics and between direct instruction and learning confidence. Qualitative data, coded for learning domains and emerging themes, indicated perceived growth in learning confidence. Educators, students, and policy makers may benefit from incorporating the ELLI into educational reform efforts that seek to develop students into lifelong learners who are prepared for the 21st century.

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DEDICATION

This doctoral study is dedicated to my mother, Audrey Gordon Quackenbush, who, had she survived the final writing, would have been unabashedly proud. It was her faith and unfaltering belief in me that provided the impetuous to pursue this degree, and while she most likely would have publicly put forth words to insure I remained humble, her smile and enthusiasm would have given her away. Thanks, Mom.

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CHAPTER 1: INTRODUCTION TO THE STUDY

Introduction

While it is widely agreed that public education prepares children for citizenship, it also serves the political, social, and economic needs of our nation. In so doing schools bear the imprint of corporate and political agendas that have shaped this country (Walker, 2002). Throughout the last century these agendas have promoted an educational system in crisis and have spearheaded educational reform. As these political, social, and economic factors shape and define citizenship in more global terms, children's success is increasingly linked to global transformations that require new skills and ways of thinking. These new skills and ways of thinking surpass the ability of many schools to provide (Suárez-Orozco & Qin-Hillard, 2004). The forces of globalization spurred by political, social, economic, and technological changes necessitate changes in the competencies and skills of the world's populace. Because of the rapidity and the ambiguity of these changes, the need for nations to educate citizens who are able to adapt and learn quickly has never been greater. Preparing children to meet this need and to become lifelong learners requires schools to broaden their educational focus and instructional objectives, revise pedagogical practices, and rethink assessment purposes (Gardner, 2004; Hargreaves, 2003; Rothstein, Wilder, & Jacobsen, 2007; Springer, 2006; Suárez-Orozco & Qin-Hillard, 2004).

In this era of globalization, educational institutions are in the unique position to best prepare citizens with the skills and attributes of lifelong learners. Lifelong learning, as defined by Crick, Broadfoot, and Claxton (2004), refers to an individual's capacity and enthusiasm for learning. There is a strong link between the emotional and intellectual

components of learning that are essential to developing the flexibility and capacity to learn and relearn (Crick, et al. 2004; McCombs, 2003). As contemporary educational mandates place pressure on educators to measure only academic achievement (Crick 2003; Hargreaves, 2003; Holt, 2002), this critical component of learning has been lost.

Lifelong learning theory, drawing from research in the fields of education, psychology, and economics, holds that a strong learning identity will raise academic achievement and better prepare citizens for success in a changing world. Researchers at the University of Bristol in England (Crick, Broadfoot, & Claxton, 2003) isolated seven domains of learning and developed a self-report questionnaire, called the Effective Lifelong Learning Inventory *(*ELLI), which measures an individual's strength in each of the seven domains (Appendix A). Subsequent research has demonstrated a significant difference between the learning dispositions of underachieving students and their peers who are achieving at or beyond expected levels (Crick & Ren, 2007).

Current research, however, has not examined the correlation between a strong learning disposition and academic achievement. This study was designed to test the theory that suggests a strong link between the emotional components of learning, as measured by the ELLI and academic achievement for eighth-grade students at a Midwest suburban middle school. By directly teaching the seven ELLI domains, and adjusting pedagogical practice to strengthen students' learning identities, this study sought to determine if growth in a student's learning profile correlated with his or her growth in reading and mathematics. The study further sought to determine whether direct instruction in the seven domains of lifelong learning strengthened learning confidence.

Problem Statement

Contemporary educational policies that rely on psychometric measures to define academic achievement and success have placed educators at odds with their commitment to the role they play in the moral and spiritual development of young people (Barth, 2006; Broadfoot, 2004; Bracey 2003b; Darling-Hammond, 2004). The current demands made by educational reformers for data on academic achievement, primarily in the areas of mathematics and reading, have resulted in a shift in educators' objectives and focus. The increasing cultural emphasis on accountability, with its political and economic incentives and penalties, has further changed the educational landscape (Rothstein, 2008). More and more instructional time is being directed toward assessing *what* children have learned. The result is that little, if any, time is left to teach children *how* to learn. This narrow focus, and its tie to funding and governance, has unintentionally created a tapering of the curriculum and an unhealthy emphasis on measuring only academic performance (Bracey, 2003a, 2003b; Brown, 2006; Hargreaves, 2003; Hirsch, 2006; Holt, 2003; Kohn, 2004c; McCombs, 2003, Spring; Pope, 2001; Rothstein, Wilder, & Jacobsen, 2007; Zhao, 2006).

Public education in the United States has a long history of divergent forces, all of which have attempted to define its purpose: (a) who shall be served, (b) what is to be taught, and (c) how best to teach. The history of public education in the United States is reflective of a burgeoning nation and bears the marks of the economic, political, and societal influences of different eras. Pressures of class, race, and nationality have spurred debate and prompted practices—such as school segregation and mandatory testing—that were more concerned with preserving a meritocracy than with educating children

(Lemann, 1999). Indeed, it was at the turn of the last century that educational reform reached the fervor replicated by today's current call for reform. The calls for education reform at the turn of both centuries share a common basis: the adoption of business values and practices in educational administration (Callahan, 1963).

School reform at the beginning of the twentieth century was fueled by many of the same forces that encouraged industrialization 100 years ago, and which continue to kindle contemporary educational reform and globalization today. Like then, the influence of business values and demands are at the heart of today's educational reform. While Callahan (1963) believed that it was inevitable that business values influence educational practice, he believed the extent of that influence far outreached its value. Several factors at the turn of the century contributed to educational institutions' submissive stance and acquiescence to corporate demands.

The rapid rise of industrialization, the concentration of wealth and industry, the perception of government as corrupt and inefficient, and massive immigration into our urban centers all converged to create fear among the middle class. Fear has been the catalyst for educational reform for more than a century: fear of losing a democracy to an uneducated public, fear of a meritocracy losing control, fear of racial integration, fear of an organized working class, fear for national security post 9-11, and fear of losing our economic and national edge (Callahan, 1963; Bennett, 1992; Hirsch, 2006; National Commission on Excellence in Education, 1983; Mondale & Patton, 2001; Lemann, 1999; Marzano, et al., 1999; Rizvi, 2004). It is the latter that has prompted the current educational reform efforts. Despite a history of failure, educational administrations—

pressured by politicians and school boards—continue to employ business principles to education in order to fix the problem.

The stronghold on educational institutions exercised by corporate America and its business values and practices rests largely on the structure and funding of public education. School boards, largely made of community citizens with no background in education, have called for educational institutions to be efficient, reflecting a business philosophy of *the best product for the least cost*. Because of school boards' power to hire and fire superintendents, educational administrators have abdicated their power and forgone their expertise on educational philosophy and practice to adopt a more managerial role. According to Callahan (1963), administrators capitulated their authority, making educational decisions for the purpose of "appeasing their critics in order to maintain their positions in the school" (p. vii). Add to this the historical funding of schools through local property taxes and the current allocation of any federal funding being dependent on No Child Left Behind's (NCLB) mandate of adequate yearly progress (AYP), and a culture of efficiency is created. That culture results in the education of our children being dictated by the need to perform on tests in order for educational personnel to keep their jobs and educational institutions to maintain their funding and control.

In today's era of accountability and the push for data-driven reform, the influence of business values and practices is evident in schools across the nation as they struggle to develop and employ continuous improvement plans designed to both standardize systems within the institution and the content to be taught. Indeed, an entire industry has emerged as corporate America discovered a new market: the public schools. Profit driven

programs litter the educational landscape. Programs such as Charter schools, Channel One, continuous improvement managerial systems adapted for education, professional development trainings, standardized tests, assessments, and text book publication to name just a few assess the acquisition of knowledge based on content standards. Those assessments produce the data that is then offered as evidence of learning.

However, it is not just *what* children learn but *how* children learn that becomes important to assess to insure a citizenship with the skills and abilities to succeed in the 21st century. According to Crick, "Access to knowledge is universal and immediate, so it is quality of questioning, rather than possession of answers, that takes us to higher levels" (Tew, Crick, Broadfoot & Claxton, 2004, p. iii). Unfortunately, how children learn is neither easily defined nor measured. Despite the fact that economic, technological, and political advances have created and continue to create an ambiguous future, one that will require that individuals adapt to the changes spurred by globalization and continue to learn throughout their lifetime (Bloom, 2004), little attention is directed toward instruction in, or evaluation of, the affective nature of learning or the development of learning characteristics needed to become lifelong learners (Crick & Wilson, 2005; Rothstein, Wilder, & Jacobson, 2007; Suárez-Orozco & Qin-Hillard, 2004).

The literature supported a call for a more balanced approach to the curriculum, one that focuses on more than just basic skills and that promotes critical thinking, the ability to adapt to change, and the importance of continuing to learn throughout one's lifetime (Barth, 2001; Crick et al., 2004; Hargreaves, 2003**;** Holt, 2003; Rothstein et al., 2007; Suárez-Orozco & Qin-Hillard, 2004; Tew, Crick, Broadfoot, & Claxton, 2004). The effects of globalization and the fact that knowledge does not always translate into an

ability to think about information (Marzano, Kendall, & Gaddy, 1999), lead to the need to educate children on how to be lifelong learners. Rothstein et al. (2007) contended that if educators continue to focus just on the academic basics, they may fail to meet the complex needs of 21st century learners. The need to be lifelong learners has never been as great as it is today (Barth, 2001; Crick et al., 2004; Hargreaves, 2003**;** Rothstein et al., 2007; Suárez-Orozco & Qin-Hillard, 2004; Tew et al, 2004). Supporting teachers in their efforts to help every child become a lifelong learner is the focus of this research study.

Research Question

What is the relationship between the learning profile of adolescent students who have received instruction in effective lifelong learning characteristics, as measured by the ELLI, and their growth in academic achievement in reading and mathematics, as measured by the Measures of Academic Progress (MAP) test? The hypothesis was that direct instruction in effective lifelong learning characteristics will strengthen students' learning profiles and that stronger learning profiles will correlate with higher scores in reading and mathematics.

Nature of the Study

A concurrent transformative strategy was employed in this quasi-experimental mixed-methods study. The theoretical perspectives of globalization, lifelong learning, learning, and teaching guided this inquiry (Creswell, 2003). A multistage process was used to assess and measure growth in the affective domains of learning as identified by the ELLI, a self-report questionnaire designed to measure learning disposition on seven affective domains of learning (Crick et al., 2004). Current research on the effectiveness of

the ELLI for developing a strong learning identity was positive (Crick, 2006), but linking growth in learning identity to growth in academic achievement required more research.

There were a few studies that attempted to link affective domains of learning to academic achievement. Blackwell, Trzensniewski, and Dweck (2007) explored the relationship between Growth Orientation, identified as the Changing and Learning domain on the ELLI, and academic achievement. Blackwell et al. found a significant correlation between direct instruction on that domain and mathematics achievement in middle school children. In a separate case study, Crick and Ren (2007) identified a significant difference in the learning dispositions of underachieving students and their peers who were achieving at or above expected levels.

This study adds to the literature that explores the link between affective domains of learning and academic achievement. The research participants included103 eighth-grade students in an affluent, suburban, middle school outside of Chicago. The study examined each student's learning profile and academic measure of reading and mathematics. The treatment group received direct instruction in the seven domains of learning as measured by ELLI. All students received instruction in the district's language arts and mathematics curriculum. The independent variables were direct instruction in the seven dimensions of learning, as outlined in the ELLI, and the inclusion of strategies in the pedagogical practice to strengthen those dimensions. The dependent variables were defined as growth in reading and mathematics achievement, as measured by the Northwest Evaluation Association's (NWEA) Measure of Academic Progress (MAP), and growth in the participants' lifelong learning profile, as measured by the ELLI. The

intervening variables, such as the socio-historical environment of the learner or pedagogical practices of other instructors, were controlled statistically in the study.

Purpose of Study

The purpose of this study was twofold: (a) to test the theory that states there is a strong link between the emotional components of learning and academic achievement and (b) to determine if direct teaching of the learning domains as identified by the ELLI strengthens learning confidence. The focus of the study was to develop a theoretical framework from which the development of standards, curriculum, assessment, and pedagogy will draw. It sought to identify the changes in perceptions, choices, and behaviors demonstrated by adolescent students who received direct instruction in effective lifelong learning characteristics over a 10-month period during their eighth-grade year.

Theoretical Framework

The theoretical foundations of this study drew from the fields of sociology, psychology and education. Specifically, the theoretical perspectives in the areas of globalization, lifelong learning, learning, and teaching guided this research study.

Globalization Theory

Globalization is held up in the current research as the stimulus for a paradigm shift not unlike industrialization a century ago. Like its cousin, the implications of this shift places education squarely at its center (Suárez-Orozco & Qin-Hillard, 2004). Spurred on by economic changes, political agendas, social processes, technological innovations, and cultural realities, globalization has created the need to prepare children for a future that is continuously changing. Those changes force a reevaluation of what is

needed to teach children to live happy and successful lives. Globalization has altered the world that students will enter and educators need to be aware of those changes in order to properly prepare students for success. Those changes require educators to seriously evaluate and adapt curriculum and pedagogical practice (Gardner, 2004). Globalization theory explores the ramifications of the rapid changes presented by political, social, economic, and technological influences and therefore provides valuable insight into how best to revise educational focus and adapt educational practice.

Lifelong Learning Theory

Lifelong learning, like globalization, evokes different meanings depending on the lens used. Early in the twentieth century, the Progressive Education Association promoted lifelong learning, drawing from the teachings of John Dewey. In 1916 Dewey published *Democracy and Education.* This work summarized his philosophical position on education and promoted a curriculum centered on lifelong learning, one in which the personal, intellectual, and social development of each child is considered with the goal of preparing children for successful lives (Lemann, 1999; Lipka, Lounsbury, Toepfer, Vars, Allessi, & Kridel, 1998; Westbrook, 1991). Later in that same century, the term took on an economic focus. Industry used the phrase to promote corporate training in order to mold employees into profit-producing components and to impose changes on its workers (Hyslop-Margison & Sears, 2006).

Contemporary education is addressing the need to help children become lifelong learners in order to live productive lives in the 21st century. The research in lifelong learning pulls from the fields of education, psychology, and economics and much of it attempts to correlate the perception of what is meant by the term lifelong learning within

the various fields of study (Bloom, 2004; Hyslop-Margison & Sears, 2006; Kohn, 2004c; Lemann, 1999; McCombs, 2003, Spring; Murphy & Alexander, 2002; Rothstein et al., 2007; Suárez-Orozco & Qin-Hillard, 2004). What remained consistent throughout the research was the relationship between globalization and lifelong learning theory and the need for change in education. In fact, it is the relationship between globalization and lifelong learning that calls for curricular change (Gardner, 2004; Hargreaves, 2003; Rothstein et al., 2007; Springer, 2006; Suárez-Orozco & Qin-Hillard, 2004).

Teaching Theory and Learning Theory

While globalization and lifelong learning theories address what should be taught, learning and teaching theories address how students learn and how the curriculum is delivered to accommodate that learning. When the content of curriculum changes in response to global and societal shifts, there is often a need to examine and alter pedagogy. Teaching theory can provide a foundation from which educators can develop effective pedagogical practices that will nurture lifelong learners within a global community. However, because the teaching and learning theories are intertwined, how children learn is an essential element in determining how best to teach children to become lifelong learners. Indeed, learning theory drives teaching theory and should be the impetus for pedagogical change.

At the conception of public education in the United States during the early to mid nineteenth century, traditional learning theory promoted by Thomas Jefferson and Horace Mann prescribed a set body of knowledge that was to be memorized (Walker, 2002). The teacher was the source of that knowledge and students the recipients, a concept that is promoted by proponents of a back-to-basics approach to curriculum design (Hirsch,

2006; Marzano, Kendall, & Gaddy, 1999). There was an emphasis on obedience to authority and the purpose was not only to prepare a citizenship capable of sustaining democracy, but also to identify individuals of merit to lead the country (Lambert, Walker, Zimmerman, Cooper, Lambert, Gardner, & Szabo, 2002; Lemann, 1999; Mondale & Patton, 2001). Toward the middle of the twentieth century, theorists such as Edward Thorndike and B. F. Skinner put forth a behavioral theory of learning in which knowledge was broken down into smaller pieces and required both practice and reward (Walker, 2002). A behavioral theory of learning promoted a direct teaching approach that measured and directed learning (Lambert et al., 2002). This behavioral theory, based on the assumption that children differ widely in ability, promoted the pedagogical practice of sorting students into homogeneous groups for instruction. Any variance in instructional practice was grounded in the perceived ability of the students within that group.

Curricular goals, student self-esteem, and cooperative social learning contribute to contemporary learning theory, which holds that knowledge is constructed from the beliefs, values, skills, knowledge, and experience that the learner brings to the table. According to the constructivist theory of learning, new knowledge is constructed as a result of prior knowledge, new information, and the readiness to learn (Lambert et al., 2002; Southwest Educational Development Laboratory, 1994). While this theory can be traced back to the 18th century Italian philosopher, Giambattista Vico, who believed that individuals only clearly understood what they themselves constructed, it was Jean Piaget and John Dewey, who, at the turn of the 20th century, applied this theory to the classroom. Both Piaget and Dewey emphasized the importance of social context and believed, unlike in traditional and behavioral theories, that knowledge exists within the

learner. Learners, through a combination of prior knowledge, readiness to learn, skills, and values, make choices about whether or not to accept new ideas and how to assimilate them into their existing worldview (Crick et al., 2004; Hargreaves, 2003; Lambert et al., 2002; Southwest Educational Development Laboratory, 1994, Westbrook, 1991).

As learning theory evolves, so too must teaching theory. According to Richardson (2003), constructivist theory of learning does not in and of itself endorse a specific practice or pedagogy, but rather involves the following elements: (a) attention to the individual and respect for students' backgrounds; (b) facilitation of group dialogue in order to lead to the shared understanding of a topic; (c) planned and often unplanned introduction of formal domain knowledge through a variety of means; (d) opportunities for students to confirm, challenge, change, or add to existing beliefs and understanding by engaging in tasks that are structured for this purpose; and (e) development of students' metawareness of their own understandings and learning processes.

Research from the fields of both neurology and psychology contribute heavily to contemporary learning theory. The neurological functions of the brain and how they relate to pedagogical practice has been at the core of Dr. Mel Levine's research (2002). Recognizing that all children possess different strengths and weaknesses, Levine attempts to identify which neurological construct is strongest in an individual learner. Once identified, those neurological strengths are used to compensate for weaker constructs. After strengths and weaknesses of neurological function are identified, learning strategies unique to that individual's neurological construct are used to strengthen learning and promote success. Levine recognizes that each brain has its own affinities as well as challenges and believes educators need to meet the learning needs of their students

individually. In a process Levine refers to as *demystification*, he strongly advocated that learners be informed about their own minds, and how best they learn, so that they become their own best advocates (Levine, 2002).

The field of psychology also contributes to contemporary learning theory. Combing the established research on human learning, development, and motivation in the field of psychology in 1993, the Learner-Centered Principles Work Group of the American Psychological Association prepared a framework for school reform and redesign. This framework identified 14 learner-centered principles that emphasized the active and reflective nature of learning. One of the original members of this task force was Barbara McCombs who developed tools to assist educators in adopting and assessing learner-centered practices within the classroom to achieve high student outcomes. McCombs' Assessment of Learner Centered Practice (ALCP), (2003) much like the ELLI, is a self-report questionnaire that guides reflective practice. The ALCP allows teachers to compare their perception of learner-centered principles within their classrooms to their students' perceptions.

Contemporary learning and teaching theory recognizes that the relationship between globalization and lifelong learning calls for curricular change and acknowledges that changes in curriculum, in response to global and societal shifts and contemporary learning theory, necessitate changes in pedagogy. Globalization theory provides the crystal ball that assists in conceptualizing an ambiguous future and projects what changes might be ahead. Lifelong learning theory draws on this to conceptualize what behaviors, ways of thinking, and skills will be necessary to succeed in that future. Learning theory provides the knowledge needed to understand how best individuals learn and drives

teaching theory which draws on all three to develop sound pedagogical practice that will prepare students to be global citizens.

Operational Definitions

The seven domains identified in the Effective Lifelong Learning Inventory (ELLI) defined lifelong learning (Crick et al., 2004). Those domains are Changing and Learning, Critical Curiosity, Creativity, Resilience, Strategic Awareness, Learning Relationships, and Meaning Making (Appendix A). A student's learning profile was comprised of these seven domains. The term academic achievement used in this study refers to the difference in scores between a pre- and posttest on the Northwest Educational Association's (NWEA) Measures of Academic Progress (MAP) mathematics and reading tests.

Assumptions

This study assumed that the students, teachers, and parents responded to the questions on the surveys with honesty. It further assumed that students responded to the best of their ability to the questions presented on the ELLI and the MAP tests.

Scope and Limitations

The utility of this study and the ability to generalize the findings are limited by a number of factors. First, the research population of this study, school children living in the United States, differed from the school children living in the United Kingdom on which the ELLI was developed. Therefore, some variance in data reliability and validity may have occurred. In addition, because the data collected from the ELLI and the student surveys were self-report data, it is limited in its ability to be generalized. However, self-report data are the most valid form of data for assessing learning dispositions, which by definition are personal and subjective (Crick & Ren, 2007).

The convenience sampling used for this study also decreased the ability to generalize the findings (Creswell, 2003). The school councilor considered a wide range of academic and human factors when she assigned students to one of the three eighth-grade teams. The need for special education services, gifted services, English Language Learner services, and math placement constituted the academic variables in placement decisions for each student. Additionally, the emotional needs of the student were taken into account when matching teacher to student. The placement of students on teams was not random and therefore constitutes a bias.

Finally, the research as an active participant in the study constitutes subjective involvement. As a result, in the qualitative portion of this study, the findings could be subject to other interpretations. However, in combining the role of teacher and researcher, an insider status was established. That allowed for a deeper insight into understanding student perspectives and greater access and opportunity to observe growth in learning.

Delimitations

The purpose of this study was to determine if, through direct instruction in the seven domains of lifelong learning, learner confidence rose. It further explored the correlation between strength in learning confidence and growth in reading and mathematics.

The ELLI was selected because it specifically defined domains of lifelong learning and assessed growth in learning confidence. The domains were established through a rigorous research process and reliability and validity had been established. The ELLI offered a convenient tool that could be employed by educators to assess the affective domains of learning and help shape pedagogical practice.

The MAP tests were selected as the measure for growth in reading and writing. The Illinois Standards Achievement Test (ISAT) is the measure used by the school to establish Adequate Yearly Progress (AYP). This tool was not selected because the results are not reported in a timely manner and would not be available at the conclusion of this study. Because of the subjective nature of grading, the use of report card data was not used to measure academic growth.

In addition to the ELLI that assessed each student's perception of their learning in seven domains, parents and core teachers of the students in the treatment group were surveyed to identify any observable changes in learning behaviors. Teachers were asked to identify observed changes, if any, to learning behaviors associated with the seven domains of learning (Appendix B). Parents of the treatment group were also asked to identify changes to learning behaviors associated with the seven domains of learning (Appendix C).

Finally, the students of the treatment group were asked to complete a survey. The purpose of the student survey was to provide the students themselves with the opportunity to describe in their own words their learning. They were asked to identify any changes in their learning behavior with regard to their motivation to learn or their confidence to pursue learning – particularly learning that would normally be a challenge. Like their parents, they were asked to consider the other domains of lifelong learning (Appendix D).

The purpose of these surveys was to provide further insight into the gains made in learning power by students in the treatment group. Teacher and parent surveys provided a

wider lens and alternative perspectives through which growth in the seven domains of learning was identified.

Significance of the Study

Developing lifelong learning and students' learning capacities is essential if students are to become fully participatory citizens of the world. Personal as well as national security and prosperity hinges on a citizenship that is equipped to adapt to rapid change. To this end, the ability to continue to learn is essential and is particularly significant for all stakeholders in the educational arena. In this nation, the responsibility to prepare a citizenship that will defend and lead this democracy rests with the public schools, and yet schools are notoriously slow to change (Barth, 2001; Gardner, 2004). This study adds to the growing field of research that attempts to address the need for educational reform in this era of globalization. By aligning pedagogy and assessment to purpose, educators shift their focus toward preparing children to lead happy, healthy, and productive lives as global citizens, and to measure and assess what is valuable: the learning characteristics deemed necessary to survive and prosper in an ever-changing international community.

Summary

Educational practice should foster strong global citizens who are prepared intellectually to address the challenges and problems of the future, as well as emotionally to adapt and change with the world. Narrowing public education's focus to fundamental mathematics and reading skills will not meet that challenge. In order to prosper, our country needs citizenry with critical curiosity, citizens who are able to use their

knowledge to make sense of new ideas and technologies, and who are creative and resilient. That citizenry will need to value learning relationships, develop a strong strategic awareness, and believe in its ability to continue to learn. In light of the rapidity and ambiguity of economic, political, and social changes spurred by globalization, the need for citizens who can adapt and learn quickly has never been greater.

Unfortunately, current educational reform's focus on assessing primarily basic skills has left little time for educators to address the lifelong learning skills students will need in the future. By identifying a correlation between the affective domain of learning and academic achievement, and by being able to measure and assess growth in this area and provide tangible evidence, educational reform can, with confidence, value and then focus on this important and largely ignored component of learning. According to Carr and Claxton (2004), what is assessed is valued. If schools value the ability to continue to learn, then there is a need to assess lifelong learning. This study sought to explore the impact of direct instruction on developing a strong learning identity by teaching and assessing lifelong learning. In so doing, it adds to the body of research that will direct and shape educational reform in the United States.

The intent of this study was to develop a theoretical framework from which the development of standards, curriculum, assessment, and pedagogy will draw, one that values the emotional component of learning and its impact on intellectual development. Additionally, this study provides alternatives to educational reform efforts by valuing the affective domains of learning and aligning pedagogy and assessment to both the emotional and intellectual components of learning. By measuring and assessing what is valuable, the learning characteristics deemed necessary to survive and prosper in the

ever-changing global community, educators can better prepare children to lead happy, healthy, and productive lives as global citizens.

The following chapters will examine the factors that shaped public education and explore how globalization and lifelong theory challenges contemporary educational reform efforts. Student, teacher, and parent perspectives on growth in lifelong learning will be explored and how learning confidence correlates to academic achievement in reading and mathematics will be examined. Finally, implications for educational reform in support of positive social change will be presented.

CHAPTER 2: LITERATURE REVIEW

Introduction

The mandates of NCLB have created a narrowing of the curriculum in schools across the nation as educators strive to meet the demands placed on them to meet AYP (Barth, 2001; Bracey, 2003, Darling-Hammond, 2004; Holt, 2002; Kohn, 2004; Rothstein, 2008; Springer, 2006). The resulting time and energy spent on assessing students and collecting data has redirected the focus of educators away from teaching children and placed it on teaching content. This shift of focus was the impetus for this study that seeks to explore and identify the underlying factors that contributed to current educational reform efforts. An understanding of these factors as they relate to globalization and lifelong learning theory can provide different perspectives on how educational reform can better prepare students for the future.

The literature review relied primarily on three main databases: Academic Search Premier, Educational Resource Information Clearinghouse (ERIC), and Pro Quest. Additionally, Google Scholar, Phi Delta Kappa, and Teacher College Record were reviewed. Key words used included globalization, lifelong learning, learning theory, learning, vocational education, teaching theory, assessment, psychometrics, grading, and history of public education. Search results were then explored to determine relevancy to the study. While there was adequate research on psychometrics and assessment, research on lifelong learning as it relates to globalization and educational reform was limited. Most research in this area was conducted outside the United States, primarily in the United Kingdom, Africa, and Asia. As a result, the use of article references garnered

more success and helped to direct the search, particularly as it related to journals published outside of the United States.

The libraries of Walden University, College of DuPage, and the University of Illinois provided resources relevant to this study. Additionally, a trip to England provided training on the ELLI by the University of Bristol.

One hundred and ninety-six resources were reviewed for this study and fifty-six were cited. In order to remain abreast of current research related to this study, the researcher subscribed to several professional organizations including: (a) Association for Supervision and Curriculum Development (ASCD), (b) National Middle School Association (NMSA), (c) Phi Delta Kappa International (PDK), (d) Teacher College Record, and (e) Education Week.

The literature on globalization and lifelong learning challenges the current focus of educational practice and reform. The ability to adapt and learn quickly throughout ones lifetime is paramount to success, but defining and measuring growth in learning can be challenging. In reading and mathematics, educators have narrowly relied on standardized test to assess academic growth, but that measurement fails to address students' capacity to learn and continue to learn throughout their lifetime. While much of the research in education and psychology addresses the importance of the emotional components to learning (Barth, 2001; Hargreaves, 2003; Holt, 2002; Kohn, 2004a; Lipka et al., 1998; Springer, 2006; Suárez-Orozco & Qin-Hillard, 2004; Zhao, 2006) identifying and measuring that learning is more elusive (Carr & Claxton, 2002; Crick et al. 2004, McCombs, 2003 April). This study sought to identify and provide evidence of growth in

the affective domains of learning by using the seven domains of lifelong learning, as defined by the ELLI as a framework for instruction and a tool for assessment.

Psychometrics and its use as a measure of academic achievement is more prevalent in the research than measures of growth in the affective domains learning. Standardized testing of school children has been documented for 2 decades as being related to academic growth and *what* has been learned. What is missing from this body of literature is a focus on *how* children learn and its importance. A number of researchers have suggested that the ability to lead a successful life will depend on the ability to continue to adapt and learn throughout one's life (Barth, 2001; Boyd, 2003; Bracey, 2003a; Crick & Wilson, 2005; Hargreaves, 2005; Hyslo-Margison, Sears, & Alan, 2006; Springer, 2006; Suárez-Orozco & Win-Hillard, 2004). This viewpoint indicates a growing need for research on the identification and measurement of the affective components of learning. A review of the history of public education provides an understanding of why educational reform has failed to address this critical need.

The Impetus for Educational Change in American Schools

Given the crucial role that American education plays in the opportunities afforded its citizens and the power enjoyed by the nation as a whole, it is not surprising that so many individuals and institutions are compelled to influence and shape educational practice and policies. Indeed, a cursory review of the history of public education in this country would reveal patterns of economic, political, and social influences, such as industrialization, the eugenics movement, immigration, civil rights, technology, and globalization that have left their individual mark on educational practices and policies (Callahan, 1963; Lehmann, 1999; Mondale & Patton, 2001). Questions about the purpose

of public education, what it means to be well educated, and how best to teach what students should know, have been debated since the inception of a free public education (Kohn, 2004). Today's educational reform movement continues to address these same questions with a renewed urgency brought on by the increased speed of change generated largely by globalization.

The role of globalization in the urgency of educational reform in this country should not be underestimated. Education has the potential of addressing a plethora of problems facing the developing world by creating a pool of future leaders, healthier citizens, improved status for women, a reduction in poverty and a skilled, productive workforce with the "mental agility to retrain for new industries as old ones become defunct and new opportunities arise" (Bloom, 2004, p. 57). The forces of globalization have brought the benefits of education to developing nations and threaten to unseat the power and status that the United States has enjoyed, largely because of its commitment to a free public education for all citizens. Today's educational reform is fueled by the need to maintain that status. Just what is needed to achieve this is at center of the debate.

Factors that Shaped Current Educational Practice

To understand more clearly the issues at hand and the passion of those who are engaged in today's educational reform debate, it is helpful to explore the past, and in particular, the turn of the last century when the United States found itself grappling with many of the same social, political, economical, and technological issues the country is struggling with today as it enters the 21st Century. At the beginning of the 1900s, the nation was moving from an agricultural economy to an industrial one. New technologies and inventions placed the demand for new skills on citizens and sparked a flood of

immigration into our cities. This created a crisis in many governmental organizations, especially public schools, which struggled to meet the needs of an increasing number of children (Mondale & Patton, 2001; Lemann, 1999). Immigrants who did not speak the language or share American values or culture flooded the public schools and challenged educators to adapt curriculum. Industrialists gained access to public policy and public education as the need for new skills in the workforce grew. The result was the infusion of business values into educational practices and the birth of vocational education, which promoted a sorting and tracking of students (Callahan, 1963).

Along with the rapid rise of industrialization came immigration and an exploitation of a labor force that gave rise to militant labor unions that threatened the seat of power (Callahan, 1963). The fear of a loss of status and control by capitalists and the failure of traditional avenues in addressing social problems (i.e. charity, religious organizations, and social work) created a demand for a more active role of the government in economic and social arenas. Those who feared the influx of immigrants and this threat to power turned to science to support their beliefs in who exactly merited power. Using Darwin's "survival of the fittest" theory to explain social and economic inequalities, a new philosophy called progressivism turned to science to solve society's problems and gave rise to the American Eugenics movement (Allen, n.d.).

The Role of Science and Eugenics

One of the early players in this shift to science was Willhelm Wundt, who introduced science investigation to the field of education. Wundt's research was laboratory-based rather than field-based—instead of moving from theory to experiment, his scientific study moved from experiment to theory (Besag, 1981). Two individuals

refined this scientific approach: mathematician Karl Pearson, and geneticist Sir Francis Galton, who was a cousin of Charles Darwin and founder of the International Society of Eugenics. Their purpose was to use the scientific process to prove to the public that scientific findings did not occur due to chance. Both men set out to prove scientifically that one race of people was intellectually superior to another. Bastardizing Charles Darwin's "survival of the fittest," Galton and Pearson wanted to prove that those in power were by nature intellectually superior (Besag, 1981; Lemann, 1999).

In 1869, Francis Galton published the *Hereditary Genius*, in which he concluded that less desirable people were reproducing at a faster pace than more intelligent people and threatened to bring down the average IQ of the entire world. The eugenics movement was most prevalent from 1890 until 1920, and counted among its members several influential men in education, including Carl Brigham and E.L. Thorndike. Not coincidently, this was the same time during which America was bursting with the arrival of new immigrants, largely from Eastern and Southern Europe, who were placing an unprecedented demand on our public schools (Lemann, 1999).

The Influence of Testing

As a result, at the turn of the century, a commonly held belief was that human intelligence was genetically inherited, that social organization should be centered on that intelligence, and that certain races and cultures were inferior, and therefore less entitled than others. The eugenics movement presented what proponents claimed to be scientific evidence of superior intelligence based on race and breeding. Those who were of northern European decent were considered more intelligent than those of southern and eastern European heritage. The instrument of proof was the IQ test.

In 1905, Alfred Binet, a French psychologist, developed the first test designed to measure intelligence with the intent to identify slow learners. During World War I, Harvard professor Robert Yerkes convinced the United States Army to allow him to administer to its enlisted men the IQ test for two purposes: to help identify candidates for officer training and to generate statistical evidence to support the IQ testing movement. He administered the test to over 2 million men. Carl Brigham, a colleague of Yerkes and a devoted eugenicist, analyzed the test results by race and promptly concluded that American education was doomed if the races were permitted to continue to mix. Brigham concluded in his study, "There were 3 distinct white races in Europe – in descending order of intelligence, Nordic, Alpine, and Mediterranean – and that the United States had been initially and successfully populated by the highest but was now being over-populated with the lowest" (Lehmann, 1999, p. 30). His results paralleled the existing social order and provided the eugenics movement with the scientific data to support its position. Brigham concluded, "American intelligence is declining, and will proceed with an accelerating rate as the racial mixture becomes more and more extensive . . . . These are the plain, if somewhat ugly, facts that our study shows" (as quoted in Lehmann, 1999, p. 32).

The 1920s and 1930s was fertile ground for advocates of IQ testing and education. Similar to the Army during World War I, the public schools provided another domain where the processing of a large number of people was essential. And so, it was schools to which the advocates of IQ testing turned their attention. E.L. Thorndike from Columbia Teachers College developed an IQ test for college students. Lewis Terman developed one for elementary and secondary students. Brigham developed what is now

known as the Scholastic Aptitude Test or SAT, which was a revised edition of the test administered to the Army during World War I. Common among all these tests was their multiple choice format and their heavy reliance on vocabulary. Additionally, and more ominously, their purpose was to sort and rank individuals, thereby limiting the number of children who would have the right to go to high school and college (Kohn, 2004; Lemann, 1999).

Key to the implementation of this idea was the President of Harvard at the time, James Bryant Conant, who seized on Thomas Jefferson's theory that if we could identify those individuals who were truly the most intelligent, then we should provide a college education to them so that they would serve and lead the country. As Jefferson was in his time, Conant was a proponent of rewarding merit rather than birthright, a radical and unpopular stand for the President of Harvard. Conant believed that all should have the opportunity, but not all were entitled to the rewards. His stance on education was quite radical; he believed that the government should take measures to prevent inheritance of privilege, and that privilege and money did not automatically equip individuals to lead—although this was not a difficult idea to sell on the heals of the Great Depression. And so, to combat this practice, Conant proposed a Harvard scholarship program that would seek out young men from all over the country who, based on their test scores, would be given a free ride to Harvard. The person he placed in charge of implementing this plan was a dean at Harvard named Henry Chauncey, an enthusiastic supporter of IQ testing, who later became the president of the College Board. He would come to play a much more significant role in the field of testing, but in 1933, Chauncey, with Brigham's test in hand, headed west in search of Midwestern school boys who deserved a shot at a Harvard

education (Lemann, 1999; Mondale & Patton, 2001). The irony rests in Conant's desire to extend a college education based on intellectual merit, as opposed to birthright, and the instrument developed by Henry Chauncey that was deeply biased in its design, favoring a specific race, class, and culture (Lemann, 1999).

In contrast to the work of Chauncey was that of a psychology professor at the University of Iowa who designed a test of his own, but for very different purposes. E. F. Lindquist developed what is commonly referred to as the Iowa Test, with the purpose not of limiting education based on merit, but of expanding education to all by using the test results to help teachers identify students who might need additional attention. Lindquist belongs to one of the four camps for educational reform that existed at the time (Lemann, 1999).

The Origin of Current Educational Reform

The players in education during the 1920's and 1930's fell into four distinct factions. Lindquist, along with George Zook, the head of the American Council for Education and who later served as the head of the President's Commission on Higher Education under President Harry Truman, was a vocal advocate for the expansion of education to all, and believed that, as a nation, America ought to be looking for ways to send more young people to college, not less. Later, Lindquist said these tests should be used to help teach children and inform teachers so that more children could go on to higher learning. He opposed both the use of tests to sort children that would deny them opportunity and the issuance of standards that would inevitably favor some children over others. He believed that schools should teach all Americans how to read, think, and succeed in life (Lemann, 1999).

Another camp was that of Progressive Education. John Dewey, the father of the Progressive Education Movement believed that the schools' job was to help each child to become creative thinkers and participatory citizens. This camp challenged the traditional pedagogy that depended on rote memorization and drill by emphasizing more creative teaching methods based on student-centered learning. The Progressive Education Movement organized The Eight-Year Study, funded by the Carnegie Foundation, which promoted the use of these methods with the intent of creating more liberal-minded, independent thinking and, as a result, a fairer society (Lehmann, 1999; Lipka, et al., 1998).

The Pennsylvania Study, also funded by the Carnegie Foundation, optimized the ideology of another group in educational reform: those that believed tough, universal standards should be imposed. Dismayed at the lack of common knowledge disseminated in schools, educational researcher, William Learned, and Benjamin Wood, a professor at Columbia Teachers College, set out to evaluate education in Pennsylvania. They found that there was no correlation between level of schooling and knowledge. They promoted the idea that there was a basic body of knowledge that all high school and college students should be required to know and devised a test to measure that knowledge, again, with the purpose of limiting opportunities for those who did not measure up.

The final camp of educational reform was grounded in the use of IQ tests to sort and track children. Some in this camp believed they should be used to determine the amount of education to which a child was entitled and all believed that inherited intelligence should be rewarded. This group was not at all interested in addressing pedagogy and curriculum, but rather believed that public education should identify those

with higher intelligence so that they would have access to continuing education and eventually take leadership roles in our society. Those who did not demonstrate this higher intelligence would be tracked into vocational programs more suited to their competencies as measured by these tests (Lemann, 1999). The influences of all these perspectives can be seen in today's educational landscape.

The Back-to-Basics Movement and Current Educational Reform

The current drive to reform education in the United States was triggered by a report written by the National Commission on Excellence in Education called *A Nation at Risk* (1983), which alleged that American school children were being inadequately prepared for a competitive world, particularly in the areas of science and technology. Presented as a crisis in education, recommendations were made to fix the system's content, timing, standards, and expectations. The commission also suggested restructuring teacher preparation and leadership, as well as fiscal support, which inspired many of the policies and mandates of today's Elementary and Secondary Education Act—commonly referred to as No Child Left Behind (NCLB) (Bruno, 2006).

On the heels of this alleged crisis in education came a series of reports and publications calling for a back-to-basics approach to education. One of the leading proponents of this call was E. D. Hirsh, Jr., who published *Cultural Literacy* in 1987 in which he condemned a constructivist learning theory put forth by theorists such as Jean-Jacque Rousseau and John Dewey. In its stead, Hirsch proposed a content-specific curriculum, inspiring the *Core Knowledge* movement. The Core Knowledge movement is an educational reform platform that promotes a core of common learning that allows children to establish a strong foundation of knowledge on which to build future

knowledge. A sequenced, coherent curriculum is mandated and “learning to learn” is considered secondary to building a foundation of knowledge. The Core Knowledge movement also holds that although knowledge is changing rapidly, this does not necessitate a change in educational focus, as the basic principles and essential elements of the core subjects remain steadfast (Core Knowledge, 2007).

Hirsh was not alone in his critique of American education and the perceived intellectual crisis in America. In 1987, Allan Bloom published *The Closing of the American Mind* and Diane Ravitch and Chester Finn published *What Do Our 17-Year-Olds Know?* (Marzano, Kendall, & Gaddy, 1999). Both of these publications questioned the educational theory and pedagogical practices within our nation’s schools, fueling the idea that public education in America was in crisis.

William Bennett, who served as Secretary of Education under Ronald Reagan and later as the "Drug Czar" under George H. Bush, added his voice in 1992 by publishing *The De-Valuing of America: The Fight for Our Culture and Our Children*, in which he argued that American culture was being undermined by an acceptance, largely in public schools, of different cultures and values (Bennett, 1992). This point of view was in reaction to a shift in education toward a constructivist learning theory, which acknowledged the significance of culture to learning and pushed for equity, helping students to understand how the role of race and class affects them in school and in life (Walker, 2002).

Learning Theory

Much of the standards movement can be traced back to this period, and while few educators would argue that there is essential knowledge that needs to be learned by

school children, identifying that knowledge in a rapidly changing world can be challenging. In addition, contemporary learning theory challenges the notion that teaching core knowledge translates into an ability to think about information (Marzano, Kendall, & Gaddy, 1999).

A social constructivist theory of learning holds that knowledge is action and transforms individuals within a social and cultural context (Delandshere, 2002). This is counter to traditional views in which knowledge is something separate from the activity of learning, an assumption on which present assessments are designed.

Contemporary learning theory draws from a constructivist framework espoused by Dewey, Piaget, and Vigotsky that believed learners construct knowledge for themselves both as individuals and in social contexts and that constructing meaning is learning. As a result, educators must focus on the learner, rather than the subject at hand, when thinking about teaching. A constructivist theory of learning holds that knowledge is dependent on meaning as it relates to the experience of the learner or community of learners. Additionally, contemporary learning theory acknowledges that the contributions from neurological and psychological research are critical for effective educational reform (McCombs, 2003; Murphy & Alexander, 2002).

Globalization: From Industrialization to a Knowledge Society

As global political, economical, technological, and social influences and demands continue to alter and mold the world in which we live, the role of public education, and more specifically, the responsibilities, expectations, and capabilities of teachers need redefining. If, as Suárez-Orozco and Qin-Hillard (2004) propose, global transformations will require skills and capabilities of our youth that are beyond our present educational

systems to deliver, then the need for professional development designed to assist teachers in developing new and global visions is paramount for our children's success and our nation's survival. These scholars believe that "Education's challenge will be to shape the cognitive skills, interpersonal sensibilities, and cultural sophistication of children and youth whose lives will be both engaged in local contexts and responsive to larger transnational process" (p. 3).

Historically, education has served and supported what Hargreaves (2005) referred to as a market fundamentalism, which requires a large, inexpensive labor market with a basic level of knowledge, and a much smaller, selective group of creative and highly educated individuals. Hargreaves acknowledges a current shift toward a knowledge economy, in which survival depends on one's ability to out-create one's competitors. This shift from a market-driven society to a knowledge-driven one dramatically changes the complexion of our needed labor force. Such an economy depends on the ability of individuals to share and access knowledge, emphasizes the need for critical thinking and creativity, and stresses the importance of setting higher standards in literacy and math for all.

American public education is not, however, driven only by economic demands. Our country is a democracy, and our founding fathers, including Thomas Jefferson, saw public education as essential to preserving and enriching our democracy (Mondale & Patton, 2001). Literacy was tied inexplicitly to political freedom, the American dream, and to citizenship. As Howard Gardner (2004) suggests, public education has the responsibility to teach democracy and the expectation that students will contribute to the health of the community in which they live.

Given the rapid pace of globalization, the community in which students live has expanded to include the world (Suárez-Orozco & Win-Hillard, 2004). Today's students deserve an education that will prepare them for global citizenship, but, as the world continues to shift and change, much of what is learned today becomes irrelevant or outdated tomorrow. Information and new knowledge compounds and grows exponentially, necessitating a shift in focus for educators. Consequently, scholars such as Deakin Crick (2004) believed that it is the ability to question that is paramount and the responsibility of teachers is no longer to increase knowledge, but rather to help students become more effective learners.

To this end, Crick, Broadfoot, and Claxton's research (2004) has identified seven learning domains of effective lifelong learning: (a) Changing and Learning, (b) Critical Curiosity, (c) Meaning Making, (d) Creativity, (e) Resiliency, (f) Strategic Awareness, and (g) Learning Relationships. By teaching the learning domains directly and strengthening an individual's learning profile, schools can create lifelong learners and better equip children for a rapidly changing and ambiguous future. The need to be a lifelong learner is a by-product of globalization and is a significant factor in the paradigm shift in education.

Lifelong Learning

Early in the century, Progressive education defined lifelong learning as the need for schools to prepare children for successful lives (Lemann, 1999). It was grounded in a constructivist theory of learning, which holds that learning is a complex process with both internal and external factors that must work together to maximize the learning power of individuals, drawing on the learner's interests, needs, capacities, and experiences. By

the 1950's, in an attempt to boost corporate profits and challenge labor unions' strong hold on workers, industry used the term "lifelong learning" to impose corporate training on their workers (Hyslop-Margison & Sears, 2006).

Today, lifelong learning pulls from the fields of education, economics, and psychology and evolves from the realization that the focus of citizens' education must extend beyond national concerns in this global world (Boyd, 2003; Crick, 2003). Contemporary lifelong learning theory identifies the need for change in skills and competencies of citizens because of the social, political, economic, and technological changes due to globalization and that necessitates a change in education (Holt, 2001; Rothstein, Wilder, & Jacobsen, 2007).

Constructivist theory and lifelong learning both recognize the vital role affective behavior has on learning. Crick and Wilson (2005) defined lifelong learning as learning that is continuous and takes place throughout one's life, involves both formal and informal learning, is self-directed, intentional, relational, and transformative. While lifelong learning is a personal activity, it requires participation in a community because learning relationships are critical to the learning. Crick and Wilson (2005) argued, "The development of lifelong learning requires an intention to learn, the development of self-awareness, and the capacity to take responsibility for one's own learning. We have also [stressed] the importance of the relationships of learning" (p. 362). Crick and Wilson hold that lifelong learning requires active awareness and engagement of the learner within a community.

Crick, et al. (2004) defined lifelong learning as the individual's capacity and enthusiasm for learning. There is a strong link between the emotional and intellectual

components of learning that are essential to developing the flexibility and capacity to learn and relearn—one of the primary components of lifelong learning. Learning power is a form of awareness about oneself as a learner and can be recognized in particular behaviors, beliefs, and feelings about oneself and about learning. It is a way of being in the world (Crick, 2006).

Real-life learning power consists of two inter-related facets: capabilities and dispositions (Carr & Claxton, 2002). Capabilities are identified as the skill, strategies, and abilities needed to learn. Disposition is the individual's willingness and readiness to engage in learning opportunities. Dispositions are the human attributes that are different from knowledge, skill, and understanding and can be thought of as habits of mind, the way in which an individual responds to learning situations. Like the double helix in DNA, both these facets are interactive and inseparable (Crick, 2006). While the term disposition is imprecise, it is useful in drawing attention to domains of human attributes that are different from knowledge. Researchers identify these facets of learning using a variety of terms, such courage, curiosity, playfulness, perseverance, confidence, and responsibility, to name a few (Carr & Claxton, 2002). It is the affective component of learning that has been lost in the current educational reform movement, as it places more and more pressure on educators to measure only academic achievement.

Current Research in Assessing the Affective Domains of Learning

The transformative power of an individual's belief in his or her ability to grow as a learner was substantiated in Blackwell, Trzesniewski, and Dweck's (2007) longitudinal study of student achievement and its relationship to implicit theories of intelligence. The research, which was conducted over a 2-year period, involved nearly 400 adolescents

who were divided into two groups, both of which received instruction in study skill strategies. Only one group, however, received direct instruction in growth orientation, what the ELLI refers to as "Changing and Learning." In the end, those students who perceived their intelligence as a malleable quality affirmed learning goals more strongly, believed in the relationship between hard work and achievement, were more likely to rise to challenges and setbacks, were less likely to attribute failure to a lack of ability, and were more likely to suggest the need for more effort or different strategies. Perhaps, most remarkable, however, was that the direct teaching of an implicit theory of intelligence resulted in a positive change in student motivation and in a substantial improvement in academic success in the form of higher math scores and grades (Blackwell et al., 2007).

In a current study, Crick and Ren (2007) sought to evaluate the relationship between learning dispositions and academic achievement of 823 fourteen-year-old students in England. Using the ELLI to measure learning profiles, the data was collected and then compared to the students' academic performance. Students were classified as underachieving, achieving at expected levels, and achieving above expected levels, as measured by the schools' existing assessments. The findings indicated a significant difference between the learning dispositions of the underachieving students and the rest of the students in four of the identified domains of learning: strategic awareness, changing and learning, critical curiosity, and meaning making.

The Role of ELLI in Educational Reform

Helping educators to incorporate into practice a focus on the lifelong learning inventory requires a clear, learner-centered vision of purpose. What are necessary for the pursuit of high-level intellectual outcomes are strong leadership, open communication,

collaborative problem solving, and structures that promote teacher teaming and collaborative endeavors. In order to create learning community in which students and teachers are given the time, space, and permission to know one another well (Newmann, 2002) structural and time constraints rooted in traditional teaching and learning theory must be overcome.

The evidence in the literature supports that the dynamics of global changes occurring today warrant a change in educational practice. Current research in learning supports a constructivist theory put forth by such renowned educators as J. Dewey, L. S. Vygotsky, H. Gardner, and R. Marzano (Walker, 2002). The experts largely agree that the need for children today to be lifelong learners has never been greater (Barth, 2001; Bloom, 2004; Boyd, 2003; Brown, 2006; Gardner, 2004; Hargreaves, 2005; Holt, 2002; Marzanno et al., 1999; McCombs, 2003; Springer, 2006; Suárez-Orozco & Qin-Hillard, 2004). The statistical evidence is profound when one considers that a mere 50 years ago, high school students graduated knowing somewhere in the neighborhood of 75% of what they would need to know in order to be successful citizens (Barth, 2001). Conversely, today, it is estimated that high school graduates leave school knowing only 2% of what they will need to know to be successful citizens (Barth, 2001). It is not that they know less. Indeed, they know quite a bit more than their counterparts 50 years ago. But when knowledge doubles every three years and computer technology changes every few months, the need to be a resilient lifelong learner becomes indisputable (Barth, 2001). Clearly, given the speed with which technology advances and knowledge increases, a back-to-basics approach herald by the Core Knowledge movement will not adequately prepare our children for the future.

In today's educational landscape, it is not enough to be learned. It is essential that students and teachers alike be learning. "The problem with schools isn't that they are no longer what they once were; the problem is that they are precisely what they once were" (Barth, 200l, p.28). If teachers are to prepare children adequately for the future, they must commit themselves to lifelong learning, not only for their students, but also for themselves. For teachers to successfully develop lifelong learning skills in their students, they must be lifelong learners themselves. As Eric Hoffer, a San Francisco longshoreman and philosopher stated, "In times of change, learners inherit the earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists" (as quoted by Barth, 2001, p. 28).

The evidence presented on lifelong learning and its relationship to living a successful, fulfilled life as a fully participatory citizen in the 21st century is compelling. The role that educational institutions play is critical. Sound learning theory, not business practices or attempts to sort and rank children, should guide educational decisions and professional development activities. The expectation that our children should be prepared to become lifelong learners necessitates that our teachers model lifelong learning. The ELLI can begin that transformation of teacher to lifelong learner and student to lifelong learner by providing a common vocabulary. The questionnaire requires respondents to reflect on their learning, helping to ignite and enrich conversations about ones own learning profile and evolution as a lifelong learner. The ELLI clearly defines the characteristics of lifelong learning, provides guidelines and suggestions on how to incorporate into pedagogical practice lessons and strategies that strengthen these characteristics, and offers to anyone who asks a clear measurement of growth in learning.

Delandshere (2002) suggested that educators needed to align educational practice with theoretical and philosophical ideas about learning and knowing. Both internal and external accountability tests that sort and rank children are counterintuitive to sound pedagogical practice and shape curriculum in ways that fail to adequately prepare children for a global world (Hargreaves, 2003). The skills needed to be a fully participatory citizen are not measurable by standardized and traditional tests. The present model of assessment is rooted deeply in racism, classism, and behavioral theories of learning developed decades ago. External measures generated by external sources are results-specific. In most classrooms today, others calculate the value of a child's learning and the child is presented with that worth, usually in the form of a number or letter. What is absent from this measure is the learner's commitment and engagement in that learning, his or her creativity and critical curiosity, the ways in which he or she makes meaning, and the strategies he or she employs in the process of the learning, all valuable characteristics deemed necessary to be a lifelong learner (Crick, et al., 2004).

The following chapter will explore the basis for selecting a mixed-method design, quasi-experimental design. The study's hypothesis will be introduced and the decision to collect both quantitative data through the use of the ELLI and the MAP assessments and qualitative data in the form on open-ended surveys form student, parents and teachers will be defended. Determining if a correlation exist between growth in the learning confidence and academic achievement will be data-driven, as will the determination of growth in learning confidence.

CHAPTER 3: METHODOLOGY

Introduction

The purpose of this quasi-experimental mixed-methods study was twofold: (a) to test the theory that there is a strong link between the emotional components of learning and academic achievement (Crick, Broadfoot, & Claxton, 2004), and (b) to determine whether direct teaching of the learning domains, as identified by the ELLI, strengthens learning confidence for eighth-grade students at a suburban middle school. The independent variables consisted of direct instruction in the seven dimensions of learning as outlined in the ELLI (Crick et al., 2004) and the inclusion of strategies into the pedagogical practice to strengthen those dimensions. The dependent variables provided both quantitative and qualitative data. Those variables are defined as: (a) growth in academic achievement in reading and mathematics as measured by the Northwest Evaluation Association's (NWEA) Measure of Academic Progress (MAP) (2004-2007); (b) growth in the participants' lifelong learning profile as measured by the ELLI; and (c) perceived growth in learning characteristics as perceived by core teachers, parents, and the participants. The control and intervening variables, such as the socio-historical environment of the learner or pedagogical practices of other instructors, were statistically controlled in the study.

Research Question

This study sought to answer the following questions:

1. Does a correlation exist between the growth in learning confidence of adolescent students who have received instruction in effective lifelong learning

characteristics, as measured by the ELLI, and their growth in academic achievement in reading and mathematics, as measured by the MAP's test?

2. Does direct instruction in the seven domains of lifelong learning strengthen learning confidence?

The null hypothesis for the question of correlation between growth in learning confidence and growth in academic achievement states direct instruction in lifelong learning characteristics of eighth-grade students as measured by the ELLI does not predict students' academic growth in reading and mathematics as measured by the MAP tests (H_0 *direct instruction in lifelong learning ≠ growth in academic achievement)*. The alternative hypothesis states the direct instruction in lifelong learning characteristics of eighth-grade students as measured by the ELLI does predict students' academic growth in reading and mathematics as measured by the MAP tests exists (H_1*: direct instruction in lifelong learning = growth in academic achievement)*.

Research Design and Approach

A concurrent transformative strategy was employed by this mixed method of inquiry and was guided by specific theoretical perspectives in the areas of globalization, lifelong learning, learning theory, and teaching theory (Creswell, 2003). Using a quasi-experimental design, this study followed a multistage process involving 103 eighth-grade students at an affluent suburban middle school outside of Chicago, divided into two groups.

This study tested the theory that there is a strong link between the emotional and academic components of learning. By focusing on the learner in the educational process, and using his or her perspective, capacities, and motivation as the point from which to

begin teaching, academic achievement improves (Crick et al., 2004). The intent of this study was to develop a theoretical framework from which the development of standards, curriculum, assessment, and pedagogy will draw. In doing so, it is hoped that those involved in educational reform will redirect the focus for change to address the current and future needs of the learner.

For the purpose of this study, the operational definition for lifelong learning employed the definition of lifelong learning as defined by Crick et al. (2004) and specified in the ELLI: Changing and Learning, Learning Relationships, Strategic Awareness, Resilience, Creativity, Meaning Making, and Critical Curiosity.

This researcher assumed that a strong lifelong learning profile correlates positively to academic achievement and correlates to positive patterns of learning behavior. Further, it was assumed that direct instruction in lifelong learning characteristics makes students cognizant of their personal learning identities. Awareness of their development in each domain as defined by the ELLI promotes growth toward becoming a more effective learner and that growth can be taught through thoughtful pedagogical practices designed to strengthen targeted domains. By identifying a correlation between a strong learning profile and academic achievement after direct instruction in the seven domains, this study hoped to determine if there was any validity in these assumptions.

Setting and Sample

The population consisted of 103 eighth-grade students attending an affluent suburban middle school outside of Chicago. The sampling was reflective of the community in which a minimum of 76.1% of the students are Caucasian and 8.2% live in

households that are classified as low-income. In the 2007-2008 academic year, 93.1% of the eighth-grade students at this middle school met or exceeded standards (Illinois School Report Card, 2008) in reading on the *Illinois State Achievement Test (ISAT*). Stratification of the population was used to ensure that both groups were reflective of the demographics identified above.

There were two groups in this study. Group A was the Instructional Group and consisted of 65 eighth-grade language arts students, divided into three classes, and were instructed by the researcher for 84 minutes a day. The control group consisted of 38 eighth-grade language arts students divided into two classes and taught by another language arts teacher for 84 minutes a day. The students' science, social studies, and math teachers completed surveys at the conclusion of the study in which they were asked to identify students that demonstrated growth in learning behaviors over the course of the academic year (Appendix B). Forty-five parents from the treatment group volunteered to complete parent surveys that solicited feedback on observable growth in learning behaviors at home (Appendix C).

Within this school, eighth-grade students are assigned to one of three teams for the academic year. The placement decision rested with the school counselor and was done independently from teacher recommendations and requests. Because this group was instructed by the researcher in the areas of lifelong learning over a 10-month period, availability and access were essential. As a result, sample groups were drawn from a specific team within the school. The school counselor assigned students randomly to this team, without knowledge of or consideration for this study. Within the team, the students were randomly assigned to one of two language arts teachers.

All participants in this study received the district curriculum based on the Illinois State Standards by highly qualified language arts and math teachers. In addition to the curriculum, the instructional group received direct instruction in lifelong learning skills. The purpose of this instruction was to make participants cognizant of their learning identities and provide strategies to strengthen those learning characteristics. To minimize any risk to the participants in the control groups, a personal interpretation of their learning identity as revealed by the ELLI and direct instruction in the lifelong learning domains were made available to any participant requesting this information for a period of two months after the conclusion of the research.

Students and parents may have felt coerced to participate because of the unequal student/teacher relationship and the process of grading. The researcher addressed these concerns directly with both students and parents. For those participants who were graded by the researcher, grades were cooperatively determined. Grades were not arbitrarily given by the teacher, but were initially determined and defended by the student, based on evidence. When there was some question as to the validity of the grade, the student and researcher/teacher discussed the evidence and a grade was mutually determined. The personal role of each student in their assessment and the value placed on their work in the form of a grade minimized the concern.

Instrumentation and Data Collection Tools

Effective Lifelong Learning Inventory

The ELLI survey is an assessment tool used to measure the components of lifelong learning and uses a five-point Likert scale. Consisting of 72 questions, the ELLI measures the learning dispositions of learners on seven domains: Changing and Learning,

Critical Curiosity, Meaning Making, Creativity, Resiliency, Learning Relationships, and Strategic Awareness. The ELLI was administered by the University of Bristol and Lifelong Learning Foundation online and provided immediate feedback on both individual and class groups. This feedback indicated patterns of strengths and areas for development in the form of a variety of graphs, with mean scores and frequency counts for whole groups, as well as percentage scores for individuals in each of the learning domains. The obvious advantage to having the ELLI scored by an outside agency was the ability to remove the researcher's bias from the computation of the responses. A pre and posttest was administered to all participants in both groups.

The ELLI was selected for this study because it met accountability goals and addressed three major objectives (Tew, Crick, Broadfoot & Claxton, 2004):

1. The ELLI was used as a diagnostic tool for learners. It assessed students' capacity for learning and provided data that helped to identify areas of strength and weaknesses.
2. The ELLI enabled students to keep track of their own learning and employ learning strategies aimed to strengthen specific domains.
3. The ELLI provided group profiles and enabled the teacher to differentiate pedagogical practice to meet specific needs.

Additional benefits of the ELLI include a common vocabulary with which to talk about learning and the generation of important conversations among teachers, students, and parents about learning. The seven domains of lifelong learning as defined by the ELLI are:

1. *Changing and Learning*: A healthy perspective of oneself as a learner is present when an individual believes that through effort, their minds will grow, and that learning is a lifelong process. There is a sense of getting better over time. A less effective learner perceives learning capacity as fixed and experiences difficulty in learning as something that reveals inadequacies and limitations.
2. *Critical Curiosity*. Effective learners with critical curiosity have energy and drive for learning. They value finding the truth, thinking deeply and asking questions. They are critical in their approach to learning and are undaunted by public exposure. They are in charge of their learning and are motivated by challenge. Less effective learners are passive in their learning and are more likely to accept what they are told. They are less likely to engage in speculation and exploratory discussions.
3. *Meaning Making.* Effective learners who make meaning search for ways to connect what they are learning to what they already know. They tend to make sense of new things by using their own experiences and are interested in the "bigger" picture. Less effective learners approach learning experiences as isolated and fragmented events. These learners are more interested in identifying the criteria for success than in constructing meaning.
4. *Resilience:* Effective learners are resilient and robust in their learning. They like a challenge and are more willing to try things and to take risks. They exert good mental effort and accept that sometimes learning is hard. They are not easily frustrated. Less effective learners present evidence of dependence and fragility.

They are easily frustrated when they are challenged or when they make a mistake. They rely on others for their learning and self-esteem.

5. *Creativity*: Creativity allows the learner to look at things in different ways. These learners are imaginative and believe in new possibilities. They enjoy exploring new ideas and looking at things from different perspectives. They are more playful in their learning, as well as more purposeful. Less effective learners are characterized by literalness and are rule-bound. They tend to be unimaginative and prefer clear-cut and traditional ways of looking at things. They prefer having preset rules or directions to follow.
6. *Relationships/Interdependence*: Effective learners are well balanced and are able to be both private learners and social learners. They know the value of watching others learn, and make use of others' knowledge to expand upon their own. They understand that their peers and educators provide resources, as well as support. Yet, at the same time, they also know that effective learning may require time alone to study and ponder. Less effective learners are more likely to depend on others for reassurance and guidance, and are more likely to isolate themselves.
7. *Strategic Awareness:* More effective learners are interested in learning about themselves as learners. They will try different strategies in order to learn more about how they learn. They handle frustration and disappointment and are more reflective and self-evaluative. They like to plan and organize their own learning. In contrast, less effective learners are more robotic in their learning. They are less self-aware and more self-conscious.

Measures of Academic Progress (MAP)

While the ELLI provided a measure of a student's learning confidence, the Northwest Educational Association's (NWEA) Measures of Academic Progress (MAP) reading and mathematics tests measured the acquisition of content knowledge.

The MAP test for reading and mathematics was also administered online. Both tests are aligned to the state standards and are adaptive in design, allowing them to measure the instructional level of each student and determine growth over time, independent of grade level or age. The measurement scale used by NWEA (2004-2007) assessments, called Rasch Units (RIT), is an equal-interval scale that measures instructional level independent of grade level. A variety of reports, both individual and class groups, were made available. The obvious advantage to having the MAP tests scored by an outside agency was the ability to remove the researcher's bias from the computation of the responses. A pre and posttest was administered to all participants.

Surveys and Self-Assessments

An open-ended questionnaire was given to the three core teachers (Appendix B) and parents (Appendix C) of the treatment group. These surveys attempted to identify any changes in the participants' learning behaviors in a variety of settings, at home and in other classes. Additionally, the participants in the treatment group were asked to complete student-designed self-assessments check lists that addressed their learning behavior and reflect on teacher-designed questions that asked them to reflect on the specific learning experiences within that quarter (Appendix E). These self-assessments were completed at the end of each quarter. In May 2009, the students were asked to self-

report any changes in their perceptions of themselves as learners on an open-ended survey (Appendix D).

Procedures

This mixed method inquiry involved a series of interventions spanning a 10-month period pulling from both qualitative and quantitative data in order to test the theory, which states there is a strong link between the emotional components of learning and academic achievement (Crick, Broadfoot, & Claxton, 2004). The initial step in this study was to administer as a pre-test both the ELLI and the MAP reading and math tests to all participants. Results of the MAP pretest were shared with all participants from both the control and treatment groups, as well as their parents through written notice and parent conferences. Results of the ELLI were shared and explained only to the treatment group and their parents in the form of a spider diagram. In addition, the parents of the students in the treatment group received written information about the ELLI and the seven domains of learning (Appendix A).

The treatment group was then engaged in a series of discussions that required them to reflect on what it meant to be a good learner and a good teacher. Through an inquiry approach, the students were asked to consider what their individual needs were for optimal learning and how did those needs and the needs of their classmates coexist with or contradict one another. They examined the strategies and characteristics used by teachers that facilitated their learning. Each class then explored strategies they thought would be useful in creating an optimal learning environment for everyone. They were asked to consider what they believed the purpose of public education was, taking into account not only personal goals and aspirations, but also societal needs and

responsibilities. The treatment group examined past and current public school practices and discussed the validity and purpose of these (i.e. grading, standardized testing, student grouping, college admission policies and practices). The treatment group explored the impact of their own and others' expectations on their learning and the importance of the arts and social sciences, as well as the fundamentals of reading and writing, and their personal responsibility to participate in and contribute to their community. The seven domains of learning were introduced and defined and provided the foundation used to discuss learning characteristics.

Drawing from these discussions, each class scribed a class bill of rights describing the learning community they would create in order to optimize everyone's learning (Appendix F). Additionally, each class formulated a self-assessment checklist that was used at the end of each quarter to reflect on their individual learning, as well as their promise to their community. These quarterly self-assessments included, along with the student-designed checklist, teacher-designed questions that required the students to reflect on the curricular work presented during that quarter. These two components made up each quarterly assessment (Appendix E).

The ELLI class profiles of the treatment group were used by the researcher to help direct instruction in the seven domains of learning and to guide the pedagogical approach to the teaching of curricular content for a minimum instructional period of 10 months. Members of the treatment group were engaged in multiple discussions about learning. Throughout the 10 months, the treatment group was guided in reflection on their own learning using the seven domains of the ELLI as the framework from which they drew. Students were asked to complete the self-assessment their class created each quarter in

which they reflected on their work and their learning for that quarter. The researcher coded these assessments for evidence of effective lifelong learning behaviors defined by the ELLI. When curricular material was presented and assignments given to the treatment group, the language of the seven domains was used to describe which domain of learning correlated to the assigned task (Appendix G). The treatment group received strategies designed to strengthen each domain, selected several strategies and were asked to reflect on the effectiveness of those strategies throughout the 10 months of instruction (Appendix H).

At the close of the treatment period, all participants in both the control groups and the treatment group took the ELLI as a posttest to determine growth, if any, in the seven domains of learning. It is at this point that the participants in the control group were given information about their learning profiles. Direct instruction in the seven domains was provided to any member of the control group that requested more information.

To glean some insight into whether or not growth in learning profiles had transferred to other arenas, the participants in the treatment group completed an open-ended survey that asked them to identify any changes in their learning behavior that they had identified over the 10-month period (Appendix D). Additionally, core teachers of both groups were asked to complete an open-ended survey in which they identified students who had demonstrated any observable changes in their learning behaviors within their classes (Appendix B). Parents of the treatment group were also asked to complete an open-ended survey in which they were asked to identify any observable changes in their child's learning behaviors at home (Appendix C). The surveys provided another source of data to evaluate perceived growth in student learning profiles and ways in which that

growth manifested itself in the tapestry of each student's life. The data from these surveys was coded for themes. Methodological triangulation was employed to build a coherent justification for themes and to enhance confidence in the results.

Reading and math scores for all participants were taken from the school district's MAP testing that was given in September and April 2009. Statistical analysis was used to determine the correlation between growth in reading and mathematics as measured by the MAP test and growth in learning as measured by the ELLI.

Once results were completed, the findings were shared with any participant who wished to receive a copy. Additionally, any student within the control group who expressed an interest received direct instruction in the seven domains of learning as identified by the ELLI.

Data Analysis

Independent *t*-tests were used to compare the difference between the treatment and control groups' respective means in learning dispositions scores, as well as between groups' mean scores on the MAP tests for both reading and mathematics. Independent *t*-tests were used to compare overall ELLI growth in male and female students between the treatment and control groups, as well as to account for socioeconomics factors. A one-way analysis of variance (ANOVA) was used to compare the impact of direct teaching of the seven domains of lifelong learning on achievement and learning confidence between both groups. A linear regression test was used to run the correlations.

Limitations

The convenience sampling procedure decreased the ability to generalize the findings as did the small sample size.

In the qualitative portion of this study, the findings are subject to other interpretations. In addition, because the data collected from the ELLI was self-report data, it is limited in its ability to be generalized. However, self-report data is the most valid form of data for assessing learning dispositions that, by definition, are personal and subjective (Crick & Ren, 2007).

Validity and Reliability

Research has been conducted to determine the internal reliability, validity, and stability of the seven domains of the learning as defined by the ELLI. Using data collected over a four-year period with a sample size of 10,496 individuals from 122 institutions and 413 classrooms, the seven domains were found to be reliable, stable, and internally consistent over time (Crick & Yu, 2008). An alpha reliability computation was performed to determine the internal reliability of the seven scales. Cronbach's alpha coefficients for ages eleven to fourteen ranged from a low of .72 (Learning Relationships) to a high of .85 (Strategic Awareness). Ongoing research continues on the ELLI and currently includes research projects conducted at all levels of education ranging from the pre-school to the university level.

When determining reliability for the MAP tests, the NWEA used a both a temporal reliability test, commonly known as the test-retest approach, and reliability across forms, commonly referred to as parallel form, in which the two tests are considered equivalent in every way except the questions differ. Reliability coefficients ranged between the mid .80's to the low .90's (NWEA, 2004). Concurrent validity, that is how well the RIT scores from the MAP tests corresponded to the scores obtained from the 2003 Illinois Standards Achievement Test (ISAT), was determined using a Pearson correlation

coefficient. A strong correlation would be indicated when the correlations are in the mid-.80's. Coefficient correlation of reading was .79 for 962 eighth-grade students. The coefficient correlation for mathematics was .87 for 957 eighth-grade students (NWEA, 2004).

Role of the Researcher

The researcher is currently employed as a language arts teacher in a Midwest suburban school district outside a large metropolitan area. She previously taught adolescents who were homebound hospitalized, deaf blind, psychiatric and emotionally disturbed, and deaf and hard of hearing in both private and public school setting. The researcher is an advocate for learning, both for her students and her colleagues. She holds National Board Certification and has taught for 20 years. The narrowing of the curriculum in response to the political mandates generated by NCLB and the impact of those mandates on student learning were the impetus for this study.

Participants' Rights

As required by Walden University's Institutional Review Board (IRB approval # 06-03-08-0335956) and participating school systems guidelines, the participants' rights were safeguarded. Permission to conduct research in the school district was obtained from the superintendent. Permission to use the ELLI was obtained by Dr. Ruth Deakin-Crick (Appendix I). The students and their parents received a description of the study asking them to participate in the study (Appendix J). Teachers received the teacher survey and a description of the seven domains as defined by the ELLI. The ELLI and the MAP tests were administered online. Participant anonymity was assured, and no school district names or parent, student, or teacher names were used in any reports or

presentations of findings. The raw data will be held by the researcher at her home for 5 years, after which time all data will be destroyed. Data will be made available to the participants and community members upon request. The opportunity to learn about the seven domains of lifelong learning as defined by the ELLI was offered upon request to the participants in the control group for a period of two months after the close of the study.

In the following chapter the data collected from the ELLI and the MAP tests is analyzed to determine if any correlation exists between growth in learning confidence and academic achievement. Survey data will be used to corroborate perceived growth in lifelong learning behaviors between students, teachers and parents. Qualitative data will be analyzed for theme and trends.

CHAPTER 4: Results

Introduction

The purpose of this study was to determine if direct instruction in lifelong learning yielded growth in learning confidence and academic achievement. By directly teaching the seven domains as identified by the ELLI, and adjusting pedagogical practice to strengthen students' learning identities, the researcher examined growth in learning confidence and explored whether or not a correlation between a strong learning disposition and academic achievement existed. Specifically, this study sought to answer two questions:

1. Does a correlation exist between the growth in learning confidence of adolescent students who have received instruction in effective lifelong learning characteristics, as measured by the ELLI, and their growth in academic achievement in reading and mathematics, as measured by the MAP's test?
2. Does direct instruction in the seven domains of lifelong learning strengthen learning confidence?

The null hypothesis would indicate that direct instruction in lifelong learning does not predict students' academic growth in reading and mathematics *(H_0*: Direct instruction in lifelong learning ≠ academic growth in reading and mathematics). The alternative hypothesis states that direct instruction in lifelong learning does predict students' academic growth in reading and mathematics *(H_1*: Direct instruction in lifelong learning = academic growth in reading and mathematics).

The independent variables consisted of direct instruction in the seven dimensions of learning as outlined in Effective Lifelong Learning Inventory (ELLI) (Crick et al.,

2004) and the inclusion of strategies into the pedagogical practice to strengthen those dimensions. The dependent variables provided both quantitative and qualitative data and are defined as: (a) growth in academic achievement in reading and math as measured by the Northwest Evaluation Association's (NWEA) Measure of Academic Progress (MAP) (2004-2007); (b) growth in the participants' lifelong learning profile as measured by the ELLI; and (c) perceived growth in learning characteristics as perceived by core teachers, parents, and the participants. The control and intervening variables, such as the socio-historical environment of the learner or pedagogical practices of other instructors, was statistically controlled in the study. This researcher provides a description of the research design and approach.

Research Design and Approach

Guided by specific theoretical perspectives in the area of globalization, lifelong learning, learning theory, and teaching theory, this mixed method inquiry employed a concurrent transformative strategy (Creswell, 2003). The quasi-experimental design followed a multi-stage process involving a total of 103 eighth-grade students at an affluent suburban middle school outside of Chicago, who were divided into two groups. The sampling was reflective of the community in which a minimum of 76.1% of the students are Caucasian and 8.2% are classified as living in low–income households. In the 2007-2008 academic year, 93.1% of the eighth-grade students at this middle school met or exceeded standards (Illinois School Report Card, 2008) in reading on the *Illinois State Achievement Test (ISAT*). Stratification of the population was used to insure that both groups were reflective of the demographics identified above.

There were two groups in this study. Group A was the instructional group and consisted of 65 eighth-grade language arts students, divided into three classes that were instructed by the researcher for 84 minutes a day. The control group consisted of 38 eighth-grade language arts students divided into two classes and taught by another language arts teacher for 84 minutes a day.

As stated earlier, the purpose of this study was two-fold: a) to test the theory which states there is a strong link between the emotional components of learning and academic achievement of 103 eighth-grade students, and b) to determine if direct teaching of the learning domains as identified by the ELLI strengthens learning confidence. Theoretically, by focusing on the learner in the educational process, "in which it is learners' perspectives, their capacities and their motivation and the quality of their relationships that become the starting point for teaching, rather than the more usual curriculum content" (Crick et al., 2004, p. 267), academic achievement improves. The intent of this study was to develop a theoretical framework from which the development of standards, curriculum, assessment, and pedagogy will draw. In doing so, it is hoped that those involved in educational reform in the United States will redirect the focus for change to address the current and future needs of the learner.

This researcher assumed that a strong lifelong learning profile correlates positively to (a) academic achievement and (b) positive patterns of learning behavior. All participants in this study received the district curriculum based on the Illinois State Standards by highly qualified language arts and mathematics teachers. In addition to the curriculum, the instructional group received direct instruction in lifelong learning skills. The purpose of this instruction was to make participants cognizant of their learning

identities and to provide strategies to strengthen those learning characteristics. To minimize any risk to the participants in the control groups, a personal interpretation of their learning identity as revealed by the ELLI and direct instruction in the lifelong learning domains were made available to any participant requesting this information for a period of two months after the conclusion of the research.

Instrumentation and Data Collection Tools

Two instruments provided the quantitative data used in this study. The ELLI is a self-report questionnaire that uses a five-point Likert scale. Consisting of 72 questions, the ELLI measures the learning dispositions of learners on seven domains: Changing and Learning, Critical Curiosity, Meaning Making, Creativity, Resiliency, Learning Relationships, and Strategic Awareness. Using data collected over a four-year period with a sample size of 10,496 individuals from 122 institutions and 413 classrooms, internal reliability, validity, and stability of the seven domains of learning as defined by the ELLI were found to be reliable, stable, and internally consistent over time (Crick & Yu, 2008). For this study, the ELLI was administered online and provided immediate feedback on both individuals and class groups. This feedback indicated patterns of strengths and areas for development in the form of a variety of graphs, with mean scores and frequency counts for whole groups, as well as percentage scores for individuals in each of the learning domains.

Pre- and posttests were administered to all participants. Participants in the treatment group received a copy of their pre- and posttests in the form of a spider diagram, as did their parents (see Figure 1: Treatment Group and Figure 2: Control Group)

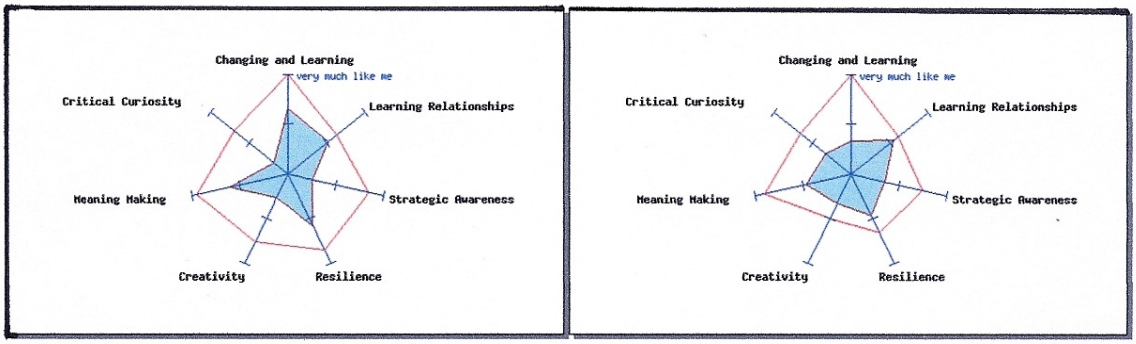

Figure 1. Sample of ELLI spider diagrams for treatment group. The blue shaded area represents the pretest. The red line represents the posttest.

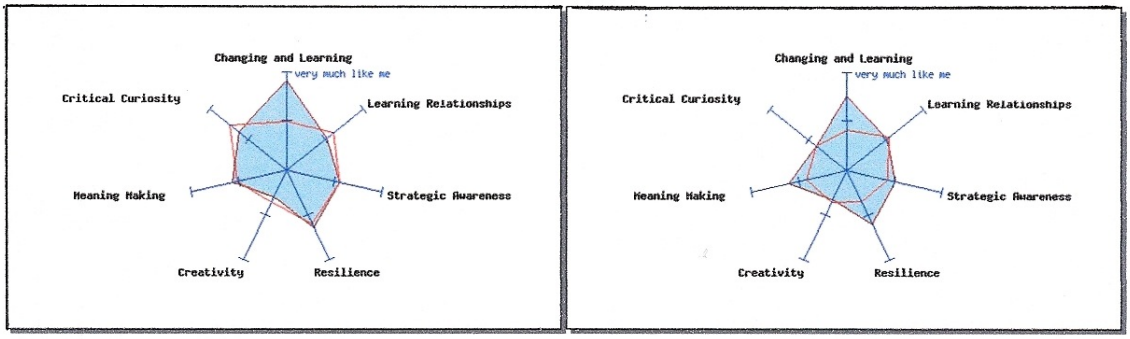

Figure 2. Sample of ELLI spider diagrams for control group. The blue shaded area represents the pretest. The red line represents the posttest.

The pretest provided a baseline for each student, providing a visual reference as to the individual's strengths and challenges in each of the domains. Students used the pretest spider diagrams to identify specific domains on which they would focus throughout the year. Strategies were selected to assist in strengthening targeted domains (Appendix H). Class profiles were used to guide pedagogical practice.

The Northwest Educational Association's (NWEA) Measures of Academic Progress (MAP) in reading and math was also administered online. The reliability of the MAP tests, using both a temporal reliability tests and reliability across forms tests, were

determined to be sound. Concurrent validity of the MAP tests to the Illinois Standards Achievement Test using a Pearson correlation coefficient was determined to be strong for mathematics (.87), and acceptable for reading (.79) for eighth-grade students. The MAP reading test is aligned to the state standards and adaptive in design, allowing it to measure the instructional level of each student and determine growth over time independent of grade level or age. The measurement scale used by NWEA (2004-2007) assessments, called Rasch Units (RIT), is an equal-interval scale that measures instructional level independent of grade level. A variety of reports were generated. Pre and posttests were administered to all participants. Every participant and their parents received a copy of their test results.

Qualitative data were gathered from several sources. An open-ended survey was hand delivered to the mathematics, social studies, and science teachers (Appendix B). The survey asked those teachers to identify any student that displayed a change in learning behavior within their classroom. An open-ended survey was mailed to the parents of the participants in the treatment group at the end of the school year (Appendix C). This survey asked parents to identify any changes they observed in their child's learning behavior at home. A self-addressed envelope was provided for the return of these surveys.

Additionally, the participants in the treatment group were asked to reflect on their learning and self-report any changes in their perceptions of themselves as learners through their quarterly, class designed self-assessments (Appendix E), and through an open-ended survey distributed in April 2009 (Appendix D). Six months into the treatment, the students were asked to create a representation of how they experienced

learning in the classroom. All data were kept in a secured location under lock and key. Qualitative data was coded according to the seven domains of lifelong learning as defined by the ELLI. Additional codes were added as certain themes began to emerge from the data. Field notes were kept throughout the study.

Data Analysis

The ELLI was used to gather information in the areas of the seven domains of lifelong learning: Changing and Learning, Critical Curiosity, Making Meaning, Resilience, Creativity, Learning Relationships, and Strategic Awareness. Responses from the ELLI questions were compiled using the Statistical Packages for Social Sciences (SPSS). SPSS-17 was used to compute an independent-measure *t*-test to examine the difference in the average growth between the treatment group and the control group on the ELLI and to determine growth in the seven domains. Growth is defined as the difference between the pre and the posttest.

The MAP test in reading measured instructional level in four areas: word analysis and vocabulary, reading strategies and comprehension, literature, and literary works. The MAP test in mathematics measured instructional level in five areas: number sense, measurement, algebra, geometry, and data analysis and probability. NWEA reports a RIT score range for each subtest and an overall mathematics and reading RIT score for each student. Additionally, at the time of the pretest, a Target Growth value is determined by NWEA for each student, the expected growth measured in RIT that the student should achieve for the year. Again, the SPSS 17 was used to compute an independent-measures *t*-test on the data produced by the MAP assessments and to analyze the average growth in both reading and mathematics between the treatment and control group.

A One-way ANOVA test was used to compare MAP reading and mathematics RIT growth between the treatment and the control groups with regard to gender and socio-economic factors. Linear regression was used to correlate the impact of learning dispositions on achievement.

The student quarterly self-assessments were coded and imported into the qualitative data analysis software TAMSAnalyzer for analysis. Teacher, parent, and student surveys, student work, and field notes were manually coded for theme. Trustworthiness of data was established through the cross-referencing of the information found in the teacher, parent, and student feedback.

Summary of Findings: Quantitative Data

The ELLI

The pretest for the ELLI indicated no significant difference in perceived learning power between the subjects in the treatment group (M = 61.42 and with SD = 13.65*)* and those in the control group (M = 62.51 and with SD = 10.66). After treatment, the scores for the posttest on the ELLI indicated a statistically significant difference in perceived learning power between the participants in the treatment group (M = 73.90 and with SD = 13.06*)* and the subjects in the control group *(*M = 61.56 and with *a* SD = 13.00*).* As shown in Table 1, for the students in the treatment group, the perception of their capacity to learn as measured by the ELLI illustrates a significantly higher overall average growth in their learning profiles (M =12.47 and with SD = 11.00) than the low average growth of the subjects in the control group (M = -1.13 and with SD = 9.46). Statistical analysis indicates that direct instruction in the seven domains of lifelong learning as defined by

the ELLI results in a significantly stronger learning profile than would be expected by chance, *t(99) = 6.183, p = .000).*

Table 1

Overall Growth on ELLI for both Treatment and Control Groups

	Class	*N*	*M*	Std. deviation
Elli growth	Treatment group	65	12.4740	11.00356
	Control group	35	-1.1296	9.45851

Note. Overall growth in learning confidence between the treatment group (Class 1) and the control group (Class 2).

Additionally an independent-measure *t* test was used to compare the overall average growth in each domain for both the treatment group and the control group (see Tables 2 and 3). In all seven of the domains, the variation in growth between the participants in the treatment group and those in the control group was statistically significant, indicating higher average growth in all domains for the treatment group.

Table 2

Growth Delineated by Domains for Treatment Group

	Statistics						
Elli Growth	CL	CC	MM	CT	RS	SA	LR
Mean	13.3762	15.5525	12.5420	13.8918	8.9638	15.1095	7.8822
Std. Deviation	23.63176	15.49234	17.07501	14.89080	11.89325	17.10350	13.00239

Note: CL = Changing and Learning; CC = Critical Curiosity; MM = Meaning Making; CT = Creativity; RS = Resilience; SA = Strategic Awareness; LR = Learning Relationships; *N* = 65

Table 3

Growth Delineated by Domains for Control Group

	Statistics						
Elli Growth	CL	CC	MM	CT	RS	SA	LR
Missing	3	3	3	3	3	3	3
Mean	-1.5723	1.9706	-.0631	-1.0763	.2826	-4.5897	-2.8591
Std. Deviation	21.61506	15.50795	13.84208	17.87791	12.12284	17.51777	15.68724

Note: CL = Changing and Learning; CC = Critical Curiosity; MM = Meaning Making; CT = Creativity; RS = Resilience; SA = Strategic Awareness; LR = Learning Relationships; *N* = 35

An independent *t* test was run to compare growth in the seven domains of the ELLI for males and females and for socio-economic factors. No statistically significant difference was found between male and female overall growth on the ELLI between groups. The same was true with regard to socioeconomic factors. Selection of students who fell into this sub-group was determined by eligibility of free lunch. It should be noted that there was a very small number of students who fell into the socio-economic sub-group *(N = 10).*

Measurement of Academic Performance (MAP)

To assess the academic growth, an overall percentage of Target RIT met or exceeded was calculated. This calculation took the total student growth and divided that figure by the target RIT represented as a percentage. This figure shows the proportion of the overall RIT growth targets achieved by the students. A measurement of 100% is considered by NWEA as average and indicates that student growth equaled the target

growth established in the pretest. Additionally, the percentage of students who met or exceeded their target RIT is provided.

Reading. The count of eighth-grade students with valid beginning and ending term scores for reading in the treatment group was 63. Out of the 63 students with valid scores, 39 students met or exceeded their Target RIT, constituting 60.0% of the student in the treatment group (See Figure 3). The overall percentage of Target RIT met or exceeded for the treatment group was 147.8% (see Figure 4).

The count of student with valid beginning and ending term scores for reading in the control group was 38. Out of the 38 students with valid scores, 21 met or exceeded their Target RIT, constituting 55.3% of the students in the control group. The overall percentage of Target RIT met or exceeded for the control group was 127.1%.

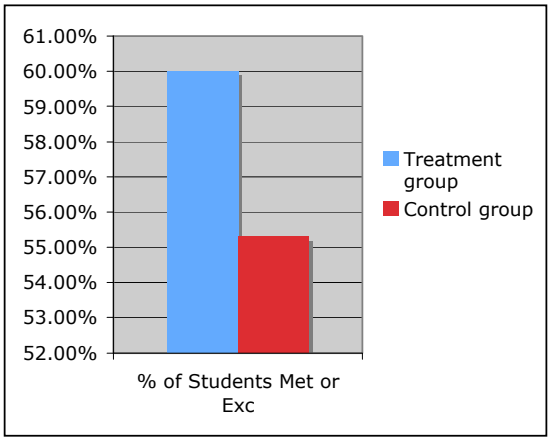

Figure 3. Percentage of students with a Growth Index Value of greater than or equal to zero on the MAP Reading test.

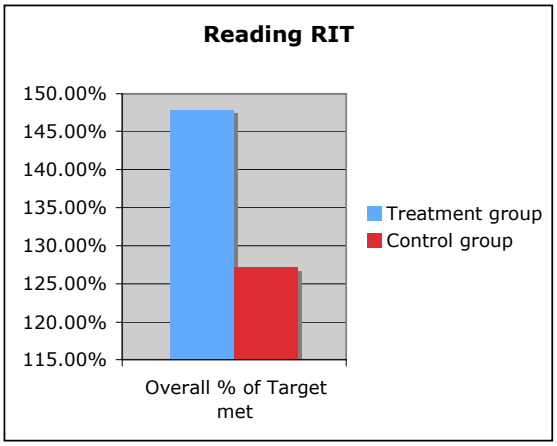

Figure 4. Overall percentage of Target RIT met or exceeded. Performance of 100% is considered average.

Mathematics. The count of students with valid beginning and ending term scores for math in the treatment group was 63. Out of the 63 students with valid scores, 39 met or exceeded their Target RIT, constituting 61.9% of the student in the treatment group (see Figure 5). The overall percentage of Target RIT met or exceeded for the treatment group was 96.0% (see Figure 6).

The count of student with valid beginning and ending term scores for math in the control group was 36. Out of the 36 students with valid scores, 13 met or exceeded their Target RIT, constituting 36.1% of the students in the control group. The overall percentage of Target RIT met or exceeded for the control group was 68.0%.

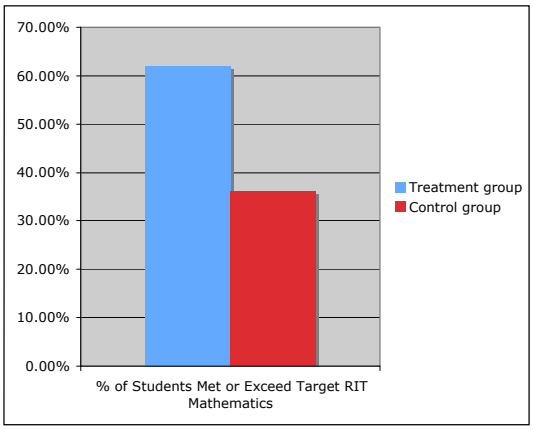

Figure 5. Percentage of students with a Growth Index Value of greater than or equal to zero on the MAP Mathematics test.

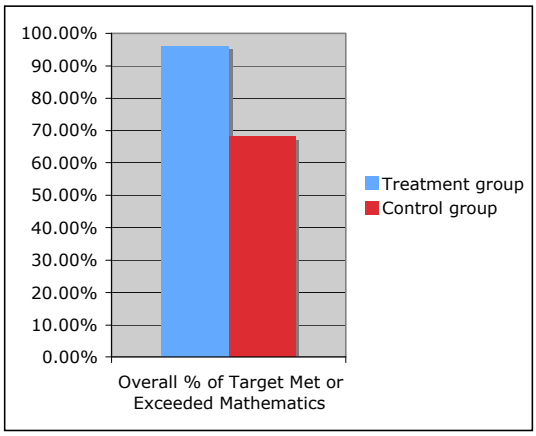

Figure 6. Overall percentage of Target RIT met or exceeded. Performance of 100% is considered average.

One-way ANOVA tests were run to compare MAP Reading and Mathematics RIT Growth between subgroups based on gender and socio-economic factors. No statistically significant difference was found with regard to males (*p*=- *.998)* or females *(p* = .510). With regard to socio-economic factors, no statistically significant difference was found with regard to those receiving free lunch *(p* = .059) and those who did not

receive free lunch *(p = 1.00).* It should be noted that there was a very small number of students who fell into the socio-economic sub-group *(N =10).*

In order to determine to what degree variations in the dependant variables (Growth in Math RIT and Reading RIT scores) were explained by the independent variable (growth of each of the ELLI domains of learning), a linear regression was run to determine an r^2 value. The r^2 value can range from 0 to 1.000. The higher the r^2 value the stronger the correlation between the dependant variable and the independent variable. The first correlation that was run looked at overall growth on the ELLI and RIT growth on the MAP reading and mathematics tests. The correlation between overall growth in the ELLI seven domains of learning and MAP Reading RIT Growth produced an $r^2 = .039$. The correlation between overall growth in the ELLI seven domains of learning and MAP Mathematics RIT growth produced an $r^2 = .101$. The low r^2 values indicate that a correlation between the dependent and independent variables cannot, with any confidence, be statistically supported.

The analysis examined the relationships among academic achievement in reading and mathematics as measured by the MAP test and each of the seven domains of lifelong learning on the ELLI: Changing and Learning (CL), Critical Curiosity (CC), Meaning Making (MM), Creativity (CT), Resilience (RS), Strategic Awareness (SA), and Learning Relationships (LR) - for $n = 100$ participants. The correlations between pairs of variables are reported in Table 4. Significant correlations are noted on the table. A statistically significant correlation was found to exist between growth in the learning domain of Resilience and growth in mathematics *(p = .004).*

Table 4

Correlation matrix for growth in reading, mathematics and the seven domains of the ELLI

ELLI Domains	CL	CC	MM	CT	RS	SA	LR
Reading RIT Growth	$p = .385$	$p = .490$	$p = .101$	$p = .475$	$p = .210$	$p = .322$	$p = .328$
Mathematics RIT Growth	$p = .171$	$p = .241$	$p = .426$	$p = .390$	$p = .004$*	$p = .229$	$p = .138$

n = 100

Summary of Findings: Qualitative Data

In reporting the findings of the qualitative data, pseudo-names have been used to protect the identity and privacy of the students. Parents and teachers were anonymously referenced.

Parent Surveys

As stated previously, qualitative data was gathered from several sources. One of those sources was an open-ended survey mailed to the 45 parents of the participants in the treatment group who volunteered at the beginning of the year (Appendix C). This survey asked parents to identify any changes they observed in their child's learning behavior at home. A self-addressed envelope was provided for the return of these surveys. Nineteen surveys were returned, representing a 42% rate of return. Of the 19 surveys, only three parents indicated that they had not observed any changes at home in their child's learning.

Those 16 parents who identified changes in their child's learning capacity spoke to observing more confidence in their child as a learner, an observation that indicated

growth in several different domains. For example, one parent identified growth in her child's confidence and hinted that this might be due to her child's growth in the area of Meaning Making. The parent stated:

> The biggest change I have seen in Rebecca this year is that she has become even more confident in her writing abilities and seeks less support for revisions of her work. I have also seen growth in her ability to connect her learning to her own life.

Another parent admitted that her son has always demonstrated a passion and excitement for learning, but acknowledged that his confidence in his learning was demonstrated in his newly found skill of working in a group. She inferred his growth in the area of Strategic Awareness and stated:

> I'm not sure where this fits, but he seems to be more willing to stand-up for himself, not letting kids use him in group projects, working to get everyone to work and then speaking with the teacher if that doesn't work.

Several parents identified growth in the domain of Changing and Learning. As one parent stated, "He no longer seems to accept that he is simply 'not good' at a subject. This alone has enabled him to learn more in subjects he typically showed little interest in." Still another parent stated that her daughter "constantly seeks out feedback and tries to improve her learning according to that feedback."

Six parents referenced growth in the area of Resilience. While one mother admitted to her own frustration with the daunting task of "getting a conversation" out of her [teenage] son, she did believe that, "he is more resilient, not easily frustrated." Another parent, when referencing her daughter's struggle in Spanish class, stated, "I have seen her rise to the challenge of bringing her grade up when faced with the realization that dropping the class was not an option." Another parent stated, "I see April as not

being afraid to take a challenge in an assignment, rather than taking the easy assignment." This parent goes on to connect the growth in Resilience to growth in the area of Critical Curiosity. She stated, "She seems energized by taking that challenge and succeeding in it." Another mother connects Resilience and Critical Curiosity this way.

> Mary doesn't take criticism as hard now. She sees correction as part of the process not as an attack. She is also more relaxed in her learning. She doesn't seem to put as much pressure on herself, and as a result her writing assignments are actually better. It is no longer "all about her" in showing knowledge and more about being thoughtful and inspirational. Her energy is being directed into the product and not on herself to achieve.

One parent provided evidence in her daughter's positive growth in the Strategic Awareness as key in her growth in Resilience and Critical Curiosity. She stated:

> She has used the Strategic Awareness strategy in preparing for tests. She prepared for a test and did not get the results she had hoped for so she tried an alternate path to study for another test and was pleased with the end result. She also passed this advice on to her mother. If one method of preparation doesn't work, try another. Kristen has shown an increase in wanting to learn more. She will often ask us about a topic and if we do not have the answers we will turn to the internet [*sic*] and find out together.

Two parents reported growth in their children in the area of Creativity. One mother associated her daughter's growth in Meaning Making to Creativity. She wrote:

> Continues to work on connecting learning. She looks for ways to relate the concept to what she has experienced and what she might experience. Some of the writing projects have pushed her to think out of the box. Definitely seems to have more fun trying to come up with creative or unique standout ideas.

Another mother offered the evidence of growth in the area of Creativity by stating that her daughter has "engaged in more creative projects and has taken on extra work in Art Tech."

Two themes that emerged from other qualitative sources were also identified in two of the parent surveys. One theme was that of an emotional attachment to the subject and the power of that interest to alter a learner's level of learning. As one mother stated:

> This past year I have seen Adam stretch himself in some ways to learn new things he has an interest in. With exposure to topics such as marketing and the media, the Holocaust, and poetry he has had the ability to make some new connections with his experiences. Lots of discussion at home came up with more questioning and more searching for the meaning of how media affects teens, how history relates to today's world and how he could use poetry as an outlet to express himself.

The second theme that surfaced in the parent surveys and other sources of qualitative data was the power of a safe learning community to promote healthy growth in learning. As one parent stated, "His learning is very much tied to the teaching style and personality of the teacher."

Teacher Surveys

An open-ended survey was hand delivered to the two math teachers, the social studies teacher, and the science teachers (Appendix B), along with a description of each domain (Appendix A). The survey asked those teachers to identify any student that displayed a change in learning behavior within their classroom. All teachers completed the survey. Of the 65 participants in the treatment group, 27 students were referenced in the teacher surveys, nine of which were identified by two or more teachers. Six students were reported to have demonstrated a negative change in their behavior.

Gabriella was identified as being more focused by her science teacher and demonstrated growth in the area of Critical Curiosity and Learning Relationships in her math class. As the math teacher stated, Gabriella "asks more questions in class" and is "willing to explain concepts to classmates." Adam's social studies teacher and math

teacher were unable to identify a specific learning domain in which Adam grew, but they both noted growth in Adam's social skills. As the social studies teacher stated, "Knowing when to be formal/informal" and "less physical contact with other students" was seen as note-worthy in terms of growth and was supported by the math teacher's comment, "other issues … improved!" While Catherine's parents reported seeing no change in her learning behaviors, her math and social studies teachers did. The social studies teacher reported that Catherine was "much more socially comfortable" and made "good use of e-mail to clarify classroom questions." Another student by the name of Jason demonstrated growth as a student leader in the eyes of the social studies teacher. The social studies teacher reported that Jason saw himself as "a student of history," alluding to the power of personal interest in a subject on learning growth. Jason's science teacher saw Jason as "creative" and "strategic."

Other students were seen to have grown in the domains of Resilience and Critical Curiosity. John's math teacher saw John as someone who was "excited to try new things and practice new concepts until he understands – doesn't give up until he gets the right answer." Eleanor's social studies teacher stated that she will "go far" because she was a "caring, hard worker, all year long from day one." The science teacher identified Alex and Bradley as asking more questions. The math teacher identified Nathan and Katherine as having grown in the area of curiosity.

The area of Resilience and Strategic Awareness were also identified as areas in which several students had grown. The math teacher reported that Elizabeth was "resilient, strategic, driven and motivated." Caroline was persistent and strategically

aware. The science teacher felt that Caroline had always taken charge of her own learning.

Student Surveys

Through an open-ended survey distributed in April, participants in the treatment group were given the opportunity to reflect on their learning and a voice in reporting any changes in their perceptions of themselves as learners (Appendix D). In analyzing the data, most students identified the domain Critical Curiosity as one in which they grew and were able to identify specific activities or units of study that fostered behaviors related to this learning domain. As Franny stated:

> My Critical Curiosity has improved this year from the I-search paper and the media unit. I noticed myself thinking a lot about those topics even outside of school when I was seeing commercials or when I saw a homeless person.

Katherine believed her curiosity grew out of "classroom discussions and sometimes being left with questions I wanted to research." Both Nathan and Elizabeth tied their Critical Curiosity to their sense of responsibility to the learning community. Elizabeth stated, "I have become more critically curious when there are things I don't know, I actually go look them up and they usually help me later. I can bring it up in the discussions." Nathan was more descriptive in the evidence he provided:

> At the beginning of the year I would look at the quote and if I didn't know it, I would write down, 'Didn't get' but now whenever I don't understand a quote, I go home to delve more deeply into it and learn more about [it] so that I can write down that information and share it with the class.

Mary offered several ways in which she saw growth in her Critical Curiosity and ties this to the domain of Learning Relationships and Strategic Awareness. She stated:

> Before this year I really did not have the strive [*sic*] to go and find out more about something. By doing the Q or Q [represents Question or Quotation, a daily homework assignment in which the students were given one or the other to interpret, to share in class the next day in order to explore different perspectives] I have been more attentive to think more deeply about something. I will go and talk to my parents or other people about the quote to get another insite [*sic*] on it. A few times I have looked up the speaker of that quote to get some insight. Just this year I have started watching the History and Discovery channels more. Usually on there is something that I do not quite understand. I now will go online and look it up, so I can get more out of the program.

When the learning domains were first introduced in September, most students defined Creativity in narrow terms related to artistic talents, such as drawing or music. Sadie referenced this change in perception directly. "Being told the actual definition of Creativity, I am not that way with any other subject other than writing. Constantly I'm striving to find newer better and more original ways to tell a story and story lines."

Unlike Nathan or Mary, who referenced the Q or Q when discussing their growth in Critical Curiosity, Adam acknowledged that the Q or Q exercise each day attributed to his growth in Creativity. He stated, "For the Q or Q I notice usually we don't all have the same interpretation. That means we all see it in a separate way. I almost always interpret the Q or Q a different way." He goes on to identify another exercise that he believed fostered growth in his Creativity. "Through the Socratic Circles I participated in this year, I was more creative in the ways I looked at other's perspectives and thoughts."

Katherine believed the papers that she wrote this year contributed to her growth in Creativity. She stated, "I got more creative because with some papers I had to think outside the box which was harder but I definitely think it helped." Georgia also referenced a writing exercise that offered her an opportunity to be more creative and a strategy she used to help her grow in this area. Georgia stated, "At the beginning of the

year, I didn't think I was very creative, but then I started to let go and I realized that I could be if [I] just tried, like I did during the Great American Teen Novel [a prose poetry assignment addressing the stereotyping of teenagers]."

Mary connected her Creativity to Meaning Making, pulling what she had learned in the past to create something new and unusual in the present. She stated:

> I consider myself a very creative person, but in the political ad I am very amazed at how creative I was. I first had an idea and after thinking about it I decided I need[ed] something else. I ended up creating something like no [one] else did. Also I used my background knowledge that using children get peoples [*sic*] attention. So I made the narrator's voice a child.

Elizabeth believed her growth in Creativity contributed to her growth in Resilience. She stated, "I have become much more creative. I've learned to look at things in different views and perspectives and to take risk with a[ll] types of writing and other assignments."

Learning Relationships was another domain in which many students identified growth. Many students confessed to being more open to other's ideas and resisting the compulsion to take control of group projects. As Katherine stated, "I have found more people who can help me with work and I don't boss around people when in groups. I try to make sure everyone has a say in a discussion. I didn't use [*sic*] to do this." Chelsea stated, "I also work better with others more now because I don't always lead."

Many adolescents have difficulty working in groups for a variety of reasons. Bradley, whose mother stated in her survey that he was often used in groups to do the bulk of the work, admitted, "I used to not like being in groups. Now I kind of do." Daniel, who is struggling to assimilate into American culture after living all of his life in

Yemen, stated, “I have grown in Learning Relationships because now I listen to people rather than ignoring them because my interpritation [*sic*] is better.” Catherine, a shy girl, sees her growth in Learning Relationships a little differently. “I think I have improved in learning relations[hips] [*sic*] the most. I have improved by being able to work with a team and I am also able to work alone if I have too [*sic*].” April stated:

> I think that I have gotten better at taking others advice or oppions [*sic*] in consideration. Before I used to think there was only one way to do things and now I am open to new ways or ideas. Our Socratic Circles really help alot [*sic*] with that.

Matt associates the value of Learning Relationships to his understanding of the world. He stated, “For me, the I-Search paper helped a ton. It made me go farther out into the world by interviewing people than just go onto websites.” He goes on to state, “I really enjoy working in groups now and I didn’t before. I think it is key to hear other people’s opinions to solve a problem. Taking those opinions gets me stronger as a learner.”

Georgia identified the value of Learning Relationships not in group activities, but rather in the normal course of the writing process. She stated, “I think we practice Learning Relationships everytime [*sic*] we have a writing assignment because we start out working by ourselves when we are writing a piece. Then we have peer edit where we use other’s opinions to help improve our writing.”

Another area of growth identified by the participants in the treatment group was in the domain of Resilience. Most of the comments related to the ability to take constructive criticism as an opportunity to grow, as opposed to a personal assault. As Lawrence stated, “I’ve gotten better at not taking feedback personally. At the start of the

year I felt bad if someone had made a correction and given me feedback about it." Bill echoed this sentiment. He stated, "Early in the year I would think feed back [*sic*] on my writing was just saying I'm a bad writer. Now I think of it just as good advice to help me grow." Gabriella expanded this feeling, "In the beginning of the year I took critism [*sic*] really hard and just thought my paper was horrible but now I take the critism [*sic*] and try to improve my paper." She stated, "I never ask questions because I'm afraid I will sound stupid or ask a "dumb" question. I have realized threw out [*sic*] the year though that there is no such thing as a dumb question."

In addressing her growth in Resilience, Eleanor also exposed her growth in the domain of Changing and Learning. She stated:

> I have changed as a learner because I have learned to be more resilient when reviewing a test or paper in which I needed to work on. An example would be that I had to really work on my I-Search in order to succeed so I took the suggestions given to me as a learning opportunity and not take it personally.

Kristen associated her growth in the area of Resilience to her growth in the domain of Creativity. She stated:

> Last year I would get so upset about all the corrections my teacher made and I would take them to heart and like on a paper we wrote I made a stupid mistake and felt so dumb for making that mistake, this year I just look at the mistake and work harder on it without really caring too much about it. This year I got a real confidence boost. This year I also feel more freedom in my writing which [*sic*] allows me to try new things and not be punished for trying.

Many students acknowledged making changes in the strategies they used to learn, abandoning old strategies that, while perhaps more enjoyable, did not result in better learning. John explained, "I have learned many strategies and lost my bad ones like watching T.V. and studying. I have gained working in a quiet place to do my homework."

For Elizabeth, a change in perspective was helpful. She stated, "I can deal with frustration better now and I know that it is okay to take a break from something and come back to it, its [*sic*] actually good to do that." Franny "figured out that it helps me to see what I am learning visually." Cassidy offered a more specific study technique that helped her to learn her Spanish vocabulary. She stated, "While studying for my Spanish placement quizzes I found ways that helped me learn easier. I repeated the word with the definition and then circled the ones I knew the least." For Weston, the growth in Strategic Awareness was a result of planning to meet a long-term requirement. He stated, "The 25 book requirement has helped me pace myself and manage my time."

Quarterly Student Self-Assessments

Over the course of the 10 months, the students were asked to reflect on their learning. Each class designed a checklist that evolved out of the class discussions about learning, teaching, and the purpose of public education (Appendix E). In addition to being asked to reflect on the behaviors and ways of being that they valued, they were asked to reflect on how they were able to manifest those values and ways of being involved in the curricular activities presented that quarter. Those assessments were coded for the seven domains and themes that evolved from the text.

On the first quarter assessments, there were 58 references to the domain of Strategic Awareness, more than twice as many as any other domain. Many of those references identified strategies employed during the research project, strategies used to select independent reading books, and strategies that would improve their writing. Weston offers this reflection on Strategic Awareness and how it applied to his improving his writing skills:

> For my writing goals I need to work on my conclusions and my voice in my writing. I plan to improve on my voice by reading it out [loud] to myself to see if it sounds like I'm connecting with the reader. I believe this will help me improve my voice because of [*sic*] I'm taking the place of the reader and can judge myself on my voice. On my conclusions I need to wrap it up better instead of just putting in filler and then just ending it. I will improve on this by reading through my paper and in my head summarize what it's about. Then I will incorporate that into my conclusion. This will help me by showing a summary so I can sum it up better in my conclusion.

Several students identified strategies they wished to employ in order to build other domains of learning. Strategic Awareness was referenced as a way to improve those domains 27 times in the first half of the year. For example Dakota wrote, "The domain I need the most work in is Creativity, which means that it's hard for me to be creative while working. I think a way to strengthen that is to find other way to do things." Katherine identified strategies to improve the domain of Meaning Making. She stated:

> The area that I need to improve on is Meaning Making. Meaning Making is making connections and seeing that learning matters to me, not just accumulating data. To strengthen this domain I will try to make more connections and actually think about what I am learning, not just learning the facts to get through the subject.

Daniel recognized that he needed to build his resilience stating, "Resilience is my problem and my strategy is when some one says something about my writing I say in my head that they're just trying to be helpful."

One theme that emerged from the data was that of a self-evaluative stance, where the student identified factors that promoted or prevented their learning. In analyzing the data, the area of Strategic Awareness was often aligned to this theme. Elizabeth, who confessed to being a procrastinator, stated:

> The one thing that I really need to work at is getting it done easily by pacing myself. I have a really bad habit of procrastinating. I really need to

> work on pacing myself through longer projects and papers I usually end up having to cram to finish it all in one night (which is not a good strategy).

Another student speculated on ways to improve her participation in class and in so doing exposed her struggle with Resilience. Elli reflected:

> I think that I could participate a lot more, it's just when I try to say things it comes out wrong and I say something not very smart. Most of the time I do understand what the passage means but I just don't raise my hand. Maybe I could just think it through before I raise my [hand] so I know exactly what I am going to say.

Many students were surprisingly honest when they took a reflective stance and evaluated their learning behaviors and choices. Julia, who confessed that she does not always do high quality work, stated:

> I do accomplish all of my homework on time. Every day I accomplish my homework but, I don't think that I do the best work that I can. And I don't put 100% of my effort into it all the time.

Resilience was the next most frequently mentioned domain. Adolescents are extremely sensitive to the opinions of others, and so building resilience is a challenge. Some students have histories of being ridiculed and this was evident in the responses that focused on resilience. As Donald stated, "I could make comments more often in class, but I am sometimes ridiculed for them out of class." This sentiment was mirrored by Georgia who stated, "I usually don't share because I'm afraid of being wrong and sharing my thoughts aloud." Eleanor took a self-reflective and analytical stand on the issue of Resilience and stated:

> Resilience is being able to take constructive criticism and not see it as an insult. They are also willing to take risks when learning. I struggle in this area because when someone says something about a task that I am doing I can sometimes overreact. Also, I tend to over analyze what they said which can lead to miss-communication. I am going to try and strengthen

> this domain by taking opinions in an advice sort of way instead of maybe as an insult.

The next domain that was referenced often was that of Changing and Learning. Many of the students referenced the I-Search paper as evidence of them changing over time. They were able to recognize that after the research they had learned more about their topic and the process of researching than they had expected. As Gabriella stated:

> The I-Search project has taught me so much. It has taught me a different way too research, cite sources properly, and all about search engines. I also learned a lot of information on my topic; School Violence, Virginia Tech. Although the project was difficult and lengthy it was worth it.

Other activities provided evidence of Changing and Learning as well. As Lawrence stated:

> During the This I Believe essay and podcast I learned a couple main things. I learned that sometimes a paper can be very powerful but if it is read in the wrong way it doesn't seem very good or powerful. I learned that in order to make it sound good you have to record it in a speed that seems to [*sic*] slow when you're reading it but sounds good when you hear it. I also learned how to use the program audacity.

Alex describes another change in his learning by reflecting on the writing process. He stated:

> I went through a paper I wrote last year along with the drafts and saw that last year when I edited my papers I only checked for grammar and now I realized I do not do that anymore. Instead I check the content of the paper not the grammar of the paper. This strategy helps for me to know how I have improved and I have to say it made me feel really good about my improvement.

With each successive assessment, the students were more adept at recognizing how they had grown as learners. In the first quarter, assessments there were 10 misinterpretations of learning domains and the behaviors and characteristics associated with specific domains. There were no errors in any of the subsequent assessments. By the

fourth quarter assessment, the participants easily articulated their growth as learners by using the language of the seven domains.

Several other themes emerged from the data. Several students tied their learning behaviors to grades. As Kristen stated:

> I am able to keep up with the homework every night. I have always been able to keep up with projects and such because if I forget to do part of the project I was planning on doing that night I realize that it just adds up to more homework the next night and I still do it because it's one of the only main grades in this class and I know it counts.

Grades were a factor behind the choices some students made in their learning. Edward said, "The only thing I need help with is being more organized, so this quarter I am going to buy a new binder and become organized and get straight A's so my mom can buy me a new golf club." When referencing a writing assignment, Katherine admitted, "I think I could have made it a little longer and a bit more detailed. I think the reason I didn't is because I knew it wasn't a grade but I still worked hard."

Another theme that emerged from the data was students' connections of learning to positive social change. For the purpose of analysis, positive social change was defined as a deliberate process of creating and applying ideas, strategies and actions to promote worth, dignity, and development of individuals, communities, organizations, institutions, cultures, and/or societies resulting in the improvement of human and social conditions. At the beginning, most of these references were made toward making the classroom a better learning community. When reflecting on how she could contribute to improving class discussions, Rebecca stated, "I could always improve by helping others to go deeper and by directing the group in a different direction to help to create a better discussion."

Melissa references the classroom Bill of Rights as the measure of positive social change. She stated:

> Throughout the first half of the year I think the class has been great at living up to these expectations [the expectations written in the class' Bill of Rights]. Most of the time we listen to what others have to say, we are patient and helpful. With all of the peer editing we have taken the advice in a good way and not a critical way. Everyone is friendly to one another. I think that I am doing well with the Bill of Rights. I enjoy LA. I think for the next half of the year we should keep doing what we have been doing.

By the end of the school year, the definition of 'world' had gone beyond the classroom walls. When asked to share one thing they had learned this year about themselves that they felt would make the world a better place, many students expressed a newfound confidence in their learning and their ability, through hard work, to continue to learn and grow. As Cassidy stated, "I can achieve greater things than I give myself credit for. If I believe in myself and get off my butt to try new things, then I can help others and do something bold and great." Ben stated, "I learned to voice my opinion and not to be afraid to share my feelings with others . . . .When I don't think something is no [*sic*] right not to let someone else take care of it but to do something about it myself." Georgia, who offered ideas on ways she would like to help the world, stated, "This year I learned that I want to help people, whether it is through writing, joining the Peace Corps, or charity work."

Several students were able to view their individual actions as catalysts for a chain of events that might improve the world. Alex stated, "I think I have learned how the smallest action can change the whole world or just doing little actions all the time will eventually make a huge difference in the world." Thomas expanded on this notion

stating, “I learned that small ideas escalate and influence bigger ideas so that you can effect [*sic*] the whole world.” Wyatt was more philosophical in his belief and stated, “I know now that even one little person can make a difference and like the butterfly effect you can make a big difference in the world someplace else, too.”

Several students identified their voice and the voice of others as key to their ability to improve the world, introducing the idea that effective change requires first that all voices be heard. Caroline reflects this sentiment and acknowledges the power of belief in shaping actions. She stated:

> One thing that I have really learned this year is that teenagers do have a voice. I used to say that nobody listens to teenagers, therefore they cannot make a change but since the beginning of this year, I have been challenged in that previous opinion. I now know that I can make a difference and I believe that I can which brings me a step closer to actually achieving that goal of changing the world for the better.

Dean also recognized the power of voice in changing society for the better. He stated, “I have learned that all voices need to be heard in order to make a society great.” Several students learned that there is power in numbers. Matt acknowledges that his belief in the power of numbers represents a change in his perspective. He stated, “Before this year, I believed that only one person can change this world. [Now I believe] That it only takes one good idea to make more people follow you and eventually change the world. I believe in the power of numbers.” Claire identifies the importance of learning who you are as a person in order to effectively mobilize others. She stated:

> Throughout this year I have actually learned a lot about who I am as a person, student, and teen in this world. I know that it’s not easy to change the entire world as one person, but if you get more people involved then it can make a big difference.

Perhaps Sadie, who learned that Creativity could manifest itself in writing not just art, explains most distinctly how one's actions, no matter how insignificant, can change the world:

> I think that I learned that I need to get things done right when they're handed to you and you need to do them to your best ability. This can help the world, and your job, in many ways. For example:
> You're doing charity work in Zambia, Africa. You've been asked to bring the mosquito nets from the car.
> -Wrong: You say "I'll do it in five minutes" and grab a lemonade.
> -Consequence: One of the children is sleeping in bed, without a net, and gets bitten by an infected mosquito. This causes the child to get Malaria and is now suffering. It's all your fault.
> -Right: You rush over to the car and grab as many mosquito nets as you can. You pass these nets to your co-volunteer and he/she brings them to the bedrooms.
> -Consequence: That one child that *could* have died has now been saved and is going to grow up to be a president of something grand.

The final theme that emerged from the reflective voices of the participants was the power of the environment to facilitate learning. The environment was described in both aesthetic and affective terms. The room was one of six classrooms located in a portable building outside of the main complex. The physical environment of the room was adapted to create a warm, home-like atmosphere. Lamps were used to illuminate the room, forgoing the use of the bright florescent lighting available. Curtains were hung on the windows and cloth wall hangings and quotes were placed on the wall to mitigate the starkness of bare, beige walls. Tables were used instead of desks to facilitate the feeling of community and they were arranged in a circle to facilitate class discussions.

Six months into the study, the participants were asked to create a representation of how they experienced learning in this class. That representation could take any form that they wished. They were encouraged to think metaphorically. Most students created a

pictorial representation of how they experienced learning in the classroom and several wrote narratives or poems. Some responses represented the process of growing, while others addressed the respectful relationship within the classroom. As Jacob's stated, "I drew a picture of our classroom having a discussion. Everyone talked to each other and Mrs. Bruno and Mrs. Bruno was a contributor, not a lecturer."

Some students identified the mix of physical and respectful relationships as having contributed to a sense of comfort. As Matt stated, "When I walk into our L.A. classroom, I feel like I can be myself. When we have conversations, we all share our thoughts and get involved." He said, "It's also easy to learn in our class. It does not have the school feel. It's more comfortable and easier to focus with the dimmed lights and lamps." Matt also valued the diversity in his class: "Sometimes people can get out of hand, but that is our class. We're different and we are all comfortable with each other." Katherine also found the layout of the room to be conducive to her learning. She stated, "I love the layout of the room, how it allows me to see and interact with the whole class. I also love the atmosphere. The dimmed lights creates tranquility and this helps me to learn."

Caroline appreciated the freedom to share ideas and opinions and the academic challenges presented throughout the year. She also acknowledged the value of physical arrangement of the room. She stated:

> Mrs. Bruno's class is very helpful to my learning. I know that all opinions are open to discussing. I like that we go above and beyond the learning ciriculum [*sic*]. We have many good discussions that I not only want to discuss in class, but I actually go home and talk about it with my parents. The learning envirement [*sic*] in the classroom is very cozy. When you are comfortable you can learn easier and that's how Mrs. Bruno's class is. I like the lighting and seating the most.

Mary focused on the academic rigor and challenge of expanding and changing her perspective. The last verse to her poem stated:

> It uncovers all the details,
> The things you thought you knew,
> Now you see it in a whole new light.
> You want to know more,
> So you wipe the rest away.
> Transparent again.

Georgia also referenced the value of expanding her perspective and understanding of the world. As she described:

> I drew a picture of an eye and inside the iris, I wrote words that described the class such as: philosophical, creative, etc. The last word, eye-opening, I wrote in bold because I think that's the term that most accurately describes the class and reasons why I drew an eye.

The overwhelming response from all participants reflected concepts of comfort, freedom, and safety. In her representation, Cassidy included "a shooting star representing the freedom I have in the class to express myself in my writing and to extend my knowledge." Sean used the metaphor of a kite to express the freedom he felt to "fly high and keep flying so we are successful." James simply stated, "I can express my true feelings and be myself." Morgan stated the sense of safety created in the classroom most directly. He stated, "My drawing was of our classroom in a safe. Meaning that I thought our classroom was a safe place to learn." Ben expressed it most distinctly when he stated, "It's an easy place to be truthful."

Summary of Findings

This mixed method quasi-experimental study sought to test the theory that suggests a strong link between the emotional components of learning and academic

achievement. The researcher assumed that a strong lifelong learning profile correlates positively to positive patterns of learning behavior and academic achievement. It was theorized that by adjusting pedagogical practice to strengthen students' learning identities, students' learning profiles and academic achievement would grow.

With regard to the research question, the findings indicate that while the treatment group obtained a higher overall percentage of Target RIT met or exceeded in both reading and mathematics, a correlation between growth in the seven domains of learning and growth in reading and mathematics could not be statistically established. There was one exception. A correlation was found between the domain of Resilience and mathematics.

The difference in growth as measured by the ELLI between the treatment group and the control group was found to be statistically significant, with those students in the treatment group reporting much higher confidence in their learning, as opposed to their peers in the control group. These findings were substantiated by the qualitative data collected. Parents, teachers, and the students themselves were able to provide evidence of growth in learning, sharing observations, behaviors and thoughts that substantiated the findings and supported the researcher's assumption that direct instruction in lifelong learning correlated with positive patterns of learning behavior and stronger learning profiles.

The final chapter will review and interpret the findings of this study and identify themes and trends that offer value to educational practice and reform. Implications for social change will be examined and recommendations for action and further study will be made. Additionally, reflections on the research process and experience will be offered.

Biases, preconceived ideas and values as well as the possible effects of the researcher on the participants will be examined.

Chapter 5: SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND COMMENTARY

Discussion

This mixed method of inquiry employed a concurrent transformative strategy, and was guided by specific theoretical perspectives in the area of globalization, lifelong learning, learning theory, and teaching theory (Creswell, 2003). This quasi-experimental design followed a multi-stage process involving a total of 103 eighth-grade students at an affluent suburban middle school outside of Chicago, who were divided into two groups.

As stated earlier, the purpose of this study was two-fold: a) to test the theory which states there is a strong link between the emotional components of learning and academic achievement and b) to determine if direct teaching of the learning domains as identified by the *Effective Lifelong Learning Inventory* (ELLI) strengthens learning confidence. Theoretically, by focusing on the learner in the educational process, exploring their perspectives, identifying their learning capacities and motivation, and developing strong learning relationships with them, academic achievement may improve (Crick et al., 2004). The intent of this study was to develop a theoretical framework from which the development of standards, curriculum, assessment, and pedagogy could draw. It is hoped that those involved in educational reform in the United States will consider the need for children to be lifelong learners and the implications of that when developing policy and designing practice.

This researcher assumed that a strong lifelong learning profile correlates positively to academic achievement and correlates to positive patterns of learning behavior. Further, it was assumed that direct instruction in lifelong learning

characteristics makes students cognizant of their personal learning identities. Awareness of their development in each domain as defined by the ELLI promotes growth toward becoming a more effective learner and that growth can be taught through thoughtful pedagogical practices designed to strengthen targeted domains. By identifying a correlation between a strong learning profile and academic achievement after direct instruction in the seven domains, this study hoped to determine if there was any validity in these assumptions.

The findings of the study indicated that direct instruction in the seven domains of lifelong learning and purposeful pedagogical practices were strongly correlated to growth in learning confidence. A correlation between growth in the seven domains of learning and growth in reading was not statistically proven. Statistical analysis indicated that growth in math did not correlate to growth in six of the seven domains of learning. However, a statistically significant correlation was found between growth in the learning domain of Resilience and growth in mathematics.

Interpretation of the Findings

With regard to the specific research question of correlation between growth in learning domains and growth in academic achievement, the results were inconclusive. The quantitative data, comprised of ELLI scores and MAP reading and mathematics scores, dictates that the null hypothesis with regard to reading cannot thus far be disproved, meaning the student outcomes may not be a result of the treatment. With regard to growth in mathematics, the statistical analysis dictates that the null hypothesis cannot be disproved as it relates to six out of the seven domains of learning. With regard to growth in Resilience and growth in mathematics, the statistical analysis dictates that

the hypothesis be accepted. There is evidence that a correlation between growth in Resilience and growth in mathematics exists and that the difference observed in the sample data is unlikely to have occurred by chance. However, although the *p* value ($p = .004$) for growth in Resilience and Math RIT scores appears to show a significant difference between the treatment and control groups, the r^2 (.101) value is very low, indicating that we cannot, with confidence, conclude that the growth in Math RIT scores correlates to growth in Resilience. Therefore any significant correlation between learning dispositions and achievement cannot be concluded with any confidence. This may have been due to the small sample size of 103 students and two teachers. Further research is recommended.

A statistically strong correlation was indicated between direct instruction in the seven domains of lifelong learning and pedagogical practices to student growth in learning confidence. This confidence was measured on the ELLI and supported by the qualitative data. Through the analysis process, specific themes emerged that have implications for educational policy and practice.

Reflection on the Qualitative Data

With regard to the specific domains of lifelong learning, several domains presented valuable information. The domain of Strategic Awareness appeared most often in the data, and students often linked this domain to others, indicating that perhaps this domain should be prioritized when planning curriculum. Students initially were quite comfortable discussing specific strategies that they would employ in order to satisfy a requirement or achieve an objective. These strategies were typical behaviors identified by educators as evidence of good work habits such as the need to "participate in class,"

"look up words," or "think more" about assignments rather than "just getting them done." The behaviors the students described when addressing strategies such as recording assignments in an assignment notebook, participating more in class, and completing assignments, were behaviors that related more to satisfying teacher's requirements than improving learning. When strategies were initially referenced, they were often expressed in vague terms. For example, Dakota wrote in her first quarter assessment, "The domain I need the most work in is creativity, which means that it's hard for me to be creative while working. I think a way to strengthen that is to find other way [*sic*] to do things." By the third quarter, Dakota referenced strategies more precisely by writing, "I am able to accomplish my homework at home because I have a special place where I am ale to do my homework peacefully. Also if I don't know exactly how something is suppose [*sic*] to be done I'll call a friend to help me with it."

The words that students used to describe the strategies they employed became more specific and learner-focused. Strategies for these students became less about producing a product for a specific class and more about transforming themselves into stronger learners. The implications for educators would dictate that generalizing broad strategies to every student may result in compliance, but does not necessarily improve learning. Strategies become effective when they are tied to individual learning needs. Identifying and valuing different needs in learners and providing a variety of strategies to students have implications for enhancing and strengthening learning in all the domains. The ELLI provided the framework and the language to facilitate the reflective process necessary to arrive at the plethora of strategies needed for individuals to optimize their

learning. Additionally, the ELLI assisted students in redirecting the use of strategies from an action to obtain a grade to actions that helped them to grow as learners.

The change in the way Creativity was perceived also has implications for the ways in which we prepare students for a global community. The data indicated that students came to see creativity as a way of thinking. Creativity was more about being able to analyze information in new and critical ways. It was about problem solving and perceiving something in ways that had not occurred to them before. Creativity was about seeing with new eyes.

Shifting from a narrowly defined artistic perception of creativity to a definition that embraces alternative ways of thinking requires positive presuppositions and a respectful stance. The value of this cannot be underestimated. A global community requires the ability and willingness to explore different cultures, practices, and ways of thinking. Expanding the definition of creativity to include the ability to remain open to other perspectives in order to think in different ways will be necessary as nations come together to confront global challenges. Working together will necessitate skills in building learning relationships in order to nurture creative ways of thinking.

The data on Learning Relationships raised the question, “Should learning be collective?” Certainly, the students identified value in seeking others’ ideas and interpretations. Their concerns about working in groups were grounded largely in their concern for their personal grade. Assigning value to an individual for their work is easier than assigning value to a group of individuals for work produced collaboratively, but is the work more valuable? And does individual work represent the expectations placed on individuals once they leave school? As Matt stated, “I think its key to hear other people’s

opinions to solve a problems. Taking those opinions gets me stronger as a learner." Matt was able to recognize that there was collective value in solving a problem and individual value in growing as a learner. When the artificial constraint of grades was removed, the learning became more collaborative and authentic.

Another domain that emerged from the data as significant was the domain of Critical Curiosity. The most often recorded descriptor of positive learning change given by the teachers on their surveys was curiosity and, while students like Gabriella saw the value of asking more questions, the constructs placed on schools by current educational mandates does not foster or support this learning characteristic. The current demands made by educational reformers for data on academic achievement, primarily in the areas of mathematics and reading, have resulted in a shift in educators' objectives and focus. A culture emphasizing accountability, with its political and economic incentives and penalties, has negatively influenced educational values (Rothstein, 2008), which has resulted in a decline in the amount of instructional time left to pursue questions. Teachers are pressed to cover their curriculum and prepare students for standardized testing. Agendas in most schools require students to adhere to a prescribed schedule. But, asking questions and seeking answers takes time. If Critical Curiosity is to be valued and fostered in schools, how time is allocated and used will need to be addressed.

The domain of Resilience presented the largest challenge for these students. Adolescence is a time in which they struggle to discover who they are and often experiment with the person they would like to become. There is a strong need to be accepted and belong to a group, resulting in fierce loyalty to specific peer groups. They are becoming keenly attuned to differences and often feel vulnerable and self-conscious.

Their moods can be erratic and they often feel embarrassed and overreact to social situations. They tend to be highly sensitive to criticism. All of these developmental characteristics compete with strategies and best practices designed to foster confidence and self-esteem, and as a teacher of adolescents, attempts to foster this can feel a lot like a salmon swimming up stream. What emerged from the data as crucial to the promotion of Resilience in adolescents was the creation of a safe learning community created through social relationship and the physical environment.

When asked to reflect on how he experienced learning in the classroom, Ben wrote, “It’s an easy place to be truthful.” These are powerful and incredibly telling words that raise the question, “How does one create a physical space that encourages honesty?” Identifiable factors emerged from the data that help to identify why the students considered the classroom a safe place to be honest. Those factors fell into two realms: physical and relational. However, it should be noted that the physical and the relational factors were interdependent. Additionally, when discussing the factors that contributed to the strong relationships forged by the members of each class, those relationships were not based on personality, but rather on a covenant of behavior that was grounded in a shared vision.

The students identified several physical features of the classroom that contributed to their sense that the classroom, as Caroline said, “is very helpful to my learning.” The use of lamps instead of overhead fluorescent lighting created an environment that looked and felt warm and welcoming. As Matt stated, “It does not have that school feel. It’s more comfortable and easier to focus with the dimmed lights and lamps.” Another student remarked, “It feels like home.” This was a sentiment shared by many.

The use of tables and the arrangement of those tables in a circle initially were done to facilitate community discussions and group projects. What the data showed was that the tables and their arrangement, while simple, carried with it an understanding that learning is relational, and this was not lost on the students. As Katherine stated, “It allows me to see and interact with the whole class.” This finding brought to light the fact that rows of desks all facing the front of the classroom communicates the belief that learning is a passive, solitary act. Tables arranged in a circle values all members of the learning community equally and communicates the belief that learning is accomplished together.

Lamps and tables alone, however, did not establish the classroom as safe. The sense of safety grew out of the trust that developed among the students in each class and was grounded in a common core of beliefs and purpose. As a result, the establishment of an environment in which all community members feel safe can be generalized.

The research indicates that if students are involved in the creation of classroom expectations, the compass that guides and directs them will be more intrinsic, and therefore, more effective. But simply starting with asking students to author a set of classroom rules becomes, in their minds, just another classroom activity in which the same rules that have been established in other classes should apply. What do not get addressed in this approach are the underlying reasons for those parameters and promises.

In order to establish a learning community in which students felt the classroom was an “easy place to be truthful,” the school year began with class discussions that revolved around three foundational questions:

1. What is it that needs to be in place for me to learn?

2. What are characteristics and approaches of teaching from which I learn best?

3. What is the purpose of public education?

When the students discussed and shared the various aspects of what it is that helps them learn, they realized that the list was diverse and contradictory. One student needed noise in order to concentrate and another, complete silence. And so the community brainstormed ways to maximize all learning needs in that environment. For example, if there was the need for silence to concentrate, then the classroom needed to be silent for that learner. Behaviors such as side conversations and the tapping of pens were issues that need to be addressed when students envisioned a classroom that promoted all learning. In addressing this dilemma, the students recognized that while they worked in writer's workshop, Mp3 players had the potential to assist all learners. Students who needed noise to concentrate could do so without infringing on those students who needed the opposite. Students who need silence could listen to soft instrumental music on their Mp3 as a filter for noise that would normally be distracting. Another example was when one student shared that he liked to curl up into a small space to do his work and another confessed he needed a larger, well-organized space at a table. The members of the class brainstormed ways those spaces could be created within the classroom. As each class discussed ways to honor everyone's learning needs, the students recognized that some students would need to compromise their own needs in order to accommodate the greater good. The ELLI was instrumental in forging these discussions. It offered a new lens through which the students saw learning and it gave them the vocabulary to discuss and reflect on that learning. Learning no longer was defined by grades or work habits or class discussions, all of which are external measures and focuses. It became internal and personal.

When students discussed teaching and what skills, approaches, and presumptions best helped them to learn, they created a list. Humor most commonly topped that list, so the community discussed humor, and in particular, sarcasm. While sarcasm can be clever, it can also be hurtful. And so the community discussed how the use of humor needed to also ensure that everyone felt safe and that no one was hurt or humiliated. Additionally, the students expressed that they liked to discover things for themselves and appreciated teachers who gave them time and space to do that.

As the discussion evolved, the students compared the characteristics they listed for a good learner and those listed for a good teacher. They discovered that the lists were interchangeable. The discussion of learners and teachers ended with the recognition that we were all learners and we were all teachers and, at any given moment, we would be called upon to be one or the other or both.

Perhaps the most revealing and important conversation revolved around the students' beliefs about the purpose of public education. Initially, the usual answers were given: to get good grades, to go to a good college, to get a good job, to earn good money. But the students were challenged to go beyond these considerations and were asked, "Why was public education created and mandated?" and "How is it tied to continuing our democracy? Our economy?" These questions were essential in order to move students from a 'me' perspective (my grades, my success, my good job) to a global 'we' perspective (our democracy, our economy, our classroom, our community, our country, our world).

From those conversations, each class was asked to envision the type of classroom that honors all they had identified to be important in their learning. Each class wrote an assessment tool based on the outcomes of these discussions that was used each quarter to

reflect and assess their own personal contribution to creating that classroom (Appendix E). Additionally, each class authored a Bill of Rights or promise that they believe would help to create that imagined classroom (Appendix F).

Finally, throughout the year, students reflected, assessed, and assigned value to their work and their behaviors within the community. When a student strayed from the class promise, it was the other students who addressed him or her. Through these discussions, the relationships that were forged were grounded in respect and mutual aspirations. As a result, the students guarded and protected the community they designed.

The final theme that emerged from the data was the student's ability to perceive themselves as global citizens and their power and responsibility to make positive social change. As they moved from perceiving good learning for the purpose of obtaining a grade toward a way of being in the world, they came to recognize that they were a vital part of a world community and that carried with it certain responsibilities. By creating a place where they felt it was safe to be honest, students found their voices and understood at a core level the responsibilities that came with using those voices. They understood the power of a collective voice to change the world and accepted that it was their responsibility to marshal the power of numbers behind that voice to address social injustice and effect positive change. Perhaps Brent, the resident minimalist, stated it most distinctly when he wrote, "I learned that the world is a cold and dark place and that we need to make it a warmer and brighter place for all."

Relationships of Findings to the Literature

This study was unable to, with any confidence, identify a correlation between growth in the seven domains of lifelong learning as identified by the ELLI and academic

growth in mathematics and reading. This does not, however, suggest that the teaching of lifelong learning characteristics has no value. In contrast, the data from this study identified remarkable growth in learning confidence. While few educators would argue that there is essential knowledge that needs to be learned by school children, the use of standardized tests to measure that knowledge effectively is debatable and places into question their value as the primary measure of what is learned. Indeed, contemporary learning theory challenges the notion that teaching core knowledge translates into an ability to think about information (Marzano, Kendall, & Gaddy, 1999). A social constructivist theory of learning holds that knowledge is action and transforms individuals within a social and cultural context (Delandshere, 2002). This is counter to traditional views in which knowledge is something separate from the activity of learning, an assumption on which present assessments are designed.

This study drew from constructivist theory. The constructivist framework of learning espoused by Dewey, Piaget, and Vigotsky holds that learners construct knowledge for themselves both as individuals and in social contexts and that constructing meaning is learning. As a result, educators must focus on the learner when thinking about teaching, rather than the curricular content.

According to Richardson (2003), constructivist theory does not in and of itself endorse a specific practice or pedagogy, but rather involves the following elements: (a) attention to the individual and respect for students' background, (2) facilitation of group dialogue with the purpose of leading to the creation and shared understanding of a topic, (c) planned and often unplanned introduction of formal domain knowledge into the conversation through a variety of means, (d) opportunities for students to determine,

challenge, change, or add to existing beliefs and understanding through engagement of tasks that are structured for this purpose, and (e) development of students' metawareness of their own understandings and learning process.

The findings of this study would support Richardson's contention that it is not a specific pedagogical practice that is important, but rather a strong core of beliefs about how children learn. Unfortunately, how children learn is not easily defined nor measured. The use of the ELLI was essential in bringing theory to practice and providing the data to show growth in students' learning profiles.

Constructivist theory and lifelong learning both recognize the vital role affective behavior has on learning. Crick and Wilson (2005) define lifelong learning as learning that is continuous and takes place throughout one's life, involves both formal and informal learning, is self-directed, intentional, relational, and transformative. The qualitative data provided by the students in this study reflects all these qualities.

While lifelong learning is a personal activity, it requires participation in a community because learning relationships are critical to learning. Crick and Wilson (2005) argued, "The development of lifelong learning requires an intention to learn, the development of self-awareness, and the capacity to take responsibility for one's own learning. We have also [stressed] the importance of the relationships of learning" (p. 362). Crick and Wilson hold that lifelong learning requires active awareness and engagement of the learner within a community. The data from this study reflects the power of such relationships on learning.

Based on the research, by teaching the learning domains directly and strengthening the students' learning profile, the findings indicate that the participants in

the treatment group are better equipped to successfully participate in a rapidly changing and ambiguous future.

Implications for Social Change

This researcher assumed that a strong lifelong learning profile correlates positively to academic achievement and correlates to positive patterns of learning behavior. While a correlation between growth in learning confidence and growth in academics was not proved, neither was it disproved. What was discovered in the study was that direct instruction in lifelong learning characteristics and making students cognizant of their personal learning identities resulted in remarkable growth in learning confidence.

The intent of the researcher was to develop a theoretical framework from which the development of standards, curriculum, assessment, and pedagogy will draw, one that values the emotional component of learning and its impact on intellectual development. The findings of this study sheds further light on educational reform efforts by valuing the affective domains of learning, as well as aligning pedagogy and assessment to both the emotional and intellectual components of learning. By assessing what is valuable, the learning characteristics deemed necessary to survive and prosper in an ever-changing global community, educators can better prepare children to lead happy, healthy, and productive lives as global citizens.

Recommendations for Action and Further Study

Recommendations for action would include the implementation of the ELLI on a larger scale, involving more students and more teachers, over a longer period of time in order to assess growth over time. The longitudinal tracking of learning would provide

rich data on which future curricular and structural decisions would be based. This recommendation would necessitate additional funding to institute the professional development that would be necessary to educate teachers about the learning theories that are the foundation of the ELLI. Furthermore, the teachers would require instruction and training on how to administer the ELLI and analyze and apply the information obtained through the data received.

Areas of further study would be to continue to assess whether or not a correlation between academic achievement and growth in learning confidence exists. The use of multiple measures of academic achievement would be beneficial, as well as looking at academic achievement over time.

Personal Reflections

This study confined itself to 103 eighth-grade language arts students at a Midwest suburban middle school outside of Chicago. The convenience sampling procedure decreased the ability to generalize the findings. The assignment of students to the team was done by the school counselor who, when making student placement decisions, considered a wide range of academic and human factors, such as the need for special education services, gifted services, English Language Learner services, foreign language, and math placements. Additionally, the emotional needs of the individual students were taken into account when matching teacher to student. Although the counselor had no knowledge of the study, the placement of students on teams was not random and therefore constitutes a bias.

Because the data collected from the ELLI and the student surveys were self-reported data, it is limited in its ability to be generalized. However, given the nature of

what this study attempted to explore, self-reported data is the most valid form of data, particularly when assessing learning dispositions that, by definition, are personal and subjective (Crick & Ren, 2007). In the qualitative portion of this study, including parent, teacher, and student surveys, the findings could be subject to other interpretations.

It should also be noted that dual role of teacher and researcher constitutes a bias and limits the ability to generalize these findings. The professional qualifications and the personal involvement of the teacher in all aspects of the study cannot be dismissed as a mitigating factor. The researcher is a veteran teacher, having taught for more than two decades. She holds National Board Certification in the area of *English Language Arts Adolescent and Young Adulthood*. She was related to one member of the control group and resided in the community in which the study was done.

Additionally, as in all social science research, it is impossible to determine the influence of other factors on the learning confidence of the participants. Surveys were not given to students and parents of the control group, so information about their perceptions of their learning growth is unknown.

Conclusion

Developing lifelong learning and students' learning capacities holds significances for all stakeholders in the educational arena. This study adds to the growing field of research that attempts to address the need for educational reform in this era of globalization. By aligning pedagogy and assessment to purpose, educators shift their focus toward preparing children to lead productive lives as citizens of the world, and assess the learning characteristics deemed necessary to survive and prosper in an ever-changing global community.

Educational practice should foster a strong citizenship, citizens that are prepared intellectually, to address the challenges and problems of the future, as well as emotionally, to adapt and change with the world. Narrowing public education's focus to fundamental math and reading skills will not meet that challenge. In order to prosper, our country needs citizens with critical curiosity, who are able to make meaning from both the old and the new, and who are creative and resilient. It is critical that the students of today learn to value learning relationships, develop a strong strategic awareness, and believe in their ability to continue to learn.

According to Carr and Claxton (2004), what is assessed is valued. Through the legislative mandates of NCLB, contemporary educational reform seeks evidence of learning by narrowly focusing on growth in reading and mathematics. Considering the effects of globalization and that knowledge does not always translate into an ability to think about information (Marzano, Kendall, & Gaddy, 1999), it becomes evident that educators and politicians need to expand what is valued and educate children on how to be lifelong learners. Rothstein et al. (2007) contended that if educators continue to focus on the academic basics, educators may fail to meet the complex needs of 21st Century learners.

By being able to measure and assess growth in lifelong learning, tangible evidence can be provided in order to shape and guide educational reform. By assessing the learning characteristics deemed necessary to survive and thrive in an ever-changing global community, educators can better prepare children to thrive as global citizens.

The rapidity and ambiguity of economic, political, and social changes spurred by globalization have created a need for global citizens who can adapt and learn quickly.

Contemporary educational research identifies this ability as essential to prosperity in the 21st century. The need to be a lifelong learner has never been greater. This research indicates that direct instruction in developing a strong learning identity and personal well-being significantly strengthens students' confidence in their ability to learn and continue to learn. In so doing, this study provides a framework with which educators can meet the challenge of preparing students for the 21st Century and adds to the body of research that should direct and shape educational reform.

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APPENDIX A

The Seven Domains of Lifelong Learning

The research conducted by Crick Claxton, and Guy (2004) identified seven domains of learning. Those domains are defined as follows:

a. ***Changing and Learning*:** A healthy growth orientation is present when an individual believes learning is learnable, that through effort their minds will grow, and that learning is a lifelong process. There is a sense of getting better over time. A less effective learner perceives learning capacity as fixed. They experience learning difficulty as negative, something that reveals their inadequacies and their limitations.

b. ***Critical Curiosity*.** Effective learners with critical curiosity have energy and drive for learning. They value finding the truth, thinking deeply and asking questions. They are critical in their approach to learning and are undaunted by public exposure. They are in charge of their learning and are motivated by challenge. Less effective learners are passive in their learning and are more likely to accept what is told to them. They are less likely to engage in speculation and exploratory discussions.

c. ***Meaning Making***. Effective learners who make meaning search for ways to connect what they are learning to what they know. They tend to make sense of new things by using their own experiences and are interested in the big picture. Less effective learners approach learning experiences as isolated events. Referred to as fragmentation, these learners are more interested in the criteria for success than in constructing meaning.

d. ***Resilience:*** Effective learners are resilient and robust in their learning. They like a challenge and are more willing to try things and to take risks. They have good mental effort and accept that sometimes learning is hard. They are not easily frustrated. Less effective learners present dependence and fragility. They are easily frustrated when they are challenged or when they make a mistake. They are dependent on others for their learning and self-esteem.

e. ***Creativity*:** Creativity allows the learner to look at things in different ways. These learners are imaginative and believe in new possibilities. They enjoy playing with new ideas and looking at things from different perspectives. They are more playful in their learning as well as more purposeful. Less effective learners are characterized by literalness or are rule bound. They tend to be unimaginative and prefer clear-cut and traditional ways of looking at things and rules or directions to follow.

f. ***Learning Relationships:*** Effective learners are well balanced and are able to be both private learners and social learners. They know the value of watching others to learn, and make use of others knowledge to expand their own. They understand that others provide resources as well as support and yet, they also know that effective learning may require time alone to study and ponder. Less effective

learners are more likely to be dependent on others for reassurance and guidance or they are more likely to isolate themselves from others.

g. ***Strategic Awareness****:* More effective learners are interested in learning about themselves as learners. They will try different strategies in order to learn more about how they learn. They handle frustration and disappointment and are more reflective and self-evaluative. They like to plan and organize their own learning. In contrast, less effective learners are more robotic in their learning. They are less self-aware and more self-conscious.

APPENDIX B: TEACHER SURVEY

The purpose of this survey is to determine if participants in Mrs. Bruno's research study have demonstrated any observable changes in their learning behaviors within their core classes. Some identifiable changes to learning behaviors might be observed in the student's motivation, confidence, creativity, curiosity, connections, learning relationships, responsibility, strategies, or focus within the classroom. All responses are kept confidential. Your cooperation is greatly appreciated.

1. Please mark the subject you teach.
   - ❑ Social studies
   - ❑ Science
   - ❑ Math

2. Please identify any students who have demonstrated an observable change in their learning behavior over the course of the year by marking none, positive change, or negative change. If you mark positive change or negative change, please list or briefly describe what behavior(s) you have observed.

Student name 1		
❑ None	❑ Positive change	❑ Negative change
Comments:		

Student name 2		
❑ None	❑ Positive change	❑ Negative change
Comments:		

Student name 3		
❑ None	❑ Positive change	❑ Negative change
Comments:		

Student name 4		
❑ None	❑ Positive change	❑ Negative change
Comments:		

Student name 5		
❑ None	❑ Positive change	❑ Negative change
Comments:		

Student name 6		
❑ None	❑ Positive change	❑ Negative change
Comments:		

Student name 7		
❑ None	❑ Positive change	❑ Negative change
Comments:		

Student name 8		
❑ None	❑ Positive change	❑ Negative change
Comments:		

Student name 9		
❑ None	❑ Positive change	❑ Negative change
Comments:		

Student name 10		
❑ None	❑ Positive change	❑ Negative change
Comments:		

Student name 11		
❑ None	❑ Positive change	❑ Negative change
Comments:		

Student name 12		
❑ None	❑ Positive change	❑ Negative change
Comments:		

Student name 13		
❑ None	❑ Positive change	❑ Negative change
Comments:		

APPENDIX C: PARENT SURVEY:

The purpose of this survey is to determine if you have noticed any changes in your child's learning behavior. Some changes you may have noticed might be seen in the motivation he or she shows toward learning or in the willingness to learn something that is challenging. Does your child ask more questions? Is your child more creative? Maybe you have noticed that your child has made more connections to personal experiences or past knowledge. Still, other changes in learning behavior might be an improvement in learning relationships, responsibility, strategies, or focus. In the box below, please write down any changes in learning behavior you may have seen in your child this year. You may list the changes you have seen and the behavior that demonstrates those changes, or you may write your response in paragraph form.

All information is kept confidential. Thank you for participating.

Student's name:

Changes in learning: (if none, please indicate by writing 'none' in this section)

APPENDIX D: STUDENT SURVEY

The purpose of this survey is to determine if you feel you have changed as a learner. You will be asked to identify any changes in your learning behavior you feel you have undergone. Some identifiable changes to learning behaviors might be observed in your ***motivation*** to learn or your ***confidence*** to pursue learning; particularly learning that would normally be a challenge. Other changes in learning behavior may take the form of ***creativity, curiosity,*** or ***making meaningful connections***. Still, other changes in learning behavior might be in the areas of ***learning relationships***, ***responsibility***, ***strategies,*** or ***focus***. Please indicate any observable changes in learning behavior you have observed in yourself during this year. You may simply list the changes you have noted and the observed behavior that supports those changes, or you may write your response in paragraph form.

Be assured that all responses are kept confidential. Your cooperation is greatly appreciated.

Student's name:

Observable changes: (*Changes to consider may be in the following areas:* ***motivation***, ***confidence, creativity, curiosity, making meaningful connections, learning relationships***, ***responsibility***, ***strategies, focus***.)

APPENDIX E: CLASS DESIGNED ASSESSMENT

Class 1 – 1st Quarter

Are you …	Very much like me	Some-times like me	Not really like me	Not at all like me
Responsible- Do you turn in homework on time? Are you on task? Do you follow the class's Bill of Rights?				
Respectful- Do you listen to everyone's ideas? Do you treat others the way you want to be treated?				
Motivated- Do you try new things and are you willing to challenge yourself?				
Hard-working- Do you put forth your best effort? Do you feel good about your work habits grade?				
Optimistic- Are you positive? Do you have a good attitude?				
Creative- Do you try to think outside the box? Are you unique with your work?				
Truthful- Are you honest with your peers and teacher?				
Communicating- Are you a good listener? Do you wait your turn to speak? Is your body language receptive to different points of view?				
Focused- Do you stay on task? On longer projects, do you stay on track and pace yourself?				
Confident/ Resilient- Are you willing to share your ideas with others? Are you willing to take risks with your learning? Are you able to take constructive criticism without taking it personally?				
Curious- Are you curious to learn new things? Are you willing to go deeper into the subject? Do you ask questions to learn more about a topic?				
Fun- Do you enjoy being here? Are you able to stay on task and have fun? Do you laugh with people not at people?				
Proactive- Do you ask for help when you are unsure? Are you independent when you are managing your responsibilities? (i.e. check for homework when absent, check class log when absent)				
Expectations- Do you hold high expectations for yourself?				

Read aloud: During the daily Read Aloud, it is important to listen with an open mind, think critically about the topic, and contribute to a class discussion. Describe how well you meet these expectations and where you believe there is room for improvement.

Q or Q: The daily Question or Quotation requires you to think deeply about the meaning of language, be open to other people's perspectives, listen to different interpretations and incorporate those in your final rewrite. Describe how well you meet these expectations and where you believe there is room for improvement.

Vocabulary: The opportunity to build your vocabulary occurs daily, in class discussions, read-alouds, conversations and independent readings. Describe how well you participate in building your vocabulary by applying word analysis strategies, discussing new words, looking up new or alternative words, and recording new words and their meanings. Discuss where you believe there is room for improvement.

Homework: The Q or Q, independent reading, drafting and self-editing of papers, research, and a host of other activities must be done at home in order to keep up with the pace of the projects assigned. Describe how well you are able to accomplish this at home. Discuss where you believe there is room for improvement.

Independent Reading (25 books): In order to reach the expectation of 25 books this year, it requires each student to complete, on average, 5-6 books every marking period, holidays and time off from school allowing for additional books to be completed.

Describe your strategy for reaching this goal and how well you believe your strategy is working.

Describe your concerns you have, if any, about meeting this expectation.

List the books you have read this quarter, including the one you are currently reading.

Describe the book you like the most and tell why.

Books on Deck: The Books on Deck list is a tool designed to help you meet the expectations of 25 books. You should have a minimum of 6 book titles on this list at all times. List the books you currently have on your Books on Deck list.

Learning Log: The daily Learning Log provides the opportunity for you to organize and direct your learning by asking you to summarize what you learned that day and by requiring you to consider where you need to go tomorrow. Describe how well you complete your learning logs. Discuss where you believe there is room for improvement.

Weekly Assessment: The Weekly Assessment asks you to appoint a value to your contribution as a learner and community member each day. It requires honesty and reflection. Describe how well you reflect and assess yourself on your Weekly Assessment. Discuss where you believe there is room for improvement.

Reading and Writing Workshop: When the community goes into Workshop, the expectation is that each community member takes responsibility for their work. Further, it is expected that each class member conduct themselves according to the class Bill of Rights. Workshop is where independent and responsible behaviors are the norm. You are expected to be on task, focused, and productive. Describe how well you meet these expectations. Discuss where you believe there is room for improvement.

Writing projects: This quarter we have had several writing projects. Please describe what you learned during each of these assignments. Tell what you think you did well and discuss where you believe there is room for improvement.

The Fruit Bowl Project:

The Political Ads:

The I-Search Project:

Personal Writing and Reading Goals: Through both yours and my assessment process individual writing and reading challenges will be identified and those challenges will become your personal goals. Please list here your personal reading and/or writing goals.

The ELLI: You have received your results from the ELLI and have seen your learning profile. Reflect on that profile by responding to the items below.

Strength: Of the 7 Domains on Effective Lifelong Learning Inventory, you have one domain that you have identified as an area of strength. Please name and define that domain and describe the ways in which you show strength in this area.

Challenge: Of the 7 Domains on Effective Lifelong Learning Inventory, you have one domain that you have identified as an area in which you would like to improve. Please name and define that domain and describe the strategies you are using to strengthen that domain.

Class 2 – 3rd Quarter

				
	The Seven Domains of Learning			
Changing and Learning: Did you work hard and give your best effort to become more knowledgeable?				
Critical Curiosity: Did you have enthusiasm to dig deeply into a topic? Do you ask questions to learn more?				
Making Meaning: Do you connect what you're learning now to what you already know?				
Resilience: Did you challenge yourself in learning, persevere through hard times, and not take constructive criticisms personally?				
Creativity: Did you look at things with a new perspective and imagine new possibilities? Did you take risks and express your unique view of things?				
Learning Relationships: Did you have a balance between working by yourself and with others?				
Strategic Awareness: Did you try different strategies to find out more about how you learn, and organize your learning?				
	Individual Traits			
Did you honor the class's bill of rights?				
Did you encourage your classmates and have faith in yourself?				
Were you respectful and caring to yourself, your teacher, and peers?				
Were you playful in a way that still allowed your classmates to learn?				
Did you work hard and stay focused?				
Were you fair towards your classmates?				
Were you honest in your reflection on the quality of your work?				

Read aloud: *During the daily Read Aloud, it is important to listen with an open mind, think critically about the topic, and contribute to a class discussion. Describe how well you meet these expectations and where you believe there is room for improvement. Compare how you assessed yourself last quarter to your performance this quarter.*

Q or Q: The *daily Question or Quotation requires you to think deeply about the meaning of language, be open to other people's perspectives, listen to different interpretations and incorporate those in your final rewrite. Describe how well you meet these*

expectations and where you believe there is room for improvement. Compare how you assessed yourself last quarter to your performance this quarter.

Vocabulary: The *opportunity to build your vocabulary occurs daily, in class discussions, read-alouds, conversations and independent readings. Describe how well you participate in building your vocabulary by applying word analysis strategies, discussing new words, looking up new or alternative words, and recording new words and their meanings. Discuss where you believe there is room for improvement. Compare how you assessed yourself last quarter to your performance this quarter.*

Homework: *The Q or Q, independent reading, drafting and self-editing of papers, research, and a host of other activities must be done at home in order to keep up with the pace of the projects assigned. Describe how well you are able to accomplish this at home. Discuss where you believe there is room for improvement. Compare how you assessed yourself last quarter to your performance this quarter.*

Independent Reading (25 books): *In order to reach the expectation of 25 books this year, it requires each student to complete, on average, 5-6 books every marking period, holidays and time off from school allowing for additional books to be completed. Compare how you assessed yourself last quarter to your performance this quarter.*

What are the total number of books you have read this year?
List the books you have read this quarter, including the one you are currently reading.
Describe the book you like the most and tell why.

Books on Deck: *The Books on Deck list is a tool designed to help you meet the expectations of 25 books. You should have a minimum of 6 book titles on this list at all times. List the books you currently have on your Books on Deck list. Compare how you assessed yourself last quarter to your performance this quarter.*

Learning Log: *The daily Learning Log provides the opportunity for you to organize and direct your learning by asking you to summarize what you learned that day and by requiring you to consider where you need to go tomorrow. Describe how well you complete your learning logs. Discuss where you believe there is room for improvement. Compare how you assessed yourself last quarter to your performance this quarter.*

Weekly Assessment: *The Weekly Assessment asks you to appoint a value to your contribution as a learner and community member each day. It requires honesty and reflection. Describe how well you reflect and assess yourself on your Weekly Assessment. Discuss where you believe there is room for improvement. Compare how you assessed yourself last quarter to your performance this quarter.*

Reading and Writing Workshop: *When the community goes into Workshop, the expectation is that each community member takes responsibility for their work. Further, it is expected that each class member conduct themselves according to the class Bill of Rights. Workshop is where independent and responsible behaviors are the norm. You are expected to be on task, focused, and productive. Describe how well you meet these expectations. Discuss where you believe there is room for improvement. Compare how you assessed yourself last quarter to your performance this quarter.*

Socratic Circles: *The Socratic Circles ask you to think deeply about a piece of writing and seek to understand the perspectives and opinions of your classmates. This requires you to do preliminary work in preparation for participating in the discussion. The assigned text is annotated the author's thesis or idea is identified, text evidence is selected to support that idea, and your interpretation, drawn from your background knowledge and the current information is drafted (at least in your head). Additionally, vocabulary is explored and questions to achieve fuller understanding are crafted. Throughout the conversation you listen intently, focus on making meaning, and insure that everyone is included in the conversation. Describe how well you meet these expectations. Discuss where you believe there is room for improvement.* ***(President Obama's speech, Google article)***

Hierarchy of Talk: *The Hierarchy of Talk is designed to improve the quality of your contribution to class discussions. Please check your rubric and describe how well you meet these expectations. Discuss where you believe there is room for improvement.*

Writing projects: *This quarter we have had several writing projects. Please describe what you learned during each of these assignments. Tell what you think you did well and discuss where you believe there is room for improvement.*

Great American Teen Novel:
Extended Response writing: *(Lab report, Social Studies essay questions, Story of Stuff, Media questions):*
Public Service Announcement:

Personal Writing and Reading Goals: *Through both yours and my assessment process individual writing and reading challenges will be identified and those challenges will become your personal goals. Please list here your personal reading and/or writing goals.*

The ELLI: *We have clarified the meaning of each domain in the Effective Lifelong Learning Inventory and you have identified the strategies that you have committed to use in order to strengthen each domain. Describe a time when you have demonstrated one or more of the learning characteristics.*

Changing and Learning:

Critical Curiosity:
Creativity:
Meaning Making:
Learning Relationships:
Strategic Awareness:
Resilience:

Community of Learning: *Read your class's Bill of Rights and Affirmations (below). How well do you think the class is living up to these expectations? You? How might you help to ensure that the class is successful in its attempt to live up to these documents?*

Class 3 - 4th Quarter

				
Respect				
Did you come in with a positive attitude?				
Did you raise your hand quietly to speak?				
Did you give everyone a chance to learn?				
Did you treat others how YOU want to be treated?				
Did you listen with an open mind to different perspectives?				
Team Work				
Did you work productively with classmates?				
Did you choose your partners wisely?				
Were you "There" for classmates who need help?				
Did you carry your share of the responsibility in group projects?				
Did you respect the group's decisions and choices?				
Critical Curiosity				
Did you think seriously and deeply about the topics at hand?				
Did you ask questions when you didn't understand something?				
Did you seek out a deeper meaning?				
Did you fuel other's curiosity to learn?				
Traits				
Were you confident in your learning?				
Did you adopt new strategies and skills to help you learn?				
Did you ensure that all voices were heard?				
Were you attentive to the teacher and your peers?				
Did you work hard and to the best of your ability?				
Did you hold high expectations and challenge yourself?				
Were you able to be playful while ensuring your peers are learning?				
Making Meaning				
Did you attach new knowledge to prior knowledge to help things make sense?				

1. You were asked to create a representation of how you experience the learning environment of this

classroom. Briefly describe what your shared with Mrs. Bruno.

2. Throughout the year we have added vocabulary words to an ever-growing list. Share with your parents your favorite 5 new vocabulary words from the list and tell why they are your favorite.

3. You wrote an opinion piece this quarter on an issue that you felt passionately about. Please write the question that you addressed in this piece and share what you learned about persuasive writing through the act of writing of this piece

4. You explored political cartoons and the literary devices they use to communicate their message (symbolism, irony, labeling, exaggeration, analogy). Share what you learned about the skill of interpreting political cartoons.

5. You explored the life and work of Dr. Seuss and the literary devices he used to communicate his message (i.e. rhythm and beat that is predictable, rhymes, made-up words, silly characters, use of color, purpose/focus, allegory). Share what you came to learn about one of your favorite childhood authors.

6. You worked in collaboration with your classmates in authoring a Dr. Seuss like book. Share what skills you used to facilitate that collaboration.

7. You participated in a poetry jam in which you were required to memorize and perform poetry. Share the strategies needed to do this well (i.e. volume, pace, projection, movement, staging, tone).

8. You participated in the Reality Store. What lessons did you take away from that experience?

9. You have learned about the 7 domains of lifelong learning this year (changing and learning, critical curiosity, creativity, meaning making, resilience, strategic awareness, and learning relationships. Share how you have grown in these domains over the course of this year.

10. Share one thing you have learned this year about yourself that you feel will help you make this world a better place.

APPENDIX F: CLASSROOM BILL OF RIGHTS

Class 1

We the students of Mrs. Bruno's class…
Promise to communicate with curious ideas and thoughts. We promise to be open to other's opinions and respect them in order to branch off and reflect. We promise to be willing to put forth our best efforts. We promise to challenge ourselves and others. We will consider democracy our right and accept the responsibilities for those rights. We will work hard, be creative and equal, be truthful and focused, be calm and positive, and be inspired.

Class 2

Bill of Rights

We the learners in Mrs. Bruno's class, in order to form a more democratic classroom, will be patient with one another and respectful of our peers. We will encourage each other and be enthusiastic about learning. We strive to be fair and let others have a turn to shine. We are considerate of each other's needs and hold an open mind during discussions. We value honesty and are trustworthy. We promise to work hard and be good listeners. Our goal is to honor critical curiosity and think deeply about issues. We hope to develop a relaxed and thoughtful atmosphere where we care for and challenge one another.

To create that atmosphere, we aspire to be playful, helpful, and sometimes funny. We vow to offer our opinions in a respectful manner, and to think before we speak. We honor student voice and promote individual choice. In order to fulfill our promise we will work as a team and have faith in ourselves and in others.

Class 3

Classroom Bill of Rights

We the students of period 8/9 in Mrs. Bruno's class promise to be respectful of others opinions, have fun while learning, and be patient with our classmates. We also promise to work in a peaceful classroom where everyone is willing to ask, answer and elaborate on other's ideas and questions. We also promise to work hard, work together and give it our all. We as a class cannot make anyone feel uncomfortable. In class we promise to always be fair to others and ourselves while monitoring our own behaviors. We vow to 'be there' for our classmates when they need help. We will develop our critical curiosity by asking serious questions. We promise to come in everyday with a positive attitude and always be chipper.

BE A SMARTICAL EVERYDAY!!!

Appendix G

I-Search and The Learning Domains

1. Demonstrating ***Critical Curiosity*** will be essential during this project. The ability to look deeper into a topic, the desire to know more is what research is all about. If your learning profile demonstrated a need to develop your critical curiosity, this project and its objectives clearly describe the process of and behaviors of an individual who is critically curious.

2. ***Learning Relationships*** are extremely important in the research process. Through the process of peer-editing, discussions with experts in the field, requesting the assistance of librarians and teachers, conversations with peers, parents, and family friends, you will develop skills that will help you to achieve learning relationships that are balanced and rich. If your learning profile indicated that you needed more balance in your learning relationships, this is where you should focus your energies.

3. The research process will require you to develop your **Creativity**, as you gain new knowledge that will challenge you to look at old ways of thinking. The necessity of synthesizing the old knowledge with new knowledge and then considering the ways that relates the larger question of "repairing the world,' will require you to think in different, creative ways. If your learning profile indicated that you needed to work on creativity, this is where you should focus,

4. This project requires you adhere to specific process and time lines. Additionally, the research process will present the need to read critically, manage new information, and construct new knowledge. All of these actions will require you to apply and identify new strategies in order to meet the objectives and your obligations and requirements. **Strategic Awareness** will be essential throughout this project. If your learning profile indicated that you needed to work on your strategic awareness, spend some time identifying what you need to do and specifically identify the strategies that you think might help you be successful.

5. In all learning, **Meaning Making**, the ability to connect new knowledge to what you already know, is essential. By its very definition, research is the act of meaning making. If your learning profile indicated that you needed to strengthen your ability to meaning make, The *What I Learned* section will be critical for you. As you write this section you will needed to tell your reader how the new knowledge you identified in the *Research Journey* section is related to the information you recorded in the *What I Know* section.

6. I-Search paper is grounded in the fact that you do not know something. For those of you who need to develop your **Resilience**, take comfort in knowing that this is true of all of us! The process of research requires you to repeatedly acknowledge to yourself and others that you do not know, a difficult task for those who are not very resilient. If this is a learning domain you need to improve, consider that the ability to seek answers to questions is indicative of a strong and confident learner. Begin to recognize the 'not knowing' as the engine that will help you to develop your strength as a learner. You will need to change the way you see the need to ask others for help in the research process and the peer-edit process. Both are opportunities to become stronger learners. Take a confident, 'learner stance' and listen to the recommendations offered for improvement and think of them as ways you can grow as a learner.

7. The I-Search process requires you to work hard. It will, if done well, provide tangible (real, seeable, touchable) proof that through hard work and guided focus you can become smarter. If your learning profile indicated you needed to improve in the domain of **Changing and Learning**, then follow the research process, and in the end, compare the *What I Know* section to the *What I Learned* section. You will see the evidence that you have indeed changed as a learner.

APPENDIX H: ELLI STRATEGIES

RESILIENCE

Things to try which might help to make you a more ***resilient learner***:

- When you are really struggling to understand something, remind yourself that uncomfortable feelings are an important part of learning: all learners have them.
- Just as your body needs exercise, so does your brain. Don't give up when it starts to hurt: that's when it's getting fitter.
- Instead of waiting till you've solved a problem before writing anything, try describing your early uncertainties, doubts, and confusions: they may turn out to be part of the answer.
- Fear makes the thinking brain shut down. Being afraid of failure can cause failure. Adopt a new motto for your learning such as: 'Nothing to lose!' 'Give it a go!' 'Do or die!' 'Who dares, wins!' 'Feel the fear and do it anyway!'
- Encourage yourself to take risks: try out hunches, new ideas, and different ways of approaching or presenting your work. Tell your teacher and put a sticker in the margin whenever you do this, so that she can celebrate this with you, whether it works or not.
- Ask your teacher in advance for the criteria by which your work will be judged. Try assessing your own work before it is marked so you become gradually less dependent on external judgments.
- Create your own 'private' assessment system, based on how well you have tried, risked, failed, and tried again. Use it to reward yourself in small ways.
- Ask one or two friends to help you create a self-help checklist, 'what to do when I don't know what to do' e.g. 1) Brainstorm possible ways forward and choose the best. 2) Look in a dictionary, encyclopedia, or Internet. 3) Phone a friend … etc.
- Take note of and compliment yourself when you are working effectively and independently in workshop, advancing your work, building learning relationships and achieving your goals for the day.
- When you've done everything you can and a task still seems impossible, put it down and do something completely different. Come back to it when you are refreshed.
- Break difficult tasks down into small, manageable steps and then tackle the task one step at a time. Celebrate the completion of each step.
- List the things you do well outside of school and remember that often these strengths can be used for schoolwork too.
- When receiving advice on how to improve your work, remember that it is not a critique of you as a person. We all can improve our work.

CHANGING AND LEARNING

Strategies to increase your awareness of yourself as ***changing and learning:***

- Think of yourself as a learner – the best thing to be, all life long!
- Think about how your body gets stronger and fitter with exercise and start an exercise regime for you mind and brain.
- When learning is difficult and your brain 'hurts', remember it is making your 'learning muscles' stronger.
- Look at some of your old exercise books and assignments and compare what you were doing a year or more ago with what you are capable of doing now.
- Keep a learning journal: record your hopes, plans, successes, failures, milestones, and what new knowledge you learned each week.
- Think of your progress as a 'learning journey.'
- Make a map of your learning journey ad give yourself a reward whenever you climb 'little mountains'.
- Ask your teachers to help you to notice the new things you are learning to achieve.
- Remember, there are not such things a 'mistakes.' There are only lessons to learn! Every experience moves you forward, if you want it to.

CREATIVITY

Things to try to increase your ***creativity*** as a learner:

- Try guessing at solutions before working them out; see how good your guess was.
- Play games with routine tasks like revision, rote learning and writing up notes: e.g. timing yourself; inventing a board game; playing 'any questions?' or swapping quizzes with a friend.
- Make up characters and situations in which the concepts, ideas and facts in your learning come to life for you: write or imagine scripts and scenes.
- Use color and draw pictures, diagrams funny faces, symbols, to illustrate your notes.
- Make mind maps with labels or draw 'trees' with 'meaning branches' to show how possibilities multiply when you think about alternative scenarios.

- Use a different kind of writing to present your work: e.g. a stream of consciousness, a diary, a cartoon, a news article, a poem, a rap, a song. Try a storybook with illustrations, to explain the topic to a much younger learner.
- Think about the rules you tend to follow in your learning and see if you can break them constructively by doing something differently.
- Let your mind 'float free' when you are stuck or puzzled; see if your 'dreams' come up with a way forward.
- Trust your subconscious mind as much as you do your thinking ability.

CRITICAL CURIOSITY

Things to try that might exercise and build your ***critical curiosity:***

- Think of yourself as a 'learning detective': not only interested in answers, but in clues, patterns, and incongruities.
- Look for opportunities to:
    - Ask questions at school, of fellow students first if it's easier, then your teachers
    - Say respectfully and with an open mind and intent to listen, "I'm not sure I agree with that" and challenge people to explain and justify their opinions
    - Tell your teacher what you're up to and ask for encouragement.
- Practice climbing the 'why?' ladder:
    - Think of a question – e.g. 'Why do I have to go to school?'
    - Think of an answer – e.g. 'It's the law.'
    - Ask, 'Why is it the law?'
    - Think of an answer … and so on!

  See how far you get. Write it down if you like.
- Keep a dictionary nearby and pounce on words you don't understand – so you do now. Make a collection.
- Play 'Twenty Questions' with a friend: one of you thinks of a person, animal or object, alive or dead. The other asks questions that can be answered 'Yes' or 'No' or 'irrelevant' to try to narrow the possibilities down to one in less than twenty questions.
- Welcome the feeling of being perplexed or puzzled and use it to drive your learning forward, like a quest for the light.
- Find out about the kind of questions a surgeon asks someone admitted to the hospital with a serious pain in their side in order to decide whether to operate or not.
- Play a game with 'What if…?' scenarios.
- Find out about Bloom's Taxonomy (starting with a Google search if you like).
- Help to promote a risk-friendly climate in your class so that you are able to speculate, try out 'whacky' ideas on each other and ask 'What if …?' and 'Why?' questions with confidence.

MEANING MAKING

Things to try which might improve your ability to ***meaning make***:

- Choose a topic you know quite a lot about and create a mind map for it. Use your mind map to connect up:
    - Why it matters to you – your feelings and connection with it
    - Facts and figures
    - History and development
    - Current state of play
    - People associated with the topic
- Use mind mapping to start you off with any assignment in which you have to organize and present knowledge
- Take an everyday object – e. g. the first manufactured thing you used today – and think about everything that had to happen for that object to be there for you.
- Play a game with a friend: each of you think of an object, animal, person or idea. Try connecting up the two things you have thought of in some way (example – 'flowers' and 'winning the world cup': a link – petals showered over the players in a victory parade).
- Ask your teacher if your class could create a 'mega mind map' on the wall for each topic you do – so everyone can add a new connection whenever they see them.
- For every new piece of learning you come across, think about how it relates or could relate, to something you remember experiencing or hearing about.
- Ask your teacher to stop the lesson from time to time and ask the class, 'what does this remind you of?"
- Find key words in the topic you are doing and play word-association games to see how they connect with the web of thought and language you already possess.

- For every new topic, complete the sentence, "What matters to me about this is …" and then write down three ways in which the ideas and learning in this topic could make a difference in your life.

STRATEGIC AWARENESS

Things to try which might help you to develop your ***strategic awareness***:

- Remember that assessing and plotting your progress with the seven learning power dimensions is in itself an example of strategic awareness. Try to do this at least once a month, for your learning as a whole across all areas.
- Make planning charts for yourself, in three formats: weekly plans for the time you control; school plans with assignment deadlines and main events; and yearly plans that include big events, major exams, and holiday dates.
- Make practical lists: daily to-do lists; lists of equipment needed; questions to ask others; bright ideas that pop into your head at odd times; shopping lists of what you need to buy or ask for. Use Post-it stickers that can move between your work area and your diary/planner and be thrown away when all items are crossed off.
- Create a 'learning cockpit' in your private study area, where all your current lists and plans can be seen at a glance.
- Allocate your time in advance, so that all subjects have their fair share, you know how much you can give to each new assignment and you can see deadline clashes coming.
- Use 'time-out' in the middle of a concentrated piece of work to check whether you are still on track and following the guidance you were given.
- Keep a 'learning log' to record difficulties, frustrations, worries, boredom, as well as 'Eureka' moments and feelings of satisfaction and ask your teacher for the chance to air these feelings from time to time.
- Make two lists: 'What helps me learn' and 'What stops my learning' and compare them with your friends.
- When you are starting a major piece of work, create a mind map to help you see the whole picture and then make a flow-chart to help you plan a step-by-step approach that will work.

LEARNING RELATIONSHIPS

Try these strategies when trying to achieve a balance in ***learning relationships*:**

Things to try which might help you to work well with others:

- Make a list of people who can help you learn: at home, at school and in the community/world. Next to each one, write down what they are good at: ways they can help; topics they can help with. This is your "*Learning Team Sheet."*
- Imagine whose team sheet you might be on and what they'd say you are best at.
- Think of those who help you learn as part of your 'learning resource kit': use them to help you think through problems, play learning games, check your work, and test your learning power together. Remember, you are helping them too.
- When you are struggling with a topic, imagine you are playing "Who wants to be a millionaire?" At home, you can 'phone a friend'; in class, you can 'ask the audience'. You just have to decide on the question.
- When you are working in pairs or small groups, remember to: ask questions; listen carefully; say things like, 'Well done!' or 'That's good!'; admit what you don't know and contribute what you do know, when it's relevant. You don't have to say a lot to be a good team player.

Things to try which might help you to manage on your own when you need to:

- When you are given an assignment or homework task to take away, don't leave before you have: asked all the questions you need in order to understand it; checked you have all the resources- equipment, notes, access to knowledge- needed to complete the task.
- Create a learning environment for yourself in your private area: clear space to set out your work; all you need within easy reach; no interruptions or distractions; an atmosphere of welcome and concentration that you look forward to being in.
- Establish a routine to get the best out of your private study time, so it becomes a habit to work when you are still fresh, with a mind cleared for business. Ask your family and friends to support you in this.
- Keep a pad t write down questions to ask others when they are available.
- Reward yourself every hour or so with a five-minute break and something healthy and good to eat or drink. It will help to clear your mind again.

Retrieved from Crick, R. D. (2006). Learning power in practice: A guide for teachers. London: Paul Chapman Publishing

APPENDIX I: PERMISSION TO USE ELLI IN RESEARCH

From: Ruth.Deakin-Crick@bristol.ac.uk
Subject: Re: Permission to use ELLI in research
Date: January 7, 2008 2:37:57 AM CST
To: lbruno@kwom.com
Cc: Sue.Woodhead@bristol.ac.uk, Tim@ahead-space.com

Dear Lynn,

I must apologise for taking so long over this request, I know it has been very frustrating for you. However I am pleased to be able to report that the University of Bristol has finally resolved all the issues relating to IP which have dogged the ELLI programme over several years, and the outcome is better than we dared hope. I am now able to authorise this research!

The only three caveats are (i) that you or the school concerned are able to cover the costs of Sue's time registering your cohort of 103 year 8 students in ELOISE, which I think will be one days work @£300. However please let us know if you are having to fund this personally and (ii)you undertake not to use the materials for commercial exploitation and (iii) you keep us informed of your progress informally and supply us with a copy of the final thesis.

I am copying Sue into this email so she can liaise with you about registrations and the project agreement form, but there is no reason why this cannot go ahead as soon as possible.

I will be really pleased to support your research in any way that I can. We have just completed the first part of a similar project with year nine students in Bedfordshire and I attach the report here.

I know that you have been ELLI trained with Tim, and now that the infrastructure is secure for the ELLI programme,and I am able to attend more to developing the research, I am sure there will be possibilities for further collaboration. If you are able to name me as a consultant to your research project (with or without fees) then this will also help, and may facilitate such collaboration. In any event I will be most interested to keep in touch. I am sorry I did not meet you when you were over here,

very best wishes

Ruth

APPENDIX J: ASSENT FORM

Date: _____

Hello, my name Mrs. Bruno and I am doing a research project to explore if there is a relationship between the emotional components of learning and academic achievement. I am inviting you to join that study. I picked you for this project because you are on my team. I am going to read this form with you. You can ask any questions you have before you decide if you want to participate in this study.

WHO I AM:
I am a doctoral student at Walden University and a teacher at XXXX Junior High School. I am working on my doctoral degree.

ABOUT THE PROJECT:
If you agree to participate in this study, you will be asked to:

- Take the MAP test in reading online
- Take an inventory called the Effective Lifelong Learning Inventory online
- Take a short self assessment

IT'S YOUR CHOICE:
You do not have to participate in this study if you don't want to. You will not get into trouble with me, nor will it impact your grade if you say no. If you decide now that you want to join the project, you can still change your mind later just by telling me. If you want to skip some parts of the project, just let me know.

There are no known relevant risks or disadvantages to being in this study. But this project might help teachers to better prepare students to meet the challenges of the future by enriching and expanding what is taught and how it is taught.

PRIVACY:
Everything you tell me during this project will be kept private. That means that no one else will know your name or what answers you gave. The only time I have to tell someone is if I learn about something that could hurt you or someone else.

ASKING QUESTIONS:
You can ask me any questions you want now. If you think of a question later, you or your parents can reach me at xxx-469-4511 or my professor at Dr. Peter Kiriakidis at peter.kiriakidis@waldenu.edu or Dr. Frank Besag at fpbesag@comcast.net. If you or your parents would like to ask my university a question, you can call Dr. Leilani Endicott. Her phone number is 1-800-925-3368, extension 1210.
I will give you a copy of this form.
Please sign your name below if you want to join this project.

Name of Child _____

Child Signature _____
Parent/Guardian Signature _____
Researcher Signature _____

APPENDIX K: DATA USE AGREEMENT

This Data Use Agreement effective as of January 3, 2008 is entered into by and between Lynn Bruno and XXXX. The purpose of this Agreement is to provide Lynn Bruno with access to a Limited Data Set ("LDS") for use in research in accord with the HIPAA and FERPA (Family Educational Rights and Privacy Act) Regulations.

1. Definitions. Unless otherwise specified in this Agreement, all capitalized terms used in this Agreement not otherwise defined have the meaning established for purposes of the "HIPAA Regulations" codified at Title 45 parts 160 through 164 of the United States Code of Federal Regulations, as amended from time to time.

2. Preparation of the LDS. XXX School District XX shall prepare and furnish access to Lynn Bruno a LDS in accord with HIPAA or FERPA Regulations

3. Data Fields in the LDS. In preparing the LDS, XXXXX School District shall include the **data fields specified as follows**, which are the minimum necessary to accomplish the research: Reports provided by the Northwest Educational Association on the Measure of Academic Progress assessments in reading for research participants.

4. Responsibilities of Data Recipient. Data Recipient agrees to:

    a. Use or disclose the LDS only as permitted by this Agreement or as required by law;

    b. Use appropriate safeguards to prevent use or disclosure of the LDS other than as permitted by this Agreement or required by law;

    c. Report to Data Provider any use or disclosure of the LDS of which it becomes aware that is not permitted by this Agreement or required by law;

    d. Require any of its subcontractors or agents that receive or have access to the LDS to agree to the same restrictions and conditions on the use and/or disclosure of the LDS that apply to Data Recipient under this Agreement; and

    e. Not use the information in the LDS to identify or contact the individuals who are data subjects.

5. Permitted Uses and Disclosures of the LDS. Data Recipient may use and/or disclose the LDS for its Research activities only.

6. Term and Termination.

   a. Term. The term of this Agreement shall commence as of the Effective Date and shall continue for so long as Data Recipient retains the LDS, unless sooner terminated as set forth in this Agreement.

   b. Termination by Data Recipient. Data Recipient may terminate this agreement at any time by notifying the Data Provider and returning or destroying the LDS.

   c. Termination by Data Provider. Data Provider may terminate this agreement at any time by providing thirty (30) days prior written notice to Data Recipient.

   d. For Breach. Data Provider shall provide written notice to Data Recipient within ten (10) days of any determination that Data Recipient has breached a material term of this Agreement. Data Provider shall afford Data Recipient an opportunity to cure said alleged material breach upon mutually agreeable terms. Failure to agree on mutually agreeable terms for cure within thirty (30) days shall be grounds for the immediate termination of this Agreement by Data Provider.

   e. Effect of Termination. Sections 1, 4, 5, 6(e) and 7 of this Agreement shall survive any termination of this Agreement under subsections c or d.

7. Miscellaneous.

   a. Change in Law. The parties agree to negotiate in good faith to amend this Agreement to comport with changes in federal law that materially alter either or both parties' obligations under this Agreement. Provided however, that if the parties are unable to agree to mutually acceptable amendment(s) by the compliance date of the change in applicable law or regulations, either Party may terminate this Agreement as provided in section 6.

   b. Construction of Terms. The terms of this Agreement shall be construed to give effect to applicable federal interpretative guidance regarding the HIPAA Regulations.

   c. No Third Party Beneficiaries. Nothing in this Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

   d. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

e. Headings. The headings and other captions in this Agreement are for convenience and reference only and shall not be used in interpreting, construing or enforcing any of the provisions of this Agreement.

IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be duly executed in its name and on its behalf.

DATA PROVIDER	**DATA RECIPIENT**
Signed: _____	Signed: _____
Print Name: XXXXXXXX	Print Name: Lynn Bruno
Print Title: Director of Curriculum	Print Title: Teacher/Researcher

LYNN AUDREY QUACKENBUSH BRUNO

HOME:
415 Lorraine Road
Glen Ellyn, Illinois, 60137
630-469-4511 (home)
630-347-4511 (cell)
lbruno@kwom.com

Areas of Specialization

Adolescent Literacy/Reading and Writing Workshop

Teaching Effective Lifelong Learning

Learning Theory and Pedagogical Practice

Democratic Classrooms

Teaching at the Middle Level

Academic Background

2009	*Ed.D., Walden University, Teacher Leadership,* Dissertation title: "Lifelong Learning Characteristics and Academic Achievement of Eighth Grade Students: Lessons for Educators in Preparing Students for Global Citizenship."
1979	*M.S., Special Education,* George Peabody College for Teachers, *(now School of Education at Vanderbilt University).*
1975	*B.S., Special and Elementary Education,* George Peabody College for Teachers.

Certification

2005	Master Certification Secondary Teaching – Illinois 09 Certificate, *English Language Arts*
2005	Special Education Teaching – Illinois 10 Certificate, *Deaf or Hard of Hearing*
2002	Elementary Teaching Certification – Illinois 03 Certificate, Endorsements – *Language Arts, Middle School*

Academic Experience

2002 – Present	Teacher –Language Arts, Hadley Junior High School, District 41, Glen Ellyn, Illinois.
1992 – 1995	Teacher – Deaf and Hard of Hearing; Neptune Middle School, Neptune, New Jersey.
1988 – 1992	Teacher – Psychiatric/Emotionally Disturbed; Beadleston High School, Clark, New Jersey.
1980 – 1983	Assistant Coordinator/Vocational Instructor – Deaf/Blind, Overbrook School for the Blind, Philadelphia, Pennsylvania.
1979 – 1980	Teacher – Deaf/Blind, Multiple Handicapped; Tennessee School for the Blind, Donelson, Tennessee.
1976 – 1978	Teacher – Deaf/Blind, Multiple Handicapped; Overbrook School for the Blind, Philadelphia, Pennsylvania.
1975 – 1976	Teacher – Homebound/Hospitalized; Educable Mentally Retarded, Roanoke Rapids, North Carolina.

Teacher Leadership

2008 – 2009	Technology Committee; Glen Ellyn School District 41, Glen Ellyn, Illinois.
2007 – 2008	Building Leadership Team; Glen Ellyn School District 41, Glen Ellyn, Illinois.
2005 – 2006	Evaluation Committee; Glen Ellyn School District 41, Glen Ellyn, Illinois.
1996	Presenter/Instructor: *Developing the Literate Learner in a Technological World*; New Jersey Department of Education, Marie Katzenbach School for the Deaf, Trenton, New Jersey.
1994	Presenter: *Critical Thinking, Citizenship, and the Role of Simulations*, Spring

	Conferences on Our Successes, Brookdale Community College, Lincroft, New Jersey.
1994	Presenter: *Implementing a Whole Language Curriculum;* Marie Katzenbach School for the Deaf, Trenton, New Jersey.
1993	Presenter: *What for Critical Thinking? Minority Status, Domination, and What We Should Do About It;* Institute for Critical Thinking; Montclair State Teachers College, Montclair, New Jersey.

Post Graduate Studies

2004	National Boards of Professional Teaching Standards – *Adolescence and Young Adulthood/English Language Arts*; Edison, New Jersey.
2004	Benedictine University – *Teaching the Middle Level; Developmental Characteristics of Young Adolescents*; Lisle, Illinois.
2003	Teachers College of Columbia University – *Institute: Teaching of Reading*, New York, New York.
1993	Gallaudet University – *Whole Language Approaches in Educating Deaf Students, Hot Topics, Issues and Trends in Educating Deaf Students; Advanced American Sign Language; Bilingual/Bicultural Education*; Washington, D.C.
1990-1992	Union County College – *Interpreter for the Deaf/Deaf Studies*; Cranford, New Jersey.

Publications/Creative Works

2005	*Human Rights for Human Wrongs* – readers' theater production based on student research. Performed at Hadley Junior High School, Glen Ellyn, Illinois, Elmhurst College, Elmhurst, Illinois, and *Illinois Labor Works,* CAN-TV, Chicago, Illinois
1994	*Journey to America* – simulation game on immigration; *The Crime Bill* – simulation on congressional process (featured on *School Days*, TV channel 34, Neptune, New Jersey).
1992 – 1995	*Climbing the Ladder* – learning game designed to teach factors influencing economics and quality of life; *To You With Love* – copy-righted student designed sign language cards used to introduce deaf culture and raise funds for class trip to Washington, D.C.; *Holistic Assessment: World Cultures* – assessment of literature based World Culture
1992	Bruno, Robert and Lynn. "What For Critical Thinking? Minority Status, Domination and What We Should Do About It," *Inquiry: Critical Thinking Across the Disciplines*, Institute for Critical Thinking, Montclair State College, 10, 4, December 1992, 7-9.

Professional Affiliations

National Middle School Association, Westerville, OH
Association for Supervision and Curriculum Development, Alexandria, Virginia
Teachers College Record, Columbia University, New York, New York.
Phi Delta Kappa International, Bloomington, Indiana
National Education Association, Washington, D.C.
Illinois Education Association, Springfield, Illinois
International Reading Association, Newark, Delaware
Illinois Reading Council, Normal, Illinois