

Georgia Southern University

Digital Commons@Georgia Southern

Legacy ETDs

Winter 2003

An Inquiry into Gardner's Theory of Multiple Intelligences and Strengths of Students Placed in Special Education under Mildly Disabled Categories

Kathryn Sandiford Harrell

Follow this and additional works at: https://digitalcommons.georgiasouthern.edu/etd_legacy



Part of the [Curriculum and Instruction Commons](#), [Curriculum and Social Inquiry Commons](#), and the [Educational Assessment, Evaluation, and Research Commons](#)

Recommended Citation

Harrell, Kathryn Sandiford, "An Inquiry into Gardner's Theory of Multiple Intelligences and Strengths of Students Placed in Special Education under Mildly Disabled Categories" (2003). *Legacy ETDs*. 709.

https://digitalcommons.georgiasouthern.edu/etd_legacy/709

This dissertation (open access) is brought to you for free and open access by Digital Commons@Georgia Southern. It has been accepted for inclusion in Legacy ETDs by an authorized administrator of Digital Commons@Georgia Southern. For more information, please contact digitalcommons@georgiasouthern.edu.

AN INQUIRY INTO GARDNER'S THEORY OF
MULTIPLE INTELLIGENCES AND STRENGTHS OF
STUDENTS PLACED IN SPECIAL EDUCATION UNDER
MILDLY DISABLED CATEGORIES

Kathryn Sandiford Harrell



**Georgia Southern University
Zach S. Henderson Library**

AN INQUIRY INTO GARDNER'S THEORY OF
MULTIPLE INTELLIGENCES AND STRENGTHS OF
STUDENTS PLACED IN SPECIAL EDUCATION UNDER
MILDLY DISABLED CATEGORIES

A Dissertation

Presented to

the College of Graduate Studies of
Georgia Southern University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
in
Curriculum Studies

by

Kathryn Sandiford Harrell

December 2003

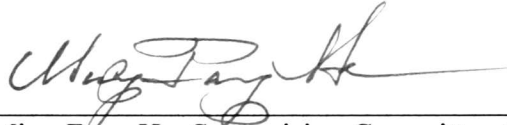
© Kathryn Sandiford Harrell 2003

All Rights Reserved

November 21, 2003

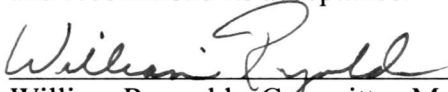
To the Graduate College:

This dissertation entitled "An Inquiry Into Gardner's Theory of Multiple Intelligences and Strengths of Students Placed in Special Education Under Mildly Disabled Categories" and written by Kathryn S. Harrell is presented to the College of Graduate Studies of Georgia Southern University. I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education with a major in Curriculum Studies.



Ming Fang He, Supervising Committee Chair

We have reviewed this dissertation
and recommend its acceptance:



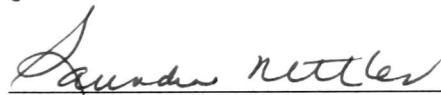
William Reynolds, Committee Member



Diana Hammitte, Committee Member



Joyce Bergin, Committee Member



Sandra Nettles, Department Chair

Accepted for the College of Graduate Studies



Charles J. Hardy
Acting Dean, College of Graduate Studies

DEDICATION

This work is dedicated first to my family. I dedicate it to my father, Harold Sandiford, who instilled the dream of one of “his girls” being a doctor one day and my mother, Catherine Sandiford, who instilled the love of learning in me from the beginning. Daddy and Mama, please don’t bore the angels with your bragging.

I dedicate this work to my sisters, Carol Sandiford and Ruth Sandiford Garrard, who have loved and supported me throughout my life journey.

I dedicate this work to my husband, Dave Harrell, who has encouraged and supported me all through the process.

I dedicate this work to my children, David, Kenneth, Bennett, Ginger, and Stephanie. Thank you for continuing to ask how I was coming on this, even when I said, “Don’t ask.”

Finally, I dedicate this work to all of my former students who inspired me to tell a story of strengths and possibilities rather than one of weaknesses and disabilities.

ACKNOWLEDGEMENTS

I would like to first express my appreciation to the members of my committee. Dr. Ming Fang He, my supervisor, who gently pushed me to create a work of which I could be proud; Dr. William Reynolds, who helped me to look at teaching and curriculum through different lenses than I might have; Dr. Diana Hammitte, who encouraged me to give my own voice to my work; and Dr. Joyce Bergin, who helped me to appreciate my field of special education despite my frustrations with certain aspects of it.

The parents, teacher, paraprofessional and students who were a part of this study will always have my deepest gratitude. Their willingness to open up and share their lives made this project possible.

My colleagues at Brunswick High School where I began this endeavor and those at the Wayne County Board of Education where I ended it were all great cheerleaders and encouragers.

Dr. Howard Gardner, whose theory is the subject of this research, continues to inspire me through his writing and beliefs.

To all of these, I offer a sincere thanks for their support, beliefs, insight, and time.

VITA

Kathryn Sandiford Harrell

Education

- 2003 – Georgia Southern University, Statesboro, GA**
Ed.D. Curriculum Studies, emphasis area: Leadership
- 1993 – Georgia Southern University, Statesboro, GA**
Ed. S. Special Education/Exceptional Child-LD
- 1985 – Georgia Southern University, Statesboro, GA**
M. Ed. Special Education/Exceptional Child
- 1971- Georgia Southern University, Statesboro, GA**
BS. Ed. Exceptional Child-EMR

Positions

Held

- 2001-Present- Wayne County Board of Education, Jesup, GA**
Special Education Director
- 1990-2001- Brunswick High School, Brunswick, GA**
Special Education Co-Department Chairperson
Special Education Teacher
- 1987-1990- Burroughs-Mollette Elementary School, Brunswick, GA**
Special Education Lead Teacher
Special Education Resource Teacher
- 1981-1987- Glynn Academy High School, Brunswick, GA**
Special Education Teacher
- 1972-1974- Oglethorpe Christian Academy, Darien, GA**
Middle and High School Math Teacher
- 1971-1972- Perry Elementary School, Brunswick, GA**
Special Education Self-Contained EMR Teacher

Professional Organizations

- Council for Exceptional Children**
- Georgia Council of Administrators of Special Education**
- Professional Association of Georgia Educators**
- District 14 Special Education Coordinators' Advisory Council**
- Pi Lambda Theta**
- Association for Supervision and Curriculum Development**
- Council for Learning Disabilities**

ABSTRACT

AN INQUIRY INTO GARDNER'S THEORY OF MULTIPLE INTELLIGENCES AND STRENGTHS OF STUDENTS PLACED IN SPECIAL EDUCATION UNDER MILDLY DISABLED CATEGORIES

DECEMBER 2003

KATHRYN S. HARRELL

B.S.ED. GEORGIA SOUTHERN UNIVERSITY

M.ED. GEORGIA SOUTHERN UNIVERSITY

ED.S. GEORGIA SOUTHERN UNIVERSITY

ED.D. GEORGIA SOUTHERN UNIVERSITY

Directed by Professor Ming Fang He

This study explored the strengths displayed by 4th-5th grade students placed in special education under mildly disabled categories as compared to the intelligences defined by Howard Gardner in his Theory of Multiple Intelligences (Gardner, 1983, 1999). These categories consist of Specific Learning Disabilities (SLD) and Mildly Intellectually Disabled (MIID). Critics maintain that special education has been focused on the weaknesses of students while overlooking their strengths (Miller, 1993; Armstrong, 2000). Under new legislation and new performance goals for special education, the time has come to focus on students' strengths and equal opportunities for students to learn the curriculum mandated by our state.

Theoretically, this study was grounded in John Dewey's (1910) theory of education, specifically transformative thinking, and Maxine Greene's (1995) theory of

releasing the imagination. Methodologically, it was grounded in Max Van Manen's (1990) phenomenological hermeneutics (researching the lived experiences of students labeled disabled and their teacher and interpreting the experiences of these students and the strengths they exhibit), and Clandinin and Connelly's (2000) narrative inquiry (telling the stories of a special education teacher and her students).

Data collection methods included classroom observations, teacher, parent, and student interviews, research journals, and field notes. Key findings of this study indicated that parents, the teacher and the paraprofessional were able to recognize distinct strengths in the student participants. However, the students themselves had difficulty naming their strengths. The strengths observed by the parents, the teacher and paraprofessional, and those identified by the student participants, particularly spatial and bodily-kinesthetic intelligence patterns as identified by Gardner (1983, 1999), are areas most neglected by our school curriculum. Examples given by the student participants of what they found easy to learn were hands-on or experiential types of activities. Perhaps the most significant finding of the study was that the eight intelligence categories formulated by Howard Gardner (1983, 1999) do not fully capture the ways these students demonstrated strengths in the classroom and at home.

It is my hope that we can find ways to allow these groups of labeled individuals to have a place in our schools without being isolated in a pull-out program. It is my hope that public school can move beyond the standardized tests that have no meaning once a student leaves school. It is my hope that through telling the stories of these students, all members of society can recognize that these labeled individuals do not fit the mold, but have much to offer society and deserve the chance at life often denied.

TABLE OF CONTENTS

	Page
DEDICATION	iv
ACKNOWLEDGEMENTS.....	v
VITA	vi
ABSTRACT	vii
LIST OF TABLES	xii
LIST OF FIGURES.....	xiii
CHAPTER	
I. INTRODUCTION.....	1
A. Context of Study.....	1
B. Research Questions.....	12
C. Autobiographical Roots of My Inquiry.....	12
D. Limitations and Challenges.....	15
E. Significance of the Study	17
F. Summary.....	21
II. REVIEW OF THE LITERATURE.....	22
A. Definitions of Eligibility Criteria for Special Education Categories.....	22
B. History of Intelligence Defined	27
C. The Theory of Multiple Intelligences	30
D. Multiple Intelligences and Curriculum Theory	37
E. Multiple Intelligences and Curriculum Planning.....	44
F. Criticism of Multiple Intelligences Theory	53
G. Summary	57

Table of Contents (continued)	Page
III. METHODOLOGY	59
A. Theoretical Framework.....	59
1. Dewey and Greene.....	60
2. Phenomenology	63
3. Hermeneutics.....	66
4. Narrative Inquiry	67
B. Data Collection.....	68
1. Research Site Introduction	69
2. Introduction of Participants.....	69
3. Classroom Observations and Field Notes	71
4. Reflective Journal	72
5. Unstructured Interviews.....	73
6. Data Management, Data Analysis, and Data Representation	75
C. Summary	75
IV. CLASSROOM OBSERVATIONS, SURVEYS ON AND INTERVIEWS WITH PARENTS, TEACHER AND PARAPROFESSIONAL	77
A. School Portraiture.....	79
B. Participant Profiles.....	82
C. Classroom Observations	86
D. Parent/Teacher Surveys	89
1. Number of Items Checked for Each Intelligence Category	90
2. Distribution of Items Checked by Intelligence	94
3. Frequency of Individual Items Checked	98
4. Individual Differences in Number of Items Checked for Each Intelligence	102
E. Parent/Teacher Interviews.....	106
F. Summary.....	110

Table of Contents (continued)	Page
V. PEER SOCIOGRAM AND STUDENT INTERVIEWS	113
A. Peer Completed Sociogram.....	114
B. Student Interviews	116
C. Summary	128
VI. SUMMARY AND REFLECTIONS.....	130
REFERENCES.....	141
APPENDICES	149
A. INSTITUTIONAL REVIEW BOARD CERTIFICATION.....	150
B. CONSENT FORMS	152
Parent Cover Letter.....	153
Teacher Cover Letter	154
Adult Consent Form	155
Student Cover Letter.....	156
Student Consent Form	157
C. INTERVIEW/SURVEY FORMS	158
Parent Survey/Interview Form	159
Teacher Interview Form.....	162
Peer Sociogram.....	165
Student Interview Form	166

LIST OF TABLES

Table	Page
1. Response Frequency by Item.....	99
2. Number of Items Checked for Each Child by Intelligence-Parent Survey	103
3. Number of Items Checked for Each Child by Intelligence-Teacher Survey	103
4. Responses by Classmates to Intelligence Categories.....	115

LIST OF FIGURES

Figure	Page
1. Number of Items Checked by Intelligence.....	91
2. Percentage of Items Checked by Intelligence.....	91
3. Distribution of Items Checked-Linguistic.....	94
4. Distribution of Items Checked-Logical-Mathematical.....	95
5. Distribution of Items Checked-Spatial.....	95
6. Distribution of Items Checked-Bodily-Kinesthetic.....	95
7. Distribution of Items Checked-Musical.....	96
8. Distribution of Items Checked-Interpersonal.....	96
9. Distribution of Items Checked-Intrapersonal.....	96
10. Distribution of Items Checked-Naturalist.....	97

CHAPTER I

INTRODUCTION

Context of Study

“We who are teachers would have to accommodate ourselves to lives as clerks or functionaries if we did not have in mind a quest for a better state of things for those we teach and for the world we all share” (Greene, 1995, p 1). This study was my quest into Gardner’s Theory of Multiple Intelligences and its relationship to strengths displayed by students who are labeled with a disability. Since the passage of Public Law 94-142 in 1975, students who have struggled in the classroom have been referred for possible services through special education. In order to receive these services, students must be labeled and placed in categories defined by the law. Two of these categories, Specific Learning Disabilities (SLD) and Mildly Intellectually Disabled (MIID), use an IQ score as a determining factor of eligibility. All of these tests are strongly based on linguistic and mathematical skills. Yet, often students exhibit skills or talents in other areas that do not fall under these two skills. Gardner (1983, 1999) contends that these skills also are a part of intelligence. This study examined strengths of students who have been labeled through the special education process and compared those strengths to Gardner’s identified multiple intelligences.

In my years of teaching special education students who fall in these two mildly disabled categories listed above, I encountered many who displayed exceptional strengths in areas that are not measured by these tests. As an administrator, I find many special education students whose opportunities are denied simply because they cannot

pass a standardized test. Yet, time and again these students show ability in hands-on tasks that lie beyond the paper and pencil tests. Currently, there seems to be a push toward more inclusion of students who are mildly disabled into the general education setting through the *No Child Left Behind Act* (2001) as well as current reauthorization of the *Individuals with Disabilities Education Act* (1997). The purpose of this study was to examine strengths displayed by 4th-5th grade students who had been placed in special education under one of these categories. These strengths were compared to the intelligences defined by Howard Gardner in his Theory of Multiple Intelligences (Gardner, 1983, 1999).

In order to better understand special education today, it is important to look at how it has evolved. Special education in the United States has a long history. Winzer's (1993) chronology points to education of deaf children leading the way in its early history. The first year schooling was provided for mentally retarded individuals in the United States was 1848 when Samuel Gridley Howe established his experimental school for feeble-minded youth. Success at the training facility prompted the Massachusetts legislature to establish a permanent school in 1850, the Massachusetts School for Idiotic and Feeble-Minded Children. In 1854, New York funded the first school for mentally retarded children within the state. However, it was not until 1898 that collegiate training for teachers of mentally retarded students began. In 1904, a training program for teachers of the mentally retarded was established at the New Jersey Institution for the Feeble Minded Boys and Girls at Vineland. The early classes in public schools were segregated ungraded classes used as dumping grounds for students "the schools could not or would not educate and just as often served as the transmission belt to move disabled children

and youth and those displaying behavioral problems beyond the schools” (Winzer, 1993, p. 322). By 1910, however, segregated classes in the public schools were well established as a viable alternative for training exceptional children.

The historical development of special education parallels that of learning disabilities. The term *learning disabilities* was first introduced by Samuel Kirk in a speech in 1963 at a Chicago parents’ meeting of the Fund for Perceptually Handicapped Children. However, the foundation phase of the learning disabilities field (about 1800-1930) was one of basic scientific research on the brain and its disorders. Many of the early brain researchers were physicians, whose work typically involved the study of adult patients who had acquired brain damage through stroke, accident, or disease (Lerner, 1981).

The beginning of the idea of learning disabilities may be traced to the discovery by Paul Broca of the speech centers in the left frontal lobe of the brain in his quest for the site of aphasia. This work, later discredited, was based on autopsies of four stroke victims. From these examinations, Broca identified the left temporal lobe as prime in speech production. This speech center, known as Broca’s area, was identified in 1861. Karl Wernicke followed up Broca’s work in 1908, describing another portion of the brain (the temporal lobe), to which he attributed the understanding of speech or listening comprehension. Both Broca and Wernicke hypothesized that specific localized areas of the brain governed particular activities. John Hughlings Jackson criticized this localization theory and in 1874 stated that parts of the brain were intimately linked and that damage to one part would reduce overall general functioning. In 1926, Sir Henry Head conducted many clinical observations, developed a system for data collection, and

created a test for aphasia. Head believed that aphasics did not suffer from generalized impairment of intellectual ability even though they had sustained brain damage evidenced by language difficulties. James Hinselwood published *Congenital Word Blindness* in 1917 in which he outlined his principle that reading disabilities are due to the damage or inadequate development of the memory centers of the left cerebral hemisphere of the brain. In 1937, Samuel Orton proposed a theory that rested on the bilateral symmetry of the brain when he proposed that the failure of one hemisphere of the brain to become dominant causes learning and reading disorders. Also in the 1930s, Alfred Strauss outlined the characteristics of the minimally brain-damaged child, later known as the Strauss syndrome. The five principal components outlined by Strauss were: hyperactivity, hyperemotionalism, impulsiveness, distractibility, and perseveration. These five characteristics still describe the core behavioral characteristics of children with learning disabilities (Lerner, 1981; Winzer, 1993). The advent of diagnosing students with attention deficit disorder (ADD) and attention deficit hyperactivity disorder (ADHD) has added to the population of students in general as well as special education classrooms who exhibit these characteristics. It is my experience that almost any teacher today would easily identify students within their classrooms who display characteristics similar to those Strauss outlined. The final two phases of development in the field of learning disabilities included a transition phase from about 1930 to 1960, where psychologists and educators used many of their predecessors' theories to develop diagnostic procedures and remedial programming. The integration phase began in 1960 and is continuing today (Winzer, 1993).

The early legal efforts in special education were grounded in federal civil rights cases in the 1950s and 1960s. The landmark case of *Brown v. Board of Education of Topeka, Kansas* in 1954 set a legal precedent in “establishing education as a right that must be available to all on equal terms” (McLaughlin & Henderson, 2000, p. 42). *Pennsylvania ARC v. the Commonwealth of Pennsylvania* in 1971 established that schools in the state must provide a free and public education to all school-aged children with mental retardation. *Mills v. Board of Education of the District of Columbia* in 1972 found that exclusion of children with disabilities from free, appropriate public education is a violation of due process and equal protection clauses of the Fourteenth Amendment to the Constitution, and it expanded the class of students with disabilities beyond mental retardation to include all types of disabilities (McLaughlin & Henderson, 2000).

These monumental court cases led to legislation in which the role of public education was defined for students with disabilities. On their web page, Parents United Together gives the following synopses of laws associated with special education:

P. L. 94-142, The Education for All Handicapped Children Act of

1975. Mandated a free appropriate public education for all children with disabilities, ensured due process rights, and mandated IEPs and LRE. As such, it is the core of federal funding for special education. This law was passed in 1975 and went into effect in October of 1977 when the regulations were finalized.

P. L. 98-199, The Education of the Handicapped Act Amendments of 1983. Reauthorized the discretionary programs, established services to facilitate school to work transition through research and demonstration projects; established parent training and information centers; and provided funding for demonstration projects and research in early intervention and early childhood special education.

P. L. 99-457, The Education of the Handicapped Act Amendments of 1986. Mandated services for preschoolers and established the Part H program to assist states in the development of a comprehensive, multidisciplinary, and statewide system of early intervention services for infants.

P. L. 101-476, The Education of the Handicapped Act Amendments of 1990. Renamed the law the Individuals with Disabilities Education Act. It reauthorized and expanded the discretionary programs, mandated transition services, defined assistive technology devices and services, and added autism and traumatic brain injury to the list of categories of children and youth eligible for special education and related services.

P. L. 102-119, The Individuals with Disabilities Education Act Amendments of 1992. Primarily addressed the Part H (Infants and Toddlers with Disabilities) Program.

P. L. 105-17, The Individuals with Disabilities Education Act

Amendments of 1997. The reauthorization of IDEA was viewed as an opportunity to review, strengthen, and improve IDEA to better educate children with disabilities and enable them to achieve a quality education. Congress sought to achieve this by: (a) strengthening the role of parents; (b) ensuring access to the general curriculum and reforms; (c) focusing on teaching and learning while reducing unnecessary paper work requirements; (d) assisting educational agencies in addressing the costs of improving special education and related services to children with disabilities; (e) giving increased attention to racial, ethnic, and linguistic diversity to prevent inappropriate identification and mislabeling; (f) ensuring schools are safe and conducive to learning; and (g) encouraging parents and educators to work out their differences by using non adversarial means. (“Legislative History”, 2003)

The Individuals with Disabilities Education Act (IDEA) is currently undergoing revision in the United States legislature. President Bush’s Commission on Excellence in Special Education released its report, *A New Era: Revitalizing Special Education for Children and Their Families*, on July 2, 2002. This report presents three major recommendations: (1) to focus on results — not process; (2) to embrace a model of prevention not a model of failure; and (3) to consider children with disabilities as general education children first. Under the third recommendation, the commission states: “In instruction, the systems must work together to provide effective teaching and ensure that those with additional needs benefit from strong teaching and instructional methods that

should be offered to a child through general education” (p. 9). This clearly seems to call for more inclusion in the regular education curriculum for special education students. It appears that revisions to IDEA will closely follow the rhetoric of the *No Child Left Behind Act of 2001*. Students receiving special education services will be held to the same accountability standards as those in the general education classroom. Since these identified special education students have demonstrated difficulties within a general education setting in the past, new methods of teaching them must be explored in order to provide them with an opportunity to access the general curriculum.

In its report on implications for special education policy and practice from *No Child Left Behind* (2003), the Council for Exceptional Children points out that SUBJECTS addressed in the act include *all* public and elementary school children, thus clearly including all children receiving (or potentially receiving) the support of special education. However, the law does refer to *separate* measurable annual objectives for the identified subgroups, one of which is students with disabilities. Each of these subgroups will be held to the standard of Adequate Yearly Progress, to be defined by each state. This law also presents the timeline of twelve years in which all students in a state will meet or exceed the proficient level of the standards of academic achievement. Although a lofty goal, this presents a dilemma for those of us working with students who lag behind year after year.

Critics of special education have maintained that it has been focused on remediation of weaknesses, rather than placing emphasis on strengths (Miller, 1993; Armstrong, 2000a, 2000b). When initially passed in 1975, the *Education of All Handicapped Children Act* (EAHCA) was largely intended to insure that students with

significant physical and sensory disabilities were not denied a free appropriate public education. For these students, the appropriate intervention was, and remains, the provision of special accommodations such as access ramps for those using wheelchairs, books written in Braille for the blind, and sign language interpreters for the deaf to make public education accessible. These accommodations spoke to a student's weaknesses, but appropriately so. However, recent data indicates that approximately 90% of students now served in special education have been classified as having relatively mild disabilities. Some would argue that this population would be better served with a prevention or intervention model in regular education rather than the application of an accommodation strategy so prevalent in special education (Horn & Tynan, 2001).

The purpose of this study was to investigate Howard Gardner's Theory of Multiple Intelligences (MI), and compare the intelligences to strengths observed in students labeled as mildly disabled. These intelligences are: *Linguistic* (i.e., the capacity to use language to express what is on one's mind and to understand other people), *Logical-Mathematical* (i.e., the capacity to understand underlying principals of some kind of causal system, or to manipulate numbers, quantities, and operations), *Spatial* (i.e., the ability to represent the spatial world internally in one's mind), *Bodily-Kinesthetic* (i.e., the capacity to use one's body to solve a problem, make something, or put on some kind of production), *Musical* (i.e., the capacity to think in music, to be able to hear patterns, recognize them, and perhaps manipulate them), *Interpersonal* (i.e., the capacity to understand other people), *Intrapersonal* (i.e., the capacity to understand oneself, to know how to react to things, which things to avoid, and which things to gravitate toward), and *Naturalist* [i.e., the human ability to discriminate among living

things (plants, animals) as well as sensitivity to other features of the natural world (clouds, rock configurations)] (Gardner, 1983, 1999). Mary Poplin (1984), former editor of *The Learning Disability Quarterly* (LDQ), stated:

The horrifying truth is that only one article has been submitted that sought to elaborate on the talents of the learning disabled....Why do we not know if our students are talented in art, music, dance, athletics, mechanical repair, computer programming, or are creative in other nontraditional ways?...It is because, like regular educators, we care only about competence in its most traditional and bookish sense — reading, writing, spelling, science, social studies and math in basal texts and worksheets.

(Poplin, 1984, p. 133)

The talents Poplin listed are an example of Gardner's other intelligences. In my twenty years as a special education teacher, I saw many students labeled as learning disabled or mildly intellectually disabled who did display creativity in these areas. As I began to study Gardner, I gained a new perspective on these creative expressions, and began to ask myself if there were, indeed, other ways of being smart.

This study emphasized the intelligence strengths of the students. Interviews with the teacher, students and parents focused on what each has seen displayed as strengths in the students. Data collection included a reflective journal kept by the researcher, surveys on the parents and teacher and paraprofessional of the student participants, a sociogram completed by peers of the student participants to indicated strengths observed, interview notes and transcripts of all interviews, and field notes of classroom observations.

Data was analyzed to discern the continuity of strengths seen in students among their teacher, their parents, and their peers. The strengths identified were then compared to the intelligences defined by Gardner (1983, 1999). Implications for the practice of multiple intelligence instruction in areas other than this setting were addressed. These implications become more important as the push continues for more inclusive settings for students with disabilities in general education. Since these students have not been successful in general education classrooms in the past, new ways of presenting information must be explored. Gardner's theory is one possibility in this exploration, whether it is used alone as a program (Campbell, Campbell, & Dickinson, 1996; Boggeman, Hoerr, & Wallach, 1996; Armstrong, 2000b) or as one part of a program such as Brain-Based Learning (Jensen, 1995, 2000) or Differentiated Learning (Tomlinson, 2001).

In order to maintain a level of confidentiality for special education students included in the study, pseudonyms were used for the school and the county. The research was conducted at Elm View Elementary School in the Wetzel County, Georgia school system. This 4th-5th grade center school had an enrollment of 617 students for the 2002-2003 school year: 305 fourth graders and 312 fifth graders. Ethnic enrollment figures show 28.8% of the student body as black, 65% as white, less than 4% as Hispanic, 0.6% as Asian, and 1.6% as multi-racial. Approximately 16% of the students received special education services. The special education program at Elm View was a resource based one serving mildly disabled students. Students with more severe disabilities were served at another school in the county. Categories of disabilities represented in the Elm View program included Specific Learning Disability (SLD),

Mildly Intellectually Disabled (MIID), Emotional Behavior Disorder (EBD), Other Health Impaired (OHI), and Autism (AUT). Of the total school population, 60.86% participated in the Free/Reduced Lunch Program. Elm View has also been identified as a Schoolwide Title I Needs-Improvement School with recognized weaknesses in reading, language, and math (SACS Accreditation Report, 2003).

Research Questions

The major research question of this study was:

- How do strengths observed in students labeled as mildly disabled compare with intelligences defined in Gardner's theory?

The specific questions addressed in the study were:

- What do teachers, parents, peers, and the students themselves see in special education students as strengths or abilities?
- How do these strengths relate to multiple intelligences as defined by Howard Gardner?
- What are the implications for curriculum and pedagogy to better serve these students?

Autobiographical Roots of My Inquiry

My inquiry was deeply embedded in my experience as a special education teacher. Granted, I now bear the title of Special Education Director, but in my heart, I am still a teacher. My undergraduate degree was in Exceptional Child: EMR (Educable Mentally Retarded). My Masters degree added the field of Specific Learning Disabilities and, by having two of the three fields that fall under the Interrelated

Certification area, I was granted a certificate in Interrelated Special Education. The third field is Emotional Behavioral Disorders.

In my twenty years of teaching special education, I found myself amazed on more than one occasion at the talents, gifts, or abilities my students possessed that did not apply to what we define as “intelligence.” I have taught many talented artists, musicians, and athletes. Year after year, vocational instructors would come to me to say that one of my students was the top in the class when it came to the hands-on activities. Even though I had studied the concept of learning styles, these students seemed to exhibit more than a style or way of learning. Yet, these students were labeled deficit. In my doctoral studies, as I explored contemporary curriculum theorists, I found myself searching for something that related to my experiences in the specialized field of special education. I had heard about a theory of multiple intelligences, and so I decided to explore this further.

My first exposure to Gardner and his theory was through his book *Intelligences Reframed: Multiple Intelligences for the 21st Century* (1999). It was in this book that I read about his journey of developing his theory and of publishing his book *Frames of Mind: The Theory of Multiple Intelligences* (1983). Through these two books, the way I looked at intelligence was changed. In *Frames of Mind* (1983), Gardner named seven human intelligences: linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, interpersonal, and intrapersonal. In his book *Intelligences Reframed: Multiple Intelligences for the 21st Century* (1999), Gardner added naturalist intelligence and hinted at adding existentialist at some point in the future. This theory became the framework of my study. I planned to investigate the implications of Gardner’s theory as

it relates to students labeled as mildly disabled in special education, particularly, Specific Learning Disabilities (SLD) and Mildly Intellectually Disabled (MIID).

After reading about Gardner and his theory, I began to investigate what others had researched about this theory and its relationship to special education. I found that in 1987, Thomas Armstrong completed his doctoral dissertation at California Institute of Integral Studies titled *Describing strengths in children identified as "learning disabled" using Howard Gardner's theory of multiple intelligences as an organizing framework*. Armstrong states that the primary question of his study was: "What in fact are the strengths of children labeled 'LD'?" (p. 7). After gathering his data, Armstrong found that two further questions became important: "How do these strengths relate to Gardner's theory of multiple intelligences?" and "Are 'LD' children particularly strong in certain of Gardner's seven intelligence categories and less strong in other intelligence categories?" (p.7). In his summary and implications chapter, Armstrong concludes that what emerged from his data supported his original suppositions. He found that most of the strengths indicated for his subjects fell in the intelligence categories from Gardner's (1983) model "that are most neglected by our culture, particularly spatial and bodily-kinesthetic intelligences categories. Additionally, it appears that strengths were found least often in intelligence categories most highly prized by our culture (linguistic and logical-mathematical)" (Armstrong, 1987, p.242). Armstrong's study was based on information gathered from the parents of LD students. My inquiry focused on the teacher of these students as well as observing them in a classroom setting. Input was also sought from peers and parents of these students.

In a reflection of my years as a special education teacher, I can recall numerous students who displayed abilities that could fall under the intelligences named in Gardner's theory. Usually, these were abilities other than linguistic or logical/mathematical, the ones most valued in regular education classrooms and on standardized tests. As I reflected on my experience of working with these former students, I began to ponder: Do other special education teachers see the same types of abilities in their students, and how can we begin to tell the stories of these students' strengths rather than stories of their failures? Perhaps Gardner's theory is not the answer to our dilemma, but can it be a starting point for us to begin to explore the possibilities rather than the disabilities?

Limitations and Challenges

The study concentrated on students attending school in the southeastern portion of a Southern state. All students included in the study were students who had been identified as having a mild disability. Their identification meant that some standard, or definition, had been used to label them in one of the categories defined by Public Law 94-142. In order to separate these students for specific instructional strategies, states define eligibility criteria for inclusion into these categories. Therefore, these could be seen as socially constructed categories (Miller, 1993). Yet, this does present a group of students that can be studied as learners who are not successful in the current instructional environment. However, these students may or may not qualify for these labels in other states.

By using defined intelligences from Gardner's (1983, 1999) theory, the possibility of categorizing continues. According to Gardner, all of us possess all of the

intelligences, but each of us displays strengths in certain areas. By labeling students' strengths and considering how to teach to these strengths, once again students are labeled as "musical," "spatial," or "bodily-kinesthetic." Certainly, there could be racial and political implications here. This was a challenge to my study, and one that I needed to address as I looked toward the implications for curriculum planning and pedagogical change.

Perhaps inherent in any study is the limitation of researcher bias. All research is ideologically driven, so the question arises as to any form being value-free or bias-free. In qualitative study, however, the researcher becomes a part of the research, and direct experience comes into play. Certainly, this was a concern regarding my study. I felt very strongly that my experiences with former students were reflections of there being more to intelligence than is measured by a standardized test. I had to become sensitive to this preconceived idea as I engaged in a study of other students, other teachers, and parents of these students. Certainly my direct experiences had stimulated the initial curiosity I had over this study, but I needed to make sure that I linked this curiosity, as well as observations and interview results, to my general research question. I needed to be sensitive to the viewpoints of the people I involved in this study, and to be opened to the opinions that may have surfaced that were different than mine. By engaging not only other educators, but also the students and their parents, I believed that I would gain a broader picture and would have an opportunity to explore diverse ways of seeing strengths exhibited by these students (Janesick, 1998; Marshall & Rossman, 1999).

Significance of the Study

This study incorporated input from special education students, their teacher, and their parents. From the discussions and reflections of this study, all of these groups should be positively impacted.

Armstrong (2000a) has referred to our nation's schools as a worksheet wasteland. Textbooks and their accompanying worksheets structure 75 to 90 percent of all learning that goes on in our schools. Students who are weak in the linguistic and logical-mathematical intelligences, therefore, feel unsuccessful 75 to 90 percent of the time in school. By identifying strengths these students possess rather than focusing on their weaknesses, these students might also be able to feel that they are a part of the school experience. Through this study, students were asked to reflect on their own strengths as well as the strengths of their classmates. By understanding their own strengths and how these might be used in helping them with weaknesses they have experienced in the past, students could be able to better advocate for themselves and find the curriculum more accessible.

Teachers of students who have been diagnosed as having learning problems might be able to better reach these students by identifying their strengths and building on these strengths. Special education, in the past, has looked at these strengths as learning styles rather than multiple intelligences. Teachers, also, tend to teach to their own strengths and often find it difficult to teach those who are not as strong in a specific area. By reflecting on the intelligences Gardner has identified, teachers should become more aware of their own intelligence strengths and how this affects their teaching style. By broadening their idea of what might be called a strength, or intelligence, teachers should

begin to utilize more avenues to present material to students, as well as more avenues for students to demonstrate their knowledge. By addressing these strengths in this new way, teachers might better serve students who have been resistant to school in the past, and show them that they are, in their own way, intelligent.

The task must become for teachers to see their vocation as one of worth and regard themselves and their students as “sacred and holy” (Purpel, 1989). Expanding on this concept, Purpel says:

Such educators must regard themselves and their students as holy and sacred, not as tools and mechanisms, hence as ends not means; they must be committed to the development of institutions of learning in which all of those involved (teachers, administrators, staff, students) are full citizens, each of whom has the inherent right of personal and social fulfillment, each of whom has inherent and full dignity, and each of whom has the inherent right to grow, learn, and create as much as he/she possibly can. Thus, schools can be transformed from warehouses and training sites into centers of inquiry and growth where participants share their different abilities and talents in pursuit of the common goal of creating a culture of deepest meaning. (Purpel, 1989, p.100)

It seemed to me that often special education students were not allowed these rights in school. Teachers seemed to want to remove these students from the mainstream because they did not “fit the mold” that the current educational system forces teachers to address. Foucault (1995) addressed this issue as coming from the normalizing of judgment in the prison system. He states:

This hierarchizing penalty had, therefore, a double effect: it distributed pupils according to their aptitudes and their conduct, that is, according to the use that could be made of them when they left school; it exercised over them a constant pressure to conform to the same model, so that they might all be subjected to “subordination, docility, attention in studies and exercises, and to the correct practice of duties and all parts of discipline.”

So that they might all be like one another (Foucault, 1995, p. 182).

This sounds like the modern education system that wants all students to measure up to the same standards, and to sit in rows and all learn the same way. This is not reality, and it is time for us to face that fact. By exposing regular education teachers to the idea of students having multiple intelligences, these teachers, as well, may become more open to diverse approaches of presenting curriculum materials. Through collaboration with special educators, general educators can become more aware of the true strengths of students who have been labeled as disabled and begin to see the value of inclusion of these students into the general education population.

Finally, this study might draw parents' focus to their child's strengths rather than his/her failures. How often we spend parent/teacher conference time reflecting on what is wrong rather than what is right. By reflecting on what they see as strengths in their child, parents will begin to understand that this unique individual they call their son or daughter is, in many ways, a bright and shining star. They, too, will then be able to advocate for their child and seek appropriate instruction to meet the needs of this student through accessing his/her strengths. Parents will also become aware of the importance of providing experiences for their child that enhance the stronger intelligences as well as

ones to strengthen the less predominant intelligences. All of this should positively impact the participation of students who are labeled as mildly disabled in the general curriculum setting.

One major tenet of special education legislation has always been the idea of *least restrictive environment* (LRE). Winzer (2000) states that this term generally refers to placing students in settings that are the most normal and where students can have the best possible relations with their normally developing peers. During the 1960s and 1970s, the cry for mainstreaming was heard by advocacy groups to address LRE. This movement was for providing every exceptional student, regardless of type or severity of disability, with an appropriate education, as much as possible, alongside normally developing peers. Winzer further states that this led to one group, the “mainstreamed”, becoming not full-fledged members of a class but, rather, a group pushed into the activities and settings that are occupied by another group. In comparison, inclusive programs expect that all children will attend schools or classrooms that they would attend if they did not have a disability. However, Winzer points out that inclusion means different things to different people, and no one understanding matches the needs of all stakeholders in the process. According to Voltz, Brazil, and Ford (2001), the idea of inclusion involves a feeling of belonging and acceptance. King-Sears (2001) offers three steps as guides for determining access opportunities to the general curriculum for learners with disabilities: (1) analyze the general education curriculum; (2) enhance areas of the general education curriculum that are poorly designed; and (3) consider creative ways students with disabilities can access the curriculum, including minor to major modifications of outcomes. The move toward more accountability for this group of students has increased the debate on LRE and the

definition of inclusion. Certainly, planning learning environments around specific student strengths will result in higher learning achievement for all students. Gardner's intelligences might provide a viable framework for these learning environments and best address the needs of students who have been labeled as mildly disabled in an inclusionary setting.

Summary

This chapter has presented the context of this study in relationship to the historical development of special education through the laws that have defined it. More specifically, the historical development of the education of students labeled as mildly mentally retarded, now known as mildly intellectually disabled, and those labeled as learning disabled was reviewed. The specific research questions for the study have been presented as has the autobiographical roots of my experiences in special education over twenty-three years in the field. Limitations and challenges associated with this study, including political and racial overtones and researcher bias were discussed. Finally, the significance of the study for students placed in special education, their parents and their teachers were offered.

Chapter II will explore the literature on the definitions of special education categories and how intelligence has come to be defined. The Theory of Multiple Intelligences will be discussed, as well as its relationship to curriculum theory and planning. The final section of this chapter will discuss the criticism of others, as well as my own, of the Theory of Multiple Intelligences.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this study was to compare strengths identified in students labeled as mildly disabled to the intelligences defined by Gardner's (1983, 1999) Theory of Multiple Intelligences. The study included four students who were participating in special education either under Specific Learning Disabilities (SLD) or Mildly Intellectually Disabled (MIID). In this chapter I will review six bodies of literature: (1) definitions of eligibility criteria for special education categories; (2) the history of how intelligence is defined; (3) Howard Gardner's Theory of Multiple Intelligences; (4) multiple intelligences and curriculum theory; (5) multiple intelligences and curriculum planning; and (6) criticism of the Theory of Multiple Intelligences.

Definitions of Eligibility Criteria for Special Education Categories

Labeling students means that some standard, or definition, must be set so that students can be identified as fitting that label. Under PL 94-142, the disabilities of a student considered to fall under these categories are defined. However, the eligibility criteria for placement in special education can differ from state to state. Of the fifteen areas identified under the Categories of Eligibility in Georgia policy, twelve of them could include students who exhibit what might be called mild impairments. However, only two of these categories base eligibility primarily on some sort of intelligence or achievement test. The others are determined by physical impairments such as blindness, deafness, orthopedic impairment; indicators of emotional disturbance; or a medical issue

of some sort. My study focused on the two areas that involve some sort of standardized testing as a major part of eligibility criteria.

According to the State of Georgia Rules Pertaining to Special Education (2000), the two categories included in this study are defined as follows:

Intellectual Disability: Intellectual disabilities refers to significantly sub average general intellectual functioning (mild: intellectual functioning ranging between an upper limit of approximately 70 to a lower limit of approximately 55) which exists concurrently with deficits in adaptive behavior (limitations in an individual's effectiveness in meeting the standards of maturation, learning, personal independence or social responsibility) that adversely affect educational performance and is manifested during the developmental period.

Specific Learning Disabilities: Specific learning disabilities is defined as a disorder in one or more of the basic psychological processes (i.e. problems in attending, discrimination/perception, sensory integration, organization, sequencing, short-term memory, long-term memory, and/or conceptualization/reasoning) involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical computations.

In both of these definitions, the emphasis is on the ability to perform linguistic or mathematical based tasks. The basis for labeling these students fall into two of the eight categories of intelligence Gardner has defined. Although criteria states that issues such as environment, cultural differences, and economic disadvantage must be ruled out to

determine true eligibility, it seems this is not the case. In many areas, an overrepresentation of minority students has been identified in the category of Mildly Intellectually Disabled. If a student learns in a different way, why would they not become frustrated at the same old routine and either shut down or act out? This is a question that, I feel, all of education needs to address.

Although the major responsibility of providing academic instruction to these students has fallen to special education in the past, the revisions of IDEA are calling for greater inclusion into the mainstream of regular education for all disabled students, but especially this group who are considered mildly disabled. A report on President Bush's Commission on Education in a recent *CEC Today* (Sept/Oct., 2002) indicates that this report recommends major changes in the focus of IDEA: "...emphasizing results rather than process, embracing a model of prevention, rather than of failure, and ensuring that children with disabilities are seen as general education children first" (p.1). In past attempts at including special education students in general education, guidelines often seemed ambiguous, as did the terminology defining inclusion. According to data from the Department of Exceptional Students at the Georgia Department of Education, 44.9% of SLD students were pulled from their regular education classes less than 21% of the school day, while only 8.96% of MIID students fell into this category. By the same token, 55.02% of MIID students were placed in special education classes for greater than 60% of the school day, while only 12.98% of SLD students were self contained in their special education program (Richard Swenson, personal communication, July 28, 2003). It seems that Georgia programs are doing a better job of mainstreaming the learning disabled student than we are the mildly intellectually disabled student. However, it should be

considered that normally SLD students exhibit deficits in only one or two academic areas, while MIID students are below grade level in all areas.

Educators and other advocates of special education services traditionally have used the term Least Restrictive Environment (LRE) interchangeably with mainstreaming and inclusion. While the terms have much the same meaning, each represented a time in educational reform and legislative passage. The official terminology today is LRE (State of Georgia rules, 2000; Weatherly, 2000). The current laws of our government and the subsequent regulations of the Georgia Board of Education (State of Georgia rules, 2000) made it plain that educators were required to provide students with disabilities a free, appropriate, public education (FAPE) in the LRE.

The Education for All Handicapped Children Act of 1975, also known as Public Law 94-142, was technically the amendment of the 1970 law which was entitled Education of the Handicapped Act of 1970, the law which mandated the concept of LRE (Friend & Bursuck, 1999). EAHCA was considered responsible for inaugurating a new movement, beginning in the early 1980s. This movement, known as the Regular Education Initiative (REI), (Smith & Dowdy, 1998), intended to integrate special education and general education providing for a greater concurrent education of students with disabilities in the general education curriculum (Rothstein, 1995) and to asseverate that, if students with disabilities were to be educated with their nondisabled peers, the classrooms were to be integrated (Smith & Dowdy, 1998).

The REI movement led to the amendment of Public Law 94-142 in 1990 and the birth of the Individuals with Disabilities Education Act (1990), better known as IDEA (Smith & Dowdy, 1998). IDEA ensured that legally, among other things, all students

with disabilities received a free, appropriate, public education and that students with disabilities be educated in the LRE, an environment consistent with their educational needs, along with their nondisabled peers. Neither IDEA nor Public Law 94-142 made clear what was meant by LRE, thus leading to a continuation of the ambiguity in the interpretation of its meaning. This ambiguity (Green, 1996) allowed all providers to lobby for a continuation of the approach each favored for providing LRE and, subsequently, led to many variations in the delivery of services. Though no clear directives have been established in the latest reauthorization of IDEA currently underway, the indication is that a standard of 90% of all special education students should be included in the regular education environment at least 80% of their school day (Dr. Bette Neville, personal communication, June, 2003).

Just as standards, rules and regulations are needed to include students under special education categories, these standards also present exclusion of many students who fall short of the criteria, yet still exhibit many of the characteristics and learning problems identified with these categories. This group would also constitute students who would be considered “at-risk”. This group of students has never been under the umbrella of special education, but still often falls short in reaching the goals of regular education and high school graduation. They make up a large portion of high school dropouts, and tend to lead marginal lives. In a policy letter to education officials regarding the implementation of *No Child Left Behind Act*, Secretary of Education Rod Paige (2002) lists among criteria to be demonstrated by state systems, “All public schools and LEAs are held accountable for the achievement of individual subgroups” (p. 4). The subgroups for accountability include: major ethnic/racial groups, economically disadvantaged groups,

limited English proficient (LEP) students, and students with disabilities. This would seem to include this group defined before as “at-risk.”

Regular education must prepare to meet the increasing needs of students who do not fit into the norm. Those of us in special education must begin to go beyond trying to remediate weaknesses in students through drill and practice and look for ways to build on strengths inherent in each student. Howard Gardner (1983) and his colleagues at Harvard University identified seven intelligences in his initial Theory of Multiple Intelligences. Since that time, Gardner (1999) has identified an eighth intelligence. Diamond and Hopson (1998) state that Gardner’s theory says that we all possess each of these intelligences in large or small measure. They also contend that to many, this seemed a better way to categorize students, “...fathoming their scholastic foibles, and helping them absorb information” (p.275).

History of Intelligence Defined

Not long after Charles Darwin had established the scientific case for the origin and evolution of all species in 1860, a wide range of scholars began to ponder the intellectual differences observed across the species, as well as within the specific groups such as infants, children, adults, or the “feeble-minded” and “eminent geniuses” (Gardner, 1999, p.11). Darwin’s cousin, Sir Francis Galton, was the first to institute a laboratory for the purpose of collecting empirical evidence of people’s intellectual differences. Galton used the great families of Britain to present evidence that intelligence ability of diverse kinds ran in families. Thus began the controversy of intelligence and heredity. Galton attempted to define intelligence in terms of its behavioral correlates.

Hence, his work did not translate into specific measures of intelligence, but did introduce the idea of intelligence testing (Winzer, 1993; Herrnstein & Murray, 1994).

Still, the honor of having fashioned the first intelligence test is usually awarded to Alfred Binet, a French psychologist particularly interested in children and education. In 1904, the minister of public instruction in Paris asked Binet and a group of colleagues to develop a means of determining which primary grade students were “at risk” for failure so these students could receive remedial attention. Binet began with largely sensory-based items but soon discovered the superior predictive power of other, more “scholastic” questions. Binet considered intelligence to be an entity founded on judgment and reasoning, not a grouping of separate components. Like Galton, he believed that individual differences consist of deviations from a population average. He developed questions that attempted to measure intelligence by measuring a person’s ability to reason, draw analogies, and identify patterns. Along with his young assistant, Theodore Simon, Binet sought to create a single scale in which samples of different facets of mental ability could be merged in order to provide a rough but serviceable method of assessing general intelligence. From Binet’s time on, intelligence tests have been heavily weighted toward measuring verbal memory, verbal reasoning, numerical reasoning, appreciation of logical sequences, and ability to state how one would solve problems of daily living (Winzer, 1993; Herrnstein & Murray, 1994; Gardner, 1999; Armstrong, 2000a).

Like many Parisian fashions of the day, the IQ test made its way across the Atlantic and became Americanized during the 1920s and 1930s. Whereas Binet’s test had been administered one on one, American psychometricians, such as Stanford

University's Lewis Terman and Harvard's Robert Yerkes, prepared paper-and-pencil versions that could be administered easily to many individuals. Terman expanded the number of tests given at each age and standardized the scale on what he believed to be a typical American sample of 2,300 Caucasian children in California. Yerkes, as president of the American Psychological Association, offered the services of that body in testing of draftees prior to World War I to assess their capabilities. He acquired data on 81,000 native-born whites, 12,000 foreign-born whites, and 23,000 native-born blacks (Winzer, 1993). Since specific instructions were written out and norms were created, test takers could be examined under uniform conditions and their scores could be compared.

The onset of the behaviorist movement under theorists such as B.F. Skinner led to more controversy on the idea of IQ and heredity. To those who held the behaviorist view, human potential was almost perfectly malleable, shaped by environment. The causes of human deficiencies in intelligence, or parenting, or social behavior, or work behavior lay outside the individual. They were caused by flaws in society. Behaviorist theory went further to state that the causes of these deficiencies could be fixed by righting public policies such as redistribution of wealth, better education, better housing and medical care (Herrnstein & Murray, 1994).

Still others spoke out on the side of data indicating that differences in intelligence are intractable and significantly heritable and that the average IQ of various socioeconomic and ethnic groups differs. These included Arthur Jensen, William Shockley, and Richard Herrnstein. Yet, despite this controversy, standardized intelligence and achievement testing remain an integral part of our educational system (Herrnstein & Murray, 1994; Winzer, 2000).

Surprisingly, the conceptualization of intelligence has not advanced much in the decades following the pioneering contributions of Binet, Terman, Yerkes, and their American and western European colleagues. Intelligence testing came to be seen as a technology useful in selecting people to fill academic or vocational niches. As long as these tests continued to do what they were supposed to do—that is, yield reasonable predictions about people’s success in school—it did not seem necessary to explore alternative views of what intelligence is or how it might be assessed (Gardner, 1999).

Gardner (1999) does point out that over these decades, scholars and students of intelligence have continued to argue about three key questions. First: Is intelligence singular, or are there various, relatively independent intellectual faculties? Second: Is intelligence (or are intelligences) predominantly inherited? Finally: Are intelligence tests biased? Gardner has attempted to address these three questions, along with others, in his Theory of Multiple Intelligences.

The Theory of Multiple Intelligences

Because of the importance of music in particular, and the arts in general, in his life, Gardner (1999) began to question the conventional definitions of human development. As he began to question the conventional thoughts of developmental psychology, he asked himself what optimal human development was. He became convinced that development also involved skills and capacities seen in painters, writers, musicians, dancers, and other artists. He was very comfortable in regarding the capacities of those in the arts as fully cognitive.

Gardner's experiences included work as an investigator at the Boston University Aphasia Research Center, part of the Boston University School of Medicine and the Boston Veterans Administration Medical Center. Here he investigated how the brain operates in normal people and how it is impaired and sometimes retrained following injury to the nervous system. This work involved only adult victims of stroke or injury to the brain. At the same time, he was working with ordinary and gifted children at Harvard's Project Zero in an attempt to understand development of human cognitive capacities.

Gardner (1999) relates that the opportunity to work with both children and brain damaged adults led him to embrace one fact of human nature: "People have a wide range of capacities. Strength in one area of performance does not predict any comparable strengths in other areas" (p. 31). Both of the populations with which Gardner worked led him to the same message: "that the human mind is better thought of as a series of relatively separate faculties, with only loose and non predictable relations with one another, rather than a single, all-purpose machine that performs steadily at a certain horsepower, independent of content and context" (p.32).

As Gardner attempted to decide on how exactly to write about his discoveries, he decided to define the "separate faculties" as intelligences. He defined intelligence as "the ability to solve problems or to create products that are valued within one or more cultural settings" (Gardner, 1999, p. 33). Gardner (1983) then set criteria for establishing intelligence by listing eight "signs" of intelligence: (1) potential isolation by brain damage; (2) the existence of savants, prodigies, and other exceptional individuals; (3) an identifiable core operation or set of operations; (4) a distinctive developmental history,

along with a definable set of expert “end-state” performances; (5) an evolutionary history and evolutionary plausibility; (6) support from experimental psychological tasks; (7) support from psychometric findings; and (8) susceptibility to encoding in a symbol system.

From these signs, Gardner (1983) identified seven distinct intelligences. These intelligences are: (1) *linguistic intelligence*, (2) *logical-mathematical intelligence*, (3) *spatial intelligence*, (4) *bodily-kinesthetic intelligence*, (5) *musical intelligence*, (6) *interpersonal intelligence*, and (7) *intrapersonal intelligence*. Over the two decades between his books *Frames of Mind* (1983) where his original seven intelligences were named, and *Intelligence Reframed* (1999), Gardner has refined his definition of intelligence, and has added an eighth human intelligence to his list. He now conceptualizes an intelligence as a “biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture” (Gardner, 1999, pp. 33-34). He has also added *naturalist* to his list of human intelligences.

Linguistic intelligence has to do with words. It involves sensitivity to spoken and written language, the ability to learn languages, and the capacity to use language to accomplish certain goals. Children who are gifted in this ability often have highly developed auditory skills and enjoy playing around with the sounds of language. This intelligence also includes the ability to manipulate the syntax or structure of language, the phonology or sounds of language, the semantics or meanings of language, and the pragmatic dimensions or practical uses of language. This intelligence can best be thought of as the ways by which one thinks of things by using their names and how one makes

statements and tells stories through naming. Linguistic intelligence involves a way of thinking filled with conversations, words, meanings, grammatical constructions, alliteration, metaphor, humor, and the like. Possible examples of persons who might exhibit this intelligence include Winston Churchill, Mario Cuomo, and Barbara Jordan (Gardner, 1999; Armstrong, 2000a, 2000b; Miller, 1993; Hoerr, 2003).

Logical-mathematical intelligence involves the capacity to analyze problems logically, carry out mathematical operations, and investigate issues scientifically. Students who are strong in this form of intelligence think numerically or in terms of logical patterns and sequences, or other forms of logical reasoning. This intelligence also includes sensitivity to logical patterns and relationships, statements and propositions (if-then, cause-effect), functions and other related abstractions. This intelligence involves reasoning and using systems to organize, categorize, and classify. It is the intelligence used to engage in inductive and deductive reasoning. Possible examples of persons who exhibit this intelligence include Benjamin Banneker, Bill Gates, and Stephen Jay Gould (Gardner, 1999; Armstrong, 2000a, 2000b; Miller, 1993; Hoerr, 2003).

Spatial intelligence features the potential to recognize and manipulate the patterns of wide space as well as the patterns of more confined areas. These students seem to know where everything is located in the room. They think in images and pictures. They are the ones who find things that are lost or misplaced. Also involved in this intelligence is sensitivity to color, line, shape, form, space, and the relationships that exist between elements. It includes the ability to visualize, to graphically represent visual or spatial ideas, and to orient oneself appropriately in a spatial matrix. Engaging in spatial thinking focuses on the physical attributes of the surroundings. Examples of persons who evidence

this intelligence might include Maya Lin, Peter Max, and Frank Lloyd Wright (Gardner, 1999; Armstrong, 2000a, 2000b; Miller, 1993; Hoerr, 2003).

Bodily-kinesthetic intelligence involves the potential of using one's whole body or parts of the body to solve problems or fashion products. This intelligence includes specific skills such as coordination, balance, dexterity, strength, flexibility, and speed, as well as proprioceptive, tactile, and haptic capacities. Children highly developed in bodily-kinesthetic intelligence often squirm in their seats and are the first ones to zoom out the door to head for PE or recess. They process knowledge through bodily sensations. They are the ones who get "gut feelings" about answers to test questions. Some are primarily graced with athletic abilities or the skills of a dancer, actor, or mime. Others are particularly gifted with excellent fine-motor coordination and can excel in typing, drawing, fixing things, sewing, crafts, and related activities. In general, this intelligence is the ability to use the body skillfully and handle objects adroitly. Examples of people who might evidence this intelligence include Mia Hamm, Harry Houdini, and Michael Jordan (Gardner, 1999; Armstrong, 2000a, 2000b; Hoerr, 2003).

Musical intelligence involves skill in performance, composition, and appreciation of musical patterns. This intelligence includes sensitivity to rhythm, pitch or melody, and timbre or tone color of a musical piece. Students highly developed in musical intelligence often sing, hum, or whistle tunes quietly to themselves. They are also sensitive to nonverbal sounds in the environment, such as crickets chirping and distant bells ringing. Just as linguistic intelligence allows one to think in linguistic conversations, musical conversations include recognizing a tune played on the radio, or imagining variations on a musical theme. Examples of persons who evidence this intelligence would certainly

include Louis Armstrong, George Gershwin, and Yo Yo Ma (Gardner, 1999; Armstrong, 2000a, 2000b; Miller, 1993; Hoerr, 2003).

Interpersonal intelligence denotes a person's capacity to understand the intentions, motivations, and desires of other people and, consequently, to work effectively with others. This can include sensitivity to facial expressions, voice, and gestures; the capacity for discriminating among many different kinds of interpersonal clues; and the ability to respond to those clues in a practical way. Interpersonal intelligence is required to see others as separate from oneself and as having motivations, intentions, and feelings from which they act. To see another person as a unique personality requires the use of interpersonal intelligence. An important aspect of interpersonal intelligence is being able to take others' points of view. Children gifted in interpersonal intelligence understand people. They are often leaders among their peers in their neighborhood or in their class at school. These youngsters often excel in mediating conflict between peers because of their uncanny ability to pick up on other people's feelings and intentions. Examples of persons who evidence this intelligence might include Martin Luther King, Jr., Ronald Reagan, and Oprah Winfrey (Gardner, 1999; Armstrong, 2000a, 2000b; Miller, 1993; Hoerr, 2003).

Intrapersonal intelligence involves the capacity to understand oneself, to have an effective working model of oneself and to use such information effectively in regulating one's own life. This intelligence includes having an accurate picture of one's strengths and limitations; awareness of inner moods, intentions, motivations, temperaments, and desires; and the capacity for self-discipline, self-understanding, and self-esteem. Students gifted in intrapersonal intelligence know who they are and what they are capable of

accomplishing in the world. They are often good at setting goals for themselves, and, even if they don't reach those goals, they are good at creating new ones that are more realistic. They are not necessarily introverted and shy, but they may have a strong need to seek solitude for reflection. In exhibiting intrapersonal intelligence, people show a capacity for mobilizing their own resources, completing long-term projects with little or no supervision, and for working on their own. In general, this intelligence might be defined as access to one's emotional life for understanding oneself and others. Examples of persons who evidence this intelligence could include Bill Cosby, Anne Frank, and Eleanor Roosevelt (Gardner, 1999; Armstrong, 2000a, 2000b; Miller, 1993; Hoerr, 2003).

Naturalist intelligence involves the ability to recognize and classify numerous flora and fauna of an environment. This also includes sensitivity to other natural phenomena such as cloud formations and mountains and, in the case of those growing up in an urban environment, the capacity to discriminate among nonliving forms such as cars, sneakers, and music CD covers. Students who are highly competent in this intelligence are nature lovers. They would rather be out in the fields or woods hiking or collecting rocks or flowers than being cooped up in school doing their paper and pencil homework. On the other hand, if the schoolwork involves studying lizards, butterflies, dinosaurs, stars, or other living systems or natural formations, their motivation is likely to soar. Examples of persons who evidence this intelligence include Charles Darwin, Jane Goodall, and John Muir (Gardner, 1999; Armstrong, 2000a, 2000b; Hoerr, 2003).

The criteria for determining eligibility for placement in special education categories and, thus, labeling students is still based on the concept of intelligence from Binet, Terman, and Yerkes. This concept is heavily weighted with verbal, numerical, and

logical tasks. Gardner has opened the possibility that intelligence involves more than these few types of tasks. However, school curriculum still is centered on standardized test scores. These scores are used to measure the success of students, teachers, and schools. This mentality has been a major part of the movement to remove students who do not measure up from the regular education classroom. This is the mentality that we as special educators must now begin to change as the movement for more inclusive education gains momentum.

Multiple Intelligences and Curriculum Theory

Curriculum planners must begin to explore how a learning environment can be provided which results in the highest learning achievement for the most students possible. This would be based on a curriculum theory that addresses unique needs and abilities of individual students within a classroom, rather than the “cookie-cutter” approach that seems to be invading many of our classrooms today. Gardner is not a curriculum theorist, as his background is in psychology. However, Gardner (2000) states that much of what he writes about can be identified with the educational tradition of John Dewey. He further states that he rejects the baggage that has, he feels, inappropriately been placed with “progressive” education. “One can be progressive while also espousing traditional educational goals and calling for the highest standards of work, achievement, and behavior” (p. 23).

John Dewey began his philosophical journey as a metaphysical idealist, but transformed this philosophical bend toward pragmatic naturalism during the late 1800s. While serving as Department Chair of Philosophy, Psychology, and Pedagogy at the University of Chicago, he worked with Jane Adams at Hull House, “...experiencing

firsthand the dehumanizing effects that America's transformation into an industrialized and urbanized oligarchy produced" (Reed & Johnson, 2000, p. 89). From his work in Chicago, he emerged, along with William James and Charles Pierce, as a founder of the distinctively American type of philosophy known as pragmatism.

Dewey insisted that the child's experience must form the basis of the curriculum. However, he also insisted that educational activity required careful pedagogical guidance, something that later progressive educators would forget (Pinar, et al., 1995). Dewey saw an experience as educative only if it produced growth. He expressed that any subject "is intellectual in the degree in which *with any given person* it succeeds in effecting this growth" (Dewey, 1910, p. 45). Students should leave the experience more capable and more interested in engaging in new experiences. From prior experiences as well as natural capacities, students learn to think and thus build knowledge to take into new experiences. Dewey (1910) pointed out that "Training, in short, must fall back upon the prior and independent existence of natural powers; it is concerned with their proper direction, not with creating them" (p. 29).

In his seminal article "The Reflex Arc Concept in Psychology" written in 1896, Dewey argued for a different view of knowledge. The world is not passively perceived and thereby known; active manipulation of the environment is involved in the process of learning from the start (Field, R, The Internet Encyclopedia of Philosophy, 2001). Thus, experience means more than merely sensation, observation, or passive looking. It is hands-on contact with and manipulation of actual conditions, as well as reflection and imagination and feelings about things (Ziniewicz, 1999). Dewey (1910) reminded

teachers that irresponsiveness to school subjects should not lead one to assume stupidity or dullness in a student.

The pupil labeled hopeless may react in quick and lively fashion when the thing-in-hand seems to him worthwhile, as some out-of-school sport or social affair. Indeed, the school subject might move him, were it set in a different context and treated by a different method. (Dewey, 1910, p. 35)

Dewey (1938) makes clear the importance of experience being meaningful in the following excerpt:

In a certain sense every experience should do something to prepare a person for later experiences of a deeper and more expansive quality. That is the very meaning of growth, continuity, reconstruction of experience. But it is a mistake to suppose that the mere acquisition of a certain amount of arithmetic, geography, history, etc., which is taught and studied because it may be useful at some time in the future, has this effect, and it is a mistake to suppose that acquisition of skills in reading and figuring will automatically constitute preparation for their right and effective use under conditions very unlike those in which they were acquired. (p. 47)

Reflections from The Dewey School (Mayhew & Edwards, 1936) describe activities where students learned from their experiences or activities. Mathematics was learned in carpentry class, physics and chemistry in cooking class, and reading sprang from first telling stories and acting them out. Here we see spatial, bodily/kinesthetic, and interpersonal intelligences in action. Yet, we see that some of the same issues facing

education in the early years of the twenty-first century were also facing educators in the early years of the twentieth century.

Too often these methods take for granted that there is a short cut to learning, and that knowledge apart from its use has meaning for the developing mind. The memorization of such knowledge has come to be a large part of present-day education, with the result that great masses of young lives have been denied the thrill of experiential living, of finding the way for themselves, of discovery, of invention, of creation. (Mayhew & Edwards, 1936, p. 21)

Ziniewicz (1999) states that according to Dewey, intelligence results from the habitual give and take of working things out in our own mind and with our human and natural environment. Intelligence is practical; it is an instrument for making things better, where better means conditions more unified and harmonious. It draws from experience and the fund of what is known to provide guidelines for resolving things here and now in the light of what is hoped for in the future. In order to draw from experience, Gardner (1991) suggests the use of apprenticeships to enhance the learning experience.

Dewey also recognized the validity of individual differences in students. Special education is built on the Individualized Educational Plan (IEP) developed for each student. Gardner (1991) recognizes that students should be given multiple entry points for approaching the teaching of new concepts. In his work, *How We Think*, Dewey (1910) states:

It is profitable to study the lives of men and women who achieve in adult life fine things in their respective callings, but who were called dull in their school days. Sometimes the early wrong judgment was due mainly to the

fact that the direction in which the child showed his [sic] ability was not one recognized by the good old standards in use, as in the case of Darwin's interest in beetles, snakes, and frogs. Sometimes it was due to the fact that the child dwelling habitually on a deeper plane of reflection than other students—or than his [sic] teachers—did not show to advantage when prompt answers of the usual sort were expected. Sometimes it was due to the fact that the pupil's natural mode of approach clashed habitually with that of the text or the teacher, and the method of the latter was assumed as the absolute basis of estimate. (Dewey, 1910, p. 38)

While Dewey's developmental theme of progressive education emerged in the 1920s, another movement was afloat. The scientific movement of Edward Thorndike was also seen as part of the Progressive Movement in education at that time. Dewey and Thorndike's ideas vied for dominance in special education classrooms of that day, as well as general education. In contrast to Dewey with his developmental approach to psychology stood Thorndike with his enormous emphasis on practice in the three R's and insistence on measurement in all aspects of education, supported by the importance assigned to IQ tests. After a period of excitement and experimentation with Dewey's ideas, Thorndike's ideas became more influential. Quantitative studies about the three R's dominated special education classrooms. Influenced by the scientific genre, teachers questioned the incidental learning of the Dewey-influenced activity method. By the 1930s, drill had become the watchword of special education (Winzer, 1993). To some extent, this idea of drill and practice remains in the special education classroom of today. Fueled by the idea of remediation meaning more of the same, only louder and longer,

many special education classrooms maintain a “purple ditto” mentality of work packets and folders. Yet, these are students who have been placed due to their inability to be successful with paper and pencil-type activities.

I certainly can see where Howard Gardner might have been influenced by Dewey’s thoughts on intelligence. Dewey saw intelligence as practical, as an instrument for making things better, where better means conditions more unified and harmonious. He felt that it draws from experience and the fund of what is known to provide guidelines for resolving things here and now in the light of what is hoped for in the future. Gardner defined intelligence as “the ability to solve problems or to create products that are valued within one or more cultural settings” (Gardner, 1999, p. 33). Where Dewey considered the process of intelligence used in creative artist work the same process used in any creative human activity, Gardner defines Visual-Spatial as one of his eight intelligences.

Gardner (1991) writes of moving toward an education for understanding. He has stated that the model has been there for us before, in the progressive movement begun by John Dewey.

Indeed, it is in the most fully articulated models of progressive education that I find clues toward the construction of an educational environment in which genuine understandings can become a reality. The model is there in the writings of John Dewey and in the practices of Francis Parker and other visionaries of a century ago. It can still be observed at work in many schools today. We now believe that such as education is more difficult to achieve than the optimists of the progressive era may have thought. At the same time

we may have available additional tools for approaching this still-alluring educational vision. (Gardner, 1991, p. 199)

Gardner does not deny that there are limitations to the progressive movement in education.

Put another way, progressive education works best with children who come from richly endowed homes, whose parents are deeply interested in their children's education and who arrive at school with motivation and curiosity.....Progressive education ought to be fused with an approach that can offer more nuanced kinds of help and support to students who are not independent-minded, to students who lack self-discipline, and to students who exhibit distinct learning disabilities as well as students who have unusual strengths. (Gardner, 1991, p. 197)

Dewey (1938) also expressed that what has been called "progressive" education presents its own set of problems. He expressed that the fundamental principles of the new education of this day were sound, but that "everything depends on the interpretation given them as they are put into practice" (p. 20). Further, Dewey warns us that "[T]here is always the danger in a new movement that in rejecting the aims and methods of that which it would supplant, it may develop its principles negatively rather than positively and constructively" (p.20). Just as Dewey's vision for a more progressive type of education was misinterpreted by some, we must be diligent in our quest for true educational reform in the present day.

I think it behooves us all to rethink the ideas of John Dewey. His vision for students who could think critically is one that we still hold fast. The idea of learning

through experience, and making knowledge meaningful seems to be making a comeback in some educational circles. Maybe, as Gardner says, we now have the tools we need to make it a reality.

Multiple Intelligences and Curriculum Planning

The problem facing all curriculum planners is how to meet the needs of diverse populations within a classroom, and still cover the material that is recognized as important for that particular age and/or grade level. As the time draws closer for that all important test that will determine if this teacher has done her job, it becomes more important to cover the objectives than to meet unique learning needs within the classroom. Somehow, we must find a way to see our students as individuals, and to honor the unique capabilities each brings to our classrooms. Looking at the possibility of multiple intelligences may offer one way to do this.

Gardner (1995) has indicated that he was unprepared for the large and mostly positive response to his theory among educators. In several articles, Gardner has given interviews where he has addressed the issues of applying his theory to educational curriculum. When asked in an interview for *NEA Today* (March, 1999) how educators might use his theory, Gardner replied that multiple intelligences could be extremely helpful in education that goes deeply into topics so that students can really make use of knowledge in new situations. He states that it is impossible to delve into a topic and make use of different domains if a teacher is forced to spend only five minutes on it before moving to something else.

When asked to describe the difference between a classroom that focuses on understanding—a constructivist classroom—and a behaviorist classroom, Gardner answered:

In a classroom that focuses on understanding, teachers are clear about the understanding that they value and the understanding that they want students to exhibit. In general, these understandings focus on the important topics and reveal disciplinary ways of thinking....

Some people use the word behaviorist to describe a regimen based on rewards and punishments. I'm not one of those individuals who avoid rewards or punishments in all cases; but grounding one's teaching in such "schedules of reinforcement" can't work in the long run. Students (and ex-students) must come to learn because they have the desire to learn, not because someone is giving them an A or an M&M. (Schrer, 1999, p. 12)

Using Multiple Intelligences in the classroom does not mean teaching each subject in seven or eight different ways. Even Gardner insists that it is a waste of time to simply "exercise the intelligence muscles" (Collins, 1998, p. 95). The key for Gardner is first to decide on the facts and procedures a teacher wants a student to understand, and then figure out how best to present this information, given student's strengths and weaknesses. There is no single MI route. "...(I)t's very important that a teacher take individual differences among kids very seriously. You cannot be a good MI teacher if you don't know each child and try to gear how you teach and how you evaluate to that

particular child. The bottom line is a deep interest in children and how their minds are different from one another, and in helping them use their minds well” (Checkly, 1997, p. 9).

The research indicates not only that students should be given options for expression, but also students should be given instruction based on their strengths. In a case study conducted by Beltzman (1994) involving learning disabled secondary students, it was concluded that Gardner’s theory of multiple intelligence should be used to identify the strengths of students in order to optimize their success. It was also recommended that educators build their instruction around the strengths of students.

Armstrong (2002), in an e-mail to the researcher, stated that David Nylund, a licensed clinical social worker at Kaiser Permanente in Stockton, California, has used narrative therapy to help students deconstruct their labels. Nylund’s therapy (Jacobs, 2001) involves a five-step process that helps children identify their strengths rather than deficits. This process, called the SMART approach, helps the child learn to separate his/herself from the problem and become instrumental in making needed changes. The process also includes helping children learn to celebrate talents and meet challenges. Children, parents, and teachers are all involved in the process.

Dobbs (2001) examined student academic achievement and its relationship with multiple intelligences theory. She conducted a three-year study with 45 randomly selected students at a seventh grade at-risk alternative school. Dobbs used a literacy/MI theory based curriculum, which tailored instruction to build on student strengths through the use of Gardner’s theory. Her findings indicated a significant relationship in the areas

of math, reading and writing between the implementation of multiple intelligences theory and student academic performance.

In discussing curriculum planning, Eisner (2000) states that one of the least-considered options deals with the modalities through which students encounter and express what they learn. Further, Eisner believes that educational programs that aim to help children gain an understanding of the world need to recognize that understanding is secured and experienced in different ways. In the spirit of Gardner's theory, Eisner states that humans employ different knowledge systems to acquire, store, and retrieve understanding, and they use different performance systems to express what they know about the world. He then points out that curriculum planners must take into account the need for having forms that express ideas presented in a variety of ways. Also, if teachers are to understand what students know about these ideas, then students should be given options in the ways in which they express what they know.

Maxine Greene (1995) states that curriculum must begin to pursue the passion of pluralism. This should include "the kinds of contexts that nurture—for all children—the sense of worthiness and agency" (p. 41). She further states that students who are labeled in some way are forced to become "recipients of 'treatment' or 'training,' sometimes from the most benevolent motives on the part of those hoping to 'help'" (p.41.). However, this removes from these students the possibilities of imaging, choosing or acting from "their own vantage points on perceived possibility" (p.41).

An example of MI theory in practice is the "brain flex" program at an Australian high school. This program consists of two or three independent learning projects to be completed by students. Students, assisted by teachers or adult mentors, are required to

compose the rationale and goals for each project, evaluate their progress, and summarize their learning. Mentors encourage students to incorporate several of Gardner's eight intelligences in this project (Henderson & Hawthorne, 2000).

Diamond and Hopson (1998) refer to Gardner's description of a school curriculum based heavily on apprenticeships and practical, hands-on training for youngsters. They point out that a student-participation program based on apprenticeships has been employed by societies all over the world since antiquity. They also give many examples of activities in which children can engage to address the intelligences identified by Gardner. Some of these include climbing on safe jungle gyms, practicing origami, or building models to address spatial intelligence. Music education in elementary schools is crucial, according to these authors. "A child's musical intelligence quotient may be naturally average or low, but experience with music—as long as it is stimulating and fun—can help open the door to future music appreciation" (p. 207). Participation in organized sports is also an avenue to which children should be exposed. However, as sports psychologist Chuck Hogan (1996) writes "We need to create ways for children to discover play for the joy of play, to enter into it freely and play the game so that the playing is winning" (p. 34). Teachers who set up school projects that require children to cooperate, plan together, and teach each other help students to explore and develop their interpersonal skills. Diamond and Hopson believe that parents are central to a child's intrapersonal development. The naturalist intelligence can be fostered, even in urban children, through activities such as field trips, vacations, camping, gardening, hiking, tidepooling, birdwatching, reading natural history books, and watching the occasional nature film.

Another way to incorporate teaching using Multiple Intelligences Theory is to offer different entry points. “When you’re teaching, you can approach a topic in many ways. You can provide analogies and metaphors for different domains. And you can present key ideas in a number of different languages or symbol systems” (All Kinds of Smarts, 1999, p. 42). In educational curriculum, this means going beyond the short-answer tests mentality that presently dominates our schools. Greene (1995) laments that “...it must be wrong to neglect those potentials ordinary curricula do not permit us to heed, potentials that do not contribute to the growth of technology or do not result in easily measurable achievements” (p. 179).

With performance goals for general and special education moving toward more participation in the general curriculum for students labeled as mildly disabled, curriculum planners as well as general education and special education teachers need to begin to explore curriculum considerations in inclusive classrooms. The focus must shift from problems within students to how classroom work is designed. This means that the relationship between students who have been labeled as mildly disabled and the curriculum will require a reconceptualization. If the curriculum is considered the problem, the challenge then becomes to rethink what the student is asked to do and whether it is appropriate given the students’ unique learning and behavioral characteristics. From this, the goal then becomes one of planning learning environments that result in the highest learning achievement for the most students possible (Warger & Pugach, 1996).

In traditional, noninclusive programs, when a student is not achieving the curriculum goals, the tendency is to look at the deficit behavior or learning characteristic

as the only source of the problem. To improve inclusive programs so they support student success, the focus can be shifted to the curriculum and how it is delivered in the classroom as the source of the problem. By targeting curriculum rather than student deficits as the beginning point for discussions between general and special educators, there is a much better chance of breaking down barriers to student success, whose origins more often than not can be traced to rigid ideas of curriculum in the first place (Warger & Pugach, 1996).

The ideas of Gardner strike a chord in the minds and experiences of special educators. Keenan Waller (1999), in reviewing Gardner's book *The Disciplined Mind* (1999) states, "While this latest work was not created to specifically address issues in Special education, anyone who has worked with children with special needs will find themselves nodding their heads in agreement with most anything Howard Gardner has to say". Gibson and Govendo (1999) state that "(A)n awareness of multiple intelligences can help teachers to use more effective supports and interventions for students having difficulty with their schoolwork or with their behavior" (p. 20).

Other authors have recounted specific instances of success with special education students when a curriculum incorporating Multiple Intelligences was used. Campbell and Campbell (1999) tell about the program at Mountainlake Terrace High School in Mountainlake Terrace, Washington. This school began its school wide initiative of using Multiple Intelligences in 1989-1990 school term. This initiative was funded by a Schools for the 21st Century Grant.

One of the teachers there, Kate Cleavail, teaches special education students. Inspired by MI implications for all students, she redesigned her science course to include

a yearlong project and to integrate her students' individualized educational plans (IEPs). To successfully complete the project, entitled *Biology Through Caretaking*, students must, in addition to other requirements, be responsible for the care and well-being of a plant or animal. This project teaches research skills and essential science concepts such as change, cause and effect, structure and function, systems and interaction, and variation and diversity. It integrates several of the school's graduation competencies and requires that students put their knowledge into real-world application.

Cleavail admits that creating such projects requires much thought and preparation on a teacher's part. However, she has witnessed significant academic and motivational results from her efforts. She describes just one of her success stories:

There was a student who skipped his probation meetings, didn't go home, didn't go to other classes, but never missed science. His mom would call to ask if we had seen him, and we had, because he attended science every day to take care of his bird: a zebra finch. MI has tremendous application in special education, even though it hasn't been discussed much. (Campbell & Campbell, 1999, p. 70-71)

Although Mountainlake School saw increases in state normed tests as well as SAT scores over the ten years of MI instruction, support for the program has dwindled. Partially, this is due to staff turn-over, but other issues affecting the use of MI as an instructional strategy are scheduling, state-mandated testing, and standards. Still, over 50% of the staff were still using MI in their instruction (Campbell & Campbell, 1999).

Another school mentioned in Campbell and Campbell (1999) is Lincoln High School in Stockton, California. The use of multiple intelligences strategies began in this

school in the early 1990s after the school had investigated the theory in preparation for applying for the California's Plan-to-Plan grant. However, in 1991, Lincoln did not receive the implementation grant that was to follow the Plan-to-Plan grant. Therefore, implementation came about as individual teachers, or interdisciplinary teams began to alter instruction in individual classrooms.

Through incorporating Multiple Intelligences Theory into their curriculum, Lincoln has designed a program known as Integrated Studies. These are block-scheduled team-taught classes that blend two or three disciplines thematically. In integrated studies courses, students typically conduct long-term research inquiries. All such courses are considered college preparatory and include students of all ability levels, from special education students to gifted students (Campbell & Campbell, 1999).

Although no longitudinal data was available when Campbell and Campbell wrote their book in 1999, baseline data from the 1997-98 Stanford Test of Academic Skills showed that Lincoln's scores were not markedly better than other schools in the state, but were slightly better. In their county, however, Lincoln was the highest scoring school in most subjects. In the California Department of Education High School Performance Report for the 1996-97 school year, Lincoln ranked first in their district and second in their county in graduation rate. The state graduation rate was 87%, while Lincoln's stood at 97% (Campbell & Campbell, 1999).

The implications for Multiple Intelligences Theory in a curriculum that includes special education students might best be summed up in the Lincoln High School's mission and core beliefs statement that "Students and teachers have multiple

intelligences. Helping students to learn in a variety of ways is part of the belief system and culture at Lincoln High School” (Campbell & Campbell, 1999, p. 78).

Criticism of Multiple Intelligences Theory

Although the focus of my study is on strengths, I am certainly aware that Gardner’s theory has not been void of criticism. According to James Collins, (1998), some of the strongest doubts about Gardner’s evidence were expressed by Gardner himself in *Frames of Mind* (1983). Collins quoted Gardner as writing, “The most I can hope to accomplish here is to provide a feeling for each specific intelligence. I am painfully aware that a convincing case for each candidate intelligence remains the task of other days and other volumes” (p. 94) Gardner also warned that his work needed to be amply tested and discussed in the fields of biology and cognitive science before it was put into practice. Collins claims that this testing and discussion has not been forthcoming from Gardner.

Collins also states that many neurologists and psychologists believe that recent discoveries in brain science are far too poorly understood to guide educators. Meanwhile, students of cognition cite research that contradicts Gardner’s theory. Some of Gardner’s intelligences do not seem to be independent faculties, while other intelligences divide up into more than one faculty.

In an example given of Multiple Intelligences Theory in practice, a teacher had a student make a model of a boat in a study on European settlement of the Americas rather than write a report. Collins questions whether this activity was more valuable to the student than working on weak written language skills. He also indicates that Gardner

speaks in generalities when discussing the use of his theory in the classroom and does not offer clear guidance on how he would use the different intelligences in practice.

Mary Eberstadt (1999) names several critics of Gardner's theory. She quotes Gardner as summarizing the reception of his book *Frames of Mind* as "a few psychologists liked the theory, a somewhat larger number did not like it; most ignored it" (p. 6). Eberstadt further reported that in the *New York Times Book Review*, psychologist Jerome Bruner praised the book for its timeliness, but went on to conclude that Gardner's "intelligences" were "at best useful fiction" (p. 6).

She further cites Charlie Murray and Richard J. Herrnstein, authors of *The Bell Curve* (1994) as dismissing Gardner as "radical" and his work as "uniquely devoid of psychometric or other quantitative evidence." Another critic, Robert J. Sternberg of Yale stated that "there is not even one empirical test of the theory." Australian specialist Michael Anderson complained similarly that "the scaffolding is the theory" (p. 6).

Eberstadt goes on in her article to question Gardner's theory herself. She states that the multiple intelligences, the four approaches to understanding, and the seven entry points that Gardner relates are too cumbersome for teachers to decipher. She further states that what all this means for the classroom is anybody's guess. She also indicates that many of Gardner's ideas are not revolutionary or new, but have been addressed by others before him. She even believes that some of the tenets of Gardner have their intellectual genealogy provided by one of his nemesis, E.D. Hirsh. Her final criticism is that Gardner's theory seems to be focused at the elite, especially private schools.

Others have criticized Gardner's solution to education's problems of producing students who learn to think and act like disciplinary experts. This thinking represented a

shift from thinking of thinking in general terms to thinking of thinking in domain-specific terms. Some saw this as fitting into the old authoritarian, hierarchical capitalism where the expertise of the specialist was highly valued. Others saw this as fitting well with the emphasis on creating workers who are flexible, efficient, innovative, self-controlled, and collaborative. With this emphasis on discipline-based knowledge, understanding has less to do with critique than with problem solving, and ethical issues of the relationship between knowledge and power are not easily addressed. The emphasis becomes adaptation, flexibility, speed, and innovation rather than how to challenge the substantive injustices in a society still steeped with deep inequalities (Gee, Hull, & Lankshear, 1996; Giroux, 1999).

Now I must confront my own concerns about Gardner's theory and how it can become appropriate for students in special education. By including "multiple entry points" (Gardner, 1991, 1999), teachers will begin to incorporate many different types of information in introducing a concept or lesson. These might include works of art, music, dance, as well as literature. Many students placed in special education have had limited exposure to many of these forms of the arts. It then becomes questionable as to whether the teacher or the curriculum will drive the appreciation sought for from these students. Greene (1995) implores teachers to integrate art and aesthetic education into the pedagogy in such a way that it becomes "an education for a more informed and imaginative awareness, but it should also be education in the kinds of critical transactions that empowers students to resist both elitism and objectivism, that allow them to read and to name, to write and rewrite their own lived worlds" (p. 147). I believe that the arts can be incorporated to include diversity and multicultural representation, and to encourage

students to tap into their own proclivities in these areas to begin to have a voice in their educational experience.

With the passage of *No Child Left Behind* (2001), the idea of “highly qualified teacher” has come to the forefront. For special education, the debate has become whether to be highly qualified, a teacher would have to be certified in all content areas for which she/he provides instruction as well as special education. This would put a burden on current teachers of special education, not to mention teacher preparation programs for our field. By adding the dimension of instruction in multiple ways through multiple entry points, I wonder what time frame would be involved to change teacher preparation programs to address these issues. Certainly, professional development programs would need to be implemented to educate teachers in the field on the methods appropriate for such a program. Up to this point, it appears that books addressing this theory are either too theoretical or too “model” driven. The concern thus becomes how does this theory translate into classroom practice for special education?

Another concern I have in incorporating multiple intelligences into special education is providing another avenue for labeling or pigeonholing students. Currently special education is struggling with overrepresentation of minority students in certain categories. Could multiple intelligences just become another avenue for saying that these students all seem to display strengths in bodily-kinesthetic intelligence or musical intelligence, and thus should set their sights on becoming professional athletes or entertainers? I should hope not. I hear Gardner and others saying that the point should be that all forms of intelligence should be present in our classrooms, allowing all students to find avenues from their strengths, but also to provide opportunities for growth in areas

which are not as strong. This would be my hope for a curriculum incorporating this theory for use in inclusive classrooms for students of all ability levels with diverse strengths.

Summary

The literature reviewed in this chapter has explored how the categories of mildly intellectually disabled and learning disabled are defined in the state of Georgia. The definition of least restrictive environment was discussed, and was found to be ambiguous in interpretation. However, the language of the *No Child Left Behind Act* (2001) indicates that the push will be for more inclusion of special education students in the general education curriculum.

The idea of intelligence was traced, and difficulties with the IQ tests used in determining placement in special education were explored. Gardner's (1983, 1999) question was if intelligence is indeed, singular, or if there are various, relatively independent intellectual facilities.

This question was a central idea in Gardner's development in the Theory of Multiple Intelligences (1983, 1999). This theory was discussed and defined. The theory was then aligned with many of the curriculum ideas of John Dewey. The use of Multiple Intelligences within curriculum planning in several settings was also discussed.

The final section of this chapter dealt with criticisms of Gardner's theory. Even with the criticism, I find hope in the reports of success with students who have struggled in a conventional learning environment when an approach addressing multiple intelligences is used. I see this as a stepping stone into the possibilities awaiting us as we

include more diversity and learn together in multiple ways. As Maxine Greene (1995) so eloquently states:

The community many of us hope for now is not to be identified with conformity...it is a community attentive to difference, open to the idea of plurality. That which is life-affirming in diversity must be discovered and rediscovered, as what is held in common becomes always more many-faceted, open and inclusive, and drawn to untapped possibility. (p. 167)

If we are to reach the lofty goals set before us in education, then we must work as a community. We must begin to see the needs of all students and begin to honor the differences that each one brings into our classrooms. Multiple entry points to learning is one possible way to begin this quest.

CHAPTER III

METHODOLOGY

Theoretical Framework

As I began this inquiry, I struggled to search for the appropriate theoretical framework for it. I began to engage myself in an exploration of Howard Gardner's Theory of Multiple Intelligences and its implications for special education. I have taught so many students who were very bright in many ways, just not the ways in which society defines intelligence. As their teacher, I felt frustrated at not being able to have others see these students the same way I saw them. This frustration has led me to an inquiry in which I will attempt to tell the stories of other students in another teacher's classroom and examine the impact of Gardner's theory on that teacher's perceptions of her students. When I began to read Gardner's work and recall students from my past, I gained new insight into the strengths of my students. I began to look at them differently as I considered alternate ways to define intelligence. My desire was to explore the students of another teacher to see whether she has had similar experiences.

There were three strands for the theoretical framework of my inquiry: (1) John Dewey's (1910) theory of education, specifically transformative thinking, and Maxine Greene's (1995) theory of releasing the imagination; (2) phenomenology (researching the lived experiences of students labeled disabled and their teacher) and hermeneutics (interpreting the experiences of these students and the strengths they exhibit); and (3) narrative inquiry (telling the stories of a special education teacher and her students). Theoretically, this study was more grounded in Dewey and Greene, while

methodologically, it was more grounded in Van Manen's (1990) phenomenological hermeneutics and Clandinin and Connelly's (2000) narrative inquiry.

Dewey and Greene

According to John Dewey (1910), one cannot be taught how to think, only how to think well. Dewey also compares teaching and learning to selling and buying. "One might as well say he has sold when no one has bought as to say that he has taught when no one has learned" (p. 29). Although the method of standardized testing is questionable as far as determining what has been learned, the numbers beg the question of students who are labeled as deficit and how much teaching has happened in their educational lives. Dewey points out that "in the educational transaction, the initiative lies with the learner even more than in commerce it lies with the buyer" (p.29). However, he also states that "Thinking is specific, in that different things suggest their own appropriate meanings, tell their own unique stories, and in that they do this in very different ways with different people" (p. 39). If instruction is not diversified to meet the differences of these students, then how much of the responsibility can be held by these students? The challenge, thus, is to provide opportunities for these diverse learners to demonstrate their strengths and interests. When these students are allowed to experience success in some way, and this success is acknowledged by teachers and classmates, they can begin to experience success and feel valued. It then becomes easier for them to take the risks involved in engaging in areas where they feel less comfortable. It then becomes possible to create a true community of learners from which all can benefit. (Chen & Gardner, 1997).

Maxine Greene (1995) calls for educators to embrace a theory that releases the imagination “to some naming, some sense-making that brings us together in community” (p. 3). She explains that often teachers have been inattentive to “hidden silences in students” (p. 108). She also asserts that “Many of the alienated or marginalized are made to feel distrustful of their own voices, their own way of making sense, yet they are not provided the alternatives that allow them to tell their stories or shape their narratives or ground new learning in what they already know” (p. 110).

Many of these students are made to feel marginalized by the tiers of hierarchy produced by performance on standardized testing. These tests set up a standard that maintains an insidious belief that some people are better than others based on the performance on these tests. Miller (1993) states that this approach has little to offer unless we maintain a belief in deficit and failure. “Without its pessimistic underpinnings, it is revealed as a means to maintain the status quo: Those with power control the lives of those without” (p. 68). She calls for a new narrative grounded in an ethical approach to humans rather than one grounded in science. “Science and technology, though they have produced astounding effects on our lives, fail to serve us in our most human endeavor – our relationships with others, our feelings and emotions, our unique patterns of motivation and curiosity, and, perhaps most important, our attempts to teach our children with dignity and generosity” (p. 68-69).

So, how does this all fit into a methodology for exploring multiple intelligences and special education? If, indeed, students who are labeled as mildly disabled do tend to display strengths in areas, or intelligences, that are not addressed in our current way of presenting curriculum, does it not beseech us to explore the possibility of including

“multiple entry points’ (Gardner, 1991, 1999) in our instruction? Some may argue that including art, music, drama, movement, and reflection in instruction is “fluff” which takes away time from the “basic skills instruction” that students need. Beyond that, these will not be covered on that all important test that will determine the adequate yearly progress that will be used to determine effectiveness in our schools.

Dewey (1910) would argue that “any subject, from Greek to cooking, and from drawing to mathematics, is intellectual, if intellectual at all, not in its fixed inner structure, but in its function—in its power to start and direct significant inquiry and reflection” (p.39). Further, Dewey argues that any subject can be viewed as intellectual “in the degree in which *with any given person* it succeeds in effecting growth” (p.45). Being able to lead students into inquiry through multiple and diverse means certainly could result in growth by many students on the fringes now due to their methods of learning and thinking not being included in the instructional practices of their classrooms.

Greene (1995) further questions the neglect in ordinary curricula of potential modes of knowing addressed through Gardner’s theory. “I have in mind the craft and ‘artistry’ required to become say, an opera singer; the interactions between motor and perceptual activity and the making of shapes in space and time that identify a dancer’s ‘literacy’; the thinking that guides the hands of cabinetmakers and motorcycle mechanics and machinists; people who can relate themselves to wood, metal parts, and the interiors of complex machines” (p. 179). Another obstacle faced by special education today is the move toward more literacy and technology involved in vocational education. Many students who might succeed in the hands-on laboratory activities often fail at the required “book work” that must be passed before moving to the lab experiences.

The relationship between imagination and thinking has been explored on several fronts. The imagination used in drama creates imaginary worlds and the perspectives afforded by these worlds are the bases for learning and thinking through drama (Henry, 2000). Peisach and Hardeman (2001) found significantly significant relationships between imaginative play and logical thinking primarily among 5- and 6-year olds. According to Russ (2003), central to both play and creativity is divergent thinking. Both cognitive and affective processes in play have been related to divergent thinking in children. By including the multiple entry points of spatial and bodily-kinesthetic activities, children who have struggled in thinking through problems in the past can be afforded an avenue for developing these thinking skills.

The theoretical framework of this inquiry can, I feel, be traced to these two curriculum theorists. However, if I had the opportunity to speak to John Dewey and Maxine Greene, they both might indicate concerns over Gardner's theory. Certainly, the idea of elitism would be a concern for both of these theorists, as well as the possibility of placing students into "boxes." Unquestionably, neither of these theorists would see the learning experience as something that can fit into a neat package or box. However, they both would seem open to the idea of expanding the possibilities of experiences offered to students to explore new material and relate that material to past experiences from school as well as their lived experiences.

Phenomenology

Certainly, in order to tell one's story, a researcher must depend on the lived experiences of the participant(s). According to Husserl [(1913), 1931], "The World is the totality of objects that can be known through experience, known in terms of orderly

theoretical thought on the basis of direct present experience” (p. 52). Phenomenology focuses on “human perception and experience, particularly on what many would characterize as the aesthetic qualities of human experience”. However, this type of inquiry is rigorous and disciplined, and seeks to understand experience “profoundly and authentically” (Pinar et al, 1995, p. 405).

My understanding of phenomenology comes from the writings of Max van Manen whose work stems from such names as Hegel (e.g. *Phenomenology of the Spirit*, 1977), Husserl (e.g. *The Crisis of European Sciences and Transcendental Phenomenology*, 1970), Heidegger (e.g. *Being and Time*, 1962), and Merleau-Ponty (e.g. *Phenomenology of Perception*, 1962). Max van Manen (1990) gives several characteristics of phenomenological inquiry. These include: (1) Phenomenological research is the study of lived experience; (2) Phenomenological research is the explication of phenomena as they present themselves to consciousness; (3) Phenomenological research is the study of essences; (4) Phenomenological research is the description of the experiential meanings we live as we live them; (5) Phenomenological research is the human scientific study of phenomena; (6) Phenomenological research is the attentive practice of thoughtfulness; (7) Phenomenological research is a search for what it means to be human; and (8) Phenomenological research is a poetizing activity (p. 9-13).

Further, phenomenological inquiry is “interpretive inquiry which focuses on human perceptions, particularly on the aesthetic qualities of human experience” (Willis, 1991, p. 173). Phenomenological inquiry “is about the course of primary human

consciousness in individual lives” (Willis, 1991, p. 175). This sort of inquiry is compared with “peeling an onion” (p. 177):

its only totally successful practitioners — those who have actually peeled the onion without tears — have been artists, writers, storytellers, or other people who have perceived something real, or true, or valuable about their own or others’ life-worlds and who have exemplified their perceptions well in a creative medium which has permitted other individuals to experience them in their own ways. (p. 178)

In order to tell the stories of another teacher and her student, I had to become a part of their experiences. I spent time with them in their classroom and saw exactly how this teacher and these students interacted. I needed to understand how different students went about the task of solving problems presented to them in their day-to-day school experiences. I had to peel the onion of experiences in this particular classroom at this particular time with these particular students and teacher. But now, as an administrator in charge of programming for special needs students, I must examine how this study has changed me. How have I grown as a special educator, as an administrator, and as a person by beginning to interpret intelligence in this new way? How has this impacted the way I will plan programming for my county, as well as how I will relate to all students who struggle within the confines of the general education classroom? How will I help the teachers under my supervision reach these students by encouraging their strengths rather than “remediating” their weaknesses?

Hermeneutics

Hermeneutics is the theory and practice of interpretation. According to Ricoeur [(1969) 1974], “the first achievement of modern hermeneutics was to posit as a rule that one proceed from the whole to the part and the details...as the relationship between an internal form and an external form” (p. 64). This becomes necessary when there is a possibility for misunderstanding (Van Manen, 1990). It seems to me that special education offers an open door to misunderstanding. Many would argue that the categories and labels of this field are socially constructed (Miller, 1993). However, further interpretation that leads to a different set of labels would not provide an answer to the woes of this field. Therefore, as a researcher, I had to be diligent to interpret experiences as I saw them but not judge or categorize indiscriminately.

When taken together, hermeneutic phenomenology tries to be attentive to both terms of its methodology:

[I]t is a *descriptive* (phenomenological) methodology because it wants to be attentive to how things appear, it wants to let things speak for themselves; it is an *interpretive* (hermeneutic) methodology because it claims that there are no such things as uninterpreted phenomena. The implied contradiction may be resolved if one acknowledges that the (phenomenological) “facts” of lived experience are always already meaningfully (hermeneutically) experienced. (Van Manen, 1990, p. 180-181)

It was my responsibility as a researcher to take the facts of the lived experiences of this classroom and meaningfully interpret them into stories of strengths and

achievements by students who are more often known for their failures. This interpretation came from my recollections of students from my past teaching experience, as well as the literature presented on the theory that intelligence can encompass many things. As an administrator, I also needed to interpret these experiences in the light of new regulations in compliance review procedures, as well as implications for special education from the *No Child Left Behind Act* (2001).

Narrative Inquiry

Narrative inquiry has been defined as a way of understanding experience.

Clandinin and Connelly (2000) expand this definition further:

It is a collaboration between researcher and participants, over time, in a place or series of places, and in social interaction with milieus. An inquirer enters this matrix in the midst and progresses in this same spirit, concluding the inquiry still in the midst of living and telling, reliving and retelling, the stories of experiences that make up people's lives, both individual and social. (p. 20)

In order to truly delve into experience, one must learn to think narratively (Phillion & He, 2001). This type of thinking requires "seeing experience as fluid rather than as fixed, as contextualized rather than decontextualized" (p. 18). This type of inquiry presents an impression of ardent participation in the lives of those who are studied. It also indicates an ongoing experience, as Dewey envisioned. "Dewey held that one criterion of experience is *continuity*, namely the notion that experiences grow out of other experiences, and experiences lead to further experiences" (Clandinin & Connelly, 2000, p. 2).

According to Pugach (2001), special education has been slow to embrace the use of qualitative research in telling the stories of those labeled as disabled. These are the students who are often marginalized, and whose stories are often not heard. These are students whose stories lie in numbers, of IQ scores, of disaggregated test data, of failure. But, these are students who also have stories of strengths and abilities often overlooked, and these are the stories we need to tell. Greene (1995) states that helping diverse students “articulate their stories is not only to help them pursue the meaning of their lives—to find out *how* things are happening and to keep posing questions of the *why*” (p. 165). Yes, “it is often the stories that stay with us as the kernel of our commitments to action” (Pugach, 2001, p. 439).

And so, the three components must work together in order to complete the story of the research. The students in question must interpret the phenomena of the classroom experience. The experiences must be understood from the perspectives of those studied. As I observed and interviewed, I found that indeed, “life feeds into inquiry and inquiry feeds into life” (Phillion & He, 2001). It was through this feeding that the stories emerged and waited to be told.

Data Collection

Based on the theoretical framework of this inquiry, assorted qualitative methods of data collection were utilized. They included: a school portraiture; classroom observations; a reflective journal kept by the researcher; and unstructured interviews with the teacher, students, and parents.

This study recounted the stories of one teacher and her students who have been labeled as one of two categories indicating mild disabilities. The study took place in a 4th-

5th-grade center in a small town in the southeastern part of Georgia. Permission for student participation was granted by parents/guardians before any data was collected. Confidentiality was maintained throughout the study.

Research Site Introduction

The research was conducted at Elm View Elementary School in the Wetzel County, Georgia school system. This 4th-5th-grade center school had an enrollment of 617 students for the 2002-2003 school year: 305 fourth graders and 312 fifth graders. Ethnic enrollment figures show 28.8% of the student body as black, 65% as white, less than 4% as Hispanic, 0.6% as Asian, and 1.6% as multi-racial. Approximately 16% of the students received special education services. The special education program at Elm View was a resource based one serving mildly disabled students. Students with more severe disabilities were served at another school in the county. Categories of disabilities represented in the Elm View program included Specific Learning Disability (SLD), Mildly Intellectually Disabled (MIID), Emotional Behavior Disorder (EBD), Other Health Impaired (OHI), and Autism (AUT). Of the total school population, 60.86% participated in the Free/Reduced Lunch Program. Elm View has also been identified as a Schoolwide Title I Needs-Improvement School with recognized weaknesses in reading, language, and math (SACS Accreditation Report, 2003).

Introduction of Participants

Pseudonyms were used for all participants in order to maintain a level of confidentiality for special education students. **Ms. Jones** was a second year special education teacher at Elm View School. She taught interrelated resource classes for both fourth and fifth graders in all academic subject areas. Her classroom was colorfully

decorated and presented a pleasant atmosphere with soft music playing in the background, and a reading area which included beanbag chairs and pillows for sitting on the floor. Ms. Jones had a paraprofessional, **Ms. Fields**, who worked with her during the class times I observed. Input from both of these teachers was obtained.

The four student participants targeted for this study were members of two classes taught by Ms. Jones made up of students identified for special education services in several mild disability categories. One class focused on reading skills while the other focused on writing skills. These students were all classified as exhibiting either a mild intellectual disability or specific learning disability. Three of the students were female and one was male. One of the female students was white while all of the other students were African-American.

Tiffany, a small 10 year-old African-American girl, was a fourth grader during the time of the study. In first grade, she was labeled as mildly intellectually disabled and had received special education services since that time. Background information indicated that Tiffany's paternal grandmother is raising her due to the death of her mother. She came to the special education resource class for her language arts, reading, and math classes.

Veronica, a white fourth grader in Ms. Jones' class during the study, received special education services for a specific learning disability. She also was labeled during the first grade and was in the special education resource room for language arts, reading and math. However, **Veronica** was reevaluated during the school year of the study, and math was found to no longer be a deficit area. She had received several discipline

citations during the past two years that seemed to stem from frustration in the regular education classroom.

Daniel, the only boy in the group, was an 11 year-old African-American fifth grader. He was identified as learning disabled during the second grade. He came to the resource class for language arts and reading. He was initially tested in first grade, but did not meet the criteria for placement. In second grade, **Daniel** began to exhibit behavior problems that stemmed from his frustration in keeping up in the regular education classroom. Further testing was completed and he was found eligible for special education services.

Paige, an 11 year-old fifth grade African-American girl during the study, was labeled as mildly intellectually disabled during the second grade. She had been retained in kindergarten earlier. She received her reading, language arts and math instruction in the special education resource room. Teachers noted that **Paige** displayed frustration in the regular education classroom when she needed more explanation than her peers to be able to complete assigned tasks.

My relationship with these students was one of observer and helper within the classroom. Through my time spent in observing these classes, I was also an unobtrusive part of their learning experience by helping them with seatwork, reading to them or listening to them read. I did not want to be seen as another teacher authority, but did hope to gain a better understanding of them through some contact within the classroom setting.

Classroom Observations and Field Notes

Denzin and Lincoln (1998) point out that “the research task requires both the act of observation and the act of communicating the analysis of these observations to others”

(p. 42). Van Manen (1990) encourages the use of close observation. He defines this as “an attitude of assuming a relation that is as close as possible while retaining a hermeneutic alertness to situations that allows us to constantly step back and reflect on the meaning of those situations” (p. 69).

The classroom observations for this study took place in the classroom, as instruction was ongoing. The class was observed during the 2002-2003 school year. The observations lasted for the 45-minute period that the teacher was working with a class. Students were observed for how they went about solving problems presented in the class, and what types of strengths were displayed as they worked on these problems. The teacher was observed for how she related to different students within the classroom, and how well she picked up on individual strengths exhibited by her students. Field notes were gathered through observation of group instruction, as well as independent work of students. Notes were shared with the teacher for clarification in order to maintain descriptive validity. These notes were then used to generate categories, themes, and/or patterns that emerged through the observation process.

Reflective Journal

I kept a reflective journal during this dissertation process to record observations as well as memories during the study. The journal reflected on my observations of students in the class involved in the study as well as memories of students in my past experience as a special education teacher. Coming to an understanding of practice within a special education classroom does not necessarily result from exploring only problems or perceived critical events. Much can be learned from the day-to-day, mundane elements of the school experience (Cole & Knowles, 2000). The purpose of keeping this journal

would be a record of insights gained from the experience as well as a way of reflecting on previous reflections from my teaching experience. The use of reflection is a major component in grasping the essential meaning of an experience. Van Manen (1990) states that “[t]he insight into the essence of a phenomenon involves a process of reflectively appropriating, of clarifying, and of making explicit the structure of meaning of the lived experience” (p.77). Through the reflection of this journal, I was able to “grasp the pedagogical essence” (Van Manen, 1990, p.78) of this study and the classroom experiences involved. At the end of the study, these reflections were recorded and analyzed with field notes and interview transcripts to reveal possible similarities of students in the class involved in the study and those from my past.

Unstructured Interviews

The study included unstructured interviews with the teacher, students, and parents of the focused class. Also, as a part of the interview process, students in the class were asked to complete a sociogram indicating classmates who excel in certain areas. Parents were contacted by telephone to explain the study. A time was established to meet with them either at their home or at my office. The teacher and paraprofessional were interviewed in their classroom during a planning time of the school day.

I had a list of specific questions, but understood that the teacher, students, and parents were asked to share their perceptions of the students in the class as well as experiences from the school life and from the home life of these students. With that in mind, I was aware that more information than answers to questions could be given. Van Manen (1990) suggests the use of tape recorders in an interview situation such as this. He also suggests that questions about an experience should be very concrete in order to

stay close to that specific experience. Cole and Knowles (2000) also suggest the use of audiotaping. They state that “[R]eplay the conversation after the session is often like listening to it for the first time: it is amazing how much the human ear and brain can miss and how much memory can distort” (p.91).” All interviews were recorded on audiotape and these tapes were later transcribed for examination.

As a Special Education Director, I needed to establish a rapport with the teacher so that she felt comfortable in sharing her classroom experiences. This teacher may have perceived me as her “boss.” This relationship might have caused the teacher to be more reluctant to share than with a fellow teacher. Parents could have viewed me as an administrator who might make determinations on what services their child could receive. I needed to establish a relationship of inquirer into their child’s strengths rather than the keeper of the program in which their child participates. As an outsider to these students, I had to be aware that rapport needed to be established. I needed to have them see themselves as the experts on their lived experiences so that they would openly and willingly share with me. Cole and Knowles (2000) present the thoughts of a researcher who interviewed 2nd grade children. Her insights, I think, could apply to this study’s situation as well.

The children’s powerful first message helped to define my role in the research process. I must see myself as the learner who is eager for their “expert” evaluation of the school experience as a whole. No longer could I see myself as the “great communicator”—the know-it-all. Our roles would be reversed. It was my turn to listen. This was exciting but not easy, interesting yet humbling. (p. 102)

After transcribing the tapes, I then examined the transcripts to find references to students' strengths. These references were assigned to the categories of Gardner's intelligences. These categorical statements were then compiled and examined for similarities in students who are classified as needing special education services.

Data Management , Data Analysis, and Data Representation

The six phases of analytic procedures for qualitative study presented by Marshall and Rossman (1999) were utilized in this study. These phases include: (1) organizing the data: transcripts of interviews, field notes, and reflective journal entries will be kept in separate folders on computer as well as in hard copy form; (2) generate categories, themes and patterns; (3) code the data; (4) test emergent understandings; (5) search for alternate explanations and; (6) write the dissertation. Data was coded for the researcher's organizational purposes, but no individual responses were noted as such. Due to confidentiality issues inherent in special education, no participants were identified. Pseudonyms were used for all participants. The results of this study were meant to tell the stories of these students, which reflect their strengths rather than their weaknesses.

The survey data was represented by tallying the results and displaying results in charts and tables. These charts and tables were used for graphic representation only and not for statistical analysis. Student participants' interview questions were listed. Responses were documented following the questions. In all sections, my analysis and reflections were presented in italics.

Summary

As I began the dissertation process, I looked with anticipation at the opportunity to explore students labeled as "deficit" through the lens of Gardner's (1983, 1999) theory.

My personal experiences within the field of special education said to me that many of these students are, indeed, intelligent. They are just intelligent in ways not recognized within the mainstream of education. I also looked forward to the opportunity to collaborate with a fellow teacher in my field, to see if she had encountered similar students to mine, and if viewing the strengths of these students through the lens of Gardner's theory made a difference in her perception of these students. Cole and Knowles (2000) remind us that teachers often must work in relative isolation. "The busyness of schools, crowded days and curriculum, pressures to evaluate, extracurricular demands, and a host of other chores keep teachers separated from their colleagues and tied to the exigencies of their teaching work" (p. 141). It was my hope that the opportunity to share the stories of our students would give this teacher, as well as myself, a new and refreshed outlook on the awesome responsibility of being a special educator.

The question facing me as a researcher was "So what?" Why was it important to examine these students' strengths in the light of Gardner's theory? It was my belief that by doing so, we could begin to see these students in a new light, one of possibilities rather than disabilities. It was my hope that their stories would inspire us all, general education and special education, to reach farther and try harder to meet the needs of all students, and to honor the diversity within our classrooms. It was my hope that school could become an exciting and enjoyable experience for all students and a time to learn to live in a diverse and wonderful world by respecting and celebrating our strengths.

CHAPTER IV

CLASSROOM OBSERVATIONS, SURVEYS ON AND INTERVIEWS WITH PARENTS, THE TEACHER AND PARAPROFESSIONAL

The purpose of this study was to explore what parents, teachers and peers identified as strengths in students who are labeled as mildly disabled compared to the intelligences identified by Howard Gardner (1983, 1999) in his Theory of Multiple Intelligences. The study was also designed to seek for implications for curriculum and pedagogical change to address the needs of these identified students who were unable to learn in the regular education environment.

The theoretical framework of the study was grounded in Dewey's (1910) theory of education, specifically transformative thinking, and Greene's (1995) theory of releasing the imagination. Methodologically, it was grounded in Van Manen's (1990) phenomenological hermeneutics and Clandinin and Connelly's (2000) narrative inquiry. Four students from an interrelated special education classroom were chosen as the focal participants for the study. These students were all 4th or 5th graders in a special education classroom for reading and language arts instruction.

The study included classroom observations, interviews with the students' parents or guardians, an interview with the teacher and paraprofessional who worked with the student participants on a daily basis, a sociogram completed by peers of the student participants to identify strengths, and interviews with the four student participants. Pseudonyms were used for all students, as well as the teacher, school and county to maintain confidentiality as prescribed by special education procedures.

Field notes were kept for all classroom observations. All interviews were recorded using an audio tape recorder. These tapes were transcribed. The transcriptions were read multiple times by the researcher to identify major themes. During the parent and teacher interviews, a survey on identified strengths of the student participants was completed. The surveys were analyzed and presented in charts to provide a graphic representation of the results.

The major research question of this study was, “How do strengths observed in students labeled as mildly disabled compare with intelligences defined in Gardner’s theory?” The following subquestions guided the research in identifying strengths of these students from multiple sources, comparing the strengths to the intelligences defined by Gardner, and investigating implications for pedagogical change in working with students who do not successfully learn in the regular classroom setting.

1. What do teachers, parents, and peers see in special education students as far as strengths or abilities?
2. How do these strengths relate to multiple intelligences as defined by Howard Gardner?
3. What are the implications for curriculum and pedagogy to better serve these students?

Data for this study was compiled from several sources. Students were observed in their special education classroom in order to notice problem solving techniques and classroom strategies that might address learning styles or intelligences other than linguistic or logical-mathematical. Parents or guardians, as well as the teacher and paraprofessional, were interviewed using a survey of possible indicators for each of

Gardner's (1983, 1999) identified intelligences. These interviews were audio taped so that additional information might be gathered beyond responses to the survey. A sociogram was developed by the researcher and completed by peers in the special education class to determine strengths that classmates perceived in these students. Each student was individually interviewed. During the interview, I shared with the students what others identified as their strengths and then asked what each one understood as strengths in her/himself. This chapter will report the data derived from classroom observations, surveys on and interviews with the student participants' parents, their teacher and the paraprofessional. Interpretation of the data, based upon my reflective journal, will be presented in italics.

School Portraiture

Due to confidentiality issues surrounding participation in special education, pseudonyms were used for the school, the county, and all participants. Elm View Elementary School is the 4th-5th-grade center for a small town located in southeast Georgia. The school was undergoing an accreditation review by the Southern Association of Colleges and Schools (SACS) and all data presented in this section is from the report prepared for this review (2003). Wetzel County, where Elm View is located, is one of Georgia's largest counties in size and has a population of 27,000. The population is projected to reach 30,000 by 2010. Wetzel County has five elementary schools, two middle schools, and one high school. The community is actively involved in the education of the youth of this county. An active Partners in Education Program, jointly sponsored by the school system and the county Chamber of Commerce, offers support to teachers in many ways, including rewards for academic excellence for students, a

successful mentoring program, and a grant program through which teachers can receive financial assistance for special purposes related to their teaching. Community members are also invited into classrooms to relate experiences, give presentations, and read to students. The DARE and 4-H programs are also active within the schools of this county.

Elm View is one of the oldest schools in the county, originally constructed in the early 1930s as the county's school for black students in Grades 1-12. Since this time, there have been renovations, which include the additions of two wings for classrooms, offices, a library, teachers' lounges, as well as a lunchroom and a gymnasium. All additions were prior to 1965. Renovations were completed in the 1995-98 school year for a Grade 4 hall and an open wing, as well as the addition of an administrative wing on the front building and renovations in the front office and Grade 5 hall. During the 2000-2001 school year, networking cables were added throughout the school to provide Internet access for computers.

Elm View had 617 students enrolled for the 2002-2003 school year: 305 fourth graders and 312 fifth graders. The ethnic breakdown of the students was: 28.8% black; 65% white; less than 4% Hispanic; 0.6% Asian; and 1.6% multi-racial. Gender breaks into 319 males and 298 females. The number of Hispanic, Asian, and multiracial students has remained relatively constant over the past two years while the number of black students of both genders has decreased as has the number of white females. The number of participants in the Free/Reduced Lunch program at Elm View indicates a low socioeconomic status. Of the total student population, 60.86% participated in the Free/Reduced Lunch Program.

Elm View serves students with special learning needs through programs such as special education, Title I, and ESOL. Special education students are mainstreamed into the regular classrooms as much as possible in compliance with each student's Individualized Education Plan (IEP). The percentage of students who are served through special education programs at Elm View was 16% for the 2002-2003 school year. These students ranged from those needing speech therapy only to those with orthopedic handicaps. Students with more severe handicapping conditions are served in a self-contained classroom housed at another school in the county. Elm View is also served by the Cedarwood Psychoeducational Program for students with severe emotional behavioral disorders. One of this program's classes is housed on the Elm View campus, but serves students from other schools in the county as well.

Elm View staff has continually worked to increase scores on the Georgia Criterion Referenced Competency Tests (CRCT) over the past three years. As a result of this work, the Georgia Board of Education recently recognized the school for its exemplary accomplishments. The test scores for the 2000 school year were significantly below state standards with 48% of the school's students meeting or exceeding standards in reading, 50% in language, and 43% in math as compared to state scores of 65% in reading, 71% in language, and 62% in math. Despite significant progress, in 2002 Elm View students still performed below the state average in all areas. The school's scores show 69% meeting or exceeding standards in reading, 68% in language, and 62% in math as compared to state scores of 79% in reading, 77% in language, and 65% in math. These test scores have caused Elm View to be targeted as a Schoolwide Title I Needs-Improvement School with recognized weaknesses in reading, language, and math.

Participant Profiles

Pseudonyms were used for all participants in order to maintain a level of confidentiality for special education students. **Ms. Jones** was a second year special education teacher at Elm View School. She has a bachelor's degree from a state university in interrelated special education. Both years of her young experience had been at Elm View. She taught interrelated resource classes for both fourth and fifth graders in all academic subject areas. Her classroom was colorfully decorated and presented a pleasant atmosphere with soft music playing in the background, and a reading area which included beanbag chairs and pillows for sitting on the floor. Ms. Jones was unmarried and had no children of her own. Ms. Jones had a paraprofessional, **Ms. Fields**, who worked with her during the class times I observed. These two women seemed to have a good working relationship. Both of them demonstrated a true concern for the students. Input from both of these teachers was obtained.

The four student participants targeted for this study were members of two classes taught by Ms. Jones. These classes were made up of students identified for special education services in several mild disability categories. One class focused on reading skills while the other focused on writing skills. The four students chosen were all classified as exhibiting either a mild intellectual disability or specific learning disability. Three of the students were female and one was male. One of the female students was white while all of the other students were African-American.

Tiffany is a small 10 year-old African-American girl who had just completed the fourth grade. When she was in first grade, Tiffany was referred for psychological testing due to academic struggles in all areas. This testing, as well as a reevaluation done this

past school year, found that Tiffany fell in the borderline to mildly intellectually disabled range of cognitive functioning. She has been served through special education classes since the middle of first grade. Background information provided in the psychological report of 1999 indicates that Tiffany's mother died when Tiffany was around one year old. Her paternal grandmother is raising her. Tiffany has been served for half of the academic day in special education since her initial placement. She received instruction in reading, language arts, and math through her special education classes. Ms. Jones indicated on Tiffany's current Individualized Education Plan (IEP) that Tiffany's strengths include a good attitude, a pleasing personality, a willingness to help her teacher, and an enjoyment in helping her classmates.

Veronica is a white fourth-grade girl who was also in Ms. Jones' class. She was referred when she was in first grade for psychological testing due to poor performance in all academic areas. Veronica's testing, however, revealed that she functioned within the average to low-average range of cognitive ability. The initial testing indicated that Veronica displayed processing deficits in the area of short-term memory that impacted her ability to read, write, or perform math calculations efficiently. She was determined to be eligible for special education services under specific learning disabilities, and began to receive instruction in reading, language arts, and math through special education classes. She was tested again during this past school term for a three-year reevaluation to determine if she still met criteria to receive special education services. This testing revealed scattered scores in areas used to determine cognitive ability, with higher scores in visual-spatial thinking, auditory processing, processing speed, short-term memory and phonemic awareness. It should be noted that a different examiner who used different tests

from Veronica's initial evaluation gave the tests. The identified processing deficit from this testing was long-term memory and math was found to be a relative strength. Next school year, Veronica will be returned to a regular education math class, but will continue to receive instruction in reading and language arts through special education classes. According to the psychological report, Veronica has had several discipline referrals this past school year, mainly stemming from frustration in school. There was no indication that she exhibited any behavior problems outside of the school setting. On Veronica's current IEP, Ms. Jones listed having a good attitude and a willingness to help in the classroom as some of Veronica's strengths. It appeared that she acts out when in the regular classroom where she does not feel as successful.

Daniel, the only boy in the group, is an 11 year-old African-American and completed the fifth grade this past school year. He was referred at the end of first grade for psychological testing due to academic struggles in reading and writing skills. The initial testing did not reveal discrepancies between his cognitive ability and his achievement that were large enough to warrant placement in special education. However, he continued to struggle during the next school year in second grade which led to behavioral issues stemming from his frustration in the classroom, so additional testing was completed, and Daniel was found to be eligible for special education services through specific learning disabilities in reading and written expression. He was again tested during his fourth grade year, and this testing also revealed discrepancies in these areas to warrant continued placement in special education. Daniel's cognitive ability in all testing fell in the average range. The current testing revealed processing problems in auditory processing as well as long-term memory. Throughout the notes from teachers

about Daniel's struggles in school, it was noted that sounding out words (phonics) is a weakness. Ms. Jones noted on Daniel's current IEP that he has a good sense of humor, is willing to help his peers in the classroom, and has done well on daily oral language exercises in his special education language arts class.

Paige, the final student observed for this study, is an 11 year-old African-American girl who has completed the fifth grade this school year. Her academic records indicate she was retained in kindergarten. She was referred for psychological evaluation at the end of second grade due to her poor performance in all academic areas. This initial testing, as well as reevaluation testing completed during the last school year, found that Paige functions in the lower extreme (Mildly Intellectually Disabled) range of cognitive ability. Achievement testing indicates that she is below grade level in all academic areas. Since her placement in special education, Paige has spent half of her school day in special education classes. She received her reading, language arts and math instruction through these classes. Teachers made note of Paige's frustration in regular education classes by indicating that she needs more explanation than her peers to be able to complete assigned tasks. One teacher indicated that Paige is only able to adequately express herself when she is angry. Teachers also reported that she requires constant supervision in order to complete tasks given her. Ms. Jones noted on Paige's current IEP that she is willing to help her teacher and her classmates in her resource room and that she completes her work there on most days.

My relationship with these students was one of observer and helper within the classroom. Through my time spent in observing these classes, I was also an unobtrusive part of their learning experience by helping them with seatwork, reading to them or

listening to them read. I did not want to be seen as another teacher authority but did hope to gain a better understanding of them through some contact within the classroom setting.

Classroom Observations

Classroom observations were completed during the 2002-2003 school year. These classes met in the mornings. Each class was 45 minutes long, and they met back-to-back. I was able to observe on four different occasions for the full 90-minute block of time. Two of the students participated in both classes while the other two students participated in the language arts class only. There were four other students in the reading class who were placed in special education under categories and one other student placed under SLD. In the language arts class, three other students were placed under other special education categories and two others were identified as SLD.

On my initial visit to the classroom, I was struck by the inviting nature of the room. Desks were grouped into fours so as to encourage group work. The fluorescent lights were turned off, but windows were uncovered and the door was open to provide natural lighting. Soft music played in the background. The bulletin boards were attractively decorated, but not so “busy” as to be distracting. There were three computers placed around the room that seemed to be for student use. Many books of differing levels were available in a reading center. Students were met at the door and invited into the classroom. Each was given a folder and was encouraged to begin working.

Despite my initial reaction to this classroom, I found that students were not as free to show individual strengths as I had hoped. Certainly, there were sparks of times where conventional methods were not used. During one visit, students were given free reading time as part of a school-wide reading initiative. In this classroom, students were allowed

to sit on the floor using beanbag chairs and large pillows as they read their books. Some students even removed their shoes to become more comfortable. This might be seen as an accommodation to those students who are uncomfortable sitting in the conventional desks of the conventional classroom. This also could be an accommodation for students who learn more through bodily-kinesthetic means where body positioning could impact learning. However, I only observed this during this free reading time. All other instructional time was spent either sitting at desks or in chairs at tables.

Music was incorporated in this classroom but only as a soft background during study and work time. I saw no indication that music was a part of any instructional strategy. Also, I saw no indication that the students had any input into the type of music that was played. During my time in the classroom, soft jazz type music seemed to be the dominant form utilized.

Other than the independent reading time allowed where students chose a book from groups divided by reading level, instruction in the class was not individualized. On two occasions, Ms. Jones read a book to the whole class and then gave each student the same comprehension worksheet to complete. The students were allowed to work in groups or with a partner to complete the assignment, but no other modifications or accommodations were made for individual students. On one of the comprehension worksheets, students were given a choice of writing a summary of the story, or drawing pictures to illustrate the story. Everyone except **Veronica** chose to draw. She chose to write her summary, but seemed to struggle with this and eventually sought out the paraprofessional to help her. The classroom was not one that seemed based on individualized instruction based on the IEP process.

The assignments in the language arts class were often worksheets on grammar that covered basic punctuation, proper nouns, and subjects of sentences. Once again, each student in the class was given the same worksheet. Group work was again used in completion of the worksheets but was very teacher directed. As the teacher went over the directions, students did not have the worksheet in front of them to visually follow along. Groups were directed to discuss any differences of opinions on answers, but each group seemed to have a dominant member who led the discussion, or members tended to work independently on parts and then share answers. Gardner (1999) points out that the best way to assess strengths in intelligence areas is to observe how children solve problems. I found it difficult to observe this as many times the dominant voice in the group was a student labeled as EBD, or Ms. Jones would come to the group to guide them in how to work as a group. I did not observe a time where students were allowed to spend time on a problem and independently work out how best to solve it.

The only time the computers in the room were used during my observations was for taking tests over books in the *Accelerated Reader Program*. As students completed their work, they were given time to read books for this program. As time allowed, the students would log into the computer to take a computerized test over the book. Points are awarded for these tests, and recognition is given to students reading the most books, accumulating the most points, etc. These tests are multiple choice comprehension questions, and there is no remediation or learning involved.

Overall, I was not able to gather the information I had hoped through the observations in Ms. Jones' classroom. Even though she made use of background music for seatwork time, allowed students to choose to draw rather than write on certain

assignments, allowed students to recline and/or sit on the floor during independent reading time, and had computers for students' use around the classroom, I found the class to be more teacher directed rather than student focused. I also found that students were not given many opportunities to independently work through problems so that problem-solving techniques could be observed. Unfortunately, I feel, as the researcher, that not enough data was gathered from the observations to make a determination of strengths used in an instructional setting for these students. I had planned to discuss my concerns about the classroom atmosphere with this teacher, but she left to teach in another county before I was able to do this.

Parent/Teacher Surveys

The surveys used during parent and teacher interviews were adapted from material presented by Armstrong (2000a) in his book *In Their Own Way: Discovering and Encouraging Your Child's Multiple Intelligences*. The survey was divided into eight sections, one for each identified intelligence from Gardner's (1983, 1999) theory. Each section listed ten possible indicators of strength for that intelligence. During the interview process, parents and the teacher and paraprofessional were encouraged to share any other indicators for each intelligence that a student might exhibit.

In order to better explain the process and intent of the study, all parents were contacted by telephone. During this initial contact, the research project was described, and a time was set to meet with the parents to answer any further questions, sign consent forms, and complete the interview process. Three parents/guardians came to the researcher's office for this interview and one parent was interviewed in her home. The teacher and paraprofessional were interviewed in the teacher's classroom during Ms.

Jones' planning period. This interview was conducted with both women at the same time, allowing them to discuss with each other what each had observed in the four students and between the classroom observation times. A copy of both surveys can be found in Appendix C.

Data from the surveys will be presented in this section, with a separate section for information gathered from the audiotapes of the interviews. The results from the surveys will be presented from four different perspectives: whole group responses by intelligence category, distribution of responses by intelligence category, frequency of responses by item, and individual responses by intelligence category. Charts and tables of the data will be used for graphic representation only, not for any statistical representation. However, these charts and tables do parallel the experiences of these participants. Responses from parents/guardians will be reported separately from responses from the teacher and the paraprofessional. The stories of these students will begin to unfold as this data is reviewed.

Number of Items Checked for Each Intelligence Category

Four surveys were completed by parents/guardians and four by the teacher and paraprofessional (one survey per student). Thus, for each set of surveys, there were a possible 40 items that related to each of the eight intelligence groups (10 items x 4 respondents = 40 items). In other words, if all parents/guardians had responded positively to each item on the survey having to do with linguistic intelligence, there would have been 40 items checked by the whole group concerning linguistic intelligence. By the same token, if the teacher and paraprofessional had responded positively to all items under linguistic intelligence for all four students, 40 items would have been checked for

their responses, also. In reality, neither parents nor teacher responses indicated 40 items for any of the eight intelligences. For parents, responses ranged from 5 to 20 and for teacher/paraprofessional, responses ranged from 5 to 22. Figure 1 shows the total number of items checked by the whole group for each intelligence category. Figure 2 expresses the number as a percentage of the total possible number of items checked (where 100% = 40 items). Abbreviations have been used to indicate intelligence categories (L = Linguistic; L-M = Logical-Mathematical; S = Spatial; B-K = Bodily-Kinesthetic; M = Musical; Inter = Interpersonal; Intra = Intrapersonal; N = Naturalist).

Figure 1 Number of Items Checked by Intelligence

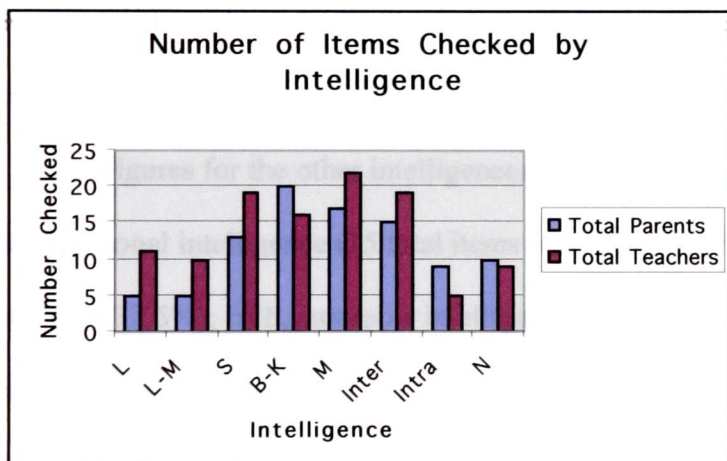
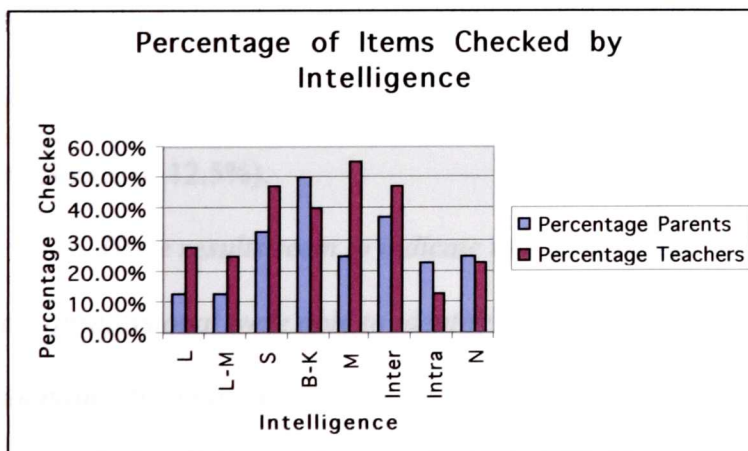


Figure 2 Percentage of Items Checked by Intelligence



These results indicate that the items identified most by parents fell under the bodily-kinesthetic intelligence, with 20 total items or 50% being identified. The teacher and paraprofessional identified items in the musical intelligence most often, with 22 total items or 55% being identified. These were the only items that reached 50% or more in responses from either parents or teacher interviews.

The second highest group for parents fell in musical intelligence with 17 total items or 42.5% being identified. The teacher and paraprofessional identified two groups with 19 total responses, or 47.5%. One of these groups was spatial intelligence and the other was interpersonal intelligence. The only other intelligence to be identified at 40% was bodily-kinesthetic by the teacher and the paraprofessional. All other responses fell below 40%.

Figures for the other intelligences ranked as follows by parents: third, interpersonal intelligence (15 total items or 37.5%); fourth, spatial intelligence (13 total items or 32.5%); fifth, naturalist intelligence (10 total items or 25%); sixth, intrapersonal intelligence (9 total items or 22.5%); tied at seventh and eighth, linguistic and logical-mathematical intelligences (5 total items or 12.5%). The rankings for the teacher and paraprofessional were as follows: fifth, linguistic intelligence (11 total responses or 27.5%); sixth, logical-mathematical (10 total responses or 25%); seventh, naturalist intelligence (9 total responses or 22.5%); eighth, intrapersonal intelligence (5 total responses or 12.5%).

These results seem to indicate that both parents and the teacher and paraprofessional were able to identify strengths in these students. Those most strongly identified by both groups were ones that are increasingly being downplayed within the

current curriculum push for higher test scores. As programs are cut to add more time on task to test related items, music and art are left behind. Both parents and the teacher and paraprofessional identified musical intelligence as a strength in these students. The teacher and paraprofessional identified spatial intelligence as a strong point, one that would be enhanced through an active art program. Parents ranked bodily-kinesthetic as the highest strength. Of course, one would tend to pair this with a strong physical education program, but this also is indicative of hands-on learning as being one of the best ways of reaching these students. In my time in the classroom, I saw little of this being employed in the learning process. Finally, the teacher and paraprofessional saw interpersonal skills as a strength in this group. The classroom was centered on group work, and this might have been one reason this was identified in the classroom setting.

I found it interesting that parents ranked the two intelligences that are most stressed in schools, linguistic and logical-mathematical, as the lowest two. The teacher and paraprofessional ranked these in the middle, at fifth and sixth. It would seem that the parents might be comparing the students to peers or siblings who do not exhibit learning difficulties, while the teacher and paraprofessional were comparing the students to others in the special education classroom setting. It would be interesting to compare this teacher's perception with that of a regular classroom teacher at fourth or fifth grade in relation to other students in their classrooms. The teacher and paraprofessional ranked intrapersonal intelligence as the lowest, while parents ranked it as sixth. Parents seemed to indicate that these students did have a goal in life and did have an understanding of

their strengths and weaknesses while the teacher and paraprofessional did not see these traits. However, both indicated that self-esteem was a weakness for these particular students.

Distribution of Items Checked by Intelligence

In order to provide a different perspective of the stories of these students from these same results, Figures 3-10 present the distribution of items checked for each intelligence category. Each graph shows the number of survey respondents who checked x number of items for a particular intelligence. Parents and the teacher and paraprofessional's responses were not separated in this chart. Therefore, there were a total of eight respondents (four parents and the teacher and paraprofessional together, but for each student). So for example, in the graph concerning musical intelligence, a total of five respondents checked 5 items related to musical intelligence, while only one respondent checked 2 items (out of 10 possible items). Similarly, in the graph concerning linguistic intelligence, one respondent checked 0 items, while four respondents checked 3 items.

Figure 3 Distribution of Items Checked - Linguistic

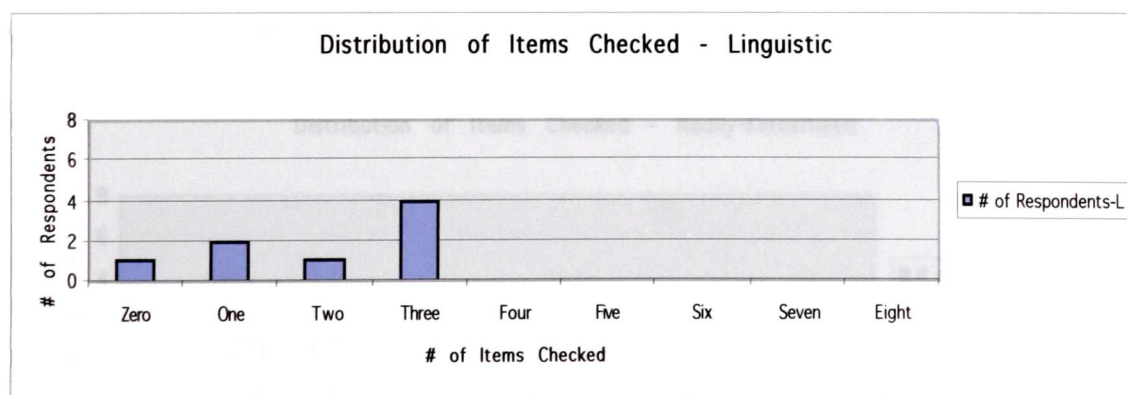


Figure 4 Distribution of Items Checked – Logical-Mathematical

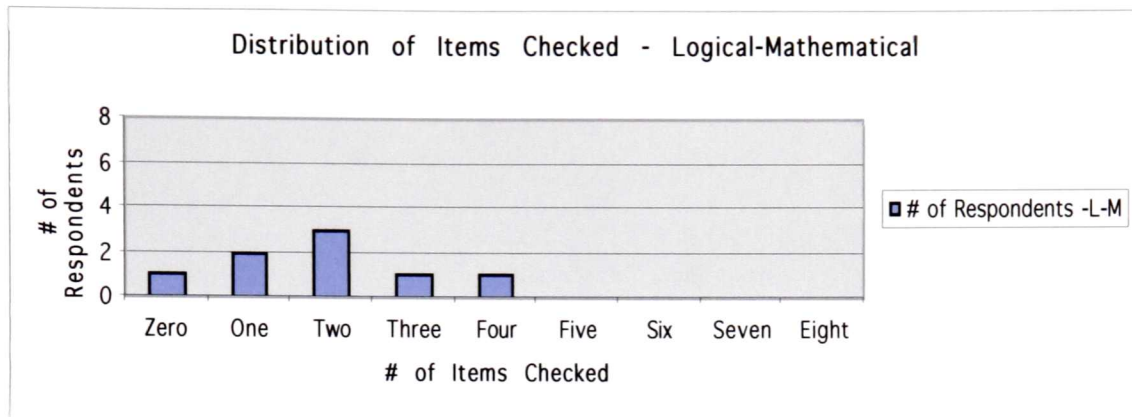


Figure 5 Distribution of Items Checked - Spatial

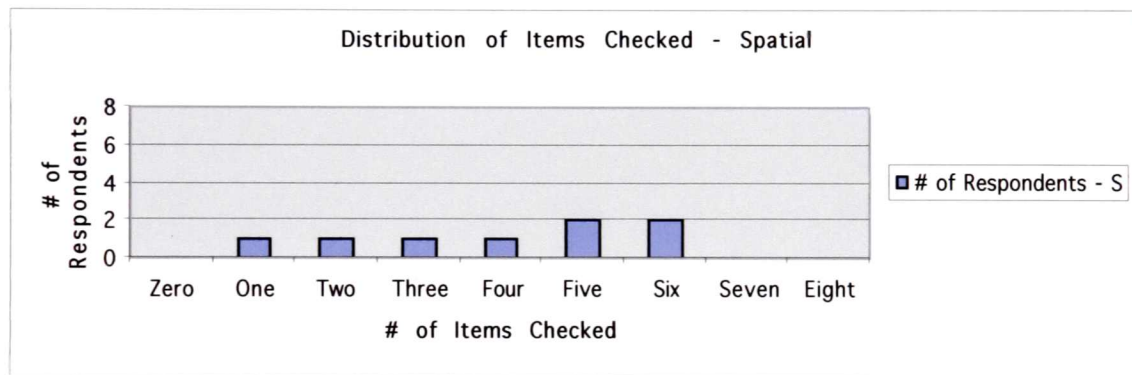


Figure 6 Distribution of Items Checked – Bodily-Kinesthetic

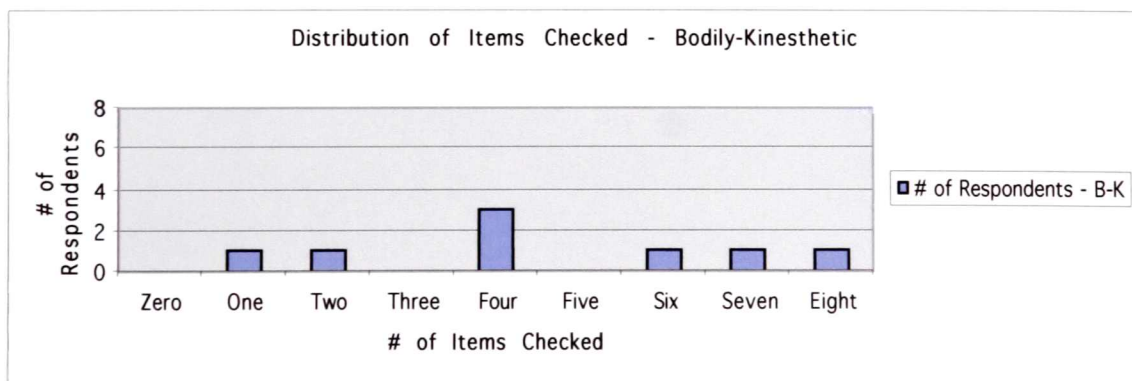


Figure 7 Distribution of Items Checked - Musical

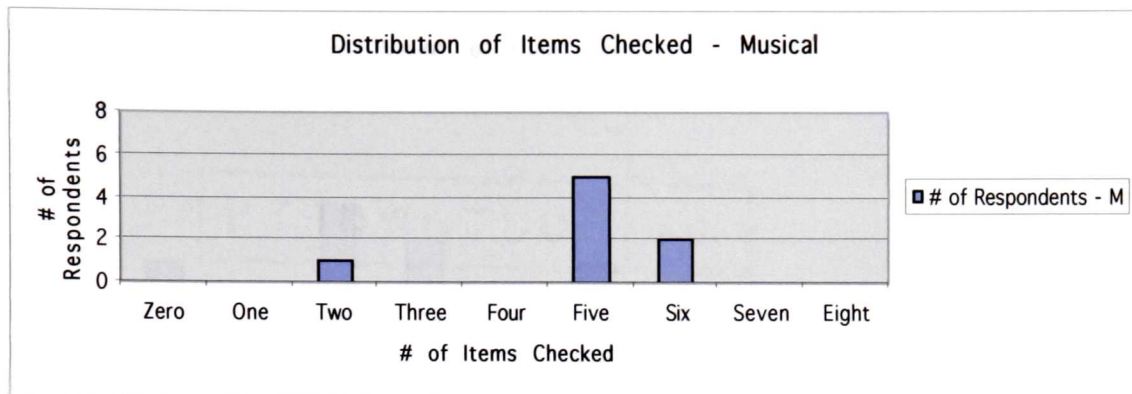


Figure 8 Distribution of Items Checked - Interpersonal

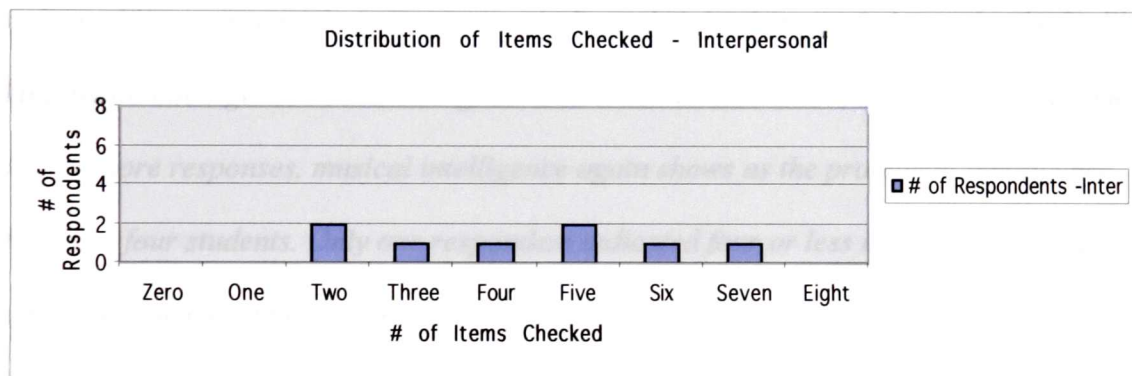


Figure 9 Distribution of Items Checked - Intrapersonal

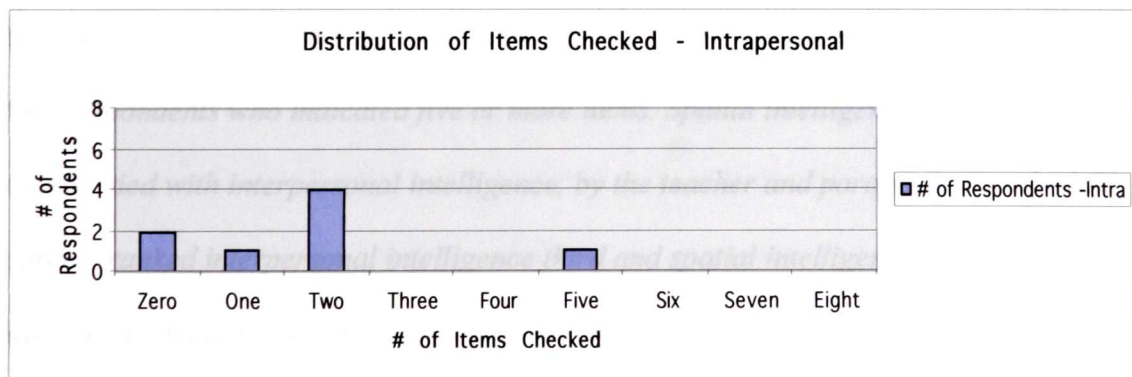
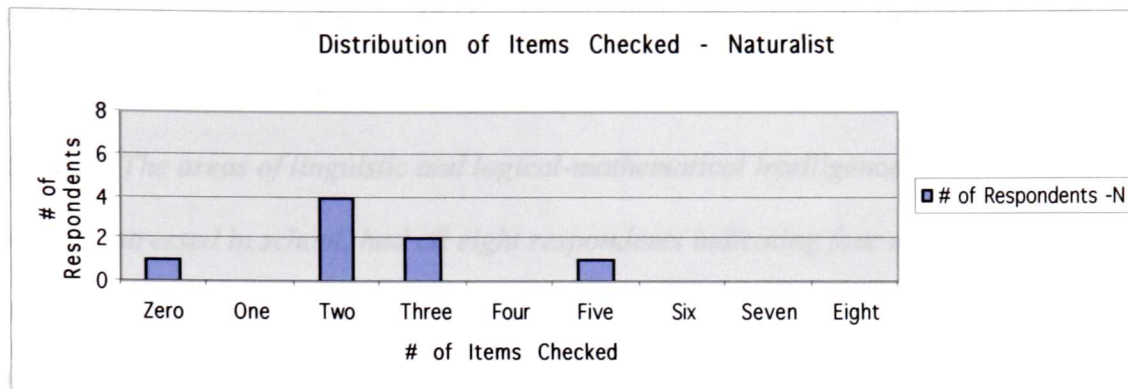


Figure 10 Distribution of Items Checked - Naturalist



These results indicate several interesting features to the stories of these students. Even though there were ten indicators for each intelligence, eight was the largest number indicated by any respondent. One parent indicated eight characteristics under the bodily-kinesthetic intelligence in describing her son. When divided into 4 or less responses and five or more responses, musical intelligence again shows as the prominent intelligence for these four students. Only one respondent indicated four or less items in this category while the other seven respondents indicated five or more items. This is in line with the data presented in Figures 1 and 2. Musical intelligence was ranked first by the teacher and paraprofessional and second by the parents.

Two of the intelligences had an even split in responses. Both spatial and interpersonal intelligences had four respondents who indicated four or less items and four respondents who indicated five or more items. Spatial intelligence was ranked as second, tied with interpersonal intelligence, by the teacher and paraprofessional while parents ranked interpersonal intelligence third and spatial intelligence fourth. Bodily-Kinesthetic intelligence responses were also rather evenly split with five respondents indicating four or less items while three respondents indicated five or more.

This information again points to the strengths of the students falling in areas that are not emphasized in a “normal” classroom setting. These are students who could learn through use of music or rhyme, hands-on activities, and through group activities and/or projects. The areas of linguistic and logical-mathematical intelligences, those most strongly stressed in school, had all eight respondents indicating four or less items for each area. Intrapersonal and naturalist intelligences were also low in response items, both having seven respondents indicating four or less items and only one respondent indicating five or more items. The idea of self-esteem and goal directedness seemed to drive down the Intrapersonal responses. Because this county is somewhat agricultural and rural, I found it interesting that the naturalist responses were as low as they were.

Frequency of Individual Items Checked

To delve further into the stories of these students, I decided to look at the individual items under each category, and how many times each was chosen as describing one of these four. Since there were eight respondents (four parents/guardians and four students from the teacher/paraprofessional), there were a total of eight possible responses for each item. Each item has a brief description, a frequency of responses, and the percentage this frequency is of the total (100% = 8 responses). The responses are ranked in order from the largest to smallest response frequencies. The intelligence category is indicated next to each item by the following abbreviations: L = Linguistic; L-M = Logical-Mathematical; S = Spatial; B-K = Bodily-Kinesthetic; M = Musical; Inter = Interpersonal; Intra = Intrapersonal; and N = Naturalist. For the complete phrasing of each item, see Appendix C. The results of this tabulation are presented in Table 1.

Table 1

Response Frequency by Item

Item Description	Intelligence	Freq.	% of all subjects
Remembers songs	M	8	100%
Has a good singing voice	M	8	100%
Sings	M	7	87.5%
Enjoys “messy” activities	B-K	7	87.5%
Strategy games	L-M	6	75%
Likes movies, slides, photos	S	6	75%
Fidgets	B-K	6	75%
Mimics others	B-K	6	75%
Socializes	Inter	6	75%
“Street smart”	Inter	6	75%
Enjoys teaching others	Inter	6	75%
Relates well to pets	N	6	75%
Likes listening to stories	L	5	62.5%
Enjoys puzzles, mazes	S	5	62.5%
Daydreams	S	5	62.5%
Sensitive to environmental noise	M	5	62.5%
Enjoys group games	Inter	5	62.5%
Aquariums, terrariums, etc.	N	5	62.5%
Word games/crossword puzzles	L	4	50%
Logical software programs	L-M	4	50%
Draws accurately	S	4	50%
Doodles on paper	S	4	50%
Good at sports	B-K	4	50%
Likes physical activity	B-K	4	50%
Touch to learn	B-K	4	50%
Studies best with music	M	4	50%
Collects CDs/tapes	M	4	50%
Has lots of friends	Inter	4	50%
Empathy for others’ feelings	Inter	4	50%
Independent/strong willed	Intra	4	50%
Tall tales/jokes	L	3	37.5%
Excels in art class	S	3	37.5%
More from pictures than words	S	3	37.5%
Take apart/put together	B-K	3	37.5%
Goal directed	Intra	3	37.5%
Does well in science	N	3	37.5%
Memory for names, etc.	L	2	25%

Table 1 (continued)

Item Description	Intelligence	Freq.	% of all subjects
Keeps time to music	M	2	25%
Running/jumping/etc.	B-K	2	25%
Enjoys math/science class	L-M	2	25%
After-school group activities	Inter	2	25%
Expresses inner feelings	Intra	2	25%
Nonsense rhymes/tongue twisters	L	1	12.5%
Math in head	L-M	1	12.5%
Questions: Why sky blue?	L-M	1	12.5%
Puts things in categories	L-M	1	12.5%
Maps/charts/diagrams	S	1	12.5%
Three-dimensional constructions	S	1	12.5%
Responds to different types of music	M	1	12.5%
“Family mediator”	Inter	1	12.5%
Realistic about strengths and weaknesses	Intra	1	12.5%
Strong opinions on controversial subjects	Intra	1	12.5%
Works/studies well alone	Intra	1	12.5%
Marches to a different drummer	Intra	1	12.5%
Self-directed hobbies/projects	Intra	1	12.5%
Enjoys nature/zoo/museums	N	1	12.5%
Sensitivity to natural formations	N	1	12.5%
Likes gardening	N	1	12.5%
Believes in animal rights	N	1	12.5%
Brings home bugs, flowers, etc.	N	1	12.5%
Writes creatively	L	0	0%
Reading for pleasure	L	0	0%
Good speller	L	0	0%
Good vocabulary	L	0	0%
Good grades in Language Arts	L	0	0%
Reasons logically	L-M	0	0%
Experiments to test understanding	L-M	0	0%
Logic puzzles/Rubik’s Cube	L-M	0	0%
Good sense of cause and effect	L-M	0	0%
Visual images when thinking	S	0	0%
Skill in craft (Carving, etc.)	B-K	0	0%
“Gut feelings”	B-K	0	0%
Plays musical instrument	M	0	0%
Does well in music class	M	0	0%
“Advisor” or “problem solver” to peers	Inter	0	0%
Natural leader	Inter	0	0%
Self confident	Intra	0	0%
Learns from mistakes	Intra	0	0%
Ecological awareness	N	0	0%
Keeps records of animals, plants, etc.	N	0	0%

The responses ranged from two items checked eight times, or 100% to twenty items that were not checked at all. The two items that were indicated by all eight respondents fell under musical intelligence, again indicating this as a strong point for these particular students. A total of six items of the ten for musical intelligence were checked 50% of the time, or more. This was also true for bodily-kinesthetic and interpersonal intelligences. Five of the ten items under spatial intelligence were checked 50% or more of the time. These results are consistent with earlier data, and indicate an active, hands-on approach that includes art and music as best practice for these particular students.

The items checked 0% of the time fell heavily in linguistic and logical-mathematical intelligences. Five of the ten items in linguistic intelligence were not checked at all while four of the ten in logical-mathematical were not checked. Of course, these are students who are identified as struggling in academic areas, so this should not be surprising. The items that were identified more than 50% of the time for these categories included listening to stories, enjoying jokes and tall tales, and playing with logical software programs. Except for the software connection, the others would not be strongly emphasized in a traditional classroom. It should also be noted that these skills emphasize oral language in the linguistic category.

There were some interesting features from the survey data collected. Despite the strong response frequency in musical intelligence, the item indicating that students do well in music class received no responses. Even though the music teacher was not contacted, it would seem there would be some sort of feedback provided to the parents or Ms. Jones so that they would know how these students performed in this class. Also

receiving no responses was the item indicating that the student played a musical instrument. It appears that the abilities cited in this intelligence deal more with popular music appreciation. The fact that Ms. Jones plays music in the classroom also would possibly taint the responses in this category, as she would see this as beneficial to every student.

*In my interpretation, Gardner's categories are somewhat tainted by the fact that the children he observed in his research were gifted and talented students. For instance, he might define musical intelligence as skill in performance, composition, and appreciation of musical patterns. None of these students were musical prodigies, but they did all seem to enjoy and react to the music played in their classroom. **Victoria's** mother indicated that she could easily learn the songs at church even though she could not read the words. The other participant's parents stated that they wished the students could learn their school work like they could learn popular songs. Perhaps Gardner's categories are too restrictive to address strengths seen in these students.*

Individual Differences in Number of Items Checked for Each Intelligence

Up to this point, this data has been examined for the group as a whole. Another way of making sense from it consists in examining the different patterns of responses by intelligence for each of the four students. Through this examination, the journey can begin on individual stories for them. Table 2 and Table 3 provide a tabulation of the number of items checked in each intelligence category for each student. Table 2 records responses from the parents or guardians while Table 3 gives responses from the teacher and paraprofessional. In order to highlight a specific pattern of "strengths," I have underlined numbers 5 or larger. In other words, underlined numbers represent responses

of half or more of the items in a specific intelligence category for each individual child and thus could be said to represent “peaks” for individual children in a profile of all eight intelligence categories.

Table 2

Number of Items Checked for Each Child by Intelligence – Parent Survey

Subject	L	L-M	S	B-K	M	Inter	Intra	N
Tiffany	1	1	2	<u>6</u>	<u>5</u>	4	0	0
Veronica	1	3	<u>5</u>	2	2	2	2	2
Daniel	3	0	1	<u>8</u>	<u>5</u>	<u>7</u>	2	3
Paige	0	1	<u>5</u>	4	<u>5</u>	2	<u>5</u>	<u>5</u>

Table 3

Number of Items Checked for Each Child by Intelligence – Teacher Survey

Subject	L	L-M	S	B-K	M	Inter	Intra	N
Tiffany	2	2	4	4	<u>6</u>	3	0	3
Veronica	3	4	<u>6</u>	<u>7</u>	<u>6</u>	<u>6</u>	2	2
Daniel	3	2	<u>6</u>	1	<u>5</u>	<u>5</u>	2	2
Paige	3	2	3	4	<u>5</u>	<u>5</u>	1	2

Several interesting features emerged from looking at this data in this context.

First, there were some differences in each student between the parents’ perceptions and those of the teacher and paraprofessional. This, I believe, speaks to the importance of good communication between home and school as children can exhibit different

characteristics in each place. In order to reach the whole child, school and home must work together to provide the best education possible.

Secondly, all students were shown as having “peaks” in musical intelligence by the teacher, while the three African-American students were identified by parents in this category. Because of the teacher’s use of music in the classroom setting, her perception may have been skewed in the importance of this for her students. Another question I had hoped to ask this teacher before she left to teach in another county was why jazz was the main type of music used in the classroom. I wondered if this was her preference, or if she had tried other types and found this to be the most effective. I also would liked to have asked if the students had any input into the type of music she played. I found that the African-American parents referred to the importance of music in their churches and the students’ participation in the church music program. This may be a cultural issue, but one that should be addressed again through home to school communication. Lisa Delpit (1995) states, “I have found that if I want to learn how best to teach children who may be different from me, then I must seek advice of adults-teachers and parents-who are from the same culture as my students” (p. 102). If we are to best make use of these areas that are culturally important to our students, then we must begin to dialogue with parents and others to understand how best to incorporate them into our teaching. Greene (1995) implores us to make the arts central in our total curricula “because encounters with the arts have a unique power to release imagination” (p. 27). In order for students to begin to imagine their world as different, the one in which they now live must be acknowledged and honored.

*As each student is considered individually, certain aspects can be seen. In **Tiffany's** case, her grandmother identified two peak areas, bodily-kinesthetic and musical, while Ms. Jones and the paraprofessional identified only musical. Ms. Jones identified four characteristics in bodily-kinesthetic as well as spatial intelligences that indicated that she saw some strengths in these areas, but not necessarily "peaks." **Tiffany's** grandmother rated spatial intelligence very low (2 responses), but saw a higher tendency in interpersonal skills than did Ms. Jones and the paraprofessional.*

***Veronica's** mother only identified one "peak" area for her, spatial intelligence. However, Ms. Jones and the paraprofessional identified four areas, spatial, bodily-kinesthetic, musical, and interpersonal. None of these areas were even identified with four choices by **Veronica's** mother. It appears that the teacher and paraprofessional see more potential in this student than her mother, or that **Veronica** is more open in these areas at school than at home.*

***Daniel's** mother identified three areas of strength for him, as did Ms. Jones and the paraprofessional. Both saw musical and interpersonal intelligences as "peak" areas for **Daniel**, but differed on the third choice. His mother ranked him very high (8) in bodily-kinesthetic skills, while the teacher and paraprofessional ranked him very low (1) in this category. The third area identified by Ms. Jones and the paraprofessional was spatial intelligence. Certainly there might be some overlap in these two categories, but it appears that **Daniel** also exhibits differing skills in the school setting than in the home setting.*

***Paige's** mother identified four areas of strength for her. Ms. Jones and the paraprofessional identified only two areas. Both agreed on musical intelligence as an*

area of strength for **Paige**, but differed on the other three. **Paige's** mother identified spatial, intrapersonal, and naturalist as the other areas of strength displayed by **Paige** in the home setting. Ms. Jones and the paraprofessional identified interpersonal as the other area of strength displayed in the school setting.

The analysis of this set of data seems to indicate that all of the students displayed differing strengths at home than at school. Musical intelligence still was the most identified, as it has been throughout the differing ways of interpreting the responses to this survey. Spatial and interpersonal intelligence traits were the second-most identified as peak areas in these students. Also, each student seemed to exhibit a unique combination of strengths both at home and at school.

The data seemed to tell a story of students who would benefit from more arts initiatives in the schools as well as group work, or projects. The intelligences that receive the major emphasis in schools, linguistic and logical-mathematical, were not identified as "peak" areas for any of these students. If the cry is indeed for more inclusion within the regular education setting for students such as these four, then the methods currently used must be reevaluated for effectiveness for all students.

Parent/Teacher Interviews

Parents and guardians were interviewed during April, 2003. Each parent or guardian was contacted by telephone to explain the purpose of the study. They were then asked to meet with me either at their homes or at my office to complete the survey and interview. **Daniel** and **Veronica's** mothers and **Tiffany's** grandmother came to my office to complete the survey and interview. I went to **Paige's** home to meet with her mother.

The interview transcripts were reviewed and showed that data collected from the surveys was confirmed by comments from the parents, teacher and paraprofessional. All indicated a strong interest by the students in music. **Veronica's** mother told how she is able to memorize songs in her church choir, even though she can't always read all the words. "She memorizes a lot of stuff, where she can't read, if the words might be too hard...but her teacher usually lets her hold the sheet and then she memorizes" (Interview, April, 2003). **Daniel, Paige, and Tiffany's** mothers and grandmother all made a statement that they wished they could learn their homework like they can learn songs.

My mind raced back to my own classroom, about five years ago. I saw Candice sitting in the desk, struggling over the spelling words I'd assigned that week. She said to the class, "you know I learned to spell Atlanta from that song." I didn't know the song, but why didn't I, as a teacher, pick up on that? Was it that I thought singing the spelling words would not be age-appropriate for high school? Was it that it would have taken too much time to come up with the ideas? Was I too overwhelmed with all the paperwork and regulations? How did I miss the boat?

Ms. Jones and Ms. Fields both agree that all of these students seem to have good singing voices. They indicated that they "fuss" if the background music in the classroom is not turned on during independent work time. Sometimes, they will sing along with the music, or keep time with their heads. This does not seem to be a distraction to them, where other outside noises such as mowers or blowers, is. However, music as a teaching tool is not incorporated into this classroom.

All of the parents indicated that these students enjoy outside activities, or hands-on type of learning. Both **Daniel** and **Paige's** mothers reported that they spend a lot of time at home with video games, such as PlayStation. **Veronica's** mother reported that she enjoys the outdoors and likes to fish and hunt with her Dad. **Tiffany** is involved in cheerleading, as is **Veronica**. Ms. Fields indicated that **Paige** is a part of a dance team at their church. **Daniel** participates in football and basketball in the county recreation leagues. All of these students enjoy playing outside with their friends, according to their parents. **Tiffany's** grandmother said that she is often in trouble at school for talking too much and being out of her seat. She also said she is always moving when she is at home. **Veronica** participates in track and was going out of town to a track meet with the team. Ms. Jones and Ms. Fields saw them all as "fidgeters." They also reported that all of the students become eager and rush to the tables for any art activities.

My mind raced to another classroom, this one about twenty years ago. Andy was sitting in the desk, working on seatwork I'd assigned. We heard the pitter-patter of feet in the ceiling above us. I told him that if a rat fell through, I'd see him in the next town down the road. He laughed, probably at the thought of the sight of me running. He was pure fluid on the baseball field. He had broken several records in that his senior year. Yet, I asked him to sit in a desk and fill out papers. How much more might he have learned if I had allowed him to move and work it out like on the baseball diamond? Could we have broken through that reading barrier if somehow I had related the two?

Everyone but **Daniel's** mother stated that his or her child liked to draw. They also reported that they could draw fairly well. Ms. Jones and Ms. Fields felt that **Daniel** did exhibit drawing capabilities and showed me a drawing of a house that **Daniel** had done in

the classroom that was nicely done. They stated that **Paige** was more into drawing letters, like graffiti things, while the others were more into drawing people. Given a choice on one assignment, everyone but **Veronica** chose to draw rather than write.

My mind raced to another classroom, about twelve years ago. David sat very quietly at his desk, drawing rather than studying for his vocabulary test. For once, I had the inspiration to use this talent as a tool. I encouraged him to come up with creative drawings to help him remember the definitions for his test. I gave him note cards to make study cards, picture and word on the front, definition on the back. His mind was so creative! And his vocabulary scores began to improve. Could I have used this tool in other subjects? I saw him at the Very Special Arts Festival, drawing pictures for the younger children. It was one of the few times I saw him smile for any length of time. My, I hope that talent is being used somewhere now!

The final area that ran as a theme in the interviews addressed interpersonal skills. All of the parents indicated that these students made friends easily, and enjoyed group activities more than playing alone. **Veronica's** mother indicated that she is often forced to play alone because her siblings are older and there are not many children living near them. Ms. Jones indicated that the girls loved being "teachers" and often tended to take on the "nurturer" role in the class. **Daniel's** mother reported that he enjoyed working with younger children in their church. **Paige's** mother told me how **Paige** helps care for her baby sister and teaches her new things when given the opportunity. **Tiffany's** grandmother said that **Tiffany** likes to help her younger cousins with their schoolwork when they come to visit.

Now my mind raced across twenty-plus years of teaching and the mind set of Special Education. I remembered the training in writing those Individualized Education Plans. I saw all those folders of individualized work I put together and students sitting isolated from each other as they worked on those packets. I was encouraged at the amount of group activities I saw in Ms. Jones' room, but concerned that this still seemed very teacher directed and driven. How much could these students gain by working together and teaching each other? What types of strengths could be displayed if given the opportunity to solve problems through avenues other than reading and writing? Can we allow children to be individuals who learn and display knowledge in unique ways?

Summary

The data collected through the classroom observations, parent and teacher surveys, and parent and teacher interviews do present a picture of students who display distinct strengths but not necessarily those that are related to success in school. These strengths were found to fall into several of the categories identified by Gardner (1983, 1999) in his Theory of Multiple Intelligences. The intelligence category that ranked highest for this group of students was musical. Although none of these students play a musical instrument, they all enjoy music and seem to easily memorize song lyrics when school related memorization often presents a problem for them. The musical mind is something that has seemed ignored in our schools outside of training in an instrument in band or music theory in chorus. As the survey and interview data on these students has indicated, some students in our classrooms bring their musical minds to school and might learn effectively if lessons had music in them (Armstrong, 2000a).

Also identified as a strength area was bodily-kinesthetic. This is displayed in athletic prowess as well as in hands-on activities and classroom “fidgeting.” All of the parents indicated that these students like outdoor play such as running, biking, fishing, and hunting. The teacher and paraprofessional reported that they all tend to drum on their desks, or keep time to music with their heads, or move around in some way during class. Perhaps closely related to this strength, spatial ability was also identified in these students. All of them draw fairly well and enjoy activities such as puzzles and taking things apart. This all points toward a need for a hands-on, project oriented curriculum that allows movement and exploration. Dewey (1938) warned that we must pursue intelligent activity, not aimless activity. The distinction he saw was that intelligent activity “involves selection of means—analysis—out of the variety of conditions that are present, and their arrangement—synthesis—to reach an intended aim or purpose” (p. 84). Teacher training will need to address how to properly engage children in meaningful activity and how to assess knowledge through means other than standardized testing.

The final area explored with this group was interpersonal intelligence. These students were all identified as enjoying group activities over individualized ones. They all enjoy teaching others, and learning from a group. This goes across age groups, as they all like to help younger siblings, cousins, or church members. This seems to fly in the face of the individualized learning so often stressed in special education. The move toward more inclusion cries for more group activities where students can learn from each other and share their individual strengths with their peers.

This data seems to show that parents and teachers can identify definite strengths in students who have been labeled as learning disabled or intellectually disabled. These

strengths seem to fall outside of those emphasized in educational settings. How do these students' peers see them in terms of strengths? And perhaps more importantly, how do they see themselves? This is what the next chapter will explore.

CHAPTER V

PEER SOCIOGRAM AND STUDENT INTERVIEWS

This research was designed to examine the strengths displayed by students who have been placed in special education under the disability labels of mildly intellectually disabled and specific learning disabilities. Parents, the teacher, the paraprofessional, peers, and the participants themselves were involved in identifying strengths of the four students chosen as participants in the study. These strengths were then compared to the intelligence categories that were identified by Gardner (1983, 1999) in his Theory of Multiple Intelligences. In this second chapter of data representation, I present the results from the peer sociogram completed by participants' classmates and interviews with the four participants introduced in Chapter III. Along with these results are my own reflections on the information gathered as well as remembrances of students whom I served in the past. These reflections served as interpretation of the data collected and will be presented in italics.

The first chapter of data representation included results from parents and the teacher and paraprofessional who are a part of these students' lives. However, I feel it is important to have input from the students themselves as well as their peers. How often in education do we tend to speak for our students without listening to their ideas and concerns? We need to notice our learners, consult with them, and ask along with them, "Why?" (Greene, 1995).

Peer Completed Sociogram

In order to gain input from the students' peers, I developed a sociogram to ask classmates who in the classroom would be best to help write a poem for their mother, or help them with their math homework, or fix their bicycle, or talk to when they were feeling down. All intelligence areas except Intrapersonal were represented in some way on this sociogram. I felt the students would better understand specific examples with graphic representations to guide their thinking on peers who exhibited certain abilities. I attempted to find meaningful examples for this age group to represent each intelligence area recognized in Gardner's theory. I was unable to think of a way to represent Intrapersonal (knowing oneself), so this one was not represented on the sociogram. The directions asked students to name one person from whom they would seek help for the following scenarios: *linguistic*: write a poem for your mom; *logical-mathematical*: help you with your math homework; *spatial*: draw a picture of your favorite cartoon character; *musical*: teach you the words to the newest pop song; *bodily-kinesthetic*: be on your kickball team or help you fix your bike; *interpersonal*: just talk to when you're feeling down; and *naturalist*: answer questions about pets or plants. The students were given the paper, and I then explained each part. Names of all the students in the class were written on the board so that all students in the class were included in the responses rather than only the four participants. On the day this was completed, **Daniel** was absent from the classroom. His name was listed on the board, and I indicated to the students to consider everyone in the class, even those who were absent. However, they tended to look around the room at those in the class, so **Daniel** may have had more responses had he been present that day. A copy of the sociogram is included in Appendix C.

There were seven students in the first class and nine in the second. Two of the four students included in the study were in both classes. The most responses for any one student were three, and three of the four subjects received this number. All three received three responses in two different areas. Response data is presented for graphic representation only in Table 4.

Table 4: Responses by Classmates to Intelligence Categories

Subject	L	L-M	S	B-K	M	Inter	N
Tiffany	1	<u>3</u>	2	1	<u>3</u>	0	1
Veronica	<u>3</u>	1	0	0	2	<u>3</u>	1
Daniel	0	0	0	1	0	1	0
Paige	1	1	0	0	<u>3</u>	<u>3</u>	0

Tiffany received three responses from her peers in the areas of logical-mathematical (Who would you ask to help you with your math homework?) and musical (Who would you ask to teach you the latest pop tune?). **Veronica** received three responses in the areas of linguistic (Who would you ask to help you write a poem for your mom?) and interpersonal (Who would you talk to if you needed a friend to listen?). **Paige** received three responses in the areas of musical and interpersonal.

The fact that two of these three participants were perceived by their peers as strong in musical and interpersonal areas goes along with all other interpretations of the data derived from the parent and teacher surveys. These two areas, along with spatial and bodily-kinesthetic, have appeared as strong points with both parents and the teacher and paraprofessional. It was interesting, I think, that their peers saw one student as

strong in the logical-mathematical area and one in the linguistic area. However, the examples given for these two intelligences were much more limited than those given to the parents and the teacher and paraprofessional. Also, these students were making comparisons in a classroom of students who all have some sort of learning problems. In comparison, some would stand out over others but possibly would not do so in a regular classroom setting. There seemed to be no clear distinction of strengths from this peer activity. Some other students in the classroom who received several responses were very strong personalities. It seemed that the activity turned into more of a popularity contest than a true picture of what these peers perceived as strengths in their classmates. I then turned to the participants themselves in order to hear what each one saw in themselves as strengths. Individual interviews are presented in the next section.

Student Interviews

The student participants were part of one special education teacher's classes under my direct supervision as Special Education Director. These students were in a fourth-fifth-grade center so that the student population was limited to that age group. In reports from the principal and other teachers at the school, I had the feeling that Ms. Jones was an innovative teacher who used varied styles and modalities in her teaching. I also thought that this particular age group would be appropriate for this study. Usually, it is difficult to appropriately place students with learning disabilities until about third grade. Until then, discrepancies are harder to discern. Therefore, those students placed at this level, in my opinion, would be a truer representation of this disability category. Also, I hoped that this age group would not be so caught up in peer pressure yet as to be hesitant to share strengths that might not be seen as "the norm." Having the grade center school, I

believed, would allow the students to be more open to my questions about what they did well. My relationship with the students was one of casual observer in their classroom, and at times, “helper” during their independent seat work and group time. A description of each participant was presented in Chapter III and Chapter IV, but I will now review some of the highlights of those descriptions and also give my own perceptions of these students.

Tiffany was a fourth grader during the time of this study. Her paternal grandmother was raising her due to her mother’s death when Tiffany was around one year old. She has been served in special education since the middle of first grade as a student identified as mildly intellectually disabled. During the time of the study, **Tiffany** was in special education classes for language arts, reading, and math. My observations in the classroom revealed a young girl eager to learn, and willing to try hard. In group activities, she tended to be a leader and organizer, and seemed very proud when her group finished early. She tended to seek help from her peers more than from the teacher or paraprofessional. **Tiffany’s** grandmother identified the bodily-kinesthetic area as a strength for her. She reported that **Tiffany** is involved in cheerleading and enjoys that activity. She also stated that **Tiffany’s** discipline problems from school stem from being out of her seat and talking too much (Chapter IV, p.107). Ms. Jones and Ms. Fields, the teacher and paraprofessional, identified the musical intelligence area as Tiffany’s strength. During the individual interview, she was quiet and reserved, and I felt I had to pull responses from her. **Tiffany** always seemed well groomed, and was very conscious of her appearance. Her hair was usually braided and adorned.

Veronica was also in fourth grade during this study. She has been served in special education since mid-first grade also. However, she is served under the specific learning disabilities area and has been found to display a processing deficit in short-term memory that has impacted her reading, writing and math skills. During the school year of the study, **Veronica** was reevaluated to determine if she still qualified for special education services. This testing revealed that she no longer displayed a significant discrepancy in her math skills and her cognitive ability, so she was to return to the regular education math class the next school year. In the classroom, she was much more hesitant than the other students, and often held back on trying things until she had some sort of affirmation from the teacher or paraprofessional. She would leave the group during group work and seek out Ms. Fields, the paraprofessional, to work with her one-on-one. Both her mother and Ms. Jones, the teacher, identified **Veronica** as a perfectionist who doesn't like to get anything wrong. She, however, readily went with me to the individual interview, and opened up to my questions better than any of the other participants. She had a radiant smile, and also seemed anxious to learn.

Daniel, the only boy in the study, was in fifth grade during the time this research was conducted. He, also, was served in special education under the specific learning disabilities category. He has been receiving services since the second grade in reading and written expression. His processing deficits were found to be in auditory processing and long-term memory. In the classroom, **Daniel** seemed very quiet and somewhat of a loner. He reluctantly participated in the group activities, but clearly would have preferred to work on his own. His mother indicated that he sees himself as "the man of the house" as there is no father figure present. Ms. Jones indicated that he has a very good

vocabulary, and seems more mature than some of the other boys in her classroom. He came hesitantly to the individual interview, and was reluctant in giving answers. **Daniel** seemed larger in size to some of the other boys. He was always well groomed.

Paige was also a fifth grader during the time of the study. She was referred to special education when she was in second grade, after having been retained in kindergarten. She has been served in reading, language arts, and math under the mildly intellectually disabled category. She was also noticeably larger than the other students in the class. **Paige** also was reluctant when it came to working with a group. She was more often placed with boys rather than the other girls, and she did not offer comments to the group discussions unless forced to by Ms. Jones. During the parent interview, her mother pointed out that she was very young when she had **Paige**, and that they had sort of “grown up together.” She thought that **Paige** was more mature than other students her age, and really got along better with adults. Ms. Jones referred to **Paige** as “street smart” and thought that she often intimidated the other students. **Paige** came willingly to the individual interview, but had a hard time relating her strengths to me. I was not sure if she just had difficulty in realizing what she was good at, or if she was just hesitant with me.

An interview was conducted with each student to review data collected from their parents, teachers and peers. The students were taken from their special education classroom to the guidance office. The interviews were audio taped for review at a later time. The interviews were conducted during the spring of 2003. The students were asked what they perceived as strengths in themselves. They were also asked what they found easy in school, and what they found hard. Another question asked for examples of things

they had done well, and found easy to do. The final question inquired what the student wanted to be when she/he grew up. A copy of the student survey can be found in Appendix C.

The striking part of these interviews for me was the smiles that radiated on all of the students' faces as I reviewed what others had named as strengths. Each one nodded, and showed extreme pride in body language as the areas were discussed. Everyone but Daniel indicated that they agreed with what others had said. Daniel pointed out that he did not enjoy "messy" hands-on type activities that Ms. Jones had indicated. In the following section, some of the interview questions are posed, student responses are presented, and analysis of these interview responses is represented in italics.

.....
 • *What do you see as strengths for you? What do you think you are good at?* •

Tiffany: Cheerleading, bike-riding, checkers, soccer

Veronica: Math, puzzles, bike-riding, running through the corn, picking peas

Daniel: Drawing, sports, video games, swimming

Paige: Math, social studies, cheerleading, teaching

*When asked to name their own strengths, all of the students seemed to struggle. I had to probe and pull from them responses to this question. All four responded with some sort of physical activity. These activities would fall under the bodily-kinesthetic intelligence field. Also included were puzzles, drawing and video games. These skills could be included in spatial intelligence indicators. **Paige's** response of teaching might be seen as an interpersonal intelligence indicator for her. Not only did the participants indicate motor or bodily-kinesthetic skills as strengths, but these skills were also reported in responses from parents, the teacher, and the paraprofessional. Both **Daniel** and*

Veronica: When I learned a song for church.

Daniel: When I made a volcano for a science project.

Paige: *Unable to give a response*

*In response to this question, these students again included hands-on and musical activities. I found it very disturbing that **Paige** was unable to give one example of something she was proud of doing. My mind began to wander again to the past. I remembered the time that that Paul gave me a tape of music that he had composed. It was very restful and peaceful, much like his personality. He was very quiet in his classes, not wanting to be called on to read. I remembered Dustin and Chris who were the leaders in their vocational classes. These were the boys others came to for help with projects in welding or auto mechanics shop. Yet, Chris buried his head in his coat in math class in order to become invisible so that his frustration wouldn't show. Then there was Donte, the star football player, who was devastated when he could not move on in school to play longer because he was graduating with a special education diploma. How could these kids have been reached to use these strengths to find success in the academic classrooms?*

*Except for **Daniel's**, none of the responses had to do with school related activities. It appears that these students see themselves as successful only outside of the classroom walls. **Daniel's** response was one of a project that related to science class, not the everyday classroom activity. The teacher and paraprofessional indicated that all of the participants become eager and rush to the tables for art activities (Chapter IV, p. 108). As Dewey (1910) pointed out, perhaps we could move children with our school subjects if we merely set them in a different context or treated them by a different method.*

.....
 :What do you enjoy doing when you can choose to do anything? :

Tiffany: Playing with my baby dolls and Easy Baker.

Veronica: Playing games with other people outside, like hide-and-seek.

Daniel: Playing outside.

Paige: Helping my teachers, and cleaning up.

Other than Paige, all responded as typical kids, saying they liked playing. Ms. Jones and Ms. Fields relayed that these students all enjoy participation in field day and Special Olympics. Daniel and Paige's mothers acknowledged that they enjoy time outside playing with peers, and have lots of friends. Tiffany and Victoria's grandmother and mother indicated that they have few peers near their homes, but these girls enjoy times when cousins come over to play (Chapter IV, p. 109).

Lundin, Paul, and Christensen (2000) include play as a part of their FISH! Philosophy for boosting morale and improving results in the workplace. Could we begin to make school fun? Could we as educators become children again and remember what it is like to learn from our play? An important element of play is imagination. Research has shown that imagination and play are bases for learning and logical and divergent thinking (Henry, 2000, Peisach & Hardeman, 2001, Russ, 2003). In the atmosphere of standardized testing and standards based learning, schools often allow many imaginative students to go unrecognized and let their gifts remain untapped. It is hard to focus on creativity when the focus of the system is on numbers, words, and abstract concepts rather than on images, pictures, and metaphors. Often these are the students who are labeled as SLD or ADD because nobody has been able to make use of their talents in a school setting (Armstrong, 2000a). Once these students are labeled, seldom are they

looked upon as “beings capable of imagining, of choosing, and of acting from their own vantage points on perceived possibilities” (Greene, 1995, p.41). Their voices cry to be heard.

.....
 : *What do you find easy to learn about?* :

Tiffany: Science because after we read about it, we make things and do activities and experiments.

Veronica: Social studies because we learn about armies back in the past. Ms. S reads it to us, and then we talk about it and think about it.

Daniel: Math because I don't have to read much, and when I don't know it, I can do it on my hands.

Paige: Reading because spelling is easy for me, and then I can learn to read. I just say my words over and over until I learn them.

The responses to this question varied. Yet all indicated that there were activities included to supplement gaining the knowledge from reading a text: science experiments, class discussions in social studies, saying spelling words over and over, and using fingers to do math. These are activities that would fall under Gardner's (1983, 1999) bodily-kinesthetic (hands-on) intelligence activities, interpersonal (class discussion) activities, and Dunn and Dunn's (1978) auditory learning styles (class discussions and repeating spelling words over and over). My experience as a teacher led me to the belief that students who have trouble with some academic subjects, such as reading and math, are not necessarily inadequate in all areas. Many of these students exhibited strengths and interests in areas such as music, sports, art, and vocational programs. Chen and Gardner (1997) maintain that when students recognize that they are good at something and have

their success acknowledged by teachers and classmates, they are more likely to engage in areas where they feel less comfortable. Incorporating projects and other forms of displaying knowledge, more students would be able to gain this sense of success, such as Daniel with his volcano for science.

.....
 :What is it about school that makes it hard?:

Tiffany: The work.

Researcher: Can you be more specific? Which work is hard?

Tiffany: Social Studies.

Researcher: What makes it hard? The reading? Having to write about it? Remembering the material?

Tiffany: Thinking all about it.

Veronica: Reading.

Daniel: The work.

Researcher: Can you be more specific? Which work is hard?

Daniel: Science

Researcher: What makes science hard? Reading the material? Having to write it down? Remembering things for the tests?

Daniel: Reading

Paige: Science

Researcher: What makes science hard? The reading of the material? Writing down what you've learned? Remembering things for the tests?

Paige: The tests and having to read to get the information.

*It appears that these students can gain the information for their content area classes through discussions or hands-on projects, but struggle when they have to gain the knowledge by independently reading the textbook. Again, the indication seems to be that instructional strategies that include group discussions, projects, and hands-on learning could provide these students an arena within the regular education classroom where they could be successful. Ms. Jones involved oral reading of stories in her classroom, and then allowed students to discuss comprehension questions. **Victoria's** mother said that **Victoria** remembers details from things that are read to her. Dewey (1938) reminded us all that rote learning of reading and math in a classroom does not "automatically constitute preparation for their right and effective use under conditions very unlike those in which they were acquired" (p. 47). Mayhew and Edwards (1936) described how academic skills were learned through meaningful activities at the Dewey School.*

In interviews with teachers who had been involved in implementation of multiple intelligence programs, Campbell and Campbell (1999) found that multiple intelligences provides a new lens to perceive students and a new tool for acting on that information. Rather than perceiving students as defective, these teachers intentionally sought strengths in every student. With the belief firmly in place that all students possess strengths, student talents can be used strategically. The theory of multiple intelligences has important implications for how we can assess students. Walters and Gardner (1990) explain that assessments of ability and learning should engage students in performances in which they "handle the actual materials of a given domain and mobilize a number of different intelligences" (p. 88). One way to accomplish this is through the use of projects.

Summary

Responses related to strengths from peers and from the students themselves were not as easily forthcoming as from the adults who were interviewed. I find this disturbing, as it appears that students find it more difficult to find strengths in themselves, especially when related to a school setting. Each of these students obviously has strengths and abilities. However these students have been so used to having their weaknesses pointed out, they find it difficult to recognize areas of strength. I wonder if the categories created by Gardner might not be the way that students are able to recognize their own strengths. It would appear that this is something that should be addressed in the way instruction is delivered in our classrooms.

There is a fable I found that seems to fit the situation of schooling today. It is attributed to George H. Reavis in *Chicken Soup for the Soul* (1993) but is also told by Leo Buscaglia in his book, *Love* (1972). The fable is called *The Animal School*, and it is the story of a rabbit, a bird, a squirrel, a fish, and an eel that came together and formed a Board of Education and began a school. Each animal insisted on their area of expertise being included in the Curriculum Guide, and that all students must take and pass all subjects. The rabbit was doing great in running, but due to brain injury suffered from falling during perpendicular tree climbing, he could no longer run as well. He ended up making a C in running and an F in tree climbing. The bird was excelling in flying, but due to damage to his wings and beak suffered in burrowing, he made a C in flying, as well as an F in burrowing. He also did very poorly in perpendicular tree climbing. The valedictorian ended up being the eel that did all classes in a half-way fashion. But the educators were all happy because everyone took all subjects, and the forest was involved

in broad-based education. This is not so funny when we look at what we do to children every day in our current system of accountability based on standardized curriculum and testing. The “Individual” from the Individual Educational Plan of special education even seems to be in jeopardy because of testing requirements under the *No Child Left Behind Act* (2001). So, what does Gardner’s theory, this study, and my own reflections have to say about the mindset of The Animal School? That is the focus of the final chapter.

CHAPTER VI

SUMMARY AND REFLECTIONS

In this chapter, I will summarize five findings which emerged from this dissertation study in to strengths observed in students who have been labeled in mildly disabled categories in special education and how these strengths relate to Gardner's (1983, 1999) Theory of Multiple Intelligences. The findings include: (1) Parents, the teacher and paraprofessional were able to recognize distinct strengths in the student participants. (2) The students themselves had difficulty naming their strengths. (3) The strengths observed by the parents, the teacher and paraprofessional, and those identified by the student participants, particularly spatial, bodily-kinesthetic, musical, and interpersonal intelligence patterns as identified by Gardner, were areas most neglected by our school curriculum. (4) Example given by the student participants of what they found easy to learn were hands-on or experiential types of activities. (5) The eight intelligence categories formulated by Howard Gardner (1983, 1999) do not fully capture the way these students demonstrated strengths in the classroom and at home.

My initial interest in this study came from reading Gardner's book, *Intelligence Reframed: Multiple Intelligences for the 21st Century* (1999). While reading about Gardner's theory, I began to remember so many of my former students who had been labeled as special education students yet displayed many of the indicators listed under several of Gardner's multiple intelligences. I found myself looking at these students in a different light, seeing these talents, strengths, abilities as ways of being intelligent made me wonder if I would have changed the way I taught them had I defined their talents

differently. Mettetal, Jordan, and Harper (1998) discovered that learning about multiple intelligence theory changed the ways teachers think about students' abilities and the ways they teach.

I then read Thomas Armstrong's (1987) dissertation where he explored the strengths of students labeled as learning disabled using Gardner's theory. This dissertation gained information from these students' parents as to what strengths they displayed. I wanted to expand that to include teachers, peers, and the students themselves. I also wanted to explore students who had been labeled as mildly intellectually disabled, as some of the students from my past had fallen under that category.

The research was conducted in a small South Georgia county. The four participants were all part of one teacher's fourth and fifth grade special education classes. Two of the students were labeled as mildly intellectually disabled while the other two were labeled as learning disabled. Two were fourth graders and two were fifth graders. There was one boy and three of the four participants were African-American.

The theoretical framework of the study was grounded in Dewey's (1910) theory of education, specifically transformative thinking, and Greene's (1995) theory of releasing the imagination. Methodologically, it was grounded in Van Manen's (1990) phenomenological hermeneutics and Clandinin and Connelly's (2000) narrative inquiry. The research consisted of classroom observations, parent surveys and interviews, teacher survey and interviews, a peer sociogram, and student participant interviews. The study was completed during the 2002-2003 school year with some follow-up during the 2003-2004 school year. Parents were contacted by telephone to explain the study, and then were met either at their home or at the researcher's office to complete the survey and

interview process. The teacher and paraprofessional in the classroom were interviewed together as the survey was completed. This interview was conducted in the teacher's classroom during her planning period. Student participants were interviewed in the guidance office at the school during a part of their special education class time. All interviews were audio taped and transcribed.

The number of participants in the study was small, and could cause difficulty in seeing the results in a generalized way. The participants were all from the same school and same geographical area, which could be a factor in any similarities seen in perceived strengths. They also were all about the same age. In addition, I heavily relied on my experiences from the past with students in my teaching career that had exhibited strengths in areas identified as intelligences by Gardner (1983, 1999). This caused me to focus on Gardner's categories as I explored the strengths in other students. I attempted to remain open to the results as they surfaced without making judgments unless the data clearly indicated the findings. My desire from the beginning has been to present students who have been labeled as "disabled" in the light of their strengths. Rather than the story of their failures and weaknesses, I wanted to tell the stories of their triumphs and strengths. It is my hope that this dissertation has done that, even with this small population of students in the present, as well as the reflections of my former students from my past.

As I reviewed the data collected, I realized that the parents and teacher and paraprofessional were able to recognize distinct strengths in the four student participants (**Finding 1**). Survey data revealed that parents identified strengths that would fall under Gardner's (1983,1999) bodily-kinesthetic intelligence area as most prevalent in these students. Some examples of items identified were enjoys "messy" activities, good at

sports, likes physical activity, and learns by touch. The teacher and paraprofessional identified musical activities such as remembering songs, having a good singing voice, singing to oneself, and being sensitive to environmental noise most often. This area was the second highest identified by parents. The teacher and paraprofessional identified spatial and interpersonal intelligence activities as the second highest in their survey. These included activities such as liking movies, slides, and photos; enjoying puzzles and mazes; and daydreaming under spatial activities. The interpersonal skills most identified included socializing, being “street smart”, enjoying teaching others and group games.

This supports Armstrong’s (1987) findings of bodily-kinesthetic and spatial intelligence skills being prevalent for the group of learning disabled students he studied. Armstrong (2000a) found that students who show high levels of bodily-kinesthetic intelligence may be at risk of being labeled as attention deficit hyperactivity disorder. He also found that students who are highly developed in spatial intelligence sometimes have difficulty in school and can be labeled as “dyslexic” or “learning disabled” because of their problems decoding words.

This finding supported my own belief that students who are labeled as disabled are truly very able in other areas that are not emphasized in a standardized-testing driven classroom. During my dissertation inquiry, I questioned the system in place for labeling these students. I also struggled with the questions of cultural bias of the IQ testing used to determine a child’s ability to learn. I wondered if there should be a better way to determine potential in children instead of labeling them.

I realize that as an administrator I needed to address these questions in special education. I could begin by enlightening general education teachers involved in the

Student Support Team process. These teachers could be the gatekeepers of referrals for testing by focusing on students' strengths and incorporating multiple ways of presenting information as well as multiple avenues for students to display what they know.

In my conversations with the student participants, I discovered that these children had difficulty recognizing their own strengths (**Finding 2**). Once I encouraged them by sharing what others saw as strengths in them, they were able to tell me things they felt they did well. The things identified most often were physical activities such as cheerleading, bike-riding, soccer, running, and sports. Also identified by these students were items that would fall under Gardner's (1983) spatial intelligence category such as puzzles, drawing, and video games. Two of the students, **Paige** and **Veronica** identified math as a strength area for them.

The physical activities and spatial examples fall right into the strengths identified by the parents, the teacher and paraprofessional in these students' lives. These are also the areas I most vividly remember in students I taught in the past. Gardner (1993) stressed the importance of taking seriously each child's proclivities, interests, and goals in a classroom. In doing so, teachers could then help each student realize her/his potentials.

This finding also made me consider ways that I could encourage my fellow educators to seek out their students' interests and strengths. I could begin with the special education teachers I oversee in my work. Perhaps I could encourage each of them to begin each school year with some sort of interest survey for their students. Through monthly meetings, ways to incorporate teaching strategies that address the different interests identified could be explored. Group sharing of strategies that have worked in

certain situations could be shared. In time, these ideas might make it back to the regular education teachers in the schools, and who knows what could happen to the instructional climate in our system!

In my inquiry, I also found that strengths observed by the parents, the teacher and paraprofessional and those identified by the student participants, particularly spatial, bodily-kinesthetic, musical and interpersonal intelligence patterns as identified by Gardner, were areas most neglected by our school curriculum (**Finding 3**). In addition, the strengths identified least by parents were found often in intelligence categories most highly prized in our school curriculum, such as linguistic and logical-mathematical skills. These skills were also rated low by the teacher and paraprofessional.

Interview data from the student participants was consistent with the parent and teacher perspectives. Students listed physical activities and drawing, puzzles and video games as their areas of strength. All of these would fall into the bodily-kinesthetic and spatial domains. When asked what made school hard, all of the student participants indicated that their having to read to gain information, which could be seen as a major indicator of strength in the linguistic intelligence area according to Gardner. Two of the students indicated that math was a strength, and one said that math was easy to learn because he could “use my hands to get the answer” (Chapter V, p. 123). Parents, the student participants’ teacher and paraprofessional all indicated that these students enjoyed listening to stories and they were good story tellers.

These observations indicated that it is difficult to limit strengths to just one or two areas of Gardner’s Theory of Multiple Intelligences. All of the participants displayed “peaks” in two to four areas from the data collected from the parents, the teacher and

paraprofessional in their lives. This seemed to indicate that students who struggle in the conventional classroom may be complex creatures who have different patterns of learning. I also found myself wondering if the eight intelligence categories identified by Gardner could give a true picture of how this group of students best learns. It was evident that their learning needs were diverse and not always addressed in what might be considered a “regular” education classroom. This would lead one to consider that to better reach these students, our classrooms need to be diverse and offer differentiated instruction strategies in order to meet the needs of all students.

As I reflected on what these students relayed as something they did well and found easy to do, I was keenly aware that the examples all had to do with physical movement and hands-on learning activities (**Finding 4**). This finding reflects on the idea of experiential learning espoused by Dewey (1910, 1938). To make learning meaningful, the student must make connections between education and experiences in order to become engaged in the learning not only academically but also physically. It should be the teacher’s responsibility to utilize the surroundings, physical and social, that exist so that they contribute to building worthwhile experiences. It seems to me that actively involving students would best lead to these types of experiences. The implementation of multiple intelligences theory into practice has created space in schools and classrooms where success could be achieved by all students (Campbell & Campbell, 1999; Hoerr, 2003). This success came from practices such as multimodal learning, flexible grouping, self-directed projects, and portfolio assessment. These schools narrowed the achievement gaps between minority and lower socio-economic students to the middle class student population. These are groups often found in special education programs.

As I compiled the information from all of my sources, I became aware that no clear-cut picture seemed to emerge for any of these students. This made me wonder that the eight intelligence categories formulated by Howard Gardner (1983, 1999) cannot fully capture the ways these students demonstrated strengths in the classroom and at home (**Finding 5**). I thought back to how Gardner came to his theory, and realized that his findings were based on experiences with brain damaged adults and gifted children. I reexamined his criteria for each intelligence area and became aware that there were limitations in them.

This was most evident to me in the area of musical intelligence and how it was recognized in the student participants in my study. These were not musical prodigies, but these students all seemed to enjoy music and could learn song lyrics easily even if they could not read them. Certainly there were cultural indications from the African-American parents and the importance of music in their churches. The lens of multicultural education is one that should be viewed. I found myself wondering if these weren't just kids who enjoy the music of their generation and the voice that it gives them. The pop culture lens is another to explore in this area. There also is interesting research on the effects of music on the brain through the use of brain imaging. Brain-based learning is an avenue that should be investigated, too.

The current “cookie cutter” approach in education could be the cause of the increase in identification of students with learning difficulties. As Armstrong (2001) expressed in his work:

Many students labeled as having learning, attention, and behavioral disorders may have brains that are not necessarily abnormal but rather that are different.

When we value only restricted ways of learning, behaving, and attending—especially high-stakes-testing learning, sit-down-in-your-seat-and-look-at-the-blackboard behaving, and focus-on-the-vocabulary-word attending—then we ignore, stifle, or repress the other marvelous things that a student’s brain might be capable of doing. (Armstrong, 2001, p.40)

So how would a classroom that embraced a multiple intelligences way of looking at things differ from a traditional classroom? Teachers would consider that students are all smart, but in different ways. They would use all of the intelligences to help students learn, thus creating a child-centered classroom. Teachers would create curriculum by using lessons, units and themes. They would also create their own assessment tools that might include projects, exhibitions, and portfolios. Most importantly, who you are would be more important than what you know (Hoerr, 2003, p. 94).

It now becomes my challenge to lead the teachers with whom I work into creating classrooms that exhibit such a climate. But, it needs to move beyond the special education classroom, and into the classrooms of the general education population. I wish the mandates of *No Child Left Behind* (2001) could encourage educators to bring our own unique strengths, or intelligences, to the fullest potential to create a learning community that values diversity. Sapon-Shevin (2003) reminds us that when one student is not fully participating in his or her school community, then we are all at risk. We should embrace the inclusion of special education students into the general education classroom as a model of social justice. By doing this, maybe we can create a world fit for us all.

The dissertation must be completed, but my inquiry into the area of multiple intelligences has raised more questions in my mind. The fact that musical intelligence

was a strong factor with these particular participants intrigues me. This was not particularly evident in other research that I studied. Music has always been a vital part of my own life, and so this is an avenue that I would like to explore more in the future. I still feel strongly that my own perceptions of past students changed when I began to think of their talents and abilities in terms of intelligences. I would like to explore this aspect further. I would also like to encourage other special education as well as general education teachers to recognize abilities in students who struggle and to consider if these abilities might be a part of what we call intelligence. According to an article by Anne Lewis (2002), the number of children eligible for special education and special accommodations increased 65% between 1977 and 2000. This demonstrates that we are missing the boat in reaching students in our regular education curriculum. Those of us in special education need to collaborate with those in regular education to somehow stop this increase in labeling students as disabled. It appears that the quest initiated in my dissertation inquiry must continue.

I have grown from this dissertation experience not only professionally but also personally. I have begun to see the signs of multiple intelligences in the teachers I oversee. I have a new appreciation for the gifts each of my own children possess. I look forward to seeing the unique personalities emerge through the multiple intelligences of my current grandchildren and many others, and, hopefully, from generations to come. Once we find the strengths of these generations through multiple intelligences, we will realize that we are not all the same.

These diversities were brought home to me while reading again in that “scholarly” series of *Chicken Soup for the Soul*. This particular piece was a part of the *Chicken Soup*

for the Woman's Soul (1996) edition. Robert Fulghum tells of organizing a game of Giants, Wizards, and Dwarfs for a large group of children under his care. As all of the others were racing around to decide which of these three categories they would choose, one small girl tugged at Fulghum's pant leg and asked, "Where do the Mermaids stand?" Even when told there were no such things as Mermaids, she insisted that she, indeed, was one. Fulghum continues:

She did not relate to being a Giant, a Wizard, or a Dwarf. She knew her category, Mermaid, and was not about to leave the game and go over and stand against the wall where a loser would stand. She intended to participate, wherever Mermaids fit into the scheme of things, without giving up dignity or identity....

Well, where *do* the Mermaids stand? All the Mermaids — all those who are different, who do not fit the norm, and who do not accept the available boxes and pigeonholes?

Answer that question and you can build a school, a nation, or a world on it.

(p. 63)

Our classrooms are full of Mermaids and Mermen. Perhaps a classroom that is open to finding the place for these Mermaids and Mermen to stand is one that explores the idea of multiple intelligences, multiple ways of engaging in learning, multiple ways of thinking, and multiple ways of educating human beings.

REFERENCES

- All kinds of smarts. (1999). *NEA Today*, 17(6), 42.
- Armstrong, T. (1987). Describing strengths of children identified as "learning disabled" using Howard Gardner's theory of multiple intelligences as an organizing framework. University Microfilms International, Ann Arbor, MI. (UMI No. 87258).
- Armstrong, T. (2000a). *In their own way: Discovering and encouraging your child's multiple intelligences*. New York: Jeremy P. Tarcher/Putnam.
- Armstrong, T. (2000b). *Multiple intelligences in the classroom* (2nd ed.) Alexandria, VA: Association for Supervision and Curriculum Development.
- Armstrong, T. (2001). IKSVAL: Interesting kids saddled with alienating labels. *Educational Leadership*, 59 (3), 38-41.
- Beltzman, J. (1994). A case study describing the application of Howard Gardner's theory of multiple intelligences as applied to the teaching of learning disabled students. Doctoral Dissertation. UMI Dissertation Services, Ann Arbor, MI. (UMI No. 9536766).
- Boggeman, S., Hoerr, T., & Wallach, C. (Eds.). (1996). *Succeeding with multiple intelligences: Teaching through the personal intelligences*. St. Louis, MO: The New City Schools.
- Buscaglia, L. (1972). *Love*. New York: Fawcett Crest.
- Campbell, L., & Campbell, B. (1999). *Multiple intelligences and student achievement: Success stories from six schools*. Alexandria, VA: Association for Supervision and Curriculum Development.

- Campbell, L., Campbell, B., & Dickinson, D. (1996). *Teaching and learning through multiple intelligences*. Needham Heights, MA: Allyn & Bacon.
- Checkley, K. (1997). The first seven...and the eight. *Educational Leadership*, 55(1), 8-14.
- Chen, J., & Gardner, H. (1997). Alternative assessment from a multiple intelligences perspective. In B. Torff (Vol. Ed.), *Multiple intelligences and assessment: A collection of articles* (pp. 27-54). Arlington Heights, IL: SkyLight.
- Clandinin, D., & Connelly, F. (2000). *Narrative inquiry: Experience and story in qualitative research*. San Francisco, CA: Jossey-Bass.
- Cole, A., & Knowles, J. (2000). *Researching teaching: Exploring teacher development through reflexive inquiry*. Boston, MA: Allyn & Bacon.
- Collins, J. (1998). Seven kinds of smart. *Time*, 152(16), 94-96.
- Commission report calls for special education reform. (2002). *CEC Today*, 9(3), 1, 5.
- Delpit, L. (1995). *Other people's children: Cultural conflict in the classroom*. New York: The New Press.
- Denzin, N., & Lincoln, Y. (1998). *The landscape of qualitative research: Theories and issues*. Thousand Oaks, CA: Sage.
- Dewey, J. (1910). *How we think*. Boston: D.C: Heath & Co.
- Dewey, J. (1938). *Experience and education*. New York: Touchstone.
- Diamond, M., & Hopson, J. (1998). *Magic trees of the mind: How to nurture your child's intelligence, creativity, and healthy emotions from birth through adolescence*. New York: Penquin Putnam.
- Dobbs, V. R. (2001). The relationship between implementation of the multiple intelligences theory in the curriculum and student academic achievement at a seventh grade at-risk alternative school. Doctoral Dissertation. UMI Dissertation Services, Ann Arbor, MI. (UMI No. 3027334)
- Dunn, R., & Dunn, K. (1978). *Teaching Students Through their Individual Learning Styles: A Practical Approach*. Reston, VA: Reston Publishing.

- Eberstadt, M. (1999). The schools they deserve. *Policy Review*, 97, 3-17.
- Eisner, E. (2000). Where we are going. In J. D. Marshall, J. T. Sears, & W. H. Schubert (Vol. Eds.), *Turning points in curriculum: A contemporary American memoir* (pp. 142-146). Upper Saddle River, NJ: Merrill.
- Elm View Elementary School (Pseudonym). (2003). *Five-year self study: Focusing on student improvement*. Wetzel County (Pseudonym) Public Schools: Wetzel, County, GA.
- Field, R. (2001). John Dewey. In *The internet encyclopedia of philosophy*. Retrieved November 17, 2002, from <http://www.utm.edu/research/iep/d/dewey.htm>.
- Foucault, M. (1995). *Discipline and punishment: The birth of the prison* (2nd ed.) New York: Vintage Books.
- Friend, M., & Bursuck, W. D. (1999). *Including students with special needs: A practical guide for classroom teachers* (2nd ed.) Boston: Allyn & Bacon.
- Fulghum, R. (1996). Where do the mermaids stand? In J. Canfield, M. Hansen., J. Hawthorne, & M. Shimoff (Vol. Eds.), *Chicken Soup for the Woman's Soul* (pp. 62-64). Deerfield Beach, FL: Health Communications.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.
- Gardner, H. (1991). *The unschooled mind: How children think & how schools should teach*. New York: Basic Books.
- Gardner, H. (1993). *Multiple intelligences: The theory in practice*. New York: Basic Books.
- Gardner, H. (1995). Reflections on multiple intelligences: Myths and messages. In A. C. Ornstein & L. S. Behar-Horenstein (Vol. Eds.), *Contemporary issues in curriculum* (pp. 235-243). Needham Heights, MS: Allyn & Bacon.
- Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century*. New York: Basic Books.

- Gardner, H. (2000). *The disciplined mind: Beyond facts and standardized tests, the K-12 education every child deserves*. New York: Penguin Books.
- Gee, J., Hull, G., & Lankshear, C. (1996). *The new work order: Behind the language of the new capitalism*. Boulder, CO: Westview Press.
- Gibson, B., & Govendo, B. (1999). Encouraging constructive behavior in middle school classrooms: A multiple intelligences approach. *Intervention in Schools and Clinic*, 35(1), 16-21.
- Giroux, H. (1999). *The mouse that roared: Disney and the end of innocence*. Lanham, MD: Rowman & Littlefield.
- Green, M. R. (1996). Perceptions of stakeholders that influence decision making involved in special education placements in the public school system. *Unpublished doctoral dissertation*. University of Wisconsin, Madison, Wisconsin.
- Greene, M. (1995). *Releasing the imagination: Essays on education, the arts, and social change*. San Francisco, CA: Jossey-Bass.
- Henderson, J., & Hawthorne, R. (2000). *Transformative curriculum leadership*. Upper Saddle River, NJ: Prentice Hall.
- Henry, Mallika (2000). Drama's way of learning. *Research in Drama Education*, 5, (1), 45-62. Retrieved June 20, 2003, from Academic Search Premier database.
- Herrnstein, R., & Murray, C. (1994). *The bell curve: Intelligences and class structure in American life*. New York: Free Press.
- Hoerr, T. (2003). It's no fad: Fifteen years of implementing multiple intelligences. *Educational Horizons*, 81(2), 92-94.
- Hogan, C. (1996, Spring). The intelligence of play. *Touch the Future*, 33-34.
- Horn, W., & Tynan, D. (2001). Time to make special education "special" again. In C. Finn,, A. Rotherman, & C. Hokanson (Vol. Eds.). *Rethinking special education for a new century*. Washington, DC: The Thomas B. Fordham Foundation.
- Retrieved July 21, 2003 from <http://www.g-case.org>.

- Husserl, E. (1931). *Ideas: General introduction to pure phenomenology* (W. G. Gibson, Trans.). London: George Allen & Unwin Ltd. (Original work published 1913)
- Jacobs, E. (2001). Treating Huckleberry Finn: A new narrative approach to working with kids diagnosed ADD/ADHD. *American Journal of Psychotherapy*, 55 (3), 442-444. Retrieved June 18, 2003 from Proquest database.
- Janesick, V. (1998). The dance of qualitative design: Metaphor, methodology, and meaning. In N. Denzin & Y. Lincoln (Eds.), *Strategies of qualitative inquiry* (pp. 35-55). Thousand Oaks, CA: Sage.
- Jensen, E. (2000). *Brain-based learning* (Rev. ed.) San Diego, CA: The Brain Store.
- King-Sears, M. E. (2001). Three steps for gaining access to the general education curriculum for learners with disabilities. *Intervention in School and Clinic*, 37(2), 67-76.
- Legislative history of special education*. Retrieved April 23, 2003, from Parents United Together: <http://www.parentsunitedtogether.com/page15.html>
- Lerner, J. (1981). *Learning disabilities: Theories, diagnosis, and teaching strategies* (3rd ed.). Boston: Houghton Mifflin.
- Lewis, A. (2002). The will to leave no child behind? *Phi Delta Kappan*, 8 (5), 343-344.
- Lundin, S., Paul, H. & Christensen, J. (2000). *FISH!* New York: Hyperion.
- Marshall, C., & Rossman, G. (1999). *Designing qualitative research* (3rd ed.) Thousand Oaks, CA: Sage.
- Mayhew, K., & Edwards, A. (1936). *The Dewey school: The laboratory school of the University of Chicago, 1896-1903*. New York: Atherton Press.
- McLaughlin, M, & Henderson, K. (2000). Defining U.S. special education into the twenty-first century. In M. A. Winzer & K. Mazurek (Eds.), *Special education in the 21st century: Issues of inclusion and reform* (pp. 41-61). Washington, D.C.: Gallaudet University Press.

- Mettetal, G., Jordan, C., & Harper, S. (1998). Attitudes toward a multiple intelligences curriculum. *Journal of Educational Research, 91*, (2). Retrieved June 20, 2003, from Academic Search Premier database.
- Miller, L. (1993). *What we call smart: A new narrative for intelligence and learning*. San Diego, CA: Singular Publishing Group.
- No child left behind act of 2001: Implications for special education policy and practice* (2003, January). Retrieved February 4, 2003, from Council for Exceptional Children: <http://www.cec.sped.org/pp/NCLBside-by-side.pdf>
- No child left behind: A desk reference*. Retrieved November 16, 2002, from <http://www.ed.gov/offices/OESE/reference.html>
- Paige, R. (2002). *Letter to education officials regarding the implementation of the No Child Left Behind Act*. Retrieved February 10, 2003, from <http://www.ed.gov/News/Letters/020724.html>
- Peisach, E. & Hardeman, M. (1985). Imaginative play and logical thinking in young children. *Journal of Genetic Psychology, 146*, (2), 233-248. Retrieved June 20, 2003, from Academic Search Premier database.
- Phillion, J., & He, M. F. (2001). Narrative inquiry in educational research. *Journal of Critical Inquiry into Curriculum and Instruction, 3*(2), 13-19.
- Pinar, W. F., Reynolds, W. M., Slattery, P., & Taubman, P. M. (1995). *Understanding curriculum*. New York: Peter Lang.
- Poplin, M. (1984). Summary rationalizations, apologies and farewell: What we don't know about the learning disabled. *Learning Disabilities Quarterly, 7*, 133.
- President's Commission on Excellence in Special Education. (2002). *A new era: Revitalizing special education for children and their families*. Retrieved March 7, 2003, from <http://www.ed.gov/inits/commissionsboards/whspeialeducation>
- Pugach, M. (2001). The stories we choose to tell: Fulfilling the promise of qualitative research for special education. *Exceptional Children, 67*(4), 439-453.

- Purpel, D. (1989). *The moral and spiritual crisis in education: A curriculum for justice and compassion in education*. New York: Bergin & Garvey.
- Reavis, G. (1993). The animal school. In J. Canfield & M. Hansen (Vol. Eds.) *Chicken Soup for the Soul* (pp. 95-96). Deerfield Beach, FL: Health Communications.
- Reed, R. F., & Johnson, T. W. (2000). *Philosophical documents in education*. New York: Addison-Wesley Longman.
- Ricoeur, P. (1974). *The conflict of interpretations: Essays in hermeneutics* (K. McLaughlin, Trans.). Evanston, IL: Northwestern University Press. (Original work published 1969)
- Rothstein, L. F. (1995). *Special education law* (2nd ed.) New York: Longman.
- Russ, S. (2003). Play and creativity: Developmental issues. *Scandinavian Journal of Educational Research*, 47, 291-303. Retrieved June 20, 2003, from Academic Search Premier database.
- Sapon-Shevin, M. (2003). Inclusion: A matter of social justice. *Educational Leadership*, 61(2), 25-28.
- Scherer, M. (1999). The understanding pathway: A conversation with Howard Gardner. *Educational Leadership*, 57(3), 12-16.
- Smith, T. E., & Dowdy, C. A. (1998). Educating young children with disabilities using responsible inclusion. *Childhood Education*, 74, 317-320.
- State of Georgia rules pertaining to special education* (2000, July 1). Retrieved March 27, 2002, from Georgia Department of Education: <http://www.doe.k12.ga.us/legalservices/160-4-7-.02.pdf>.
- Tomlinson, C. (2001). *How to differentiate instruction in mixed-ability classrooms* (2nd ed.) Alexandria, VA: Association for Supervision and Curriculum Development.
- Van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. Albany, NY: State University of New York Press.

- Voltz, D., Brazil, N., & Ford, A. (2001). What matters most in inclusive education: A practical guide for moving forward. *Intervention in School and Clinic, 37*(1), 23-30.
- Wallar, K. (1999). *Multiple intelligences: An interview with Howard Gardner*. Retrieved June 12, 2000, from http://www.suite101.com/article.cfm/special_needs/20878.
- Walters, J., & Gardner, H. (1990). Domain projects as assessment vehicles in a computer-rich environment. In B. Torff (Vol. Ed.), *Multiple intelligences and assessment: A collection of articles* (pp. 27-54). Arlington Heights, IL: SkyLight.
- Warger, C., & Pugach, M. (1996). Curriculum considerations in an inclusive environment. *Focus on Exceptional Children, 28*(8), 1-11.
- Weatherly, J. (2000, November). *The new Georgia regulations and what's going on in the rest of the country?* Paper presented at the meeting of the Georgia Council of Administrators of Special Education, Savannah, GA.
- Willis, G. (1991). Phenomenological inquiry: Life-world perceptions. In E. D. Short (Ed.), *Forms of curriculum inquiry* (pp. 173-186). Albany, NY: State University of New York Press.
- Winzer, M. (1993). *The history of special education: From isolation to integration..* Washington, D.C.: Gallaudet Press.
- Winzer, M. (2000). The inclusion movement: Review and reflection on reforms in special education. In M. A. Winzer & K. Mazurek (Eds.), *Special education in the 21st century: Issues of inclusion and reform* (pp. 5-26). Washington, D.C.: Gallaudet University Press.
- Ziniewicz, G. L. (n.d.). *John Dewey: Experience and nature: Individuality and association*. Retrieved November 29, 1999, from <http://www.fred.net/tzaka/deweynew.html>.

APPENDICES

APPENDIX A
INSTITUTIONAL REVIEW BOARD CERTIFICATION

Georgia Southern University
Office of Research Services & Sponsored Programs

Institutional Review Board (IRB)

Phone: 912-681-5465

Fax: 912-681-0719

Ovrsight@gasou.edu

4 College Plaza, P.O. Box 8005

Statesboro, GA 30460-8005

To: Ms. Kathryn S. Harrell
Curriculum Studies

Cc: Dr. Ming Fang He
Curriculum, Foundations, and Research

From: Office of Research Services and Sponsored Programs
Administrative Support Office for Research Oversight Committees (IACUC/IBC/IRB)

Date: February 26, 2003

Subject: Status of Application for Approval to Utilize Human Subjects in Research

After an expedited review of your proposed research project titled "An Inquiry into Gardner's Theory of Multiple Intelligences and Strengths of Students Placed in Special Education Under Mildly Disabled Categories," it appears that (1) the research subjects are at minimal risk, (2) appropriate safeguards are planned, and (3) the research activities involve only procedures which are allowable under the following research category:

Collection of data from voice, video, digital, or image recording made for research purposes.

Therefore, as authorized in the Federal Policy for the Protection of Human Subjects (45 CFR §46.110), I am pleased to notify you that the Institutional Review Board has approved your proposed research.

This IRB approval is in effect for one year from the date of this letter. If at the end of that time, there have been no changes to the expedited research protocol, you may request an extension of the approval period for an additional year. In the interim, please provide the IRB with any information concerning any significant adverse event, **whether or not it is believed to be related to the study**, within five working days of the event. In addition, if a change or modification of the approved methodology becomes necessary, you must notify the IRB Coordinator **prior** to initiating any such changes or modifications. At that time, an amended application for IRB approval may be submitted. Upon completion of your data collection, please notify the IRB Coordinator so that your file may be closed.

C: Dr. Tom Case, IRB Chairperson
Dr. Bryan Riemann, IRB Associate Chairperson
Ms. Melanie Reddick, IRB Administrative Assistant

APPENDIX B
CONSENT FORMS



**Department of Curriculum, Foundations and
Research
College of Education
Georgia Southern University**

Ming Fang He, Ph.D.

Phone: (912) 871-1546 Fax: (912) 681-5382E-mail: mfhe@gsvms2.cc.gasou.edu

Cover Letter Parent or Guardian

Dear _____, (Parent or Guardian,)

My name is Kathy Harrell. As a Special Education Director, I am interested in learning more about your opinions and ideas concerning strengths exhibited by students who are placed in Special Education under the labels of Mildly Intellectually Disabled and Specific Learning Disabilities.

I am conducting a research study about strengths exhibited by these students and how these relate to the intelligences defined by Howard Gardner in his Theory of Multiple Intelligences. Because you have a child who is in Special Education under one of these categories, your insights could contribute positively to this study. Participation is completely voluntary and you may withdraw at any time. If you choose to withdraw from the study, your child's placement and/or services through Special Education will not be affected. If you agree to participate, please complete the attached consent form. I will return a copy of the signed form to you to keep in your records.

The focus of my interview with you will be strengths you see in your child that may not be seen in an educational setting. As a participant, you will be asked questions and may respond accordingly. The session will be taped (with your permission) for accuracy. A transcript of the tape will be made available to you for your review. Anything you wish to have changed or deleted will be done at a scheduled follow-up time. All names, locations and other identifying characteristics will be changed in order to insure complete confidentiality. Please be assured that your responses will be kept completely confidential. Research materials will be catalogued and kept in a secure place. Estimates of the time required for my participation in this study are approximately 1 hour for taped interviews and 1 hour for reading of the research analysis.

If you would like more information on this research study in order to make your decision, or if you simply want to discuss any questions or concerns you might have, please contact me, Kathy Harrell at 427-9496 or the supervising professor, Dr. Ming Fang He at 912-681-5091 (Georgia Southern University). If you have any questions concerning your rights as a research participant in this research study, they should be directed to the IRB (Institutional Review Board) Coordinator at the Office of Research Services and Sponsored Programs at 912-681-5465.

Thank you for your time and cooperation,

Kathryn Harrell
Doctoral Candidate, Curriculum Studies/Leadership
Georgia Southern University



**Department of Curriculum, Foundations and
Research
College of Education
Georgia Southern University**

Ming Fang He, Ph.D.

Phone: (912) 871-1546 Fax: (912) 681-5382 E-mail: mfhe@gsvms2.cc.gasou.edu

Cover Letter Teacher

Dear _____, (Teacher)

My name is Kathy Harrell. As a Special Education Director, I am interested in learning more about your opinions and ideas concerning strengths exhibited by students who are placed in Special Education under the labels of Mildly Intellectually Disabled and Specific Learning Disabilities.

I am conducting a research study about strengths exhibited by these students and how these relate to the intelligences defined by Howard Gardner in his Theory of Multiple Intelligences. Because you are a teacher working with these students, your insights could contribute positively to this study. Participation is completely voluntary and you may withdraw at any time. If you choose to withdraw from the study, your employment will not be affected. If you agree to participate, please complete the attached consent form. I will return a copy of the signed form to you to keep in your records.

The focus of my interview with you will be strengths you see in your students that may not be seen in an educational setting. As a participant, you will be asked questions and may respond accordingly. The session will be taped (with your permission) for accuracy. A transcript of the tape will be made available to you for your review. Anything you wish to have changed or deleted will be done at a scheduled follow-up time. All names, locations and other identifying characteristics will be changed in order to insure complete confidentiality. Please be assured that your responses will be kept completely confidential. Research materials will be catalogued and kept in a secure place. Estimates of the time required for my participation in this study are approximately 1 hour for taped interviews and 1 hour for reading of the research analysis.

If you would like more information on this research study in order to make your decision, or if you simply want to discuss any questions or concerns you might have, please contact me, Kathy Harrell at 427-9496 or the supervising professor, Dr. Ming Fang He at 912-681-5091 (Georgia Southern University). If you have any questions concerning your rights as a research participant in this research study, they should be directed to the IRB (Institutional Review Board) Coordinator at the Office of Research Services and Sponsored Programs at 912-681-5465.

Thank you for your time and cooperation,

Kathryn Harrell
Doctoral Candidate, Curriculum Studies/Leadership
Georgia Southern University



**Department of Curriculum, Foundations and
Research
College of Education
Georgia Southern University**

Ming Fang He, Ph.D.

Phone: (912) 871-1546 Fax: (912) 681-5382 E-mail: mfhe@gsvms2.cc.gasou.edu

Adult Consent Form

I, _____, (participant) agree to participate in the qualitative study conducted by Kathryn Harrell (researcher) of Georgia Southern University. I understand that this research is to be used in the researcher's doctoral dissertation, *An Inquiry into Gardner's Theory of Multiple Intelligences and Strengths of Students Placed in Special Education Under Mildly Disabled Categories*. In this study, the researcher will use life experience interviews to explore strengths of students as perceived by their peers, themselves, their teacher and their parents. These strengths will be compared to intelligences named by Howard Gardner and questions of how this might be used in curriculum planning will be addressed. I will be asked to share life experiences and personal views orally, during audio taped interviews. The researcher will take notes during the interview and transcribe the audiotape at a later time. Estimates of the time required for my participation in this study are approximately 1 hour for taped interviews and 1 hour for reading of the research analysis.

I give permission for my voice to be recorded. All materials will be held in strict confidence and will be kept in a secure location. I also understand that tapes and transcripts of interviews and notes are the property of the interviewer and will not be released to a third party without my written permission. Classroom observations will also be conducted and field notes kept by the researcher will also be available for my review. Because the study involves my own interpretation of strengths exhibited by students who are placed in Special Education, I will have the opportunity to read and approve the analysis of the data before it is published and to request that particular information not be used in the published report. I have the right to refuse to answer any questions and to withdraw from the study at any time. Participation in this study is voluntary and consent for participation can be discontinued at any time. I understand that withdrawal from the study will not affect my employment as a teacher or my child's placement and/or services in Special Education. My name will not be used in the published report due to confidentiality issues surrounding students in Special Education. Upon completion of the research, if I desire a copy of this report, I will receive one by making a written request to the researcher. There is no anticipated risk to me due to my participation in this study.

Completion of this consent form and its return will indicate permission to use the data obtained in the subsequent interview in the study.

Participant's signature _____ **Date** _____

Researcher's signature _____ **Date** _____

Use of Pseudonym:

Due to legal responsibilities of confidentiality for students placed in Special Education, I understand that pseudonyms will be used for all participants in this study.

_____ I wish to be called by the pseudonym, _____

_____ I choose to have the researcher select a pseudonym for me.

If you have any questions about this research, please contact the researcher, Kathryn Harrell at (912) 427-9496, or the supervising professor, Dr. Ming Fang He at Georgia Southern University, (912) 681-5091. If you have any questions or concerns about your rights as a research participant in this study, please direct them to the IRB Coordinator at the Office of Research Services and Sponsored Programs at (912) 681-5465.



**Department of Curriculum, Foundations and
Research
College of Education
Georgia Southern University**

Ming Fang He, Ph.D.

Phone: (912) 871-1546 Fax: (912) 681-5382 E-mail: mfhe@gsvms2.cc.gasou.edu

Cover Letter for Minor

Dear _____,

My name is Kathy Harrell. As a Special Education Director, I am interested in learning more about your opinions and ideas concerning strengths exhibited by students who are placed in Special Education under the labels of Mildly Intellectually Disabled and Specific Learning Disabilities.

I am conducting a research study about strengths exhibited by these students and how these relate to the intelligences defined by Howard Gardner in his Theory of Multiple Intelligences. Because you are a student who is in Special Education under one of these categories your insights could contribute positively to this study. Participation is completely voluntary and you may withdraw at any time. Should you choose to withdraw from the study, your placement and/or services in Special Education will not be affected. If you agree to participate, please complete the attached consent form with your parent or guardian. A copy of the signed permission will be returned to you for your records.

The focus of my interview with you will be strengths you see in yourself and your classmates that may not be seen in an educational setting. As a participant, you will be asked questions and may respond accordingly. The session will be taped (with your permission) for accuracy. These tapes will be transcribed by myself at a later time. A transcript of the tape will be made available to you for your review. Anything you wish to have changed or deleted will be done at a scheduled follow-up time. Classroom observations will be conducted and relevant work samples may be collected. You have the right to review any field notes from my classroom observations and to request that your work samples not be collected. All names, locations and other identifying characteristics will be changed in order to insure complete confidentiality. Please be assured that your responses will be kept completely confidential. Research materials will be catalogued and kept in a secure place. Estimates of the time required for my minor child's participation in this study are approximately 1 hour for taped interviews and 1 hour for reading of the research analysis.

If you would like more information on this research study in order to make your decision, or if you simply want to discuss any questions or concerns you might have, please contact me, Kathy Harrell at 427-9496 or the supervising professor, Dr. Ming Fang He at 912-681-5091 (Georgia Southern University). If you have any questions concerning your rights as a research participant in this research study, they should be directed to the IRB (Institutional Review Board) Coordinator at the Office of Research Services and Sponsored Programs at 912-681-5465.

Thank you for your time and cooperation,

Kathryn Harrell
Doctoral Candidate, Curriculum Studies/Leadership
Georgia Southern University



**Department of Curriculum, Foundations and
Research
College of Education
Georgia Southern University**

Ming Fang He, Ph.D.

Phone: (912) 871-1546 Fax: (912) 681-5382 E-mail: mfhe@gsvms2.cc.gasou.edu

Minor Consent Form

I, _____, (parent or guardian) agree to let my minor child participate in the qualitative study conducted by Kathryn Harrell (researcher) of Georgia Southern University. I understand that this research is to be used in the researcher's doctoral dissertation, *An Inquiry into Gardner's Theory of Multiple Intelligences and Strengths of Students Placed in Special Education Under Mildly Disabled Categories*. In this study, the researcher will use life experience interviews to explore strengths of students as perceived by their peers, themselves, their teacher and their parents. These strengths will be compared to intelligences named by Howard Gardner and questions of how this might be used in curriculum planning will be addressed. My child will be asked to share life experiences and personal views orally, during audio taped interviews. The researcher will take notes during the interview and transcribe the audiotape at a later time. Estimates of the time required for my minor child's participation in this study are approximately 1 hour for taped interviews and 1 hour for reading of the research analysis.

I give permission for my minor child's voice to be recorded. All materials will be held in strict confidence and will be kept in a secure location. I also understand that tapes and transcripts of interviews and notes are the property of the interviewer and will not be released to a third party without my written permission. I also give permission for the researcher to conduct classroom observations in my child's school. I understand that field notes kept by the researcher on these observations will be available for my review. Relevant student work samples may also be collected for use in this study. I grant permission for my child's work sample to be used. I understand my child will not be identified in any way in connection with these samples. Because the study involves my minor child's own interpretation of strengths exhibited by students who are placed in Special Education, I and my child will have the opportunity to read and approve the analysis of the data before it is published and to request that particular information not be used in the published report. My child has the right to refuse to answer any questions and to withdraw from the study at any time. I understand that withdrawal from this study will in no way affect my child's placement and or services in Special Education. Participation in this study is voluntary and consent for participation can be discontinued at any time. My child's name will not be used in the published report due to confidentiality issues surrounding students in Special Education. Upon completion of the research, if I desire a copy of this report, I will receive one by making a written request to the researcher. There is no anticipated risk to me or my minor child due to our participation in this study.

Completion of this consent form and its return will indicate permission to use the data obtained in the subsequent interview in the study.

Parental signature _____

Date _____

Participant's signature _____

Date _____

Researcher's signature _____

Date _____

Use of Pseudonym:

Due to legal responsibilities of confidentiality for students placed in Special Education, I understand that pseudonyms will be used for all participants in this study.

_____ I wish for my minor child to be called by the pseudonym, _____

_____ I choose to have the researcher select a pseudonym for my minor child.

If you have any questions about this research, please contact the researcher, Kathryn Harrell at (912) 427-9496, or the supervising professor, Dr. Ming Fang He at Georgia Southern University, (912) 681-5091. If you have any questions or concerns about your rights as a research participant in this study, please direct them to the IRB Coordinator at the Office of Research Services and Sponsored Programs at (912) 681-5465.

APPENDIX C
INTERVIEW/SURVEY FORMS

Interview Protocol for Parents/Guardians
 Survey of Student Strengths for Parents
 Adapted from *In Their Own Way: Discovering and Encouraging Your Childs Multiple
 Intelligences*
 Thomas Armstrong (2000)

As I read through the descriptions of each type of intelligence, please resist the temptation to categorize your child into one of the eight groups. You should find your child described in several of the sections. Take what seems to apply to your child in these descriptions and add to this other observed strengths and weaknesses in all eight varieties of strengths.

Section 1: Linguistic

- likes to write creatively at home
- spins tall tales or tells jokes or stories
- has a good memory for names, places, dates, or trivia
- enjoys reading books for pleasure
- spells words accurately and easily
- appreciates nonsense rhymes and tongue twisters
- likes doing crossword puzzles or playing games such as Scrabble or Anagrams
- enjoys listening to the spoken word (stories, radio programs, talking books, (etc.)
- has a good vocabulary for his or her age
- excels at subjects in school that involve reading and/or writing

Section 2: Logical-Mathematical

- computes arithmetic problems quickly in his/her head
- enjoys using the computer languages or logical software programs
- asks questions like, “Where does the universe end?” or “Why is the sky blue?”
- plays chess, checkers, or other strategy games with skill
- reasons out problems logically
- devises experiments to test out things that aren’t understood at first
- spends a lot of time working on logic puzzles such as Rubik’s cube or logical games
- enjoys putting things in categories or hierarchies
- has a good sense of cause and effect
- enjoys math or science classes at school and does well in them

Section 3: Spatial

- excels in art class at school
- reports clear visual images when thinking about something
- easily reads maps, charts, or diagrams
- draws accurate representations of people or things
- likes it when you show movies, slides, or photographs
- enjoys doing jigsaw puzzles, mazes, or other visual activities
- daydreams a lot
- builds interesting three-dimensional constructions (e.g., Lego buildings)
- doodles on stray scraps of paper or on schoolwork
- gets more out of pictures than words while reading

Section 4: Bodily-Kinesthetic

- does well in competitive sports at school or in the community
- moves, twitches, taps, or fidgets while sitting in a chair
- engages in physical activities such as swimming, biking, hiking, or skateboarding
- needs to touch things in order to learn more about them
- enjoys jumping, running, wrestling, or similar activities
- demonstrates skill in a craft like woodworking, sewing, carving, or sculpture
- cleverly mimics other people's gestures, mannerisms, or behaviors
- gets "gut feelings" when working on problems at home or at school
- enjoys working with clay, finger-painting, or other "messy" activities
- loves to take things apart and put them back together

Section 5: Musical

- plays a musical instrument at home or in the school band
- remembers melodies of songs
- does very well in music class at school
- studies better when background music is playing
- collects CDs or tapes
- sings to him/herself or to others
- keeps time rhythmically to music
- has a good singing voice
- is sensitive to environmental noises
- responds strongly to different kinds of music

Section 6: Interpersonal

- has lots of friends
- socializes a great deal at school or around the neighborhood
- appears to be “street smart”
- gets involved in after-school group activities
- serves as the “family mediator” when disputes arise
- enjoys playing group games
- has a lot of empathy for the feelings of others
- is sought out as an “advisor” or “problem solver” by peers
- enjoys teaching others
- seems to be a natural leader

Section 7: Intrapersonal

- displays a sense of independence or a strong will
- has a realistic sense of his/her strengths and weaknesses
- reacts with strong opinions when controversial topics are being discussed
- works or studies well alone
- has a sense of self-confidence
- marches to the beat of a different drummer
- learns from past mistakes
- accurately expresses inner feelings
- is goal-directed
- engages in self-directed hobbies or projects

Section 8: Naturalist

- relates well to pets
- enjoys walks in nature or to the zoo or a natural history museum
- shows sensitivity to natural formations (e.g., mountains, clouds, etc.)
- loves to garden or be around gardens
- spends time near aquariums, terrariums, or other natural living systems
- displays an ecological awareness (e.g., through recycling, community service, etc.)
- believes that animals have their own rights
- keeps records of animals, plants, or other natural phenomena (e.g., photos, diaries, drawings, collections, etc.)
- brings home bugs, flowers, leaves, or other natural things to share with family members
- does well in topics at school that involve living systems (e.g., biological topics in science, environmental issues in social studies, etc.)

I'd like to now look back on the areas where we checked off the most. Can you give me specific examples of how your child displayed this, or some other similar experience? Tell me the stories of your child's display of strengths in these areas.

Teacher Interview Protocol
 Survey of Student Strengths for Teacher
 Adapted from *In Their Own Way: Discovering and Encouraging Your Childs Multiple
 Intelligences*
 Thomas Armstrong (2000)

As I read through the descriptions of each type of intelligence, think of which of your students might fit into each category. Certainly, more than one student might fall into each category, and each student may display strengths in more than one category. Think of what you have seen in your students this year, and then decide where they might fall.

Section 1: Linguistic

- likes to write creatively at home
- spins tall tales or tells jokes or stories
- has a good memory for names, places, dates, or trivia
- enjoys reading books for pleasure
- spells words accurately and easily
- appreciates nonsense rhymes and tongue twisters
- likes doing crossword puzzles or playing games such as Scrabble or Anagrams
- enjoys listening to the spoken word (stories, radio programs, talking books, (etc.)
- has a good vocabulary for his or her age
- excels at subjects in school that involve reading and/or writing

Section 2: Logical-Mathematical

- computes arithmetic problems quickly in his/her head
- enjoys using the computer languages or logical software programs
- asks questions like, "Where does the universe end?" or "Why is the sky blue?"
- plays chess, checkers, or other strategy games with skill
- reasons out problems logically
- devises experiments to test out things that aren't understood at first
- spends a lot of time working on logic puzzles such as Rubik's cube or logical games
- enjoys putting things in categories or hierarchies
- has a good sense of cause and effect
- enjoys math or science classes at school and does well in them

Section 3: Spatial

- excels in art class at school
- reports clear visual images when thinking about something
- easily reads maps, charts, or diagrams
- draws accurate representations of people or things
- likes it when you show movies, slides, or photographs
- enjoys doing jigsaw puzzles, mazes, or other visual activities
- daydreams a lot
- builds interesting three-dimensional constructions (e.g., Lego buildings)
- doodles on stray scraps of paper or on schoolwork
- gets more out of pictures than words while reading

Section 4: Bodily-Kinesthetic

- does well in competitive sports at school or in the community
- moves, twitches, taps, or fidgets while sitting in a chair
- engages in physical activities such as swimming, biking, hiking, or skateboarding
- needs to touch things in order to learn more about them
- enjoys jumping, running, wrestling, or similar activities
- demonstrates skill in a craft like woodworking, sewing, carving, or sculpture
- cleverly mimics other people's gestures, mannerisms, or behaviors
- gets "gut feelings" when working on problems at home or at school
- enjoys working with clay, finger-painting, or other "messy" activities
- loves to take things apart and put them back together

Section 5: Musical

- plays a musical instrument at home or in the school band
- remembers melodies of songs
- does very well in music class at school
- studies better when background music is playing
- collects CDs or tapes
- sings to him/herself or to others
- keeps time rhythmically to music
- has a good singing voice
- is sensitive to environmental noises
- responds strongly to different kinds of music

Section 6: Interpersonal

- has lots of friends
- socializes a great deal at school or around the neighborhood
- appears to be “street smart”
- gets involved in after-school group activities
- serves as the “family mediator” when disputes arise
- enjoys playing group games
- has a lot of empathy for the feelings of others
- is sought out as an “advisor” or “problem solver” by peers
- enjoys teaching others
- seems to be a natural leader

Section 7: Intrapersonal

- displays a sense of independence or a strong will
- has a realistic sense of his/her strengths and weaknesses
- reacts with strong opinions when controversial topics are being discussed
- works or studies well alone
- has a sense of self-confidence
- marches to the beat of a different drummer
- learns from past mistakes
- accurately expresses inner feelings
- is goal-directed
- engages in self-directed hobbies or projects


Section 8: Naturalist

- relates well to pets
- enjoys walks in nature or to the zoo or a natural history museum
- shows sensitivity to natural formations (e.g., mountains, clouds, etc.)
- loves to garden or be around gardens
- spends time near aquariums, terrariums, or other natural living systems
- displays an ecological awareness (e.g., through recycling, community service, etc.)
- believes that animals have their own rights
- keeps records of animals, plants, or other natural phenomena (e.g., photos, diaries, drawings, collections, etc.)
- brings home bugs, flowers, leaves, or other natural things to share with family members
- does well in topics at school that involve living systems (e.g., biological topics in science, environmental issues in social studies, etc.)


Let’s now go back and review the students in each category. Can you now tell me specific instances or experiences with each student that caused you to place them in each category? Tell me the stories of their strengths as you have seen them displayed in your classroom or in other areas of the school.

IF YOU NEEDED HELP WITH EACH OF THE FOLLOWING, WHO IN YOUR CLASS WOULD YOU ASK TO HELP YOU? PUT YOUR FIRST CHOICE FOR EACH ONE IN THE BOX.

Write a poem for your Mom




Help you with your math homework




Draw a picture of your favorite cartoon character




Help you fix your bicycle




Teach you the words to the newest pop song




Be on your kickball team



Answer questions about pets or plants



Just talk to when you're feeling down



Student Interview

Let me share with you what other people see as your strengths.

Your peers, or classmates think you are really good at _____.

Your teacher says you shine when it comes to _____.

Your parents think you are great at _____.

Do you agree with these?

What do you see as strengths for you? What do you think you are good at?

Give me some examples of when you did something really well, and found it pretty easy to do.

What do you enjoy doing when you can choose to do anything?

What do you find easy to learn about?

What about school is hard?

What do you want to be when you grow up?