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## **The Kinesthetic Kindergarten**

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Submitted in partial fulfillment  
of the requirements for the degree of  
Master of Education  
Moravian College  
Bethlehem, PA  
2012

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## **Abstract**

This teacher action research project attempted to answer the following question: *What are the observed behaviors and reported experiences of students and teacher when the numbers of hands-on learning tasks are increased during small-group instruction in Kindergarten?* The research project started in the second week of September 2011 and continued into January 2012. In a class of fifteen at-risk Kindergartners, there was small-group instruction for literacy, writing, and math. A hands-on activity was added to the beginning of each small-group lesson. The reaction of the students and teacher to this addition was observed and recorded in a double-entry journal. Photographs of the activities were taken without showing student faces to protect their anonymity. Student work was collected when possible. Students took an initial and final survey to show their feelings about their activities. An interview was conducted to understand student opinions about the hands-on activities and their purposes. The hands-on activities increased student engagement, enjoyment, collaboration, initiative, and success. The unexpected positive outcome of this project was the way it provided tools for differentiation for students with small-motor, speech, and auditory memory difficulties and for those with limited English knowledge.

## **Dedication**

*I dedicate this thesis to my brother, Johnny, otherwise known as Johnny Ponny Riccobene Stickobene Father's Helper Mother's Lover Who Went to the Store to Buy Some Grapes, who learned to read despite predictions that he would never learn to read. Johnny is my hero and my greatest example of unconditional love!*

## **Acknowledgments**

There are so many to thank and for so many different reasons! First, I thank God for carrying me through the research, the data collection, and the writing of this thesis. I have relied on Him every step of the way.

I remember with gratitude Mrs. Marlena Dorr, the amazing special education teacher of my brother, Johnny, who taught him to read despite his handicaps by thinking outside the box. Her example inspired me.

There are many Moravian professors who have touched my life over the past few years. Dr. Shosh, Dr. Dilendik, and Mrs. Modjadidi stand out above all. I will never forget them! Jessica Quinones, who agreed to be on my thesis committee without ever having met me, is appreciated for taking time to read my thesis with the eyes and heart of a Kindergarten teacher.

My fellow teacher action researchers were helpful as I struggled with the technology end of putting this together. My children, Jay and Martina, and my son-in-law, Tom, were also helpful when I hit technological problems adding photos to this thesis and scanning in data. My son, Jay, is also appreciated for his fine Spanish translation of the parental permission form. I acknowledge Meg Mikovits who helped me with formatting my document. I thank Scott Toonder who suggested how to begin my story.

I would like to thank my students for just being themselves and going along with whatever I gave them to use with open minds and ready hands.

Finally, I thank my wonderful husband, Joe, who cheered me on through the rough patches and served as my editor and crisis manager. He has been awesome!

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## My Stance as Researcher

It all started when I was ten years old. That year my brother, Johnny, was in Kindergarten. My parents were told that Johnny would never learn to read on the basis of his IQ score. He was placed in a special education school and was given the label "mentally retarded." The dire prediction was wrong. Johnny DID learn to read thanks to a primary teacher who believed he *could* learn to read and would not limit her expectations of him. She used very creative methods involving language experience stories in which the characters in the stories were Johnny and his classmates, and she used rhyme in unique ways to get the basics across to Johnny. He COULD learn to read, but not in the ordinary way. Because of Johnny, I refuse to stick to methods limited to visual and auditory learning. In Johnny's day, nobody was talking about multiple intelligences. His teacher was really thinking outside of the box by using language experience stories and rhyme instead of the basal readers. Dick and Jane stories with repetitive vocabulary were not going to work for Johnny. Currently, even with limited vision, Johnny reads the newspaper every day. Because of Johnny's story, I am open to using *all* of the intelligences (logical/mathematical, spatial, linguistic, bodily/kinesthetic, musical, interpersonal, intrapersonal, naturalistic, and existential) as my way of thinking outside of the box. The academic success of my at-risk Kindergartners is at stake. (Gardner, H. 1983).

My interest in hands-on learning comes from several areas. After teaching at-risk Kindergartners for the past eleven years, I have noticed that many of them

are not merely visual nor just auditory learners. They learn by doing: by singing, by moving, and by touching. I find myself to be largely an auditory learner with anything academic. Sometimes I even read difficult material aloud in order to better understand it. However, with anything mechanical, I must actually manipulate the object myself before I can declare that I know how to use a new camera, DVD player, or some other tool. I cannot just read an instruction booklet on a new piece of equipment and be ready to operate it. Although I consider this to be a personal weakness, it has made me aware of the value of multiple intelligences and how important it is for me to offer *several* ways of learning content to my students.

Next, the emphasis on benchmarks and standards has made its way to the Kindergarten classroom. Unfortunately, the Kindergarten classroom is no longer a safe haven where everyone can shine in one area or another, as children grow and learn at different rates. Even in Kindergarten, there are now standards and benchmarks, and, for too many children, the carrot is always just out of reach. My at-risk students repeatedly discover that they are "not quite good enough." I reasoned that for me to present the curricular materials in many different ways, I could increase the chances of my students meeting the current expectations. For a teacher who was trained back in the seventies to value a student's self-esteem above all, hands-on learning held out an additional benefit. It might even improve my students' views of themselves as learners. All of my students could not only meet the expectations that have been set for them, but each student in my class could excel at *something*.

Although I have many, many things in my classroom that involve hands-on activity, the challenge to myself would be to increase the number of hands-on activities *during small group instruction!* In the past, my students came to the teaching table in groups of four or five, and were being taught in the traditional manner: they were reading in guided reading books with my verbal guidance, or perhaps they were watching me change initial consonants on my whiteboard to make new words all using the same ending chunk. How could I make that small-group instruction become more hands-on than it has been in the past? How could I better provide for the ways my particular students learn best?

As I researched ways to increase the hands-on activities for small-group instruction, I was very interested to find out if other researchers had come to the same conclusions as I have concerning how at-risk students learn best. If school had not been a priority for the families of my students up until Kindergarten, how could I make school and learning a personal priority for each of my fifteen students? There are countless examples of people about whom one can say, "It's not what s/he said, it's how s/he said it." Teachers must be conscious of their tone of voice, their hand gestures, their tendency to just pass out worksheets instead of engage in meaningful dialogue with their students... Teachers must make the most of every teaching moment. (Dewey, 1938 p. 49). I wanted to take education for these at-risk children a step beyond a worksheet.

I went into this teacher action research study with the hunch that the way I had been treating small-group instruction in reading, math, and writing, was boring. I taught in the small-groups as I had been taught by a teacher who

modeled guided reading for me. She used a whiteboard, marker, and guided reading books. The procedure was predictable and monotonous during which the students just sat and listened until it was their turn to "read."

I have been teaching Full-Day Kindergarten to at-risk students for eleven years now. Although I have always had a lot of hands-on activity in my classroom at the learning centers, I have not had much hands-on activity at the small-group instruction table. I believe that at-risk Kindergarten students learn best by using many different learning styles. The more movement and tactile learning that can be injected into a lesson, the more engaged the students become. So, I put my beliefs to the test by conducting this teacher action research project. I could not invent engagement. I could not force academic success. I could not fake test results. The results had to speak for themselves in order to prove or disprove my hunch.

To me, nothing brings motivation and success better than when a student feels like s/he is a "smart cookie". I often use that description with a student: "Wow! You wrote your name with just the first letter capital! You are such a smart cookie!" In my experience, when a student felt as if s/he would fail at whatever it was, that student wouldn't even want to TRY to do something challenging. By incorporating many learning styles even during small-group instruction, I hoped that all of my students would be motivated to learn using their favored learning style and move toward readiness for first grade.

## Literature Review

### Introduction

A five-year-old child's world is smaller than the world of the adults in his or her life. The world of a five-year-old child is limited to the things he or she can perceive through the five senses and through prior knowledge. John Dewey said in *Experience and Education*, "The belief that all genuine education comes about through experience does not mean that all experiences are genuinely or equally educative." (Dewey, 1938). In other words, every activity should have a genuine learning goal or objective attached to it. Research supports the idea that hands-on activities can be combined with explicit instruction at the small-group level to meet educational goals. (Monroe, J., & Staunton, J., 2000) (Condis, P., Parks, D. & Soldwedel, R., 2000). The studies that follow are organized into research situations where researchers were aiming at genuine education.

### Hands-On

Thomas Armstrong (1994) was a learning disabilities specialist when he wrote *Multiple Intelligences in the Classroom*. He wrote some very practical and teacher-friendly applications of Howard Gardner's theory of Multiple Intelligences (MI). He writes:

The MI teacher provides hands-on experiences, whether this involves getting students up and moving about, or passing an artifact around to bring life to the material studied, or having students build something tangible to reveal understanding. The MI teacher also has students interacting with each other in different ways (e.g. in pairs small groups, or large groups)... (p. 50).

Armstrong lists hands-on learning as a way to teach to the Bodily-Kinesthetic Intelligence. (p. 52)

## **Work vs. Play**

Several research studies have been conducted to determine the best ways for students to learn. Miller and Almon (2009) consider that the ways Kindergartners learn best are so misunderstood that learning is in crisis. When children play, say Miller and Almon, they are motivated from within and are fully invested and engaged in seeing their ideas through. They cite many examples of research done in multiple countries which provide evidence that play-based Kindergartens with teachers who are very actively involved prove to be more successful academically than highly structured didactic Kindergartens where the focus is mainly on academics. The Miller and Almon view of play is that it must be *chosen and directed by children with adult intervention as needed*. They denounce the excessive testing and the increase of scripted lessons that is becoming more and more common in Kindergarten classrooms. Hands-on activities lead Kindergartners to view their work as play. (pp. 43-45, 65).

## **Small-Group Instruction**

Monroe and Staunton (2000) did a study involving sight word recognition in kindergarten which involved hands-on activities and small-group instruction. The connection between poor sight-word recognition in first grade and the probability of that child being a poor reader in fourth grade was noted as one of the reasons to set aside time for sight word recognition in Kindergarten. The hands-on activities proved to be very effective when post-tests were administered. These activities included tracing the words on cards, putting glue and glitter on the cards in the shape of the words, writing the words on a cookie sheet covered

with sand, using magnetic letters on a cookie sheet to reproduce the words, and more. Student feelings about reading were positively impacted by this hands-on approach.

Justice, Meier, and Walpole (2005) used storybooks in Kindergarten small groups to teach vocabulary. Their findings showed that repeated readings of storybooks improves vocabulary, providing opportunities for the students to interact during the story is beneficial, and using props to represent the vocabulary words is an asset to vocabulary development for at-risk Kindergartners. The addition of props during the storybook reading added a hands-on approach.

Coyne, McCoach, and Kapp (2007) did a study on small-group vocabulary instruction. The new vocabulary words were explicitly taught. Their hands-on element was hand raising and bodily responses during the reading of a story. This encouraged *purposeful listening*.

Florida has certain schools that are referred to as *Reading First* Schools. Kasonovich, Ladinsky, Nelson, and Torgesen (2006) put together a document to guide teachers in these *Reading First* Schools in their handling of small group instruction with a focus on differentiation. This document clarified that *re-teaching* and opportunities to *practice/apply their knowledge* will be successful when "fast-paced, interactive, and targeted" hands-on activities are provided for those areas each small-group is found to need. This practice dovetails with the attention spans of five-year old students very well. (p. 4)

Condis, Parks, and Soldwedel (2000) did a fascinating study with early childhood and Kindergarten students that injected the use of multiple intelligences

with small group instruction for the purpose of increased vocabulary development. The thinking was that using multiple intelligences makes the activities *student centered* rather than *teacher centered*. (Viale, 1997). They state:

According to Chapman (1993), the musical/rhythmic child may make gains in language concepts through the use of song, chants, raps, rhythms, and finger plays...the bodily/kinesthetic child would respond to language through his/her used of the body to express ideas and feelings and to solve problems. The visual/spatial child might express his/her understanding of a story through graphic organizers, or grids. The logical/mathematical child could verbalize about putting things in categories, experiments, or completing logic puzzles and games... (p. 23)

In their study, Condis, Parks, and Soldwedel targeted twenty Kindergartners in each of three research classrooms. The twenty students were divided into three groups with focus being vocabulary development. The teachers each had a list of language activities involving Multiple Intelligences, manipulative materials available for implementation, surveys, pre-tests, post-tests, and tape recorders. (p. 28). “All three teacher researchers agreed that the action plan clearly demonstrated the power that lies in the incorporation of the multiple intelligences into instruction and student learning.” (p. 45). There was some discussion about whether it was the multiple intelligences or the small group instruction that was responsible for the very impressive growth in vocabulary of the students in the study. However, in the end, when all teachers involved were surveyed, it was conclusive that most of them felt the multiple intelligences involved were a huge factor in student success. Each student learned best using his/her preferred intelligence.

Goodman and Williams (2007) wrote an interesting article on increasing academic engagement of students with autism. The research shows that inclusion of autistic children in a regular classroom is the recommended practice for many reasons. The article explains that transitions from one activity to another are difficult for students with autism. It suggests using songs to help transition from one activity to the next. It suggests use of many visual aids including a visual schedule, photographs at each area for independent work showing students correctly using the materials for the independent work, and providing a copy to the autistic child of any story being read to the whole class. Choral reading and having the students respond to questions in unison are also recommended to keep autistic students engaged. These suggestions were all field tested. After reading this article, I suggest that some of these practices can be engaging for students *without disabilities* who just have not had any preschool experience.

### **Kid Writing**

Feldgus and Cardonick (1999) describe a very hands-on method of teaching children to write. Kid Writing is not just a method of teaching Kindergartners to write, but it teaches them phonics and decoding skills as well. Kid Writing doesn't just promote use of a word wall, rather the use of an *interactive* word wall. Students may go to the word wall and take the word they need back to their seats in order to write it down. For those at-risk Kindergartners who have trouble sitting and listening for long periods of time, this is just the kind of movement that can help them refresh themselves and continue with their

writing. Also impressive with Kid Writing is the rhyming icons displayed in the classroom that help the students remember sight words. For example, a wizard hat is displayed with the word "is" written on it. It is referred to as "the wiz of is" and when children need the word "is" as they write, it doesn't take long for them to know just where to look to find it. Any words that are not available on the Word Wall are words they are encouraged to say very slowly while listening for letter sounds as they say them. They write what they hear. The teacher writes the adult writing in pencil under the Kid Writing and compliments the student on the ways the student's writing is like the adult writing. The entire process is highly motivational and proven to work well! (Feldgus & Cardonick, 1999, pp. 15-18)

### **Literacy**

Cihon, Gardner, Morrison, and Paul (2008) did a study that implemented a method of teaching literacy skills to those at-risk for reading failure that was originally developed for use by students who are hard of hearing or deaf. This method, See the Sound/Visual Phonics (STS/VP), "provides a hand sign for every phoneme in the English language" that copies a movement made by the mouth, tongue, or throat as that phoneme is spoken.

Meier and Sullivan (2004) did a study on literacy instruction in schools with a large proportion of at-risk students which underlined the importance of small-group instruction, of explicit instruction in the alphabet, phonological awareness, and the building of strong communication between school and home. The small-group instruction in this study was mainly done by the reading specialists. It detailed some excellent hands-on activities such as using cards for

beginning sound picture sorts. This is much more interesting for students than worksheets, worksheets, worksheets or just sit and listen, sit and listen, sit and listen. Rhyme and beginning sound games were part of the regular routine, as were rereading familiar texts and finger point reading. In addition to the explicit phonics instruction, students were given time to apply their new skills to reading and writing.

Tyner (2009) drew attention to the difference between *traditional* guided reading groups and *differentiated small-group instruction* in reading. Tyner is proposing that the differentiated model is better. The differentiated model adds the elements of word study, decoding, oral, silent, partner, choral reading, and use of word banks to the small-group instruction time. Although leveled books are still a part of the small-group instruction, the groups are not set in stone for the year. There is continual formal and informal assessments done and groups change so that each student is working with others who need the same skill taught or re-taught. In other words, the small-groups are flexible. Flexible grouping is a key element when providing differentiation. A concentration on making the ever-changing small groups equipped with hands-on materials directly impacting the skills being taught is the challenge.

### **Mathematics**

Ellis, Ellis, Huemann, and Stolarik (2007) did a teacher action research project with primary and high school students which used differentiated instruction, cooperative learning, hands-on activities, and multiple intelligences in the teaching of math. The necessity to differentiate in this era of inclusion was

extremely well expressed in this study. The frustrations of trying to meet the needs of a class with varying ability levels was also well expressed: "Teachers need to take into account individual interests and preferred learning styles and allow for students to make choices regarding their instruction." (p.45). To give the students choices adds to their motivation, allows them to be a part of the learning process, and adds to their self-esteem. The researcher at the Kindergarten level felt that the hands-on activities developed for this study made her current students perform better than her students of earlier years.

The traditional Kindergarten has always used song and movement. Grady (2009) did a teacher action research project using movement and music to teach math. She very clearly states that "Your body is the only manipulative you always have with you." (p. 4). How profound! Small groups can be taken away from the small-group table some of the time to move, touch, and sing as they learn math, literacy, and writing.

Gregory and Chapman (2001) have pulled together many different hands-on math activities for Kindergarten in an easy-to-follow set of recipes. Most attractive about these ideas are how well they use materials that are readily available in the classroom. To combine these activities with the lively assessment strategies in the Chapman and King (2005) document and use them in the small-group lessons would increase student engagement and participation.

## **Conclusion**

In summary, the research reinforces the use of hands-on activities in small group instruction, the use of bodily movement, music, and purposeful listening to reinforce concepts to be learned in reading, writing, and math instruction.

## **Methodology**

### **The Setting and the Students**

The elementary school at which I work is in Northeastern Pennsylvania and serves about 650 students. 81.5% of the students at my school have low-income status. We are a Title I School. The male/female ratios are almost equal. The students are predominantly Hispanic (57.4%) with 23% Caucasian, and 13.8% African American. However, my class of 15 at-risk Kindergarten students has 6 Hispanics, 5 African Americans, and 4 Caucasians. Four of my students receive ESOL instruction, 5 receive Speech therapy, and 4 receive Occupational Therapy for great difficulty in small-motor coordination. (Some of these students get services in more than one of the areas named here.) 13 of my students receive free lunch. 1 of my students receives reduced lunch. This class is one of only five Full-Day Kindergartens in existence this year in my district. The poor economy and budget cuts have slashed 7 out of the 12 Full-Day Kindergarten classes. Last year, there were two Full-Day Kindergartens in my school. Now, I am fortunate to have been allowed to teach the one Full-Day Kindergarten at my school this year. In my district, Full-Day Kindergarten is reserved for the lowest scoring Kindergartners. It is considered an intervention. My students started

Kindergarten at a deficit and are given double the time in school as their half-day peers in order to try to catch them up in time for first grade. I have taught Full-Day Kindergarten for eleven years and find it very rewarding. Why do these students score so low? There are many reasons: poverty, very young parents, lack of English ability, limited exposure to books, family tragedies, troubled families, and more. If school has not been a priority for the families of my students up until now, how could I make school and learning a personal priority for each of my 15 students? There are countless examples of people about whom one can say, "It's not what s/he said, it's how s/he said it." Teachers must be conscious of their tone of voice, their hand gestures, their tendency to just pass out worksheets instead of engage in meaningful dialogue with their students... Teachers must make the most of every teaching moment. (Dewey, 1938, p. 49.) I wanted to take education for these at-risk children a step beyond a worksheet.

### **Research Goals**

At the beginning of my research project, I had a rose-colored view of how it would play out to add a hands-on element to every small-group instruction lesson. I thought it would make my students enthused about learning to read, eager to come to the small-group table, and academically successful because of the greater number of intelligences students would utilize during each small-group lesson. So, I made a plan to stick to the use of hands-on activities for five to ten minutes of each fifteen minute block of small-group instruction time for the length of the period during which I would be conducting my research (the first semester of the 2011-2012 school year).

### **Data Collection**

I used surveys and interviews to keep tabs on student reactions to the activities, as well as pre- and post-test results to see if the hands-on activities led to academic success. The use of a double entry journal was kept to record observable behaviors and attitudes of the students during the small-group instruction time as well as my own reflections related to my observations.

### **Student Work**

Student work was difficult to collect. I was able to keep some graphing worksheets from the math small-group lessons. However, how can one collect a hands-on activity? My camera was the tool I used to capture the student work. It was challenging to take photos without capturing the faces of my students. I wanted to keep their names and identities confidential. Therefore, in some instances, I would take photos of just their hands doing one of the activities or in other instances, I took a photo of their finished products. For other work samples, I deleted or used white out where their names had been written and wrote the pseudonyms instead.

### **Field Log and Reflective Memos:**

A field log was kept and reflective memos were written during the course of this research study.

## **Trustworthiness Statement**

Initially, I made sure I had my principal's consent and the consent of the parents of my students as is expected by the Moravian HSIRB. I even had the parent consent form translated into Spanish for the two non-English speaking parents. (See Appendices for copies of these forms.) I explained my project to the students and did a pre- and post-interview with them as a class. The surveys were done in small groups. Being Kindergartners, I had to make the surveys non-reader friendly. I read each survey item to the group and they answered each question by circling a picture of a hand with the thumb up to mean 'yes,' with the thumb to the side to mean 'sometimes,' and with the thumb down to mean 'no.' Interviews were done with the entire class participating together, but answering individually. As I entered each day of my research project, I did my best to put the materials I would need for the hands-on activities in place for their use at or near the small-group instruction table. I did my best to record my observations honestly and thoroughly. I used triangulation by using my observations and reflections, student surveys, student interviews, student work, and the pre- and post- test results as I analyzed my data. In all of my writing concerning this research study, I have used pseudonyms instead of the real names of my students as I promised their parents when they signed their consent forms.

### **Biases**

I went into this teacher action research study with the hunch that the way I had been treating small-group instruction in reading, math, and writing, was boring. I taught in small-groups as a mentor teacher, who had demonstrated for

me the way one is supposed to teach guided reading, had taught me. She used a whiteboard, marker, and guided reading books. The procedure was predictable and monotonous during which the students just sat and listened until it was their turn to "read."

I have been teaching Full-Day Kindergarten to at-risk students for eleven years now. Although I have always had a lot of hands-on activity in my classroom at the learning centers, I have not had much hands-on activity at the small-group instruction table. I believe that at-risk Kindergarten students learn best by using many learning styles. The more movement and tactile learning that can be injected into a lesson, the more engaged the students become. So, I have put my beliefs to the test by conducting this teacher action research project. I could not invent engagement. I could not force academic success. I could not fake test results. The results in each of my data sources had to speak for themselves to prove or disprove my hunch.

## My Story

### Snapshot of the Present

It's January 20, 2012, the end of the semester. I am sitting at my small-group instruction table as my Team Three students are tracing the new word "she" in salt trays before we have our guided reading lesson involving that word. I glance around the room to see that Team One is working together near the interactive Word Wall matching words on laminated egg shapes to those on the Word Wall and then putting the eggs on Humpty Dumpty's wall on the trifold board. I had introduced that activity yesterday in my small group lessons. They are working together very well to get all of Humpty's cousins (the little word eggs) to the correct spot on the wall. I look to the left and notice that Team Two is at the listening center listening to a story that goes with our unit on winter. Everyone in the room is engaged. Now I can collect the salt boxes and start my guided reading lesson, but I have to stop and savor the moment. When I think about how things were in September when I started my Teacher Action Research project, I am amazed and delighted.

It all started in early September when I was busily working on getting my class list finalized. I teach Full-Day Kindergarten and my class members were selected after all of the Kindergartners in the school had been tested on some of the basics like letter identification, counting ability, shape recognition, and writing their names. The lowest scoring students were invited to move from their Half-Day class to my Full-Day class. Budget cuts have made it so that for the first time in eleven years, I am the *only* Full-Day K teacher at my school. This

means there were more low-scoring students at my school than there were spots available in my classroom.

### **Home Visits**

It has been our practice for the past eleven years to make visits to the homes of those students who have been selected for Full-Day Kindergarten to explain the program and the changes to the parents. At these visits, I have learned a lot about my students and gained an understanding about the factors that have made them at-risk. It was also when I forged a bond with the parents so that they understood that I considered them to be my partners in getting their children ready for first grade. Unfortunately, THIS year, due to budget cuts, I was not allowed to take the two days necessary to visit each of my students before my Full-Day Kindergarten class began on September 11th. In the past, I would bring a guidance counselor, the other Full-Day K teacher (when we had two), a Spanish-speaking social worker, or a teacher assistant in order to have the twenty minute home visit at each home. I was very sad about the time for home visits being eliminated and I approached my principal to tell her about my disappointment. I explained to her that at THIS year's home visits, I was planning to explain my teacher action research project to the parents and gain their signed consent to have their children be a part of my study and answer any questions they may have about it. She thought of another way for me to proceed: She said, "You can still do the visits if you do them on your own time." She also said that I could do it as a self-directed plan which would be in place of my formal observation this year. I had never done a self-directed plan, so I told her I would

consider it. I sought the advice of a teacher whom I knew had done a self-directed plan in the past.

All the way home that night, I was thinking and praying it through. "How badly do I want to do the home visits this year? If I don't do the home visits, will I get enough permission slips back for my research project? Am I comfortable about doing these home visits alone? If it's on my own time, would a guidance counselor or teacher assistant want to give up their personal time to come with me? Would I need to pay them for their time?"

By the time I pulled into my driveway, I was facing the fact that I was not comfortable with going into the homes of my students alone. I walked in the house trying to convince myself that I just had to accept the idea that I would not be doing home visits this year. I poured out my thoughts to my husband and, miracle of miracles, he volunteered to go with me to do my home visits!

Before I left school for the weekend, I had thirteen out of fifteen home visits scheduled. Twelve of those visits went like clockwork. One had to be done as an in-school meeting involving the principal. Two families were not home when we arrived and I ended up meeting with them after school. In the end, all fifteen of my students had signed permission to be part of my teacher-action research project! The budget restraints did not stop me from having that all-important connection with my students and their parents. Hallelujah!

## **Extraordinary Class**

May I introduce my students? The descriptions below are what I wrote about them before my teacher-action research project began in the second week of September.

Adam: He breaks my heart! His mom died suddenly in August. I knew her. His dad is overwhelmed with his new single-parenting responsibilities. Adam is clearly grieving. He rarely smiles. He doesn't even enjoy recess. I think he is intelligent enough to learn to read and count, but I must connect with him first.

Anna: She is a very petite little bundle of energy. She wants to play all day long. She has trouble listening to a whole group story all the way through no matter how theatrical I get while reading it.

Barbie: She already has an IEP. She is a happy child who smiles all the time. However, she can only make very faint circles with a writing utensil, she cannot speak in a complete sentence, and she cannot even make her needs known when it is something urgent. She is almost non-verbal.

Brianna: She speaks very little English. It is difficult for her to attend to whole group lessons because she gives up trying to understand what I am saying.

Charles: He is a puzzle. His dad originally didn't want him to be put in Full-Day Kindergarten. After meeting with the principal and me, he agreed to allow Charles to join my class. He could have opted out. We would have taken the next child on the list. However, Charles is a big asset to my class. He is very verbal. He loves whole-group stories. He is attentive and has questions and answers to share along the way. He cannot hold a pencil or crayon. He definitely

needs Occupational Therapy. His small-motor problems hold him back a great deal.

Diane: She is a very sweet girl. She is attentive and polite. Learning her letters is going to take a lot of work. She seems to have very little visual memory. She still thinks that any time there is a capital D, the word is her name.

Darlene: She breaks my heart. She was a foster child in September. She was to be adopted by her foster family in October, but there has been a hold up in the process. Her biological older sister is already adopted by these same foster parents. She is always dressed beautifully and looks adorable every day. Darlene has fetal alcohol syndrome. She is extremely small for a five-year old. She has very limited verbal ability. She is also bilingual. Her Spanish is better than her English. Her foster mom says she understands English, but will respond in Spanish. With me, she doesn't respond at all yet. She CAN say, "I need help, please." Her foster mom taught her that very well. She falls asleep very easily and her foster mom tells me not to worry if she falls asleep. She stays awake if she is moving.

Sapphire: She lives in a homeless shelter with her mom and siblings. She has a little bit of an attitude with her peers. She calls them "ugly" and "not cool" to make them sad. I have to wonder what events led her to be in a shelter. Did she come from a situation where someone called *her* mean names? I'm working with her on this. She has a noticeably short attention span and knows very, very little about the alphabet.

Ebony: She is one of eight children in a very impoverished family. I taught one of her older brothers. She has very little experience with school. No preschool. She was supposed to go to Kindergarten last year, but her mom never got around to sending her. Why isn't Kindergarten mandatory in Pennsylvania? The decision was made that she go to Kindergarten this year even though she is six. She is an agreeable child who is just learning the basics.

James: He is the most "normal" child in my class. He didn't know any letters or numbers at the beginning of the year and couldn't count, but he remembers what I am teaching from one day to the next. He would be my best bet if I had to predict which student might leave my class before the year is out because he could "graduate" to regular Kindergarten. He attends well. He interacts well with his classmates. He is a gem.

Jeffrey: He is a tall and smiley African American boy. He's got great positive energy about him, but he has a sneaky side to him that I must watch.

Jose: He is adorable. I had his older sister six years ago. He is a calm and gentle presence at his table and is kind to all of his classmates. He is an ESOL student.

Johnny: He is a puzzle. He had no preschool. He cries every day when his mom brings him to school. He's got mommy-itis badly! After a few minutes of tears, he is just fine. One day, he actually made it without crying! His eye-hand coordination is as poor as that of Charles. He cannot even TRACE his name, much less write it. He wants to participate in group lessons and always raises his hand, but when I call on him, he just smiles. He has nothing to say.

Richard: He has such a thick speech problem that I usually cannot understand him. Behaviorally he is wonderful. His mom thinks he has a hearing problem, but the school nurse checked his hearing and it was fine. He speaks a little louder than necessary. He gets all excited about the big book stories and raises his hand. None of us can understand what he is saying about the story, but his enthusiasm is contagious. I usually say, "Really?" or "Wow!" just to try to make him feel heard.

Salvatore: He is my huge behavior problem. He doesn't speak English. He wants to do what he wants to do when he wants to do it. He rebels against my behavior system. He kicks furniture when he is angry. He speaks Spanish non-stop. Even if I ask him in Spanish to please be quiet, he keeps talking. He is intelligent and is a very good artist. I try to compliment him on his drawing and give him a pat on the back or a thumbs up when he is doing right. He lives for compliments. I think he wants to earn the privileges according to the behavior system, but won't accept the consequences when he makes a wrong choice. If I can get him to buy into school, I believe he has the intelligence to succeed.

As I read this now, I am amazed at how much they have changed over the course of the first semester. This group is one like I had never encountered in my eleven previous years of teaching Full-Day Kindergarten.

By the last week in September, I had the students well acquainted with the team concept I had set up in order to be able to conduct three small-group guided reading lessons. I had three tables of students. Each table had five students. They were heterogeneously grouped with those whom I thought they could work well. The book I chose for this first experience with guided reading would make

Kozol scream! (Kozol, J., 2005). It was a decodable reader entitled We Like Sam! It used the high-frequency words, *we*, *like*, and *the*. It also used *Sam* because the letter sounds we had studied to that point were /m/, /a/, and /s/. Sam was a dog in the little book. The other words were written as rebus pictures, for quick success of the students. I remembered the lack of engagement in my guided reading groups the previous year and realized that part of my motivation to do this teacher-action research project was born of that lack of engagement. So, rather than making this guided reading lesson torture for my students, and make each child read the book after we had all read it together, I only read the book with them twice as a small group and then pulled out the Elkonian boxes. We didn't try to form words with the boxes. We just practiced saying /s/ /a/ /m/ and using a chip to slide in front of each letter as we said, "Sam" slowly. So, I spent about six minutes on the book and about eight minutes using the Elkonian boxes. The sessions went by very quickly. Everyone was engaged. I was particularly amazed that Barbie was doing very well with book handling skills and saying the words to the story aloud. I didn't think she had enough verbal ability! I wondered if perhaps she could echo others but not express her own thoughts verbally. Even Salvatore was cooperative and successful at my small-group table that first day of guided reading!

On the first day of RtII groups, I was struck with the realization of how much more setting up there is in a classroom committed to hands-on activities. Keeping stacks of worksheets handy doesn't compare with needing to have cookie sheets, magnetic letters, salt trays, foam letter dice, fly swatters, and more in place

at the correct time. That first RtII group contained two students from another class. The RtII groups are homogeneous groups across the grade level. I was given the lowest scoring group. There were five of them, but only three would be in my study. They would be Barbie, Darlene, and Johnny. I gave them each a cookie sheet and the magnetic letters necessary for them to spell out their names. They were all happily moving the magnetic letters around on the cookie sheets, but they could not spell their names. I then gave them each a piece of paper with their name printed on it. None of them could successfully spell out their name even with the paper to guide them. Then, we compared the various names, found like letters in their names, and counted the letters in each of their names. They were all definitely engaged.

The next day with my RTII group, I was able to add the fly swatter activity to the session. We sat on the floor in a semi-circle and I put just some letters out that were in some of their names. The first one to swat the letter I called would get the letter put in front of him/her. The group I had were kids who are very mild mannered. When the letters were gone, they counted their letters and I shook their hands as many times as they had letters in their piles. They loved it! Johnny even asked if we could play it again when all the letters were gone. We did. He asked for a third time, but our time was up. He doesn't recognize the letter "J," which is the first letter in his name, but he can now tell the physical difference between a lower-case "a" and a lower-case "o" by doing this activity. Baby steps are fine with me! Barbie still could not put the magnetic letters of her name in the correct order.

I gave the initial survey to the class on September 22, 2011.

The Kid Writing hour is such a boon to my students. Kid Writing is not something new that I began with this teacher action research study. I have been using the Kid Writing program for eleven years. The hands-on part of Kid Writing is built right into it. I have parent volunteers who help me during that hour and the ESOL teacher pushes in during that hour. So, the students who come to my table during Kid Writing are not consistent every day. They come as they are ready. They could come to me, to the parent volunteer, or to the ESOL teacher. Each of us works with a small group. The hands-on element of Kid Writing involves the Interactive Word Wall, the meatball and spaghetti spaces, and what I refer to as the red board. My Word Wall is interactive in that it is only about three and a half feet high so that the students can reach every word. The words are on laminated cards that have Velcro strips attached to the back of them. The students may go to the Word Wall, fetch the word they need, take it to their table and put it above their journal as they copy it down. The children are taught that there is a spaghetti space between letters within a word and that there is a meatball space between words. To help them with this idea, each child is given an uncooked piece of linguini and a small, red pom pom to place after the word to hold the space between words as they write. By the end of September, I was very pleased with what I was seeing: Anna and Jose were showing independence about going right to the correct word on the Word Wall! Jose even showed Charles where the word he needed was located. They were helping one another. I was very encouraged. However, that very same day at the end of the Kid

Writing hour, Sapphire, with no warning, went to the math tub area, pulled out three tubs of math manipulatives. She dumped them all over the floor near the computer area. Several students came to help her pick it all up. I intervened and told them they were so kind to want to help her, but I needed them at the carpet area. This little girl from the shelter would have to learn the consequences of using our hands-on materials in the wrong way or at the wrong time.

Evidence of letter and word recognition came the first week in October at the beginning to the day. Adam, James, Johnny, Charles, and Jeffrey were all gathered around the Classroom Jobs chart. They were helping one another figure out if they had a job that day. It wasn't "reading" per se, but they had to recognize one another's names and identify the little picture that goes with a particular job. They were recognizing each other's names after only one month of school! I was overjoyed! It was clear to me as I observed this scene that Adam and Jeffrey are my visual learners.

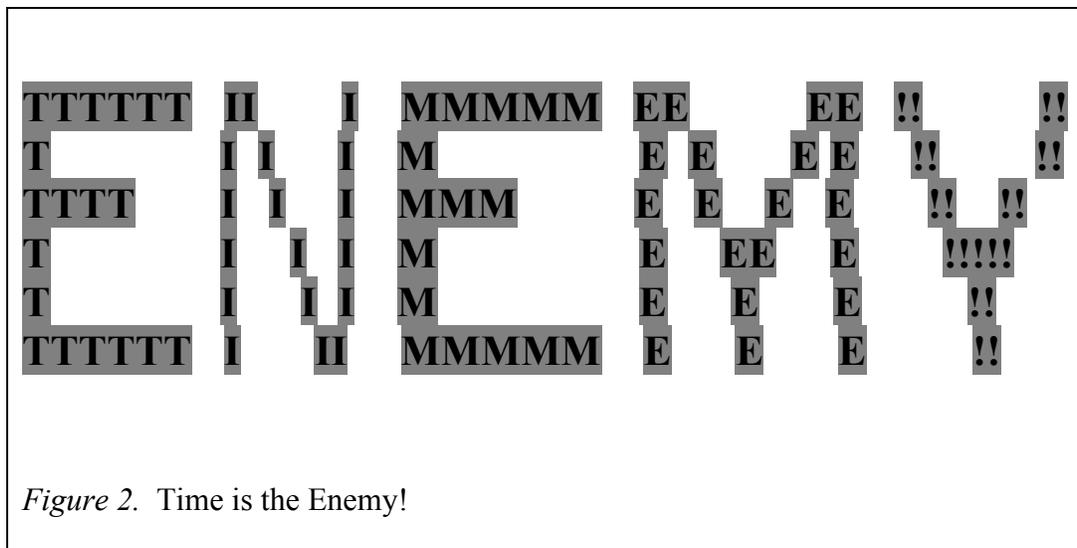
By the second week in October, I was taking photos of my RtII group writing letters in salt trays with their fingers. (See Figure 1.) I would call out the letter and they would write the letter I had named. At the end, I allowed them to look at a paper with their name on it and write their name in the salt. I was careful to photograph only their hands and the trays so as to keep their identities anonymous. I could include the letter-writing photos in my thesis, but not the writing of their names since I couldn't expect them to write their pseudonyms!



*Figure 1.* Salt boxes were used during literacy small groups

Math groups done in the first week of October were focused on making patterns. There were big, middle-sized, and little foam pumpkins, plastic bears, and various other manipulatives. Adam made a pattern with middle-sized and big pumpkins and labeled it as an AB pattern. Richard made an ABB pattern with his unifix cubes, but couldn't express what kind of pattern it was. Johnny didn't know what to do with his set of items. I tried to start him off with a simple AB pattern, but he just didn't understand. Was this task out of his zone of proximal development? More scaffolding was necessary with him. He had trouble writing the "J" in his name right-side up. Perhaps his problems with patterns were due to a problem with visual perception.

At about this time in my study, inner questions started to hound me. Remembering that it was last year's lack of enthusiasm and engagement during guided reading that brought me to do this particular teacher action research project, I started my guided reading groups by allowing them to throw foam letter dice before we pulled out the books. The students were *engaged, but not very successful* at naming the letters that came up on the dice. Engagement without success? Is this a valid reason to take some of the guided reading time for hands-on activity? And what about the time all of the organization of materials was taking me? I especially ranted and raved one early October day after I had several before school meetings which STOLE my set up time. How could I have hands-on materials in place when I didn't have any time to gather them and put them where they needed to be? My inherited temperament showed up quite apparently in my end-of-the-week journal. My Italian grandmother would have said, "I don't-a hav-a enough-a hands-a!" All I would have needed was a pasta spoon in one hand for my exclamation point as I expressed my frustration with the enemy of time. (See Figure 2.)



And yet, it was during the actual book-in-hands guided reading portion of the small group session that included Barbie that week that I was blown away by Barbie's book handling skills. We were reading a little book called "I See" where the ONLY vocabulary words in the book were the two words in the title. All of the other words were designated by the word in the sentence and a picture of that word on the facing page. On one page, for example, it said, "I see elephants." On the facing page, there were two elephants. Barbie didn't have the speaking vocabulary to give a word for each picture on every page. However, she followed along and pointed to each word as she was asked to do. Her book-handling skills far outweighed her verbal ability. I started to hope that she would surprise me and learn to read against all odds like my brother, Johnny, had done thirty-some years ago. Hope is a good motivator to carry on!

On another day of this crazy meeting-filled week, I ended up having to use my small-group time for a worksheet about the letter Tt. There were five of my

students who qualified for Occupational Therapy: Barbie, Charles, Ebony, Johnny, and Richard. It was actually refreshing to spend some small-group time, rather than whole-group time, helping them to complete the simple worksheet! During Team One's session, Anna and Ebony needed continual reassurance for every little step of the worksheet. "Should I color this? How about that?" Jose and Adam were very focused and completed the work without any extra support from me. During Team Two's session, I noted that even Sapphire worked very well in the small group! During Team Three's session, Salvatore had a meltdown just as his team was working with me. I was the only adult in the room at the time and I felt torn between my small-group role and my need to discipline and calm Salvatore down. I ended up giving up on his immediate completion of the worksheet and wrote his dad a note on the worksheet. (His dad can read English.) I was entrusting his parents to guide him to complete the worksheet at home.

By the middle of that week, I was extremely exhausted and feeling quite encumbered by such a large class of at-risk Kindergartners! I ended up the week by adding into my small-group sessions, the very motivating fly swatters, a 5X5 game for letter identification, and the Clifford the Big Red Dog puppet as we worked on reviewing the letters Ss, Aa, Mm, Pp, and Tt on which we had spent a week each. Of all of those things, Clifford was the biggest motivator! Clifford handed each child his/her foam letter die. If the child said the correct letter when it was rolled, Clifford gave the child a big, slurpy-sounding kiss on the cheek. They were absolutely engaged for the hands-on part and attentive and cooperative for the guided reading book. The hands-on addition to each lesson only takes a

few minutes, and perhaps I don't do the guided reading book in the regimented way I was taught to do it. It was because of the Clifford kisses that Johnny proudly declared that he knows what an Ss is! Johnny is the same child who cried every single morning when he said his good-byes to his mom until the week earlier. His smile could not have been any broader on the day Clifford and his slurpy kisses were introduced.

On the same day Clifford was introduced to the reading groups, I introduced the geoboards to my math groups. These are square boards with 25 thin pegs on them. The students are given colored rubber bands to stretch over the pegs to form geometric shapes and then combine them to form a design of some kind. Ebony was the child who stood out during her small group's turn. She made a triangle with a rubber band on her geoboard. She was so very delighted with herself! This is the little girl who should be in first grade but her mother never brought her to school last year, so she is in Kindergarten. Everything about school is new and exciting for her. Something that would be a little step for another child is a huge occasion for Ebony. For me to have shown her a picture of a triangle expecting her to remember the name of the shape would not have had the impact that this rubber band triangle which was formed by her own action. I believe she will never forget what a triangle is because of this activity.

One day in October, I learned something important about Jeffrey. I had already determined that he was a very visual learner. He was able to find words on the Word Wall fairly easily because he is such a visual learner. He was not yet

connecting sounds to letters on the day I had my Ah Ha moment about him.

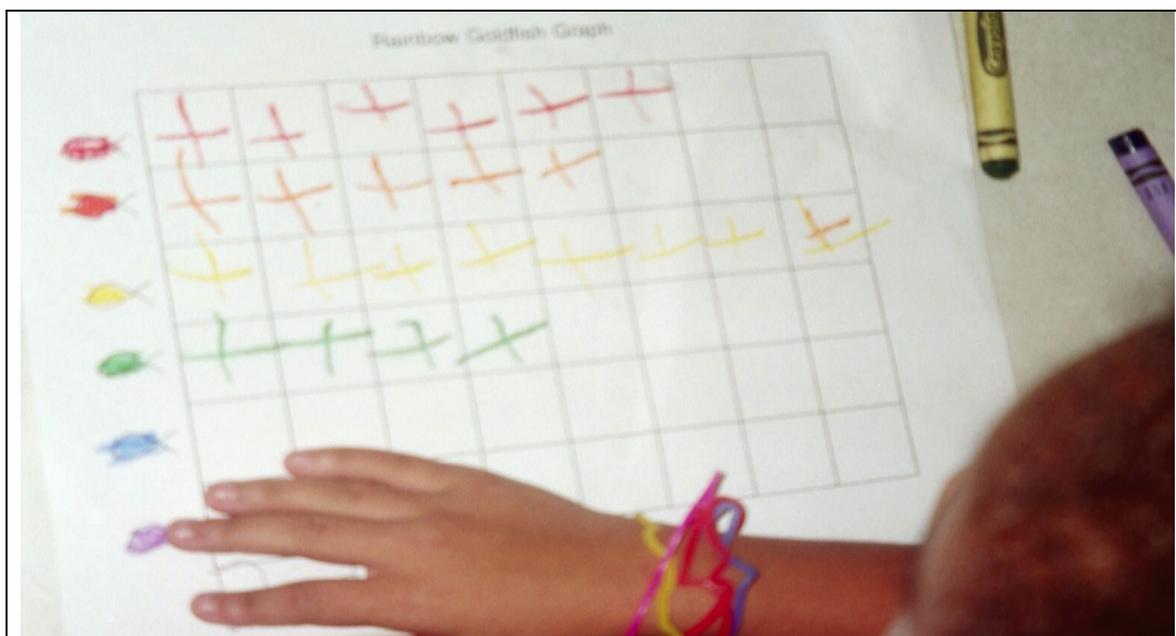
However, he recognized so many Word Wall words that he was starting to build his story by stringing these words together. On this particular day, he had drawn a face that was smiling and some other squares, rectangles, and scribbles near the face. He told me his story was, "I am looking at the junk." He proceeded to go to the Word Wall, get the word "I" and bring it back to his journal to copy it down. Then he got the word "am" then "look" then "at" then "the" and he only had one word of his story left to write. I helped him say the word "junk" slowly and asked him if he heard any sounds. I gave him a hint that "junk" starts with the same sound as "Jeffrey" starts. He wrote a "j" and then couldn't hear any other sounds and his story was finished. I wrote the adult writing under his Kid Writing. I showed him how well he had written "like a grown-up" for many of the words. I asked him to read his story with me. With his hand in mine, we pointed to every adult-written word in his story as we said it aloud, "I am looking at the junk." Then, I asked him to read it to me by himself. He said, "I like junk." I repeated the original story to him again guiding his finger to point to each word. He said, "I am junk." A third time, I guided his hand and we read together "I am looking at the junk." He tried and failed again saying, "I am looking at junk." When he pointed to the word "the" he had said "junk" and then didn't know what to do about the leftover word. This interaction made me understand that Jeffrey has some definite issues with auditory memory. No wonder he has difficulties remembering things I have told him from one day to the next! I'll have to teach to his visual strengths until I figure out how to proceed concerning this weakness.

Later that day, I fell into a period of discouragement. I had arrived at school extremely early that day and still didn't have all of the hands-on materials in place for small-group instruction in reading. My planning time kept getting stolen. Therefore, since I wasn't quite ready, I decided that it would be a great day to get some photographs of the students using the hands-on materials still out from the day before. I was able to get a few shots of the students removing some high frequency words from the Word Wall. I took photos of their hands, not their faces. I had promised to use photos in my trustworthiness statement. But, when it came time for my RtII group, I was taking photos of them using magnetic letters on cookie sheets. I was just photographing their hands to keep their identities anonymous. It wasn't until later that I realized that even without their faces, the cover was blown because they were using the letters to form their names on the cookie sheets...their *real* names! Not their pseudonyms. Oh, well! I couldn't use these photos in my thesis.

The next day I got a few photographs taken of the work done for the small-group math lesson. The students were proud of their creations. They used rainbow colored goldfish crackers to make a graph. They sorted their goldfish crackers by color and then put them on the graph. (See Figures 3& 4.)



*Figure 3.* Goldfish graphing. First they sorted the crackers by color, then they placed them on the graph.



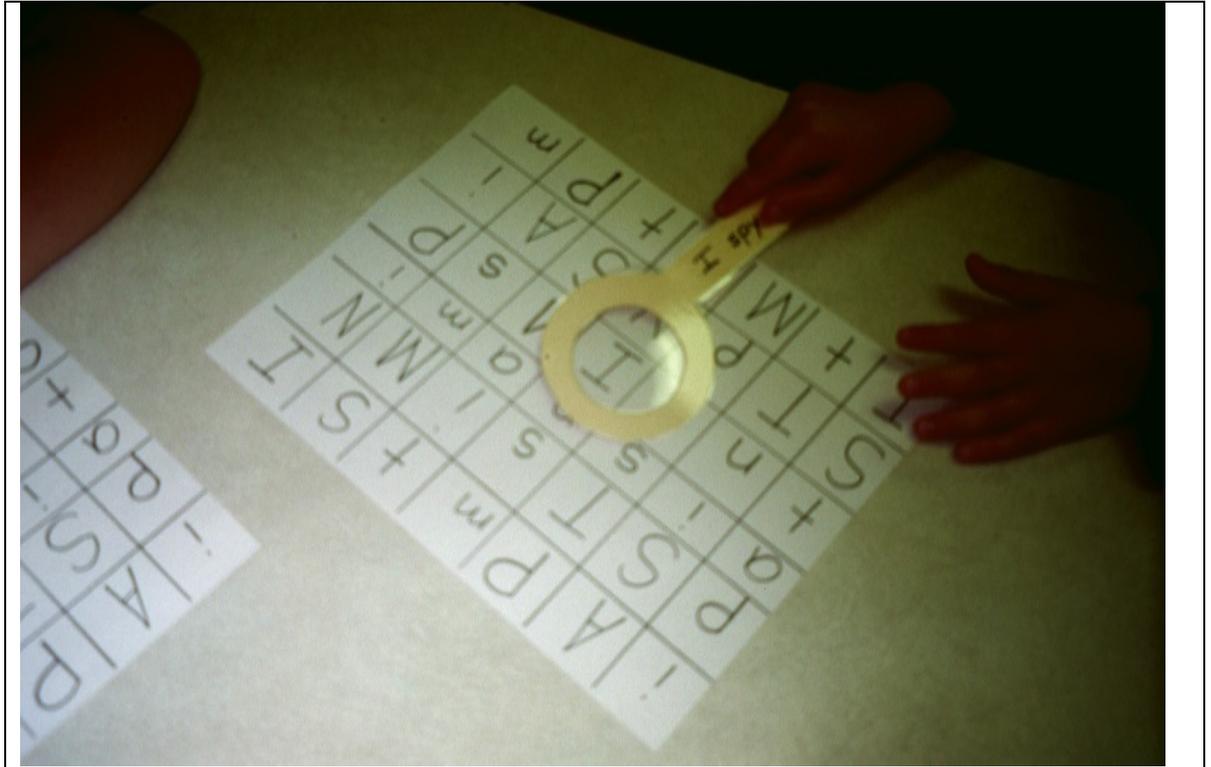
*Figure 4.* Goldfish graphing finished product. Every place a cracker had been, the students put an X.

After all were placed, they removed them one by one and made an X in the box where the goldfish cracker had been. When they had marked every place where a cracker had been, they could eat the crackers. This was our first experience with graphing this year. The following students understood the directions and completed the graph with just a little coaching: Jeffrey, Anna, Jose, James, Sapphire, and Brianna. Sapphire was so delighted with herself! Brianna followed the procedure perfectly even with her limited English. She is quite the visual learner. She saw my model graph and got right to work even though she probably didn't understand my verbal explanation of the process. Barbie could not even color the symbols to note each row of the graph the correct colors. I kept going back to her and kept asking her for the next color in the rainbow and she couldn't get it right. By the time her small group was finished, she hadn't even made an X on the graph. I realized she needed more scaffolding. The other members of her group were just about finished eating their goldfish, so I just let her eat her goldfish without completing the graph. She gave me a broad smile. I think she had been worried that she would *never* get to eat her goldfish! "You tried, Barbie," I said. I took her paper before the others would notice she hadn't done it. This activity is clearly beyond her zone of proximal development! Salvatore completed the graph, but his lack of English caused him to use the wrong color on one of the rows. Darlene sorted and placed the goldfish correctly, but she wasn't able to get the colored Xs quite right. I was pleased though. I wouldn't have guessed that she could do it so much better than Barbie. Ebony couldn't even figure out which way to hold the paper without my help. She didn't

understand that each line of goldfish had to start at the same side of the page. I should have had the students put their names on the back of the papers so I could include them in my thesis without dealing with their real names. I would know for the next time. White out would help me out in this case.

By the third week in October, I planned salt trays and laminated spy glasses to introduce the letter we were focusing on and added a review of other letters we had worked with previously. (See Figure 5.) Both of these activities were answers for the discouragement I was feeling a few days earlier. They could be grabbed for use in a moment. I kept the salt trays near my small-group instruction table and the spy glasses were under them. One particular day, the students as a whole were quite active. It was as if there were springs on their chairs. As soon as they would sit, they'd pop back up again. That was the day I handed out the spy glasses. They were to start at my small-group table and wait for me to say a letter. When I did, they could take their spy glass and search for the letter on the Word Wall, on the ABC chart, on the name tags that are on their tables, on the visual aids around the room, etc. It was as if they were playing hide and seek with the letters. Barbie was the only one who was not engaged. She even yawned. The others were like miniature detectives: "I found it!" "I found a LOT of Mms!" They were delighted with themselves. As this activity was used again further into the study, I would hand out the spy glasses and say the sound a letter made and the students would think about what letter made that sound and put their spy glasses on that letter. After getting their wiggles out with this

activity for four or five minutes, they were ready to settle down and read a guided reading book with me.



*Figure 5.* Spy glasses. They used them on pages such as this, with letter cards spread on the table, and sometimes I would let them take their spy glasses to the Word Wall.

### **Engagement Noted**

The salt trays were offered on other days. These added a tactile element to writing letters. The students used their finger to trace a letter in the salt. If Johnny could not form his "J" right-side up because of his perceptual difficulties, my hope was that by FEELING how a J was formed while writing it in the salt he would eventually write his J right side up. Barbie could not form the first letter of her name even after my helping her many times. The salt tray would hopefully

help her as well. As each group came to the small-group table, they took a tray, wrote their first initial in the tray, then their names, then I would send each child to get a particular Word Wall word which s/he would bring back and write in the salt tray. I heard exclamations like "Ooooh!" and "I made my name!" and "Wow!" The students were very engaged. I would review the Word Wall words as they brought them to my table, "Yes! You DID write the word 'in' with your finger in the salt!" They were extremely engaged. They loved the new place to write. They were working with letters and words. They were smiling. I took photos of their salt tray creations, before presenting the guided reading books. Why had I never done this kind of hands-on activity before guided reading in the past?

### **Breakthrough with Barbie**

By the last week in October, I was concerned about the lack of progress Barbie was showing with Kid Writing. All she did was scribble a little. When I would ask her to tell me her story, she would just say a word like "sun" or "mommy" and I would suggest a statement for her story and she would nod or shake her head. Most of the time she scribbled some blue and drew a circle with a yellow crayon and said, "sun." I would ask, "What's happening with the sun? Where are you?" No matter what, she would just say one word. Then, if I tried to help her hear the sound of the beginning letter of her word, she would just write a B with extra sections to it. One day I thought, "I know she can make a circle." So I said, "Barbie, can you draw a circle next to your blue drawing?" She did. "Can you draw some eyes in that circle?" She did. How about a nose?" I asked.

She did. By the time I was finished, she had drawn an entire person with ears, mouth, hair, body, and feet! I was totally amazed! She had never drawn anything recognizable before. So, I asked myself where to go from that point? If I encouraged her to draw more people the next day, would she? Would I have to go step by step as I did on this day? And I wondered when the idea for what she would draw would come from within her instead of me? It was quite an exciting moment.

The next day, I said to Barbie, "You made a wonderful drawing of a person yesterday. Will you draw another person in your story today?" Then I turned my attention to others while she worked on her illustration. By the time I came back to her, she had drawn another person, but the person had less parts. I was still amazed about the previous day. I shared the breakthrough with Barbie's special education case manager.

The same day that Barbie had her breakthrough, I was impressed again by Jeffrey's amazing ability to locate words on the Word Wall. He kept jumping up to help a classmate find the word for which s/he was looking. When I would say to the small group, "Does anyone know where the word 'it' is on the Word Wall?" Jeffrey would smile and say, "Sure, Teacher!" I thought to myself, "Jeffrey is not very verbal, but he sure is visual! He has the location of every word memorized!"

It is important to note that with Kid Writing, there are not just words with velcro attached to the Word Wall, but there are pictures, or icons stapled above the Word Wall that help the visual learners remember words. Each icon rhymes with the word that is on it. For instance, the word "I" is written on the picture of a

little spy. He is the Spy of I. The word "is" is written on a wizard hat. It is the Wiz of is. The word "and" is written on a cut out of my hand. It is the Hand of and. Most of the icons also have that word on the Word Wall. Therefore, Jeffrey could look up at the Wiz of is and then look down near the letter Ii and find the word that matched that on the wizard hat. Also available were the role tags from the kitchen area for some family words. (See Figure 6.)



*Figure 6.* The role-playing tags in the kitchen area could be retrieved during Kid Writing to copy those words into a journal story.

Also to be noted from that same day was the story Charles wrote. His story said, "The rainbow is wearing headphones." How novel! He has very creative ideas, but his small-motor difficulties hold him back.

Toward the end of the week, in my literacy small group, I added a pocket chart with eight pockets across each of five rows. I put alphabet cards in order in the pockets and gave the students a few letter cards each for which to find the match. Sapphire and Darlene were very good at this. They are quite visual. On

the other hand, Johnny found this very, very difficult. He could not even find the matches for the letters in his name. He was visually overwhelmed by the number of pockets from which to choose. After that activity, I pulled out the MacMillan decodable readers. The students only had to know four high frequency words to read this book correctly: we, like, a, and the. It was too challenging for Barbie, Darlene, and Jeffrey. Each line in the book said, "We like a \_\_\_\_\_." Or, "We like the \_\_\_\_\_." There was a picture to represent the last word of each sentence. Barbie could only say, "like pumpkin" or "like pie." However she did point to every word; even the words she did not say. Jeffrey couldn't seem to say the word "we" either. His version was "like a dog" or like a sheep." Salvatore surprised me. He read very well despite his limited English! It's amazing to me how quickly he is learning English compared to his brother's experience with me last year.

In my log on this day, I again noted how stretched I was feeling by how many things I had to physically have in place each day. Exhaustion was apparent. I was doubting myself as well. I wondered if Barbie and Jeffrey would be doing any better if I were doing guided reading the traditional way?

By the end of October, during literacy groups, I tried using salt trays to write down the words that rhyme with 'at.' We made an /at/ house out of construction paper. Every word that lived in the house had to rhyme with 'at.' They were thrilled with themselves and their ability to write the words in salt...all except Barbie. She just pushed the salt around aimlessly unless I guided her hand. Then we used the spy glasses to find some of the letters on the letter worksheet.

They proved that they still knew the letters we had worked on up to that point. I added another component by asking them to color all of the Mms blue and all of the Aas red, etc. They found the letters with their little spy glasses and they colored the ones that matched the same color. Jeffrey kept saying, "I spy a little one!" Anna said, "I colored all the Pps pink! I love pink!"

I spoke to the whole class on this day about my teacher action research project. The students were tickled to know that my teacher is called a *professor*.

### **Playdough Letters**

Cookie cutters in the shape of alphabet letters, I thought, would be a good way to work on a small-motor task and review the letters. (See Figure 7.)

The spoken and inner dialogue--

Me: What is that?

Johnny: The spy of I.

*My thoughts: What a huge smile on his face!*

[I see Barbie making a B with playdough.]

Me: What letter is that?

Barbie: D.

Me: No. Can you say, "B?"

Barbie: E.

*My thoughts: She cannot even remember the first letter of her name yet!*

*It's almost November! I tried to get Barbie to move on to another cookie cutter. No. She just wanted to make a B over and over and never call it a B. Frustrating!*



*Figure 7.* Playdough letters with letter cookie cutters.

Early in November, I was able to teach the students how to play the math game, Fill the Hexagon. I have always taught them this game in a whole group presentation. This year, I decided to teach them how to play it in small groups. It is a game where there is a playing area that contains six hexagons. Two can play it with a shared board or one can play alone. A hexagon can be filled with six triangles, three rhombi, two trapezoids, or combinations of these shapes. There is a die with these shapes on it that each child throws to add to one of the hexagons. They all caught on to the game. Barbie too! It is a very visual activity which hasn't always found success right away in previous years. With each small group, I modeled it with one student as my partner. Then I paired them up to play it with a teammate. I was able to take photos of them playing the game. I heard so many

good exclamations during their play. "We made a hexagon with two diamonds and two triangles." "Hooray!" "Look! The diamond won't fit here!" "Give me a high five, Mrs. Trovato!"

### **Class Interview**

During the second week in November, I did a whole class interview. My questions were: 1) What do you like about coming to the star table? (The star table is what the kids call the small-group instruction table). 2) Is there something that you do there that you don't do anywhere else? What? and 3) What do you learn at the star table?

1) Sapphire, Richard, and Johnny each mentioned the junk boxes as what they really like. (These are containers with common objects like little variously shaped erasers, old marker tops, teddy bear counters, and other things which the children use for counting, sorting, or making patterns.) 1-2) Adam, Diane, and Ebony raved about the salt trays and that the only place they use the salt trays is at the star table. Diane also mentioned the ABC cards in the pocket chart as a favorite of hers. Barbie was the only one to bring up the spy glasses. She actually couldn't say "spy glasses" but she got up and went over to touch them to show me what she liked. 3) Jeffrey responded that at the star table he learns "how to read books and how to be nice." Diane was the only one who said she learns her ABCs at the star table. I was not sure what to think about their answers. They were certainly more in tuned to the hands-on materials than they were to the guided reading books and academics. Although many raved about the junk boxes,

nobody brought up learning how to count, sort, or make patterns as what they learned by using them.

The next day as we were reading the little take-home book My Oo Book that we use with each letter, I allowed the students to use their spy glasses to find all of the Oos in the book. Diane was putting both Oos in the center of her spy glass. She said, "I found you two!" She was actually talking to the letters. Salvatore cracked me up. When he saw and heard what Diane was doing, he did the same. However, with his lack of English, instead of saying, "I found you!" he said, "I find you!" He kept saying it to every letter "o" throughout his book.

It was on this particular day that I noted in my log my discouragement: "These kids are cute and I already love them to bits, but RtII takes way too much of my time. I miss the good ole' days before RtII when Kindergarten was about giving kids that initial joy of learning."

During November's Parent-Teacher conferences, there was very little time for small-group instruction. Our school days were cut in half. Many personal issues came to light and added dimension to my understanding of my students during and because of conferences. Only ten of my fifteen scheduled conferences were honored. Richard's mom had her ninth baby on one of the conference days. He now has four siblings younger than he. Anna's mom also had a baby during conferences. Sapphire was in the hospital with a strange rash all over her body. The shelter might be to blame. Jeffrey's mom did not answer my calls. He is in the middle of moving to another house in our jurisdiction. Ebony is having

surgery on her arm, which is broken in two places. Education is the last thing on the minds of these parents right now!

The parents that did come to conferences had a lot to communicate to me. The mother of James would like him evaluated for speech therapy. With all of the extreme speech needs that my students have, James did not stand out. I resolved to get the paperwork going. Barbie's mom wanted her evaluated for physical therapy. Adam's dad is still riddled with grief over his wife's death and overwhelmed with single parenthood. I praised him for his attention to Adam's homework folder and for attending the conference. He's doing his best. Jose's mom was delighted to hear that Jose is very well-behaved in school. She hugged him and then asked when he would be behaving so well at home. He giggled.

At the end of November, I was aware that I wanted to do another hands-on graphing lesson with the small groups so that I could compare it to the rainbow goldfish graphing activity we had done early in the year. I decided to do graphing of numerals 1-6 using a die for each child. They would roll the die and then put an X in the rectangle above that numeral on their graph paper. They would see which numeral had the most rolls by seeing which one had Xs to the top of the paper. The numerals would be "racing" to the top. In the past, I have done this activity as a whole class activity with everyone at their tables working simultaneously after modeling the procedure myself. I am so very glad I decided to do this activity with the small groups! With all of the special needs in this class, I would have needed eight pairs of hands and eight pairs of eyes to accomplish it as a whole group task. I wrote in my field log, "Yikes!"

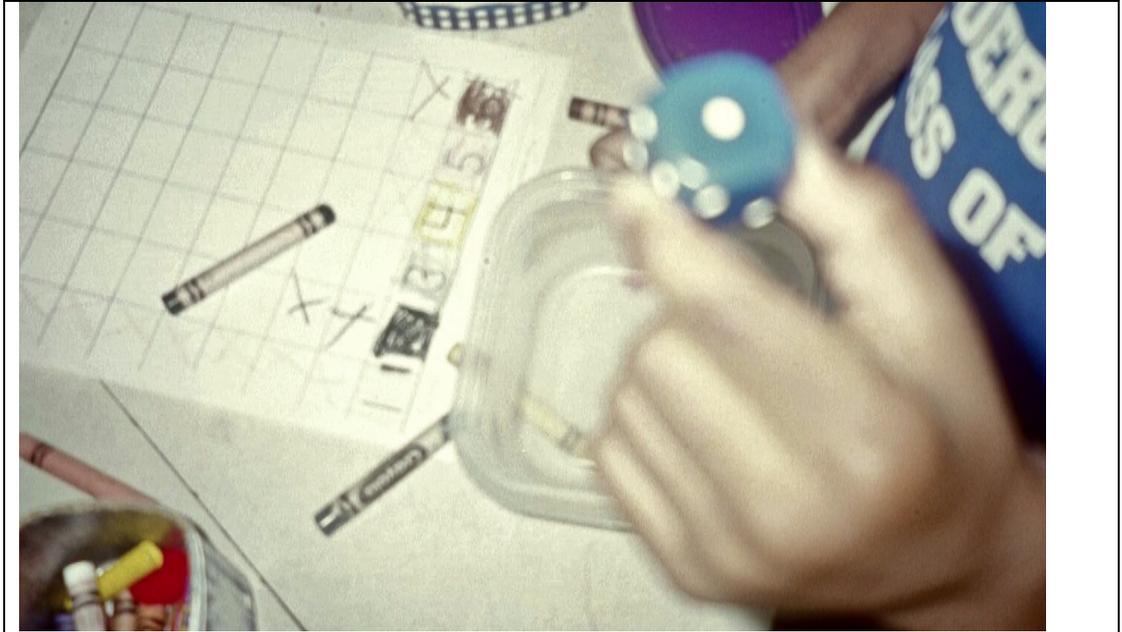


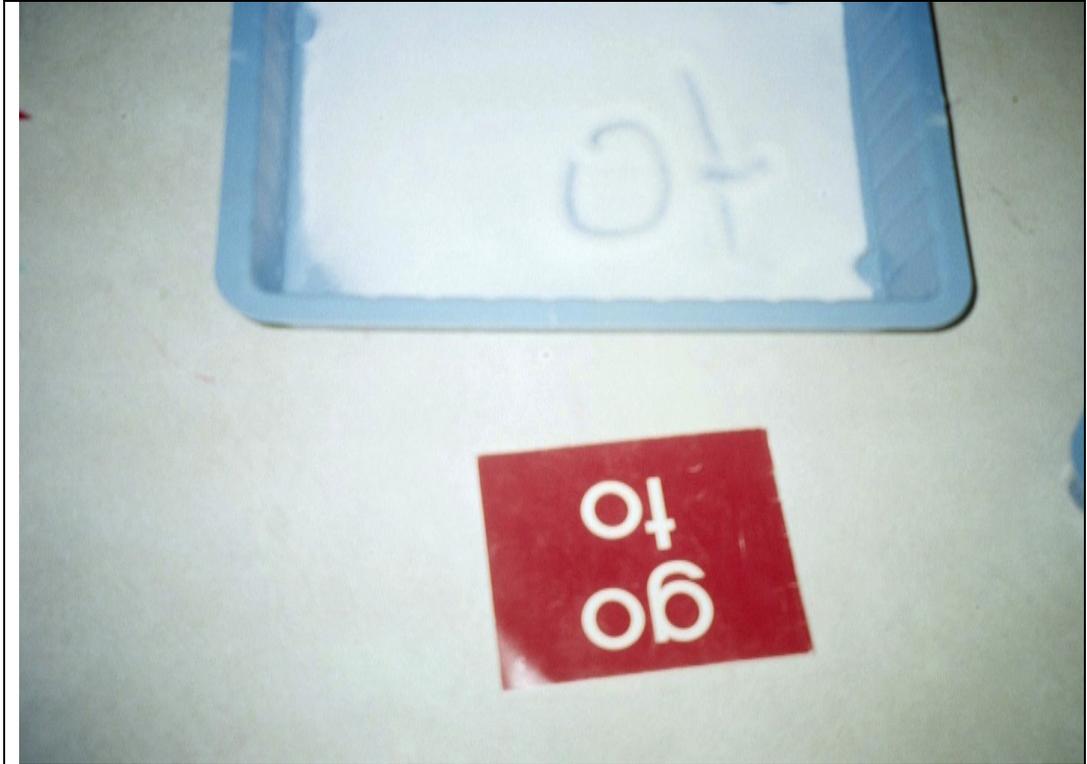
Figure 8. Graphing numbers rolled on a die.



Figure 9. Numeral Dice race...which number got to the top first?

Barbie worked with Team Three on this day since there were two students from that group that were absent and I wanted to even out the teams. I had to physically help Barbie with the process of throwing her die and then marking the X on the rectangle above the number she rolled. This was way beyond her zone of proximal development! Since the dice were regular dice and not dice with numerals on them, Jeffrey was extremely challenged by this activity. He can count, but he cannot recognize the numerals 1-6 yet. Johnny was in the same boat. Sapphire was unsuccessful too. She just put Xs on every rectangle without really rolling and counting the dots. I needed to help them with each step. Adam, Jose, Salvatore, and Jack totally understood the process. Adam was working as if he were on a mission. He really got it and was into the idea of the numerals racing against one another.

On the last day of November, I used the salt trays in a new way. I said a letter sound and invited the students to write the letter that made that sound in the salt tray. After a few letter sound reviews in that manner, I taught them the words "go" and "to" which they wrote in the salt. Then, I pulled out the guided reading books for which they needed to know "go" and "to." (See Figure 10.)



*Figure 10.* Tracing high-frequency words introduced in the guided reading book in the salt box before reading the book.

With my RtII group, I used the foam letter dice and the Play Ball with Clifford game. Johnny was doing better than usual with letter identification. I asked Barbie to show me a letter H, but she pointed to a B. The world starts and ends with B to her because she recognizes the first letter of her name.

Finally, on this last day of November, Anna was withdrawn from our school. Since her mom had the new baby, Anna was going to Puerto Rico to spend a month with her dad while her mom concentrates on the new baby. Unfortunately, our district's policy is that if a child is gone for more than a certain number of school days, she is withdrawn rather than just given a vacation form. What that meant from my point of view is that Anna will lose her spot in Full-Day

Kindergarten. And, if she does come back in January, she will be placed in half-day Kindergarten since they will fill her spot with a child who needs the intervention who registered later than my class was formed this year. The boy who will fill Anna's spot already has an IEP...One more with special needs for me to help. By the time the boy will enter my class, less than two weeks will be left of the teacher action research project. Therefore, I will not include this boy in my study.

### **Charles**

It was the end of November when my attention was heightened concerning Charles. Although everyone in my class loved our Kid Writing hour at the beginning of the day, Charles hated it. His extreme small-motor difficulties made him try to avoid doing his work. He would enter the class and just as quickly ask to be excused to the bathroom. When he returned, he would sit in front of his journal leaving it blank as he rocked in his chair. He didn't even open his crayon box. He would then wander over to the job chart and tell everyone in the class who had a job that day what job they had. I was beginning to think I was torturing the child to expect him to write a journal entry everyday. I discussed him with the guidance counselor. She suggested that we remove the obstacle of drawing the picture and just expect him to write the words for his story. She brought me fifteen scenes and about ten people figures. (See Figure 11.) She suggested I laminate them and offer them to Charles. He could choose one scene each day and some of the people figures, set them on his journal and then write the story to go with his choices. I was willing to give the idea a chance. I would

just have to take time to photocopy his final scene with figures to staple into his journal. I wondered if the other students would be jealous. The first day of December was the day I introduced Charles' to his new writing accommodation. Fortunately, he arrived a few minutes early. I was able to sit with him and show him the scenes, allow him to pick one for his journal that day and offer him some people figures to place on his scene. He was cooperative. When I asked him to tell me the story that goes with his picture, he was quiet. I asked him to think about it while I greeted the other students and put away the scenes and figures he didn't select. He still wasn't coming forth with a story. I took out the three-minute timer and told him he would need to tell me his story before the salt went through the glass. He did. It wasn't much of a story, but he did. The three-minute timer sometimes motivates him. Sometimes nothing motivates him. He finished his journal in record time! He still had to write the words of his story, but he didn't have to suffer through drawing too. When his former half-day Kindergarten teacher walked in the room and saw the new accommodation as I was working with Charles, he was incredulous! He declared that he would NEVER allow such an accommodation for Charles in his class. I was content that Charles was finished with his journal with enough time left in the Kid Writing hour to do some of the reinforcing and fun activities the students may do when finished with their journals. I took a photo of Charles' completed journal entry.



*Figure 11.* Differentiation for Charles with severe small-motor difficulties. His words say, "I am playing."

The next day, Charles picked a scene of a bedroom that had a central rug, a crib, and a bed in it. He selected a dad figure, a girl figure, and a baby figure. I asked him what his story was and he said, "I am playing." These words are all on the Word Wall. He could write this three word story with the help of the word cards. However, with a dad, a girl, and a baby in the scene, where was Charles?" I asked him to explain. He then told me that the baby was him. It still didn't make sense to me, but I allowed the story and coached him to retrieve the right words from the Word Wall to make it work.

Interestingly, by mid-January, Charles was ready to go back to drawing his picture and writing his words without the help of the accommodations. He

wanted to fit in with the others. He now had a taste of what it was like to complete his journal entry in a timely manner and he wasn't going to sit idly anymore. The laminated scenes and figures were a scaffolding step for Charles. Success comes in unexpected ways. Thanks to the guidance counselor, Charles pulled himself up over the writing hurdle.

### **Pretzel Letters and Words**

At the beginning of December, the reading specialist and I tried to reinforce Word Wall words by allowing the literacy small groups to form letters and words using pretzel sticks and pretzel wheels. (See Figures 12 & 13.) At first, the students tried to make a letter. Then, we challenged them to get a word card from the Word Wall and form the word on a paper towel. I announced that I would take a photo of their work if they succeeded in making a word on their paper towel. They were busy little bees working hard to make the words. The most popular word for them to form was "look" followed by the word "to." I was able to take several photos. A couple of the students went further and formed their names as well. I wondered if this very popular activity could be offered as an independent activity at another time.

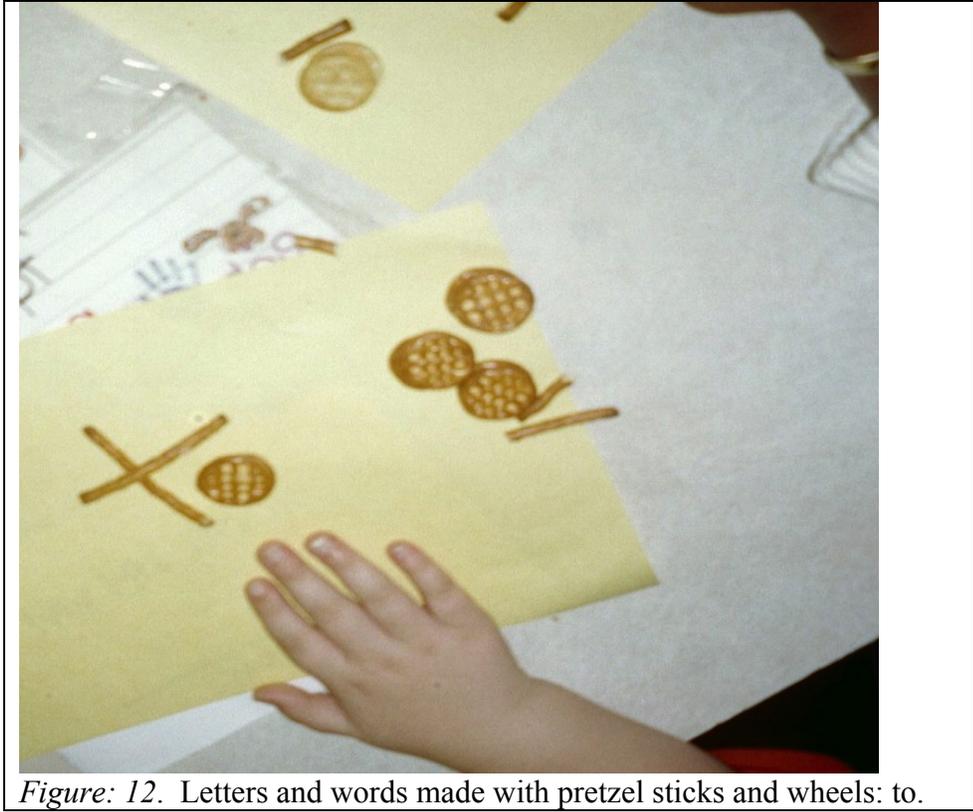


Figure: 12. Letters and words made with pretzel sticks and wheels: to.

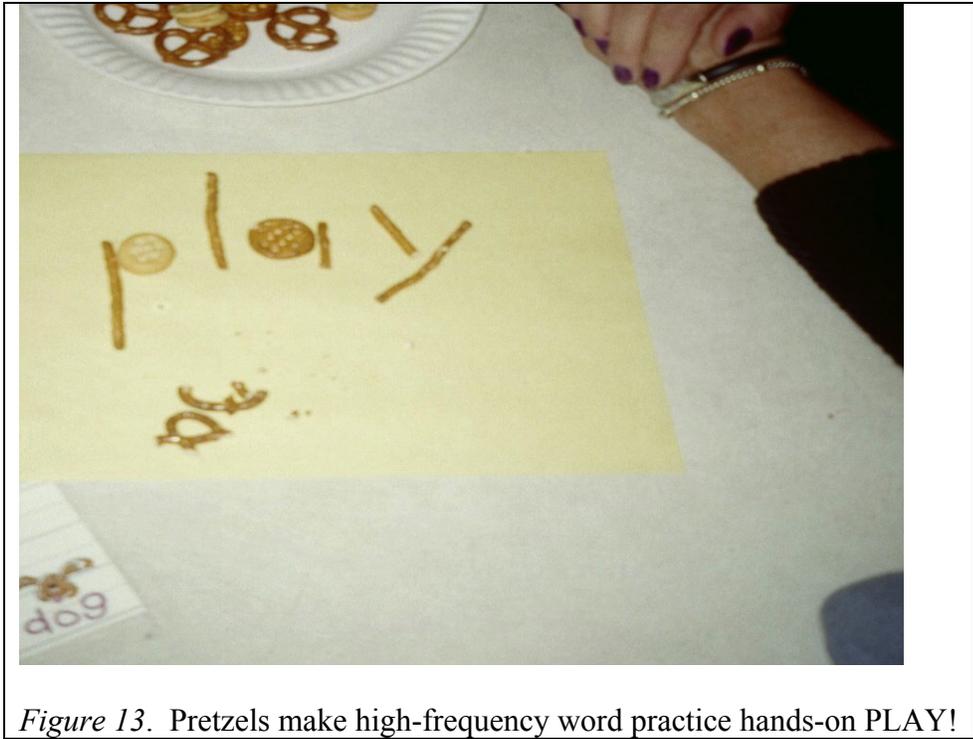
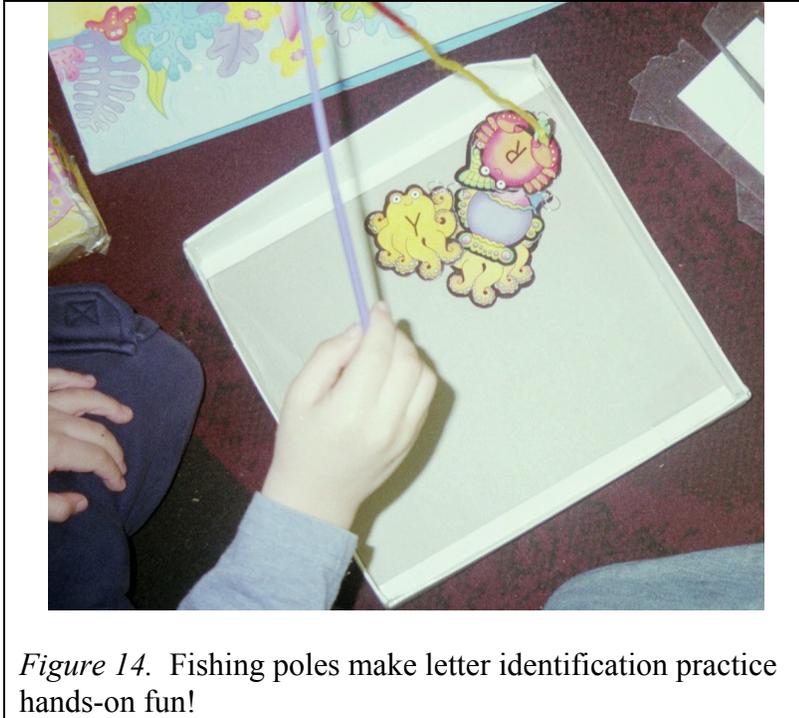


Figure 13. Pretzels make high-frequency word practice hands-on PLAY!

It was through the pretzel letters and words that I gained the insight that many of the hands-on activities I have introduced at the small-group table could be repeated as reinforcements during center time as the students became comfortable with them. If they could do it without coaching, I could provide the materials and center time could reinforce literacy skills.

Another activity that I used with the literacy small groups was alphabet fishing. I had little fish-shaped cardboard pieces with letters on them and a metal clip at the nose. Magnets were attached to the end of the strings on the plastic fishing poles. (See Figure 14.) The students could fish for a fish out of a box and then could keep the fish in their stash pile if they named the letter correctly. This activity was a definite hit! In fact, I didn't even go to the small-group lesson that day. We spent the whole small-group time fishing for letters. The element of competition is a great motivator. They wanted to have more fish than their peers. No one wanted to throw a fish back in for lack of the correct identification of the letter. I remember declaring to myself, "I will use this with letter *sounds* on another day!"



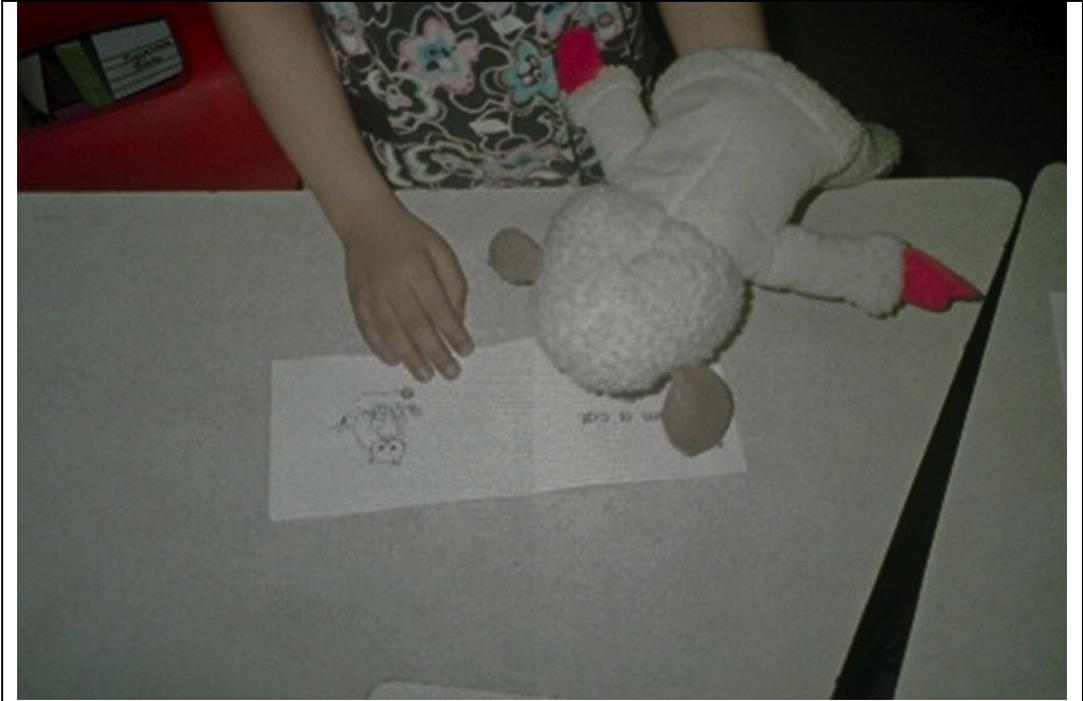
*Figure 14.* Fishing poles make letter identification practice hands-on fun!

In mid-December just before the holiday craziness, I gave the final survey to my students. Since Anna had moved away, I had to eliminate her final survey. Fourteen students completed the final survey.

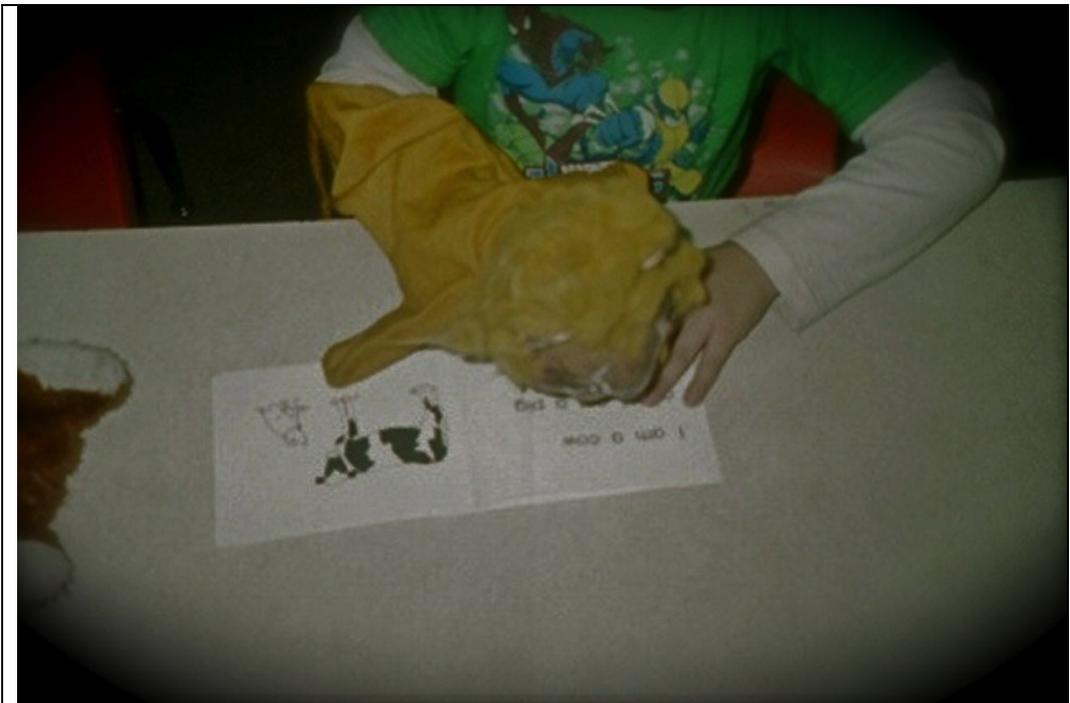
### **Read to a Puppet**

Another very popular practice has been to allow the students to bring a puppet to the small group instruction table when we do guided reading. They let the puppets point to the words, or they read to their puppets.

(See Figures 15 & 16.)



*Figure 15.* Read with a puppet! Teaching Lambchop to point from left to right.



*Figure 16.* Read to your puppet.

**Conclusion:**

My teacher action research project was complete. How would I proceed after the holiday? I had a lot to review and consider. I was certain of two things in the end:

- 1) I learned a lot about myself and about my students while doing the research project.
- 2) I was convinced that hands-on learning is engaging.

**Data Analysis****Bins**

After very careful examination of my data and a thorough coding of my field log, the following Bins were developed to reflect this teacher action research project:

**Bins**

**Kid Writing:**

- Salt trays
- Interactive Word Wall
- Laminated name cards
- Laminated scenes
- Laminated figures of people

**Reading:**

- 5 x 5 game
- Elkonian boxes
- Fishing poles
- Fly swatters
- Individual chalkboards and whiteboards
- Magnetic letters on cookie sheets
- Playdough and letter cutters
- Pocket chart tasks
- Puppets
- Pretzel letters
- Spy glasses

**Math:**

- Fill the hexagon game
- Junk boxes
- Goldfish crackers
- Numeral dice

Positive *Student* feedback received and engagement observed with these hands-on activities/materials:

**Other factors to consider:**

- Difficult group
- Effect of poverty
- Negative *student* feedback
- Teacher* frustration/exhaustion

**Positive *Teacher* reaction:**

- Breakthrough with Barbie!
- Home visit insight
- Encouragement

**Problems with the addition of hands-on tasks to small group lessons:**

- Not enough time to put everything in place
- Not enough space to organize the materials
- Engagement, but *not always* success

**Research Question:** *What are the observed behaviors and reported experiences of students and teacher when the number of hands-on learning tasks are increased during small-group instruction in Kindergarten?*

**Hands-on activities in small group instruction increased *Student*:**

- Engagement
- Enjoyment
- Collaboration
- Initiative
- Success

**Differentiation was achieved during small group instruction through the use of hands-on activities for students with:**

- Small motor difficulties
- Limited English
- Speech difficulties
- Auditory memory difficulties

Since this study involved small group instruction in literacy, writing, and math, I chose three measurable areas to add to my data. For literacy, I chose to record the number of letters, capital and lower case combined, the student could identify out of order in September and then again in January. (52 possible letters.) For writing, I chose to use their Kid Writing level from September and then in January. For math, I chose to record the highest number to which a student could count without error in September and then again in January. Out of my 15 initial students, I only kept the scores of 14 of them. One of my students moved away in November and the student that replaced her did not come until mid January. I did not include the new student in my research project since it was almost over.

When I look at these scores, I am delighted and amazed by the letter identification scores of Adam, Brianna, Charles, Diane, James, Jeffrey, Johnny, and Sapphire. Brianna's score is especially noteworthy since she is just learning to speak English. All eight of these high scoring students knew almost no letters at the beginning of the year. The most worrisome score here is Ebony. She is old enough to be in first grade and yet has the very lowest January letter identification score in my class.

When I look at the Kid Writing levels, I am again very pleased. ( See Figures 17 – 21.) In September, the students couldn't even write their names. In January, Brianna and Salvatore were both a level five! Both of them are ESOL students! The goal for the end of Kindergarten in our district is a Kid Writing level five. At the rate Brianna and Salvatore are going, they might be a strong level six by year's end! For a mid-year score, a level three or four is normal. The

only one I am concerned about is Barbie. She is still a level one. It can't merely be about her small-motor coordination. Charles, Johnny, and Richard have small-motor problems too and their scores are threes and four.

### Student Work

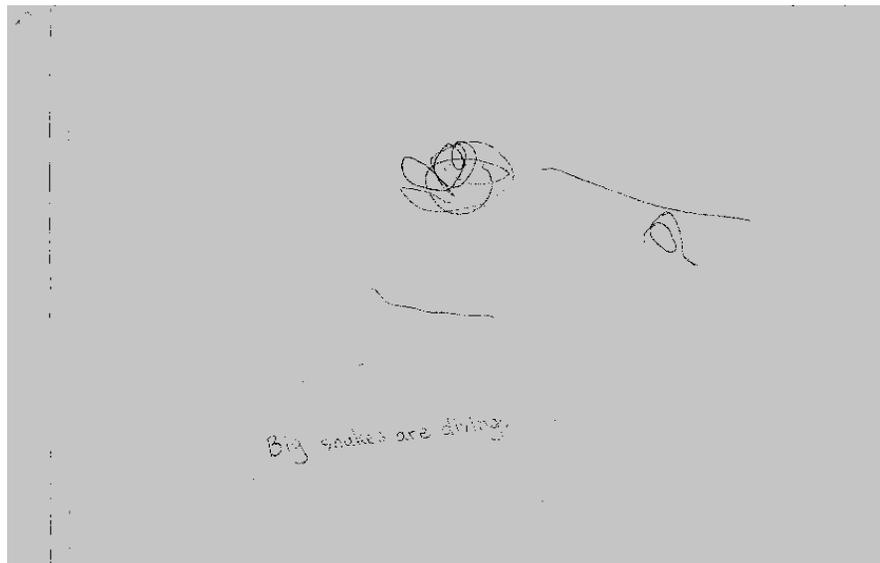


Figure 17. Johnny's Kid Writing journal entry from Sept. 14, 2011

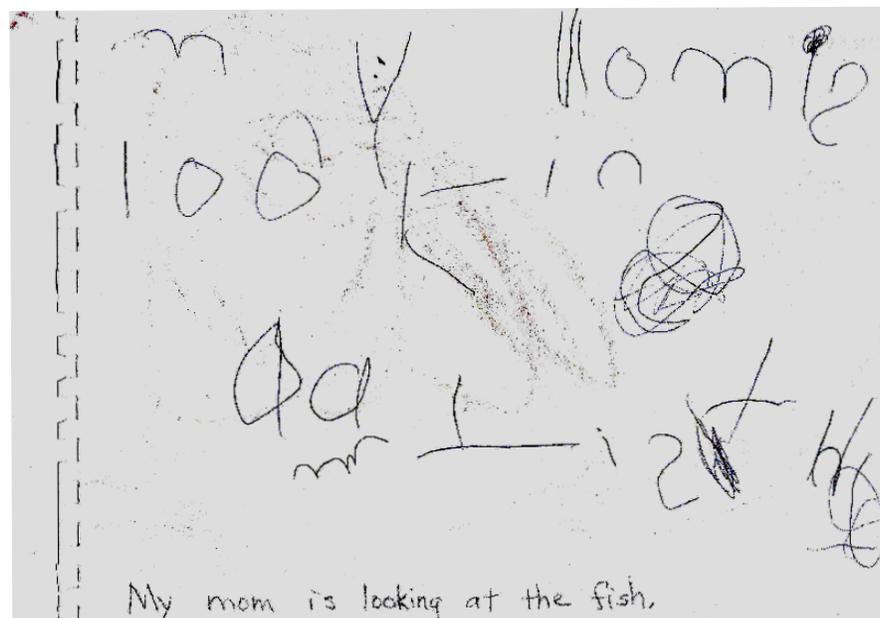


Figure 18. Johnny's Kid Writing journal from January 19, 2012.

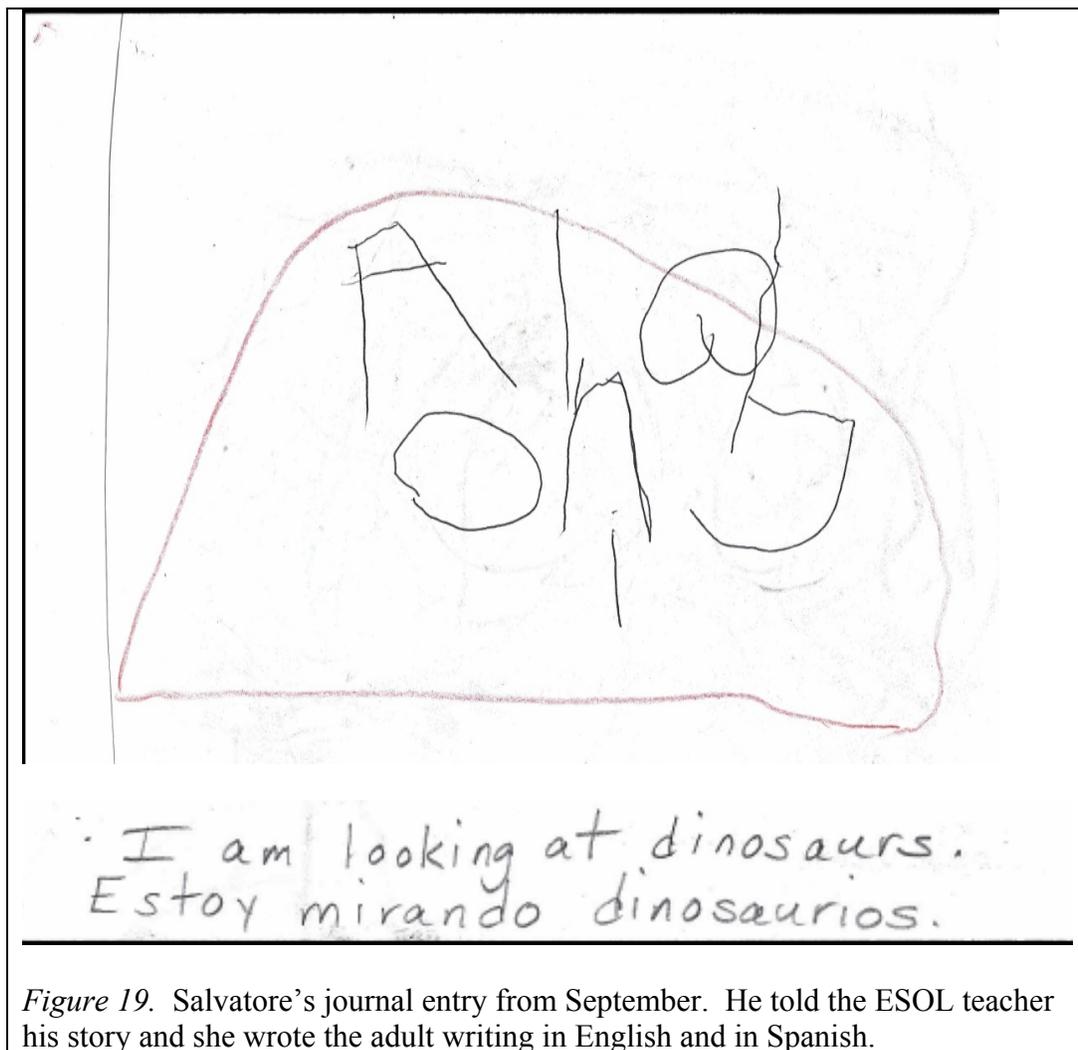


Figure 19. Salvatore's journal entry from September. He told the ESOL teacher his story and she wrote the adult writing in English and in Spanish.

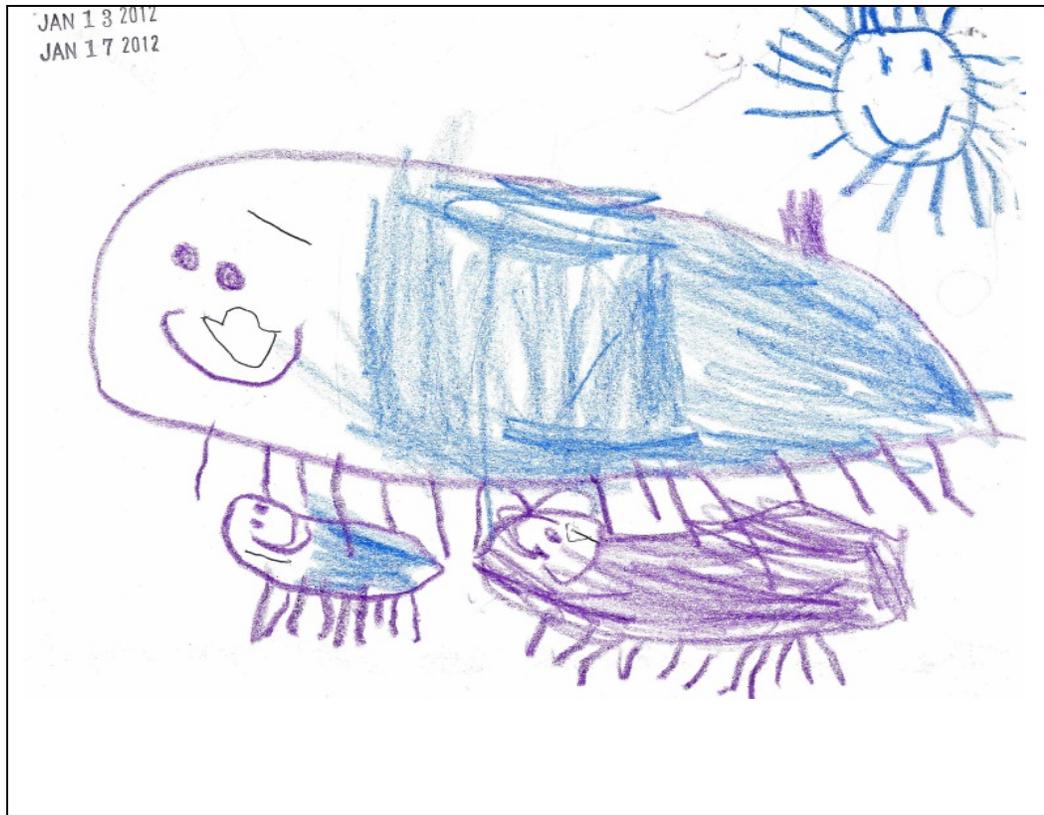


Figure 20. Salvatore's illustration to go with his January 17<sup>th</sup> journal entry.

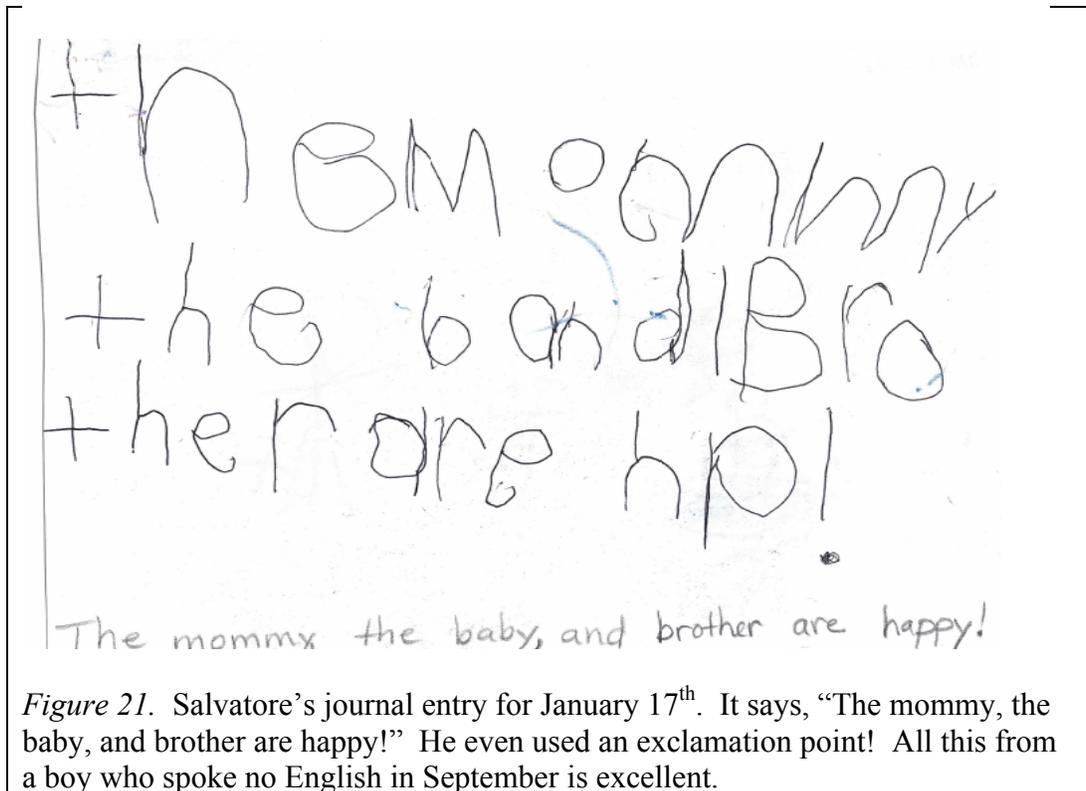


Figure 21. Salvatore's journal entry for January 17<sup>th</sup>. It says, "The mommy, the baby, and brother are happy!" He even used an exclamation point! All this from a boy who spoke no English in September is excellent.

In math, the goal is for students to be able to count orally to thirty by the end of the Kindergarten year. These counting scores are the least impressive of all three areas. If I try to understand this, my first reaction is that with the addition of RtII in my school day, there is less time to spend on math. I will have to make time for more counting activities in the small group setting.

I have to ask myself if these scores would be different if I had not added the hands-on element to my small-group instruction. This is a group of students with many academic challenges. I will never know how they might have done with the more traditional methods I used to use.

Table 1  
*Before and after scores for Letter Identification, Kid Writing Levels, and Counting ability*

STUDENT	SEPT.	JAN.	SEPT.	JAN.	SEPT.	JAN.
NAME	LETTER ID	LETTER ID	KID WRITING	KID WRITING	COUNTING	COUNTING
Adam	3	34	0	4	4	16
Barbie	1	19	1	1	6	13
Brianna	0	39	0	5	10	12
Charles	2	47	0	3	12	14
Darlene	2	16	0	3	3	14
Diane	1	30	0	4	8	14
Ebony	0	5	0	3	5	12
James	4	38	0	4	5	17
Jeffrey	2	38	0	4	11	14
Johnny	0	48	0	3	10	25
Jose	2	15	0	4	9	24
Richard	2	18	0	4	12	13
Salvatore	2	15	0	5	10	9
Sapphire	2	41	0	4	4	17
<b>TOTALS</b>	23	403	1	51	109	214
	Score is out of 52 letters.		KW Scores are Level 0-6		Score is for oral counting until an error.	

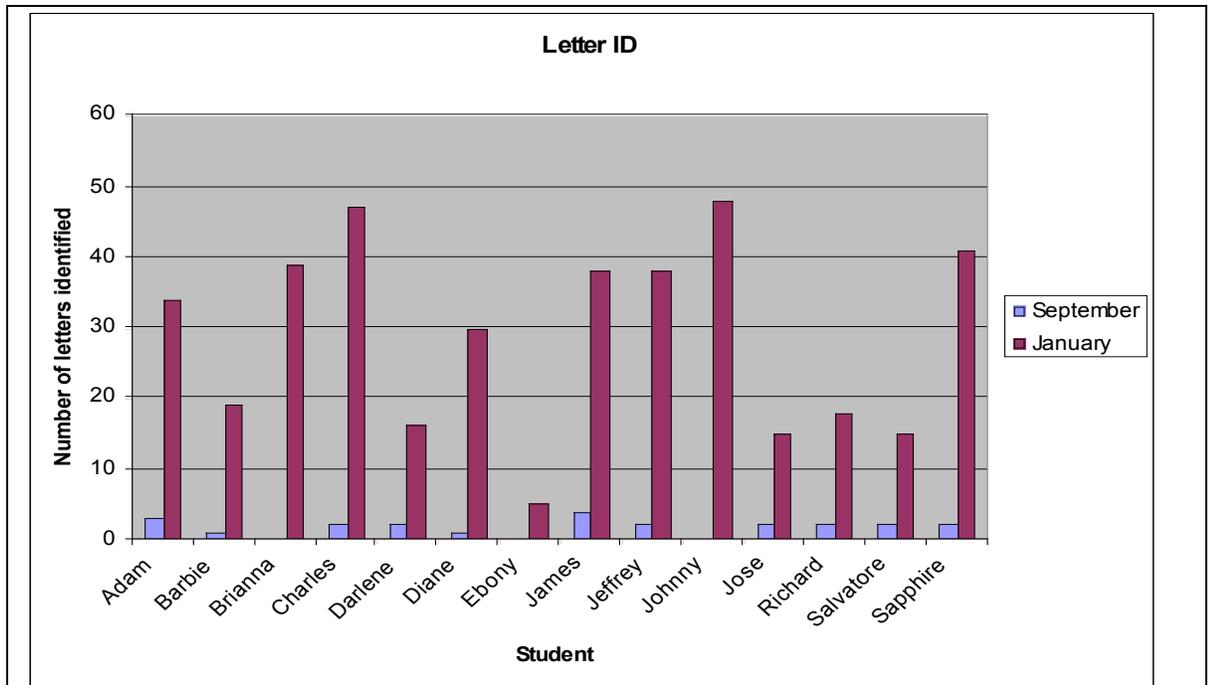


Figure 22. Graph of Letter Identification scores from September and January.

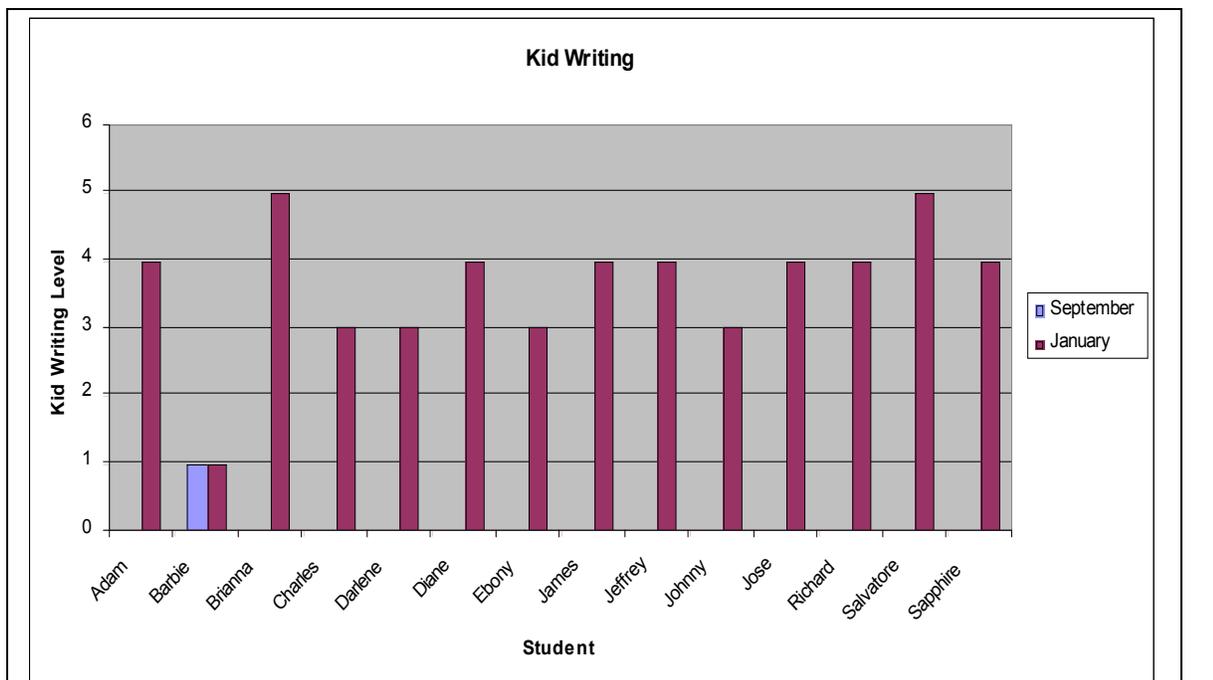


Figure 23. Graph of Kid Writing Levels from September and January. None of my students could even write their names in September!

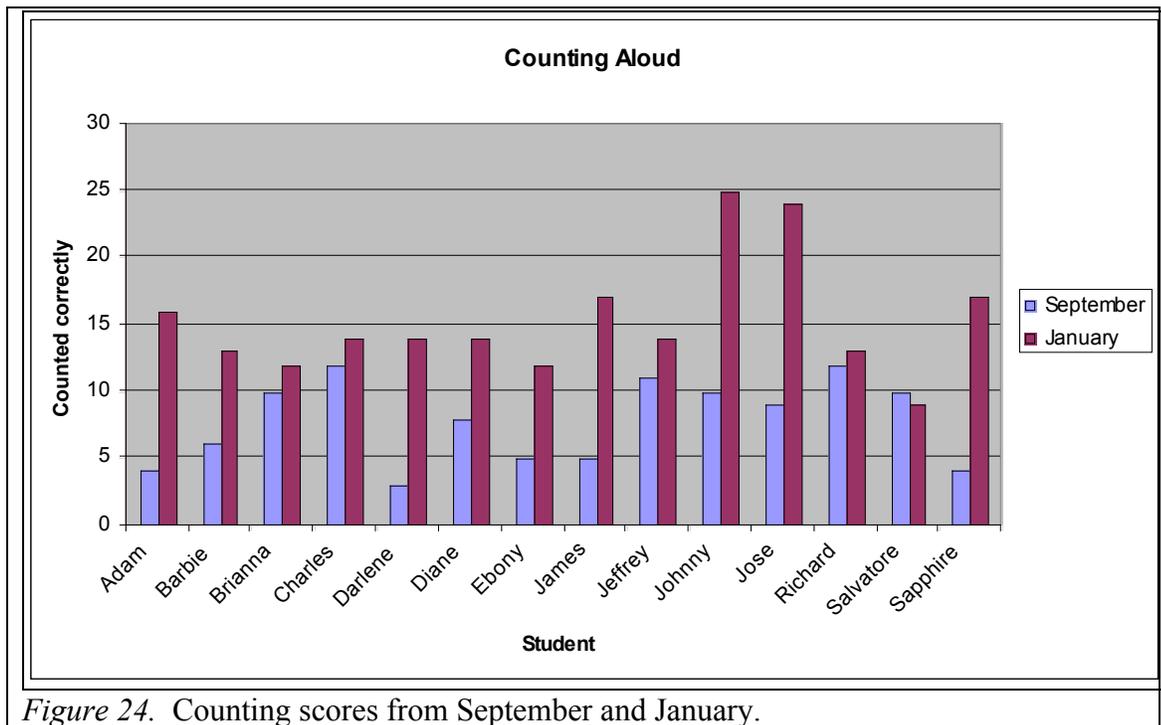


Figure 24. Counting scores from September and January.

Table 2  
Initial Survey given in September.

**Initial Survey Results:** Questions 1-7 start, “Do you like...”

Question	Yes	Sometimes	No
1 school?	10	2	3
2 to work with your friends at school?	12	0	3
3 the computer station?	13	1	1
4 the ABC rug activities?	11	1	3
5 the listening center?	10	2	4
6 the block area?	12	1	2
7 the star table? (i.e. the small-group instruction table.)	12	3	0
8 Do you know what to do when the bell rings?	11	4	0
Students: 15 in all.			
All used their thumbs to answer each question orally given.			

In September, my main focus was to acclimate the students to the centers they would be using when they were not at my small-group table (the star table). For my research project to be possible, the students had to know they would travel with their team from area to area and would come to the star table to work with me as one of their rotations. Even before I initiated the extra hands-on activities at the star table, twelve of my 15 students said they liked coming to the star table. The only area with a higher score was the computer center. The listening center was the lowest scoring center with four students saying they didn't like it and two saying they only liked it sometimes. I'm not sure if it was because the listening center is an area at which the students just sit and listen with a book to hold and pages to turn, or if it was because the students were not quite proficient at operating the cassette player with headphones at that early moment in the year. I was pleased to see that most of the students were indicating an overall enjoyment of school activities.

Table 3

*Final Survey was given in January.*

**Final Survey Results:** All questions start, “Do you like...”

Question	Yes	Sometimes	No
1 school?	12	1	1
2 to work with your friends at school?	11	2	1
3 the star table? (i.e. the small-group instruction table.)	13	0	1
4 to make letters with pretzels?	13	0	1
5 to use ABC fishing poles?	13	1	0
6 using the fly swatters?	9	0	6
7 to use puppets at the star table?	10	2	2
8 to make your name and Word Wall words with magnetic letters?	12	1	1
9 to use salt boxes at the star table?	13	1	0
10 to read little books at the star table?	12	0	2
Students: 14 in all. All used their thumbs to answer each question orally given. Three students needed help in circling the thumb picture that matched their answer.			

As with the initial survey, most of the students answered “yes” to the questions all starting with “Do you like...” and mentioning the various hands-on activities we had used at the small-group instruction table (the star table). The activity that got them most thumbs down votes was the fly swatters. The exciting thing to note in these survey answers was the fact that only one student out of my final fourteen

voted that he didn't like the small-group table. That in itself makes this teacher action research project a success. I wanted to take the boredom and lack of enthusiasm for small-group instruction away. The star table ranked right up at the top with salt trays, pretzel letters, and fishing!

## **Theme Statements**

- 1) The addition of hands-on activities to every small-group instruction lesson impacted my Kindergarten students by increasing engagement, enjoyment, success, student initiative, and student collaboration.
- 2) The need to provide differentiated instruction for specific students with small-motor difficulties, speech difficulties, auditory memory difficulties, and limited English ability were discovered through the use of the hands-on activities.
- 3) Positive student feedback was received and engagement was observed during small-group math instruction as the students used junk boxes, rainbow goldfish crackers, numeral dice, and the Fill the Hexagon game to work on sorting, patterning, graphing, numeral identification, and shape awareness.
- 4) Positive student feedback was received and engagement was observed during small-group reading instruction as the students used the 5X5 game, Elkonian boxes, fly swatters, foam letter dice, individual chalkboards and whiteboards, fishing poles, magnetic letters on cookie sheets, play dough and letter cutters, a pocket chart, puppets, spy glasses, and pretzels to work on letter identification, high-frequency word recognition, and letter sounds.
- 5) Positive student feedback was received and engagement was observed during small-group writing instruction as the students used salt trays, individual white boards and chalkboards, the interactive Word Wall,

laminated name cards, scenes, and figures of people to work on the forming of letters, the use of high-frequency words in their journal stories, and the illustrations to go with their stories.

- 6) The problems encountered during this study due to the increase in hands-on activities during small group lessons were a lack of time to set things up, a lack of space for the materials, and specific times when particular students were engaged but not always successful.

## **Research Findings**

### **Happy Children Using their Hands to Learn**

*The addition of hands-on activities to every small-group instruction lesson impacted my Kindergarten students by increasing engagement, enjoyment, success, student initiative, and student collaboration.*

Just as Monroe and Staunton (2000) found that student feelings about reading were positively impacted by the use of cookie sheets covered with sand upon which students wrote words and various other hands-on activities, I found over and over again throughout my teacher action research project that my students were enjoying similar activities and therefore enjoyed guided reading more than students had in years past.

Due to the addition of hands-on activities at every small-group lesson, over the course of this teacher action research study, I saw evidence of student engagement through my written reflections and observations. I saw evidence of student enjoyment through the student interviews and surveys. And, in many cases, I saw student success as I looked at student work and test results. I witnessed increased student initiative and admirable student collaboration as the students participated in the hands-on activities.

Early in the research project I introduced salt trays. The students were engaged and obviously enjoying the salt tray activity involving letter identification and letter sounds and, later, high-frequency word review. More than that, they were less encumbered since they didn't have to be concerned about

pencil grip. I had several students with small-motor difficulties and this was extremely helpful for them!

Another special moment, which proved enjoyment, engagement, and success, was the use of foam letter dice and a Clifford the Big Red Dog puppet. When a child rolled a die, he or she would say the name of the letter that came up. If said correctly, the Clifford puppet would give that child a big, slurpy kiss. There were many smiles and giggles with this motivating activity to lead into guided reading!

The spyglass activities supplied enjoyment, engagement, and success as well. “I found it!” they exclaimed. They were so delighted with themselves! How much more meaningful than a drab and dreary worksheet could it get?

Collaboration was very much noted as the students played Fill the Hexagon game during the math small groups. They worked in pairs filling the hexagons with triangles, rhombuses, and trapezoids. And with Kid Writing, there was so very much collaboration going on! The students were helping one another find words on the Word Wall, reminding a friend to use a meatball space between words, and admiring one another’s work.

The class interview in November helped me understand that the students were excited about some of the hands-on materials that they only used at the star table. I noted that they had many good things to say about various materials, but could not really verbalize exactly what these materials helped them learn. Their responses made me feel as if they thought of their hands-on activities at the star table as play. Miller and Almon (2009) would celebrate such a conclusion. They

state that when children play, they are motivated from within and are fully invested and engaged in seeing their ideas through.

The student surveys did not prove a great difference from the beginning of the study to the end. Most students answered positively about every area. The initial survey showed twelve students out of fifteen declaring they liked the star table (small-group instruction area) with three saying they only liked it *sometimes*. The final survey showed that thirteen out of fourteen students said they liked the star table with only one saying he didn't like it. I have not heard any groaning this year as in years past when a team of students is told that it is their turn to go to the star table. Student attitudes toward small-group instruction are quite positive this school year. I credit the hands-on activities.

### **Differentiated Instruction**

*The need to provide differentiated instruction for specific students with small-motor difficulties, speech difficulties, auditory memory difficulties, and limited English ability was discovered through the use of the hands-on activities.*

This year's class of fifteen students was the biggest class I have ever had of Full-Day Kindergarten in my school in the past eleven years. It was also the class with the most special needs and circumstances. The hands-on focus for this teacher action research project proved to be very beneficial in providing differentiation. Charles had such extreme small-motor difficulties that it helped him tremendously to provide a method for him to add an illustration to his journal entries that didn't stifle his storytelling ability. The laminated scenes and figures suggested by the guidance counselor removed a great hurdle from his journal

writing. Jeffrey suffers from auditory memory difficulties. His visual and tactile strengths compensated for his auditory memory weakness through the use of the interactive Word Wall and the rhyming word visual aids available through *Kid Writing* by Feldgus & Cardonick (1999). Barbie and Richard have both speech difficulties and small-motor difficulties. The hands-on activities helped level the field for both of them. With four students whose families speak Spanish primarily, taking away the language barrier by making the activities hands-on was extremely helpful!

The hunch I had that the use of multiple intelligences was a valuable way to differentiate instruction was extremely well-expressed by Ellis, Ellis, Huemann, and Stolarik (2007) who said, “Teachers need to take into account individual interests and preferred learning styles and allow for students to make choices regarding their instruction.” With that statement as a base, my research project was off and running. Each child in my class was treated as a unique learner and team member.

It was through the journaling process throughout this research project that I was able to reflect and institute differentiation for some of the students with particular challenges.

### **Small-Group Math Instruction**

*Positive student feedback was received and engagement was observed during small-group math instruction as the students used junk boxes, rainbow goldfish crackers, numeral dice, and the Fill the Hexagon game to work on sorting, patterning, graphing, numeral identification, and shape awareness.*

The goldfish crackers were very motivating since the students were able to eat them after they finished their graphs. Over and over in my field log I noted positive comments and obvious engagement during the use of the junk boxes and the Fill the Hexagon game. Fill the Hexagon involved collaboration and good sportsmanship as a bonus to the reinforcement of shape identification, sorting and patterning practice! Even Barbie was visual enough to be able to play Fill the Hexagon with success.

The graphing of numerals rolled with dice was a very good activity. The children enjoyed seeing which number would race to the top first. (See Figures 8 and 9). Other years, I have done this activity as a whole group task. I wrote in my field log that with THIS class having so many special needs, it would have been difficult to accomplish as a whole group task. Although the students were enjoying the activity, it was more difficult than graphing the goldfish had been. There was counting involved and numeral recognition. I did a lot of teaching and re-teaching during each small group session.

The oral counting scores are the least impressive of the three tests I gave at the beginning and end of the study. I do not know what to think of this. Perhaps I have spent too many math small-group lessons on patterning and graphing and not enough on counting.

### **Small-Group Literacy Instruction**

*Positive student feedback was received and engagement was observed during small-group reading instruction as the students used the 5X5 game, Elkonian boxes, fly swatters, foam letter dice, individual chalkboards and whiteboards,*

*fishing poles, magnetic letters on cookie sheets, playdough and letter cutters, a pocket chart, puppets, spy glasses, and pretzels to work on letter identification, high-frequency word recognition, and letter sounds.*

Just as I am teaching a large proportion of at risk students, Meier and Sullivan (2004) did too. Their study, though mainly done by reading specialists, underlined the importance of small-group instruction for alphabet instruction and phonological awareness and had a hands-on element for many of their activities. My results and their results were both positive.

The notes I kept and the quotes I wrote down were invaluable. It is through my observations and the notes I took that I was able to see and hear the enjoyment the students were having with these hands-on materials. It was through the journaling process that I was able to verify the successes and collaboration that were going on with the teams of students.

It was the guided reading small-group instruction piece that motivated me to do this study. I knew it could be more engaging and enjoyable for the students than I had been doing it. Therefore, there were a greater variety of hands-on activities presented during the literacy small-group lessons than there were for math or writing. Making letters and words out of pretzel sticks and wheels was very appealing to my students. This activity made them focus on the shapes of the letters as they tried to make them. Making playdough letters was another activity that took letter identification to a new level.

The spy glasses were a great way to start a guided reading session one particular day in October when the students seemed particularly active. I gave the

small group students each a laminated spy glass and let them search the room for the letter I would say. They were here, there, and everywhere finding letters on the calendar, on the Word Wall, on their desk name plates, and on the bulletin board. They got their wiggles out for five minutes and then settled down at the star table for guided reading.

Adam, the little boy whose mom passed away in August, enjoyed some competition and a link to his dad as he used the fishing poles to capture letters. The puppets and the spy glasses were tactile motivators that reinforced the skills needed to learn to read.

The Elkonian boxes helped the students form words and play with sounds in a very tactile way. The value of Elkonian boxes for my students with small-motor difficulties was clear! They could slip a letter card in the pocket so much easier than they could *write* a CVC word!

The letter identification scores were very good for January. When I realize that all of the students could identify from zero to four capital and lower-case letters in September and they had from fifteen to forty-eight letters in January, I see this as significant growth! And, as I write this in March, there are many of my students who know all fifty-two letters! There is only one student who had a January score of only five letters. She has since been referred to the Child Study Team as having a possible learning disorder.

### **Small-Group Writing Instruction**

*Positive student feedback was received and engagement was observed during small-group writing instruction as the students used salt trays, individual white*

*boards and chalkboards, the interactive Word Wall, laminated name cards, scenes, and figures of people to work on the forming of letters, the use of high-frequency words in their journal stories, and the illustrations to go with their stories.*

The interactive Word Wall was a formidable aid for my visual learners. The visual learners would help the less visual learners find the correct word on the Word Wall. James and Jeffrey stood out as the Vanna Whites of the Word Wall! Their willingness to help classmates added a wonderful sense of collaboration to the Kid Writing hour. This collaboration and sharing of skills between the children was evident every morning when the children would help one another look at the Job chart to see if they had a job for the day.

The Kid Writing hour was almost torturous for Charles, who has extreme small-motor difficulties. He avoided and rebelled against drawing a picture and writing words to go with it. The guidance counselor offered me some scenes and some figures of people to laminate. He chose between the scenes and added some people to the scene he chose. Then, he only had to write the words. This accommodation made a huge difference for Charles. His attitude toward writing became positive. (See Figure 11.)

The Kid Writing levels were very impressive from pre-test to post-test except for one student who made no progress. When I consider that none of the students even knew how to write their first name in September and all but one were at a level three or four by January, it's proof to me that hands-on writing works. They learned by doing: They used the interactive Word Wall. They touched the

meatball and spaghetti spaces. They were writing sentences in January! They were on their way to a Level Five writing ability by the end of Kindergarten.

Two of them were already at the Level Five in January!

### **Problems Encountered With Hands-On Activities**

*The problems encountered during this study due to the increase in hands-on activities during small group lessons were a lack of time to set things up, a lack of space for the materials, and specific times when particular students were engaged but not always successful.*

This study was not always a positive experience. There were many times in my study that I felt as if I didn't have enough time to set things up properly. This was the big frustration of the project. In addition, space in which to keep the materials organized was not plentiful enough. And finally, there were a few instances when there was engagement by the students, but not success. Hands-on activity is not a complete cure for everyone.

From the first day of RtII instruction, I became aware of how much more set-up time I needed for a classroom committed to hands-on learning than I needed in previous years. Magnetic letters on cookie sheets, fly swatters, word cards, salt trays, and spy glasses all needed a handy place to sit until RtII time arrived. There were so few places to set things in my room!

One particular day at the end of October when I felt particularly spent, I wondered if Jeffrey and Barbie would be doing better with the traditional methods of doing guided reading. I wondered if the time and energy I was expending to give them the hands-on activities were worth it academically.

There were a few times during the study when the students were engaged, but not successful. The first was when using the foam letter dice to reinforce letter identification. I had to question myself on whether it was valid to take the time away from the guided reading lesson time if the students were not successful with the foam letter dice.

### **Final Thoughts**

The triangulation among the surveys, interview, student work, tests, and the double-entry journal helped to balance the study.

In conclusion, I can say that this study has convinced me that hands-on activity in small-group instruction is a valuable and effective way to teach Kindergartners. I know that this approach has been especially beneficial for providing differentiation in this particular class that had many students with special circumstances and challenges.

## Next Steps

Since my study has ended, I have continued to add hands-on activities to my small-group instruction. However, on days when my set-up time is stolen for meetings, I give myself an alternative. Instead of setting out the salt boxes without really having the time to do so, I may just grab a puppet and start the small-group guided reading lesson by letting each child take a turn to identify a word in the book we are about to read and earn a slurpy kiss from Happy the Dog. Instead of pulling out the fishing poles and letters with magnets on them, I may have them sing the song we know to spell the word “the” which will be in the guided reading book. Since those alternatives still use multiple intelligences, the students are content and my stress is solved regarding time as my enemy.

Looking toward next year, I do plan to include hands-on activities at my small-group instruction table. This is a change that is with me to stay.

Next year *may* be very different for me. The district is talking about cutting Full-Day Kindergarten again. On the other hand, some school board members are talking about increasing the numbers of Full-Day Kindergartens to better compete with the charter schools who offer Full-Day Kindergartens. Will I teach at-risk students next year or a heterogeneous mix of half-day students? If I teach half-day Kindergarten, will I have enough time for small-group instruction? All of this is in question as I write this.

For the challenging group of Kindergartners I have had the privilege to teach this year, my research question and the practices I initiated because of it

were very pertinent for them. They have all benefited by being active rather than passive learners.

### **What are they doing now?**

As for my extraordinary class, let me share an update as of the end of March:

- James and Diane have moved away.
- Adam has become a smiling, contributing member of the class. His grief is subsiding.
- Salvatore and Brianna are quite able to communicate in English now! Salvatore is currently enthusiastic about school.
- Johnny has surpassed my expectations of him in letter identification, letter sounds, and he is the phoneme-blending champ. When given several letter sounds, he can tell me the word that those sounds make.
- Barbie can identify forty-four letters and seventeen letter sounds! She has exceeded Darlene, Richard, and Ebony with these scores.
- Charles, Brianna, and Jeffrey can identify all fifty-two letters!
- Salvatore, Jose, and Johnny can identify fifty-one letters!
- Richard can count to 40!
- Clifford The Big Red Dog Puppet was stolen from my classroom in December. It's a good thing I have several puppets!

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## Appendices

This form must be completed for any research activity involving human participants. All researchers must read the Moravian College Human Subjects Research Policy found at <p:\hsirb\MoravianCollegeHSIRBPolicy.doc>

### Part I: RESEARCHER

1. Proposer: Stefana M. Trovato	2. Department: Education
3. Mailing address: 2641 Madison Avenue Bethlehem, PA 18017-3885	4. Phone: (610)868-7424
5. E-mail address: fergodwerlivn@enter.net	
6. This is a (circle one) a. <b>New Proposal</b> b. Resubmission of a rejected Proposal c. Renewal d. Request for modification	7. Research Start/End Dates: September 2011-December 2011.
7. Title of Proposal: Using Hands-On Activities During Kindergarten Small-Group Instruction	

### Part II: SUBMITTING PROPOSALS

<p>Incomplete documentation will delay the Human Subjects Internal Review Board (HSIRB) review of your research proposal. Submit <b>all</b> of the following:</p> <ol style="list-style-type: none"> <li>1. This Human Subjects Internal Review Board Proposal Form</li> <li>2. A copy of your Informed Consent form and/or other evidence of Informed Consent to voluntary participation [See HSIRB proposed Policy #MC.116 &amp; MC.117. Can be viewed at <a href="Public/hsirb/">Public/hsirb/</a>]</li> <li>3. A copy of your instruments (surveys, tests, etc.)</li> </ol>
<p>Submit proposals to:</p> <p style="margin-left: 20px;">George Brower, Chair HSIRB          Economics and Business Department          Moravian College          1200 Main Street          Bethlehem, PA 18018</p>

### Part III: SIGNATURES

PROPOSER'S Signature: Stefana M. Trovato	Date: 4/19/2011
<p>For Student Proposals</p> <p>I am the Principal Instructor for this student. I have examined the procedures in this study and approve them as described.</p> <p>INSTRUCTOR'S Signature: _____ Date: _____</p> <p>INSTRUCTOR'S Name (Type or Print): Dr. Richard Grove</p>	

#### Part IV: PROPOSAL

1. This research involves ONLY the use of educational tests (cognitive, diagnostic, aptitude or achievement). (Circle one.) Yes | **No**
2. This research collects interviews or surveys ONLY of elected or appointed public officials or candidates for such. (Circle one.) Yes | **No**
3. This research involves ONLY observations of public behavior. (Circle one.) Yes | **No**
4. This research involves ONLY existing data, documents, records or specimens.  
(Circle one.) Yes | **No**
5. List the research funding sources, if any.  
None.
6. The results of this research will be published. (Circle one.) **Yes** | No | Uncertain
7. Summarize the Purpose of Research, including a. objectives, b. procedures, c. design, d. what is required of subjects, and e. procedures to reduce risks to subjects. Attach additional pages as needed.

##### Purpose:

- The purpose of this research is to determine if the increase in hands-on activities during small-group instruction proves to be more engaging, more effective, and/or more motivating for at-risk Kindergartners.

##### Objectives:

- To research and have ready and available many new hands-on materials and activities that can be used for math or reading instruction.
- To add a hands-on element to each small-group lesson, whether it be math or reading.
- To compare student attitudes toward small-group lessons before and after the hands-on factor is in place.

##### Procedures:

- In mid-September, 2011, after parent and principal permission have been obtained, students will be informed of the research project and invited to participate.
- Students will take an initial survey about their opinions and attitudes toward small-group instruction.
- Students will be part of one or two small groups involving 3 or 4 students each. One of their groups will be for math instruction. The other will be for reading instruction.
- Each student will meet with me with one of his/her groups once each day for 12-15 minutes and rotate to various learning centers while I meet with other groups.
- Students will use the following hands-on materials and activities in the small-group setting throughout the course of the study during this research project: individual white boards with dry-erase markers, songs with motions that teach skills, a variation of the See the Sound/Visual Phonics (a program used for hard-of hearing and deaf students), an interactive Word Wall, puppets, action games that reinforce letter and numeral identification, dance, Elkonian boxes, letter cards, word cards, magnetic letters on cookie sheets, playdough and letter and number cookie cutters, fishing poles with magnetic hooks to "catch" letters and words with a metal paper clip on the end, sand or salt boxes in which to write letters and words, fly swatters, chopsticks with which to touch words as the students read them, pencils, pens, markers, paint, and math manipulatives.

- Student work will be collected or products of the hands-on activities will be photographed each week. The students themselves will *not* be photographed.
- Whole-class interviews will be conducted every two weeks during the research project to determine student attitudes toward small-group instruction as well as feelings about the hands-on activities themselves.
- The week of November 21st, students will take a final survey about small-group instruction.

Research Design:

- Before the research project begins, pre-tests will be given to the Kindergarten students to measure letter identification, numeral identification, oral counting skill, shape identification, and name writing ability as is done every year.
- This research project will begin after principal and parental permission has been received the week of Sept. 19, 2011 and will end the third week of November, 2011.
- I will maintain a field log of students and their participation which will include my observations, reflections, and data.
- Students will take pre- and post surveys concerning their feelings about small-group instruction.
- Hands-on activities will be added to small-group instruction every day during the research period.
- Samples of student small-group work will be collected and/or photographed each week without students in the picture.
- Students will be interviewed every two weeks about small-group activities.
- Beginning of the year assessments on letter identification, numeral identification, and oral counting skills will be compared to end of the quarter assessments on these skills.

What is required of subjects?:

- Each student and his/her parents will be given the choice to participate in the study or not.
- Participation will not be required and each student will receive the same instruction whether or not they have chosen to participate.
- Students will attend the small-group instruction table with their assigned group.

Procedures to reduce risks to subjects:

- Each student will be given a pseudonym for my written report to maintain confidentiality.
- I will keep my research and data at home in a locked file cabinet.
- Student grades will not be affected directly by these small-group experiences, although it is my hope that they will learn from their small-group instruction and therefore do well on their end of quarter assessments.
- A student may withdraw from my study at any time.

8. This research involves the following GROUP(S) vulnerable to risk. (Circle all that apply.)

- Subjects under the age of 18**
- Prisoners
- Pregnant women
- Handicapped or mentally disabled persons

If you circled any or all of 8a through 8d, explain why you need to use the group and the methods you will use to minimize risk.

- 8a. Students will be five or six years old and enrolled in my Kindergarten class.
- Parental permission forms will be required for my students to participate in the study.
- Principal permission will be required for my students to participate in the study.

- All students will be given pseudonyms and anything with a student's real name on it will be kept in my home in a locked cabinet until the study is completed. All data will be kept in the cabinet as well.

9. This research might affect people with special vulnerabilities (for example, pregnant women, people with allergies, people taking some medications, etc.) (Circle one.) **Yes** | No  
If Yes, explain the methods you will use to minimize risk to these people.

- Any students with IEPs or 504 plans can be involved in the study since I will adhere to the IEPs and 504 plans as I carry out my research.
- I will make accommodations for any student who is an ESOL student.
- It is possible that some of my students may have handicaps, mental disabilities, or special learning requirements in this public school Kindergarten. All are included unless they are in Special Education class

10. Describe your subject pool including a. the intended number of subjects and b. characteristics.

a. Number of Subjects: Twelve to fifteen at-risk Kindergarten students.

b. Characteristics: Kindergarten students who have been selected for my class in September due to poor test results on basic pre-reading and pre-math skills. They are educationally at-risk due to many factors such as lack of pre-school experience, family issues, non-English-speaking parents, poverty, or unidentified learning problems. I am given 12-15 students each year. They will all be invited to participate in the study.

11. Describe the methods you will use to recruit your subjects.

As soon as my students are tested and selected for my class, I will make home visits to each student.

I do this each year with the guidance counselor or Spanish-speaking teacher assistant in order to explain the differences in the full-day Kindergarten program. I will explain the research project at the visit and ask for the permission paper to be signed by the parent and the child.

12. This research involves deception of subjects. (Circle one.) Yes | **No**

If Yes, describe the nature of the deception and your debriefing procedure.

13. Explain by whom and how the subjects will be informed of the purposes of this research project. [Make references to HSIRB Policy #MC.116 & #MC.117.]

I will explain the project to my students and their parents at the home visit. I will come to the visit with a letter which follows HSIRB Policy #MC116 & #MC117. I will have the letter translated into Spanish for the parents who do not speak English.

14. This research collects information, which (Circle all that apply.)

- a. deals with sensitive aspects from the participant's point of view.
- b. identifies the subject by name or number codes.**
- c. might place the subject at risk of liability if made public.
- d. might place the subject's financial standing or employability at risk if made public.

If you circled any or all of 14a through 14d, explain the methods you will use to

- a. safeguard the data you collect
- b. inform subjects of available support services, and
- c. minimize the risk to the subjects.

- I will use pseudonyms for all of the children in the study.
- I will keep my research and data at home in a locked file cabinet.
- I will take my field log home each night and keep it in my home.
- Parent consent forms will include my contact information that can be used at any time during the study.
- Participant surveys will be completed anonymously and kept in my field log notebook.
- Interviews will be conducted with pseudonyms and kept in my field log notebook.
- All raw data with student artifacts or names will be destroyed after the study.

**Principal Consent Letter**

September 1, 2011

Dear Mrs. XXXXX,

I am currently working toward my Master of Education degree at Moravian College under the direction of Dr. Joseph Shosh. I am planning to do a teacher action research project this semester for my thesis. I must reflect on my own teaching practices as I read current research on best practices. The focus of my research will be surrounding small-group instruction. Specifically, I will be studying the increased use of hands-on materials during small-group instruction in math and literacy.

I will be gathering information to support my study through observations, student surveys, student interviews, work samples, and photographs of the completed tasks done with hands-on materials. All of the student names will be kept confidential and I will only use student information from those students whose parents have signed a consent form approving their participation in my study. Any child may withdraw from the study at any time without penalty. Any child who withdraws during my study will have his/her information withdrawn from my study. Pseudonyms will be used to refer to all participants, and no actual names of faculty, staff, students, the school or school district will appear in my research documents. This research project will take about three months to complete beginning as soon as permissions are received.

I would be happy to answer any questions you may have about this action research project. If you agree to allow me to do this study, please sign your consent below and return the bottom portion to me.

Yours truly,

Stephanie Trovato

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Principal's signature \_\_\_\_\_ Date \_\_\_\_\_

## Parent Permission Letter

September 6, 2011

Dear Parents,

I am currently working toward my Master's degree at Moravian College and am writing to ask permission to use the data I collect from your child during the first semester of Kindergarten in my action research project. The focus of my research will be student reaction and achievement when I increase the use of hands-on materials during small-group instruction. All students will have the opportunity to use hands-on material, but I will use only data from participants in my research study. Mrs. XXXXX has approved this study.

I will be gathering information to support my study through observations, student surveys, student interviews, work samples, and photographs of the completed tasks done with hands-on materials. Although the projects will be photographed, your child will not be photographed. Your child's name will be kept completely confidential and I will only use information from those students whose parents have signed the consent form below approving a student's participation in my study. Pseudonyms will be used to refer to all participants. Any child may withdraw from the study at any time without penalty. To withdraw your child from this study, simply send me a letter or email indicating that you wish your child to be withdrawn, using the school address or email indicated on this form. Any child who withdraws during my study will have his/her information removed from my study.

If you have any questions about the study, please contact me by telephone XXXXXXXX ext. XXXXXX by e-mail at [strovato@XXXXXXXXXX](mailto:strovato@XXXXXXXXXX), or by mail to the address in the heading of this letter. You may also contact my Moravian College advisor, Dr. Joseph Shosh, via e-mail at [jshosh@moravian.edu](mailto:jshosh@moravian.edu) or at XXXXXXXX. Should you wish to discuss any facet of the project with someone other than my advisor or me, please contact Mrs. XXXXX at XXXXXXXX.

I would be happy to answer any questions you may have about this action research project. Please check the appropriate line below, sign the form, and return the bottom portion to me.

Yours, in partnership,

Mrs. Trovato

## Parent Permission Letter in Spanish

6 de septiembre de 2011

Estimados padres,

Actualmente estoy estudiando mi maestría en Moravian College y tengo que hacer un proyecto de investigación para lograr ese fin. Estoy escribiéndoles para pedirles permiso a usar los datos que recolecto acerca de su hijo/a durante el primer semestre de kindergarten en mi proyecto. El enfoque de mi investigación es cómo se reaccionan los estudiantes, y hasta qué grado aprenden mejor, si utilizo más los ejercicios prácticos durante la enseñanza en grupos reducidos. Todos los estudiantes aprenderán de ejercicios prácticos, pero sólo voy a usar los datos de los estudiantes en mi estudio cuyos padres me dan el permiso de antemano. La Señora XXXXX ha aprobado mi estudio.

Recolectaré información para respaldar mi estudio a través de observaciones, encuestas de los estudiantes, entrevistas con los estudiantes, muestras de trabajo y fotografías de las tareas completadas con los ejercicios prácticos. Aunque los proyectos estudiantiles aparecerán en las fotos, su hijo/a no aparecerá en la foto. El nombre de su hijo/a será completamente confidencial y solo utilizaré información de los estudiantes cuyos padres firman este formulario para dar su permiso a incluir a su hijo/a en el estudio. Los pseudónimos se usarán para referirse a los participantes. Si un estudiante quiere dejar de participar en este estudio en cualquier momento, se puede hacer sin castigo cualquiera. Para retirar a su hijo/a de este estudio, envíeme una carta o correo electrónico que diga que ya no quiere que su hijo/a forme parte del estudio. Tanto la dirección de la escuela como el correo electrónico están en este formulario. Si usted retira a su hijo/a de este estudio, removeré la información de mi proyecto que su hijo/a haya proporcionado.

Si usted tiene alguna pregunta sobre mi estudio, por favor póngase en contacto conmigo por teléfono a XXXXXXXX extensión XXXX, por correo electrónico a strovato@beth.k12.pa.us, o por correo a la dirección en el encabezado de esta carta. También puede ponerse en contacto con mi asesor de Moravian College, el Dr. Joseph Shosh, por correo electrónico a jshosh@moravian.edu o por teléfono a XXXXXXXX. Si quiere hablar con la directora, Sra. XXXX, acerca de este proyecto de investigación, favor de ponerse en contacto con ella a XXXXXXXX.

Me daría mucho gusto contestar cualquier pregunta que usted tenga acerca de mi proyecto de investigación. Favor de indicar su preferencia abajo en una de las líneas, firme la hoja, y devuélvame la parte inferior de esta hoja.

Atentamente,

Sra. Trovato

Initial Survey

1. Do you like school?



2. Do you like to work with your friends at school?



3. Do you like the computer station?



4. Do you like the ABC rug activities?



5. Do you like the listening center?



6. Do you like the block area?



7. Do you like the star table? (small-group instruction area)



8. Do you know what to do when the bell rings?



Final Survey

1. Do you like school?



2. Do you like to work with your friends at school?



3. Do you like the star table?(small-group instruction area)



4. Do you like to make letters with pretzels?



5. Do you like to use ABC fishing poles?



6. Do you like using the fly swatters?



7. Do you like to use puppets at the star table?



8. Do you like to make your name and Word Wall words with magnetic letters?



9. Do you like to use the salt boxes at the star table?



10. Do you like to read little books at the star table?

