

Sponsoring Committee: Dr. Richard Grove, Moravian College
Dr. Jean DesJardin, Moravian College
Mrs. Stefana Trovato, Bethlehem Area School
District

**Don't Panic! There's Light at the End of the Tunnel:
Differentiated Instruction in Kindergarten**

Kelly A. Liberto

Submitted in partial fulfillment
of the requirements for the degree of
Master of Education
Moravian College
Bethlehem, PA
2014

ABSTRACT

This qualitative research study examined and reported the experiences and observed behaviors of students in a kindergarten classroom when differentiated instruction was used in multiple forms. The study explored the effects of student learning when strategies used such as choice, homogeneous learning centers, tools, flexible grouping, assessments, reporting/report cards, and learning style were incorporated into daily activities.

Students were ages five and six and varied in socioeconomic status and race. Many methods of data collection were utilized. Prior to the ten-week study, students were assessed to gain an accurate level of instruction in order to plan homogeneous learning center groupings and locate each student's zone of proximal development. During the study, students' learning center work was evaluated to determine whether the students were grouped so centers were instructionally appropriate. Extensive field notes were taken to document signs of progress and growth in students. It was found that flexible grouping was very beneficial in meeting students' needs more appropriately. Choice provided students with a play-like environment with areas around the classroom that were geared towards learning like fine motor area, math area, ABC area, nature area, listening area, writing area, music area and easel area. Learning styles were taken into consideration when planning choice time areas and when performing routine activities. Learning styles were also considered when giving post-assessments at the conclusion of the study, allowing students to choose different methods to show what they know learned.

The study suggests that when students are instructed in their zone of proximal development they have a positive outlook on their learning. Students were highly engaged during choice time and worked in heterogeneous groups where students shared the role of instructing their peers and showed a great level of pride and engagement. Flexible learning centers provided appropriate amounts of challenge while allowing students to change groups based on their needs. Students listened to each other more and learned from one another. In addition to having more pride, students' frustrations lessened as the teacher found and instructed in their zone of proximal development, providing a more positive classroom climate and consistent steady growth from most students.

ACKNOWLEDGEMENTS

I must thank my family and friends for their unconditional support and patience during this stressful but rewarding time. My gratitude is never ending.

Another thanks to Moravian College for working out an unpredictable schedule I required numerous semesters. I thoroughly enjoyed my independent study courses, especially EDUC 700 with Dr. Richard Grove. I cannot begin to thank you enough for your intimate knowledge of my study! I was truly spoiled.

Thank you so much to Mrs. Stefana Trovato for agreeing to be part of this process and serving on my committee. I am thrilled and honored to gain insight to your kindergarten expertise and knowledge. I appreciate all the work that went into evaluating my thesis.

I must also thank Mrs. Shelly Carlstrom, my peer, colleague and friend. I could not imagine having done any of this without you. Your professional and personal support during life's crazy journey the past year is something I will never forget. You're the best!

Finally, I cannot forget to show gratitude the stars of my story: my adoring kindergarteners. They bring light to my heart and a smile to my face every day! Without them and their families, none of this would have been possible!

TABLE OF CONTENTS

ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iv
TABLE OF CONTENTS.....	v
LIST OF FIGURES.....	vii
Marie’s Sight Words	
Paula’s Story	
Alie’s Story	
Math Center Survey Metacognition	
Literacy Center Survey Metacognition	
Uppercase Letter Assessments	
Lowercase Letter Assessments	
Henry’s Big Breakthrough	
Codes and Bins	
RESEARCH STANCE.....	1
LITERATURE REVIEW.....	8
RESEARCH DESIGN AND METHODOLOGY.....	30
Participant Observation.....	32
Surveys.....	32
Student Artifacts.....	33
Trustworthiness.....	33
RESEARCH NARRATIVE.....	38
Beginning of School Year Tunnel Vision & Panic Attacks.....	38
Choice Time Introduction.....	45
Finding Their Zones of Proximal Development.....	48
Flexible Grouping & Learning Centers.....	49
October.....	51
Student Vignettes.....	53
Choice Time Bright Lights.....	58
Books, Books and More Books.....	60
Surveying Center Work.....	63
My Instructional Group for Learning Centers.....	66
November.....	69
Roger.....	70
We all Teach Each Other.....	72

Writer’s Workshop.....	73
Differentiated Assessments.....	76
Henry’s Big Breakthrough.....	78
DATA ANALYSIS.....	81
THEME STATEMENTS & THE NEXT ACTION RESEARCH CYCLE.....	90
REFERENCES.....	96
APPENDICES.....	98
A Human Subjects Proposal.....	98
B Principal Consent Form.....	99
C Participant Consent Form.....	100
D Survey: Favorite Choice Areas.....	101
E Survey: Daily Child Survey.....	102
F Traditional Letter/Number Assessment Form.....	103
G Traditional Sight Word Assessment Form.....	104
H End of the Week Letter Assessment Form.....	105
I Ten Frame Template.....	106

LIST OF FIGURES

- 4.1 Marie's Sight Words
- 4.2 Paula's Story
- 4.3 Alie's Story
- 4.4 Math Center Survey Metacognition
- 4.5 Literacy Center Survey Metacognition
- 4.6 Uppercase Letter Assessments
- 4.7 Lowercase Letter Assessments
- 4.8 Henry's Big Breakthrough
- 5.1 Codes and Bins

RESEARCHER'S STANCE

Growing up in the same district where I now teach, I recall as a child noticing that some students seemed to struggle much more than I did. These students were in our classes, but we all knew they were different in some way. I don't recall some students working on different activities than the rest of the class, and I don't remember them getting fewer problems, alternate assignments or additional assignments in something we already covered. Did the teachers I had a generation ago differentiate their instruction?

I believe strongly in success for all students, but I just don't always know how to go about achieving it effectively. Just because one student can, for example, read at the age of four, should we expect *every* student to read at the age of four? Living and teaching in a nation full of standards and "No Child Left Behind," I found myself teaching kindergarten last September, where a scripted curriculum was to be implemented and a list of set requirements would need to be employed throughout the year. Would the script value every learner in my classroom? Or would the script merely help those children who could fit into what was described as proficient?

For my very first teaching experience, I was assigned to a preschool program for at-risk students. There was no curriculum, no set of "student musts" and no boxed set of materials that would guide teachers through both large and small group lessons. All I was given was a list of prekindergarten standards identifying where students *should* be at the end of their time with me, and I was concerned. Many of my students had never sat in a chair at a table before entering

my classroom, and I would need to teach them how to behave in school. They knew nothing yet of holding a pencil to write their names; they hadn't discovered yet the magic that letters could form their names; and some did not yet know that they were not allowed to hit someone for taking a crayon away.

With each passing school year, my preschool students learned valuable lessons about how to be good students, the ways to participate effectively in school, and that they were all learners. I had my own values for kindergarten readiness and the expectations of other teachers in the building. I was also a recent graduate of a college where professors reminded us daily about developmentally appropriate practices and the proper expectations of a young child. I was proud that my students achieved my expectations.

Unfortunately, what I am required to expect my students to do in my current classroom is *not* what I was taught as developmentally appropriate. Hence, I decided to learn more about differentiated instruction, which would allow me to work with students who were not *ready* for worksheets, flash cards or sight words; who weren't *ready* for letters and who weren't *ready* to read. Did this mean they were not as smart as a student who **was** ready for those things? Did this mean I did not value the other great things they could do? Absolutely not.

From February to May, I conducted a pilot action research study in which I researched the effects of differentiated learning centers. Students who struggled with curriculum and standards requirements like letter names, letter sounds and sight words now had the additional support they needed. Before I started differentiated learning centers, the students, regardless of their current ability

level, had received the same activity during learning centers as the other students. As a result, there were students off task, who turned in work that was completely blank or with little completed at the conclusion of the learning center activity. I now realize why these students were constantly asking for help. They had been frustrated because they knew they did not have the skills I was supposedly reinforcing. I knew learning center differentiation needed to happen, and a positive thing occurred several weeks later. When I started surveying students and asking what they were learning during their center time, most of them could answer with a high level of thinking, describing to me exactly what they were learning. It was very encouraging to see my students who struggled so much in *some* ways really getting the bigger picture, even when the particular task at hand might still have been slightly challenging for them. Those struggling students, while being metacognitive, also developed other skills like measurement concepts and literacy concepts, like setting and plot, very well. They could all tell me length, weight and height differences. They also could retell a story by drawing the beginning, middle and end, a task which even some of their “higher” performing peers could not yet do. This encouraged me even more to challenge a standard that suggested that students must wait to comprehend until after they reached a pre-specified decoding threshold. I knew that teaching comprehension to all students was invaluable. After all, comprehension is the reason we read in the first place. It gives meaning to text and makes text come alive rather than being just sounds on a page. My differentiation was giving my students confidence during centers so they would not shut down. It sustained them through

the day to another activity they would then excel in. I *wanted* all my students to feel success--not only the ones who fit the proficient rubric label.

Because I also serve as our school's primary grade-level reading specialist, I knew which of my kindergarten students would be returning to me the following year for additional daily instruction. Students who struggled all year with pre-reading tasks like phoneme segmentation, letter sound fluency, or letter naming fluency would be recommended to see me every day once they got to first grade. I wanted a way to pull them up now and to break the trend so they wouldn't have to be pulled out of their classroom next year. I wanted to close the learning gap in kindergarten so they would not need additional reading support in first grade, and I knew I needed a way to do that. While I decided that differentiated learning centers were a good place to start, I found something else troubling when I administered reading assessments to first graders who could "read" or at least decode text.

Too many students could decode but could not comprehend. I listened to students who were considered by the sanctioned rubric to be great readers. They didn't miss a word and read with prosody, paying attention to every punctuation detail, and had great expression. However, when they were done reading I always said, "Ok. Now tell me what happened in this story and remember all the way back to the beginning." Unfortunately, many of them could not. Those students who sat before me could decode but couldn't remember key facts in a story they had just read. I wondered if these students realized that the reason we read is to comprehend, connect and learn. Those students were not experiencing the most

important part about reading. Just out of curiosity, I asked one of those students why we read after he was finished sharing his story with me. He answered that we read to learn things. I knew he was talking about non-fiction texts. So I asked him another question. “What about those stories that are fiction—like magic or adventure?” and he said, “You got me there!” While it was funny coming from a first grader’s mouth, it was also so sad to me. This child read to learn, which is great! But he didn’t understand that while he was decoding, and not missing a sound, he should be thinking about what he was reading to enjoy the story to its fullest extent, make a connection, think about another story or just laugh!

So were all of my other kindergarteners that could not decode as well actually behind this child? I thought not. They were all in different places developmentally. But the child I described above was seen as “smart” to other students and teachers because he sounded smart. And because the *forms* of assessments he was given showed others he was “smart.” But what did those forms of assessment show about the kinds of kindergarten and first grade students I was working with in a remedial capacity? The assessments declared to them that they were “not smart” but rather that they were “slow.” I needed to find a way to make all my students feel smart and to see the ways in which they actually were smart. After finishing the research from my pilot study, I noted that it did give my lower-achieving students something to feel good about. One of my major themes was that: relying solely on assessments can be a restrictive way to measure if students are making real progress. Certain factors like **metacognition**, participation, independence and an increase in learned literacy skills showed me

that students were showing signs of academic growth with differentiation, even if it was not shown on their report card or was not specifically assessed.

In my pilot study, students succeeded in activities that were just right for them and excelled in things other students did not. However, I knew learning centers were not enough. This was what I was trying to address in my new research. I intended to show how kindergarten students could and would make progress even if their report cards correlated to specific standards did not show growth adequately. I intended to document over a period of time exactly what gain they made. If someone noted that those gains were “low” or “behind,” I would reply that a gain is a gain and student learning should be respected and congratulated, because all children should not feel left behind even when what they are doing when they enter school is *already* behind some of their peers. There is more than one assessment to show if students had potential or not. Just because students did not remember that letter is called “C” or knew that S made the sound /s/ did not mean they knew nothing. Differentiated instruction would not only help my students work more within their zone of proximal development and give them a greater feeling of success, but it would continue to attempt to close the learning gap.

My research would focus on differentiation as an **entire** classroom cadence. Not only would I differentiate learning centers like in my pilot study, but I would also differentiate assessments, grouping techniques, large group and even simple things like classroom tools. Would there be more student success? Would it be difficult to monitor all students? Would the students show the amount of

confidence and resiliency through hardships as students had shown in my pilot study? To find out, I posed the question: *What are the observed behaviors and reported experiences in my kindergarten classroom when I used differentiated instruction as a model for teaching every part of my day?* No longer would I look at differentiation as one method or a quick fix to a sustaining problem. It would be a song I could always hear, even if the volume was turned down, floating around the room and *ever* present.

LITERATURE REVIEW

Warning: You May Be Teaching to the Imaginary Middle!!

When beginning my action research during a pilot study in my *Teacher as Researcher* course, I thought differentiation was just a simple way to teach the same subject to a variety of learning levels. I thought as long as students were all learning the same exact domain but varying the difficulty, I was engaged in instructional differentiation. As I began to explore the literature on differentiation, I, like many of my teaching colleagues across the country, taught to a classroom of imaginary in-the-middle children, whom I discovered only consisted of about five or six students in a class of over twenty (Hallam, Ireson, & Davies, 2004). “The use of the one-size-fits-all curriculum no longer meets the needs of the majority of learners” (Subban, 2006). The more I thought about it, the more I realized, “Wow, my lessons are only designed to reach *five* of my students!” My warning bell went off. It sounded the alarm for change.

The Big Idea

While changing an activity is merely one technique to differentiate, I found out a lot more about the many ways to differentiate and how my definition broadened with each piece of research I considered. The research cited throughout this literature review rings out this truth: differentiation is *necessary* in 21st Century schools. John Dewey, who finished his education career in the 1930s, says a “one-size-fits-all” plan *never* met the needs of all learners. He exhorts teachers to change their teaching practices towards a more progressive education

model, not a traditional model where teachers read from scripts and expect students to mold into their “one-size-fits all” style (Dewey, 1938). Differentiation takes longer and requires a more strategic planning. It may require twice the number of activities, sometimes three or four times the number. It also requires a deep and true understanding of each and every one of your students. What are their strengths? What are their weaknesses? How do they learn best? What is their preferred learning style? (Subban, 2006). Dewey (1938) says you cannot even begin to plan your lessons accordingly without knowing your students. So why, almost a century later, are we still not differentiating? We are still operating under a traditional education model like Dewey warned us about.

Definition of Differentiated Instruction

Until I delved more deeply into the topic, I thought differentiation was leveling a lesson to teach a whole group the same thing. Sometimes this could be for students with or without disabilities. However, a differentiated curriculum helps every child succeed, not just students who struggle particularly more than others. “All students benefit from the availability of a variety of methods and supports and an appropriate balance of challenge and success” (Lawrence-Brown, 2004). Lawrence-Brown discusses differentiation in terms of two broad goals. The first should be to teach the state-mandated curriculum for that grade-level to all students. The second goal should be to provide “adapted curriculum” for those students who need it. Lawrence-Brown says students who benefit from this second goal of adapted curriculum are, “Smart enough to learn what is being

taught but cannot learn the way that it is being taught” (p. 40). The *way* students are being taught is referred to by many researchers as “the how”. This idea is one of the key ideas when defining differentiated instruction.

The How

Margaret E. King-Sears puts it simply when she states that teachers, when differentiating a lesson, should move the focus from the “what” to the “how” to teach the lesson. Holly M. Levy also describes this same idea when discussing differentiation when she says, “How we reach these goals may require different paths. The core of differentiated instruction is flexibility in content, process and product based on student strengths, needs and learning styles” (p. 162). She uses the “path analogy” to point out that instruction is differentiated when teachers use a variety of different strategies to meet students where they are and help them move as far along on their “education path” as possible. This theory sounds very much like one we are all very familiar with in education: the zone of proximal development (King-Sears, 2001, 2008; Levy, 2008).

Zone of Proximal Development

Many researchers cite Vygotsky’s theory when discussing differentiation. After reading his definition you will understand why. To quote Vygotsky, the Zone of Proximal Development, or ZPD, is, “The distance between the actual developmental level as determined by independent problem solving and the level

of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky, 1978). Since differentiation is a continuous and ongoing path, where teachers are constantly assessing and deciding what is best for each student, differentiation runs parallel to Vygotsky’s idea that “Education is an ongoing process not a product” (Subban, 2006). Subban explains that students will only learn when being taught within their zone through meaningful adult direction. He also states that,

“The teacher would so design the lesson that instruction will extend the student to just above the student’s current developmental level, building on that which that student already knows but encouraging the student to move ahead into areas that pose greater challenge” (p. 937).

This is one of the key parts of differentiation. Teachers must find the instructional level of every student prior to beginning differentiation, as Dewey suggested. Teachers must determine their students’ zones to know how to guide them to move them further along their path, again, remembering that although the teacher knows what the students need to learn, *how* the teacher reaches each student within his or her zone of proximal development is the essence of instructional differentiation.

Differentiation is a Way of Thinking

While experts list strategies, definitions and reasons for differentiated instruction, Subban’s synthesis cites Carol Ann Tomlinson, and indicates that

differentiation is much more than that. “Differentiation is not just an instructional strategy, nor is it a recipe for teaching, rather it is an innovative way of thinking about teaching and learning” (Subban, 2006, p. 940). She argues that teachers must not only be experts in their area of teaching, but must understand each child’s need to learn through style, interest and choice (Tomlinson, 1998). She says, “[Differentiation] is successful because it is squarely rooted in student engagement plus student understanding” (Tomlinson, 1999, p. 16). She advises teachers to pick a few key concepts, essential questions and final skills that must be learned for each unit, while involving their students in the “how” process of learning. Tomlinson also discusses the constant need for teachers to meet students where they are in order to move them onward, within their zones of proximal development. Mirroring the same sentiment as above, Tomlinson talks about the “how” but reminds teachers that curriculum understanding and common goals are just as important, “differentiation is not so much the ‘stuff’ as the ‘how.’ If the ‘stuff’ is ill conceived, the ‘how’ is doomed” (p. 16).

“Differentiated instruction is a philosophy of teaching purporting that students learn best when their teachers effectively address variance in students’ readiness levels, interests, and learning profile preferences. A key goal of differentiated instruction is maximizing the learning potential of each student” (Tomlinson, 2005, p. 263).

For the purposes of this study, I define differentiation as an approach to teaching which accepts children where they are as learners, considers each child’s

learning profile, and instructs and assesses them within their respective zones of proximal development with a variety of methods.

Brain Research and Differentiated Instruction

As teachers, we should be dedicated to reaching all learners. Subban (2006, p. 939) says that, “Brain-based instruction is cognizant of the brain’s natural learning system...good instruction within the classroom seeks to utilize the brain adeptly, to process, store and retrieve information.” When studying the brain, researchers notice different brains function within the classroom in different ways. Why should all students be held accountable to process, store and use information the same exact way when clearly their brains are all different?

Tomlinson (1998) reports that in order to encourage and promote all forms of learning according to brain research, teachers should follow these three principles. First, the “learning environments must feel emotionally safe for learning to take place” (p. 54). Tomlinson describes how students feel when faced with negative feedback either physically or verbally, which causes a part of their brain to signal the “fight or flight response” and can cause negative behavior or withdrawal in the classroom. Tomlinson says negative reactions from a student who detects a negative response from a teacher are “appropriate responses by a child to chemically induced changes in the brain signaling that the first order of business is self-preservation—not learning” (p. 54). Thus, it is imperative that students feel safe *first and foremost* or no learning will occur.

Second, “to learn, students must experience appropriate levels of challenge” (p. 54). This is where the zone of proximal development comes into play again. Students should be appropriately challenged to show consistent growth and learning. Tomlinson cites two brain responses that happen when the brain is either too challenged or under-challenged. If a teacher is instructing a student on a level that is too difficult, “Stress results, and the brain over-produces key neurotransmitters that impede learning” (p. 54). On the other hand, when students being taught at a level where there is no challenge, “The brain is not inclined or engaged and, consequently, does not release the levels of dopamine, noradrenalin, serotonin or other neurochemicals needed for optimal learning” (p. 54). It is necessary for teacher to find an appropriate instructional level for each child to ensure that neither of these scenarios will occur.

Third, “Each brain needs to make its own meaning of ideas and skills” (p. 54). Tomlinson makes an amazing and clear analogy when talking about this last principle. She says, “It is no more possible for a teacher to ‘make me understand’ than for the teacher to digest food for me” (p. 54). She also states that this principle is split into two parts. First, students retain and remember parts of a whole curriculum taught differently. Some are able to retrieve and use the information readily while others still work on information being retained. Teachers need to focus on the most important ideas so struggling students can focus on *just those ideas* while enrichment students can stretch their learning further beyond those ideas. Secondly, “The brain learns best when it ‘does’ rather

than when it ‘absorbs’” (p. 54). Students need hands on experiences within learning to transform their learning into real encounters.

Fine Motor and Early Mathematic Skills

In addition to showing specific principles and guidelines for our classroom climate, some brain research produces interesting findings about developmentally appropriate practices and school readiness traits in kindergarten. Several researchers have been cited in one synthesis to show the causal relationship to later and greater reading and math success (Grissmer, Grimm, Aiyer, Murrah, & Steele, 2010). They indicate that not only does fine motor development in the early ages show later math and reading success, but also early mathematics skills. Fine motor development is “The coordination of small muscle movements which occur in body parts such as the fingers, usually in coordination with the eyes. In relation to motor skills of hands and fingers, the term dexterity is commonly used” (Wikipedia, 2013).

“By the time children reach preschool age, they have developed, during motor development, quite a sophisticated cognitive capacity to initiate learning actions and use executive function skills in pursuit of motor learning. They have also developed a significant capacity to orchestrate activities among prefrontal, cerebellum, and basal ganglia that manipulates increasingly complex representational models to achieve desired motor adaptations” (p. 1014).

What is most important about this article however is that researchers who summarize the findings state that, “Almost all of these interventions involve changing the way the math and reading are taught; earlier instruction (prekindergarten), different curriculum, better classroom climate and teaching and additional time on task” (Grissmer, Grimm, Aiyer, Murrah, & Steele, 2010, p. 1016). That sounds a lot like differentiated instruction! “ Our results suggest that early math should receive additional emphasis because reading has already been receiving additional emphasis and math is more predictive of later math and reading than is early reading” (p. 1016). Since brain researchers found that fine motor skills were one of the best indicators of later school achievement, why don’t we teach these fine motor skills to our students? “Building these skills may rely more on subjects and curricula that have been de-emphasized to provide more math and reading instruction: the arts, music, dance, physical education and free play” (p. 1016). Will our schools ever return to a place where students’ learning is valued in all of these subjects and not just the ones on a test?

While all this information is brought to the forefront for many to utilize as a source for change, it unfortunately has not been. “However, this knowledge about the workings of the human brain has yet to impact on the classroom practice and teacher preparation programs” (Subban, 2006, p. 939). For many teachers across the United States this has to do with one single legislative initiative: No Child Left Behind Act.

No Child Left Behind and its Hindrance of Differentiation & Developmentally Appropriate Practices

The No Child Left Behind Act (NCLB) has forced all states to rely heavily on standardized assessments to drive instruction. What began as a well-intentioned shift to ensure that all students across the United States were learning the same things and meeting the same standards, it turned into a nightmare for teachers, inhibiting them to feel safe to teach *any* lesson that does not align perfectly with a state standard (Tomlinson, 2000). When thinking about differentiation, this is not the best way to teach, because, “Standard-issue students are rare, and educational approaches that ignore academic diversity in favor of standardization are likely to be counterproductive in reaching the full range of learners” (p. 7). Tomlinson argues that all students are different and they need to approach what they learn and how they learn in different manners. She calls teaching to standardized tests “paint-by-number” approaches because we are giving students one template and expecting them all to be able to figure out how to “paint” perfectly inside it. If they don’t, they fail. This instructional strategy, “Will fail teachers because they confuse technical experience with artistry. They will fail students because they confuse compliance with thoughtful engagement. Any educational approach that does not invite us to teach individuals is deeply flawed” (p. 11). Tomlinson also quotes a librarian from a highly successful elementary school; “Joy in classrooms has been replaced by fear that is first felt by the teachers and then by the students” (p. 8). Is this the kind of climate teachers

want in their classrooms, one of fear, where they are scared their students will or won't meet Adequate Yearly Progress?

Other researchers echo the fear in Tomlinson's quote in addition to a feeling of playing catch-up; to cover the whole curriculum even if it means the students are not learning the content. King-Sears (2008) says,

“Educators may experience a cognitive dissonance response, in that they believe they are being told to teach all students together for the same content at the same pace in the same ways, but they are also aware that students with and without special needs are not learning as much as they could or as well as they could if the instructional pace and paths were altered to suit their needs better” (p. 56).

For students who do not meet the standards, schools have been loading students with a double-dose of certain subjects in hopes to catch them up to their on-standard peers. Sumida (2005) describes this approach and warns teachers of the dangers of "drill and kill" practices.

“Under the No Child Left Behind Act policy makers insists that students need a double-dose of reading or math instruction, crowding out time for daily read aloud sessions; art; music; physical education; enriching, hands-on experiential learning; and interdisciplinary projects. This approach sacrifices meaningful learning to drill and practice” (p. 40).

Sumida makes a perfect comparison to what our classrooms are doing to our students, with the help of NCLB,

“Schools are being forced towards a factory model of education. Monitored by testing and accountability, curriculum has shifted towards ‘teaching to the test.’ We must avoid the fast-food assembly-line ‘McDonaldization’ of schools...creating sterile, imbalanced educational environments is inhumane and encroaches upon the innate human potential that lies within every child” (p. 46).

Developmentally Appropriate Practices

While there should be some form of standard for students to strive for within each grade level, some of the standards seem developmentally inappropriate for some students. In 1998, the International Reading Association (IRA) and the National Association for the Education of Young Children (NAEYC) came together in response to the growing standards movement in the late 1990s. They discuss what the appropriate practices for reading and writing are in the early childhood years. After reviewing current standards at the time, they state, “Today the definition of *basic proficiency* in literacy calls for a fairly high standard of reading comprehension and analysis” (p. 196). Authors also describe that students are developing literacy skills from birth to *eight* years of age and their *experiences in context* are the things that help them the most. “Failing to give children literacy experiences until they are school-age can

severely limit the reading and writing levels they ultimately attain” (p. 197).

Therefore, if students come into school having many experiences with literacy or none, this can already set a child ahead or behind. Since learning to read is a systematic approach, students cannot move on until they master the beginning level of literacy exposure. With an increasingly diverse population of students entering schools, teachers must differentiate instruction to assist all these students: ones who come to school reading, ones who come having been read to, and ones who have had no literacy experiences.

Methods of Differentiation

Tomlinson (1998, 1999, 2000, 2005) points out in her many writings that differentiation is a way of thinking, an idea. While it is important to think this way, there are some key methods or strategies teachers can use to help them differentiate effectively. The methods include grouping techniques and learning centers, assessments and reporting/cards, and style and choice.

Grouping Techniques and Learning Centers

For the purposes of differentiation, it is important to remember that the key is to provide on-level learning for each student with the appropriate amount of challenge (Tomlinson, 1998). With that being said, it is important for teachers to realize that grouping students should be flexible and provides students the ability to change, move and readjust (Beecher & Sweeny, 2008; Hallam, Ireson, & Davies, 2004; Tieso, 2003). Students should not be required to stay in the same

group or level all year. This is why “tracking” is not the most effective method for students, because not only does it cement students within one level all school year, it assumes that students are at the same instructional level for every subject. When a student is at one instructional level for math, it does not necessarily mean he or she is at the same level for reading. Flexibility gives students the opportunity to work with their same-level peers and those peers may vary per subject (Levy, 2008; Tieso, 2003, Tomlinson 1998, 1999).

Another way to utilize flexible grouping is to employ learning centers within the classroom. After large group instruction, students can work at different centers throughout a previously allotted amount of time. During this time, each group of students works on a different activity, which is leveled to give them the correct amount of challenge to stimulate the correct hormones in their brains (Tomlinson, 1998). “Determining valuable learner center activities that appropriately challenge each learner is essential” (King-Sears, 2007, p. 144). Each center is usually a different subject area, or if it is the same subject area then a different task depending upon what a student needs to reinforce independently. While most of the groups are working on a subject skill independently, the teacher works with one group on a specific skill. During this time, the teacher instructs the students in a subject area where the students require the teacher to coach within the ZPD. Sometimes teachers use this time to host “guided reading” where a group of students work on reading a text at their instructional level, everyone being at the same level. Other times teachers will teach another skill that students in this particular group either need re-teaching or enriching, depending on their

level. The method of flexible grouping is very important with learning centers because as stated above. One student may be in a lower group for a center in reading, but they are functioning on level in math. Teachers can decide what works best for them during learning centers but typically students work for about thirty minutes independently while a teacher meets with one or two groups for a more individualized mini-lesson or guided reading time (King-Sears, 2008).

Assessments and Reporting/Report Cards

Since the NCLB Act, teachers have been under pressure to show that all students perform identically in skill at every point throughout the school year. This will never happen. Teachers need to find a way to assess what a student truly knows while still filling the requirements put in place by NCLB. One way teachers can do this is to allow some students different forms of assessments. In kindergarten, students need to show letter identification skills. Whether they use flashcards, a pointer on a poster or the traditional point-then-say paper form should not matter. Teachers need to find what best suits students in order to show what they know most. This is not only good practice for differentiation, but it is fair-minded for all children (King-Sears, 2008; Levy, 2008).

Reporting and report cards are another huge challenge. Many teachers object to the report card, claiming it does not show what a student has actually learned. Tomlinson (2005) agrees. Report cards have a list of standards that the “imaginary middle” student should be able to attain throughout the school year. What happens to students who already know all those standards? Every marking

period the student receives an “exceeds expectation” grade or “outstanding” according to your report card. Does this actually show what the student knows? Definitely not. It shows they have mastered the skills being measured for that school year. But, it does not show if the student has made *any* gains intellectually or if they have even been challenged all year long. Not much different is the student who struggles all year. While they may receive a “non-satisfactory” every marking period, what does that truly tell us about their skill? Yes, it shows us the student is performing under the specified grade-level expectations, but again it shows nothing of the gains the student has made all year and the small victories worth celebration. The report is more proof that our educational system does not value you unless you fit perfectly in their description of on standard (Tomlinson, 1998, 1999, 2005).

Report cards should have a rating scale that describes the standard and how the child is working to *get* there or how the child is working to *exceed and enrich* that skill. Parents and teachers need a document that shows what *each* student can *actually* do—not how much they know or don’t know compared to a standard. Report cards should report student weaknesses but also celebrate and acknowledge their strengths (Tomlinson, 2005).

Style and Choice

The idea of a learning style is a familiar one. Teachers may not take into account how often students should utilize their learning styles (Levy, 2008; Subban, 2006; Tomlinson, 1998,1999). As mentioned above in the assessments

section, whatever way students can learn and convey they know a required skill should be an acceptable way for them to learn. Similarly referred to as multiple intelligences, the learning styles are as follows: visual, musical/auditory, verbal, kinesthetic/physical, logical/mathematical, social and solitary. These learning styles should be applied during the learning centers. Students can even be grouped by these styles. Teachers should also consider the styles when conducting assessments. If a student wants to write or use clay to make letters instead of verbally telling a letter, this is differentiating to that child's strength. Sometimes catering to learning styles takes more time and energy. But think about how much better a student will feel in the classroom. They will learn and show what they know in a way that makes the most sense to them.

Choice is one of the biggest motivators for students and is a key strategy for differentiation. Teachers need to find ways to allow students make choices within their classrooms related to their learning goals, task and styles. Learning centers are difficult for teachers to allow children to choose because usually each student needs to complete each learning center. However, since the learning center is usually a longer period of time to allow teachers to meet with instructional groups, allow students to choose a follow-up activity, ones that are based on skills all the students can work on. This is where some heterogeneous groupings can occur. These follow-up "games" can be anything that reinforces what students happen to be working on that day, week, month or year. While some students may master the games quickly, other students need practice on that skill. Some games may be too hard for some students. Peers in the choice group

can help each other. If a student wants to leave because they are becoming frustrated, allow them. Follow-up choice should be something the student values and thinks is worthwhile (Beecher & Sweeny, 2008; King-Sears, 2008; Tomlinson, 1998,1999).

Choice of learning style is also crucial. Students know what they like. They know what they think is boring. Giving them a choice of *how* to learn and *how* to show it will empower them and they'll want to learn more.

Changes and Reform to Curriculum

While the described methods are very important ideas to remember when differentiating, teachers should also remember sometimes students need changes made in the curriculum. Four key terms to remember when discussing curriculum changes are: accommodations, adaptations, parallel curriculum and overlapping curricula. Some of these changes are for students with severe disabilities while others are minor changes to help students with or without a disability.

Accommodation

“An accommodation to a curriculum does not change the content, nor the difficulty. Instead an accommodation changes the input and/or output method used by the teacher or the student related to the intended instructional outcome” (King-Sears, 2001). Some examples King-Sears describes as accommodations would be assistive technology (books on tape), information displayed in different formats, altered lists of math facts/vocabulary words due to eye-hand coordination

difficulties, more time or picture dictionary for content-based vocabulary words. Not all accommodations work for all students. Teachers must get to know their students and understand their learning needs in order to prescribe the best accommodation method (King-Sears, 2001; Lawrence-Brown, 2004).

Adaptations

“An adaptation holds the content the same as it is for other students but the conceptual level for the standard changes slightly” (King-Sears, 2001). An example of an adaptation is if students are working on concepts of literacy like plot, theme or developed character descriptions a student receiving adaptations may work on beginning middle and end with brief character descriptions.

Parallel Curriculum Outcome

“A parallel curriculum outcome for a student with disabilities is one in which the content is the same as it is for most students but with major changes in the outcome within that context” (King-Sears, 2001). This could be for students with developmental delays or enrichment. If students are working on adding and subtracting numbers, a student with parallel curriculum outcome might be working on one-to-one correspondence.

Overlapping Curricula

This form of curriculum is for students with severe disabilities. Students with this differentiated curriculum have life skills embedded within the subject area.

Entire Curriculum Reform

For students who need differentiation, the curriculum needs to be clear, concise and consistent (Lawrence-Brown, 2004; Tieso, 2003). Lawrence-Brown says that students need to be taught structure when learning study skills and learning strategies. Strategies for successful differentiation may include but are not limited to the following:

Main Ideas

Give students just the main ideas. There are too many details for students who lack the focus to identify the main idea. A list of key concepts is helpful to students who have trouble emphasizing important ideas within a unit (Lawrence-Brown, 2004; Tieso, 2003).

Directions and Examples

Students need clear and explicit instruction and examples (Lawrence-Brown, 2004; Tieso, 2003). What to do and what not to do should be told to students who have trouble defining tasks during independent work time. Examples of past students' work should be displayed to show students both how

to work and how not to work. Lawrence-Brown suggests putting the work away after the example is shown to keep students from copying the displayed work. Directions should, however, always be available visually or verbally. A checklist at the student's desk with either pictures or recorded voice commands should be available to students who need reminding (Lawrence-Brown, 2004; Tieso, 2003).

Breakdown of Skills

Students need to perform this task analysis when coming to difficult problems (Lawrence-Brown, 2004; Tieso, 2003). Lawrence-Brown (2004) describes steps students should be taught to cognitively take the understanding a math problem: “describe the problem in your own words, describe if the answer should be more or less than you started with, represent the problem concretely, write the problem and answer, check the answer, self-evaluate”.

Making Connections

Students need to be taught how to relate new data to schemas already in place. This strategy benefits all learners within classrooms (Lawrence-Brown, 2004; Tieso, 2003). Comparing lists of relatable and non-relatable data is one way to show students how to understand when a topic is similar to another.

Fading Out

Teachers should be working on students becoming independent when modeling skills. A gradual release of assistance, or the steady decline of

assistance from a teacher, can help students become more autonomous (Lawrence-Brown, 2004; Tieso, 2003).

Conclusion

In conclusion, differentiation is a way of thinking that is supported by brain research (Tomlinson, 1998). It takes the “what” of the many curriculums and shows teachers “how” the best way to accept and teach all learners (King-Sears, 2001, 2008; Levy, 2008). Keeping practices developmentally appropriate for your students is the first way to ensure the greatest learning experience (IRA, 1998, King-Sears, 2008, Tomlinson, 2000, Sumida, 2005). In order to address all the key points reviewed in this document, teachers should employ all the methods described in her classroom: employ multiple grouping techniques and learning centers (Beecher & Sweeny, 2008; Hallam, Ireson, & Davies, 2004; King-Sears, 2008; Levy, 2008; Tieso, 2003; Tomlinson, 1998,1999), get to know her curriculum and choose key ideas (King-Sears, 2001; Lawrence-Brown, 2004, Tieso, 2003), continually assess students for grouping purposes and accommodation/adaption needs (Beecher & Sweeny, 2008; King-Sears, 2008; Levy, 2008; Tomlinson, 1998,1999, 2005), find out and use students’ learning styles and give students choice for engaging, meaningful learning experiences (Beecher & Sweeny, 2008; Levy, 2008; Subban, 2006; Tomlinson, 1998,1999).

RESEARCH DESIGN AND METHODOLOGY

Purpose

I conducted this study to attempt to close the academic achievement gap in my kindergarten students by using differentiated instruction strategies like choice, leveled centers, multiple learning styles and variety of assessment measures in daily instruction.

Setting

I conducted my study in a general education kindergarten class located in a middle-to lower class elementary school in a suburban neighborhood in Northeast Pennsylvania. The elementary school has a total enrollment of 438 students and of those 438, 44.52% is considered economically disadvantaged. The kindergarten program was half day and instruction time lasted two hours every morning. The general population of the school had changed drastically over the past eight to ten years, and with a major increase in certain populations of students, especially students that qualified for free or reduced lunch, the school's need for a greater understanding of individualized instruction was imperative.

The school's literacy program had leveled texts for guided reading and made loose suggestions about how to differentiate instruction during large group instruction for learners. However, the suggestions made by the curriculum manuals did not provide the details teachers needed to learn adequately about their students.

Participants

A mixed-ability group of 18 kindergarten elementary students (11 boys and seven girls with a mean age of six) participated in this study. All students attended the same middle-to lower class elementary school in a suburban neighborhood. The study was conducted during the regular instruction time of two hours daily, with one day a week having an extra half hour. Two of the students had an Individualized Education Plan (IEP) for speech and language. One student was enrolled in the English for Speakers of other Languages (ESOL) program.

Procedures

My research began immediately after I received permission from the Moravian College Human Subjects Internal Review Board (HSIRB). Following this approval, my principal and parents of participants approved my study to commence in my classroom.

I had been teaching kindergarten for one full year prior to my study. In the spring of my previous year, I had noticed a lot of frustration with my students who were struggling and chose differentiated instruction during learning center time as my pilot study action research topic. The students made some gains but not nearly as many as I knew they could if differentiated instruction *were* the model for most daily instruction and for the entire school year.

When I decided to embark on differentiating my complete instructional approach, I knew I needed to include many new strategies that would help the students learn best, not just differentiated learning centers, although this strategy

was one of the most valuable. Over the course of 10 weeks, I slowly introduced new classroom routines to the students. They began participating in learning centers, a homogeneous grouping based on student level, but also participating in choice time, a heterogeneous grouping based on student interest and learning style. Flexible grouping was a vital strategy for learning centers so students could consistently work with students of similar academic levels. Flexible grouping was also important because some students did not necessarily struggle in reading, math and fine motor. Some were with the same students all the time; others had different groups for different skills. I tried to instruct students during large group as little as possible. During those necessary times however, I would employ different questioning techniques to each student, leveling the difficulty of the question based on the student's prior and current knowledge.

Data Sources

Observations: Throughout my study, I recorded notes in a field log on the students' behaviors during small group and large group. Notes were taken several times during the week. I closely listened to what the students were saying during this observational time, to what it looked like they are doing and how they were feeling. After reviewing my notes with what I saw, heard or noticed, I then bracketed my reflections and notions about students.

Surveys: Following every differentiated center or differentiated lesson, students responded to a survey about the work they just completed. They answered three questions, "Was this work easy or hard? Did you learn or not

learn? What did you learn?" (If previous answered learned). This gave me insight about what the students thought about their learning. I reflected on students' answers in relation to their work that was completed that day at centers/lesson.

Student Artifacts: Artifacts I used to support differentiated instruction were the work the students create such as graphic organizers, student writing or informal assessments. I used artifacts to gather whether or not the student was making gains or were they falling behind. I also used the artifacts to determine if that level of differentiation was appropriately addressing their needs as a learner.

Trustworthiness

During my study it was important to remain ethical and trustworthy. I took many steps to ensure this happened throughout the entire process, starting with the beginning. Prior to starting my research, I provided my research proposal to the Moravian College's Human Subjects Internal Review Board for approval (Appendix A). After my research was approved, I sought the permission from my building principal (Appendix B), who was familiar with my similar pilot study and my findings. She did not hesitate to sign the approval form. With the Human Subjects' and my principal's approval, I sent a participant consent letter home to all the parents of my students (Appendix C). Some of the parents who were present at Open House received a personal description of my study. In the letter, I outlined the kind of data I would be collecting, the activities we would be doing and how parents could decide before or during whether they wanted their child to participate. Their choice was respected and a choice to decline participation

would not result in penalty against the student. I ensured all the students would receive the same instruction whether or not they were participants in my action research study. I told parents students' identities would be protected by using pseudonyms and all information on students would remain in a locked computer only I had access to and would be destroyed at the conclusion of my study. Lastly, I compiled a literature review of all the research I read on differentiation, verifying the need for it in my classroom (McNiff & Whitehead, 2010).

Since my students are in kindergarten I did not explain a lot to them. However, I did talk to them about finding activities and tools that are "just right" for them. I played "Goldilocks and the Three Bears" on CD while the students looked and listened to the story. We talked about how Goldilocks kept looking for things that were just right in the bears' house. I told them we would be doing this a lot in our classroom, starting with our just right pencils. I explained to them they should pick the pencil then felt the best to them, not what felt best to another student. Although they might not see it, I wanted them all to feel the most comfortable and successful.

After receiving most of my forms, I started my research in the beginning of September. I was careful to keep an open mind about the data I would collect and the observations I was about to see. I needed to put aside any biases that I had before the study began so it would not affect the outcome of my data (Hendricks, 2012). One bias I had was about siblings I had the year before. I cautioned myself not to assume that younger sibling would be at the same level academically as the older brother or sister I'd had the previous year.

My priorities in this study were to create an environment that was caring and trusting to my kindergarteners, use multiple forms of data to show their growth, consider multiple points of view when analyzing the data, and take detailed daily notes (Hendricks, 2012). I needed my students to trust that I was caring for them. I gave them multiple surveys about their interests as a learner. This taught me about the kinds of ways the students would like to learn. I also surveyed them about what choice centers they would like to use the most, taking into account their recommendations. I used many sources to triangulate data to ensure that the picture I was painting about my students was accurate and valid (Hendricks, 2012). The data forms were pre-surveys, daily interest surveys, participant and non-participant observation, field log notes, student artifacts such as relative work or pictures of something created or done, and post surveys. The use of many of these forms of data allowed me to keep an audit trail of all my hard copies the students were making (Hendricks, 2012). When analyzing my data, I could take all these sources and create a graphic organizer to easily display my findings.

After organizing my data to analyze, I would consider multiple points of view. One way I planned to do this was by engaging in dialogue validation (Hendricks, 2012) and dialogue with my colleagues and peers (McNiff & Whitehead, 2010). For this past year's evaluation system, my grade level partner and I chose to work on a self-directed plan. This was where we discussed what happened in my data and what also happened with her students. While I was collecting and analyzing my data more thoroughly and for the purposes of

publishing my data, it was helpful to compare results within a similar grade level and activities. I was engaged in weekly conversations about the meaning of my data with another key audience member, a primary grade level teacher who was also familiar with my pilot study. She was able to give her perspective and easily understood many aspects about my study. Briefings of the happenings of my study and data were also discussed in my whole group of Moravian College peers and could then be further discussed with multiple Moravian faculty advisors.

I also employed the use of a daily field log. Here I recorded in great detail what I saw and heard happening in my classroom on one side of a column and on the other side my reactions or causes for those behaviors. I was sure to use thick descriptions of the setting and the study as if someone was reading it that did not know about my study (Hendricks, 2012). That way when I went back to analyze my data, I would have a more accurate picture of what happened that instance and it would decrease my chances of generalizing unintentionally. Member checks would remain to be a little difficult with the age group of my students, however some of them have an impeccable memory. Member checks were used to validate follow up survey answers pertaining to a specific learning center or activity (Hendricks, 2012). These priorities were steps taken to increase reliability and validity when finalizing my data that was analyzed. All data collected was kept in a binder in my classroom.

My final goal was to publish my action research for a larger audience. With all of these steps in place I planned to share my answers to my initial question about differentiation. However, all my research and strategies were not

put to rest simply because my research was over. Sustained action research, while it may not be as formal, is something that all professional teachers should use when continuing to improve their teaching for the consistent use of best practices.

WELCOME TO KINDERGARTEN...THE FIRST DAY OF SCHOOL

Panic Attacks and Tunnel Vision

7:45 A.M.: I observed my reflection looking back at me on the morning of August 26th. Determined. Purposeful. Confident. The first day of school, I was ready for this to be the most meaningful year yet...

9: 45 A.M.: Holding scissors completely backwards. Cutting toward him. Blink. Gripping pencils with whole fists while parents guide hands. Don't panic. Breathe slowly. Blink. Screaming: Ricky's. Mom left. Breathe. Dizzy. Blink. Large group, I am talking, Roger says, "What is she even talking about?" Breathe. I can't see the light.

The first day of school is something I block out every year. I never want to remember it, the horror of it, the slight panic attacks I have within myself when I look at how my students behave with their parents, how they cry, how they talk constantly, how they hold, or rather don't hold, a pencil properly.

I feel like every teacher does this, has mild amnesia about the first day of school on purpose. It's stressful to look at a child and knowing where he or she has to go, imagine he or she will ever get there. This seems even worse in kindergarten. Some students have never been to school, some still don't separate from their families without screaming bloody murder and some just altogether

don't understand the whole, "I am talking, you are listening" concept yet. It's challenging, as teachers, to see the light at the end of the tunnel.

The first day of school reminds me of something people refer to as tunnel vision. If you are not familiar with tunnel vision, it's a concept I literally only experienced several years ago. Medicine Net defines tunnel vision in a variety of ways, both medically and psychologically. "Tunnel vision: Loss of peripheral vision with retention of central vision, resulting in a constricted circular tunnel-like field of vision. And, by extension, any very narrow point of view. Also called tubular vision" (Tunnel vision definition, 2012). Wikipedia also refers to this medical cause, "Extreme fear or distress, most often in the context of a panic attack (Wikipedia, 2014). While this sounded like my first day of school panic attacks, it also reminded me of my *literal* tunnel vision experience.

Three summers ago, I went on a bicycling trip where I biked from Pittsburg, Pennsylvania to Washington, D.C. The trip took about six days and I biked anywhere from 30-60 miles a day. I traveled on two trails along the way. From Pittsburg to Cumberland, Maryland, the trail was called the Great Alleghany Passageway. Then the trail from Cumberland to D.C. was the Chesapeake and Ohio Canal Trail, or more commonly called The C & O Canal Trail, which ran along the Potomac River. If you know anything about western Pennsylvania and Maryland, you know they have beautiful mountains covered in nothing but trees for miles. You also may know that both are covered with train tracks, many out of use. Therefore, parts of the trails had some tunnels. Most were short. Paw Paw Tunnel was not. According to the National Park Service website,

Paw Paw, located on the C & O Canal Trail, is 3,118 feet long (over half a mile), 27 feet wide and 24 feet high and according to Garret Peck, still one of the longest tunnels in the world (Peck, 2012). Since this tunnel was located on the canal, travelers had boats. There was a narrow passageway I traveled on my right and the canal to my left. Between the canal and I was a thin wooden gate. Inside, the tunnel was pitch black, and I could barely see a small white dot around the corner to the right a little, the exit. I had my headlamp on beneath my helmet but could hardly see in front of me. I started to panic. I was breathing heavy and feeling very lightheaded. My right handlebar scraped the side of the tunnel as I tried to maneuver my bike as far away from the canal side of the tunnel as possible. As I focused on the small white dot ahead, my vision seemed blurry, like I was unable to see the end.

I share this anecdote because this is exactly how I felt on the first day, week and month of school this year. Knowing how much work I would have to complete for my thesis and how much I would need to teach all of my little kindergarteners, all I could do was look around at their lack of cutting skills, inappropriate pencil grips and screaming separations and feel that dizziness all over again. I was, yet again, unable to see the end.

It is also important to make the comparison of tunnel vision and my thesis topic of differentiated instruction. While I felt the panic attack and no end in sight feeling of tunnel vision, I also needed to be sure I didn't and wouldn't adopt the, "loss of peripheral vision with retention of central vision, resulting in a constricted circular tunnel-like field of vision" kind of feeling. I had to be sure

that I would not focus on one kind of student in my classroom. I needed to be certain I gave attention to every student, discovering all of their strengths and weaknesses and appreciating what every individual brought to our classroom, even if all my students seemed to fit into only two categories: causing me to panic *a lot* or causing me to panic *a little*.

Finding our “Just Right” Pencils: the First Step Towards the Light

Several days after my mild panic attack, I knew I needed to start finding ways to ease my panic and my students’ frustrations. When researching for my literature review I’d found one profound study about the links between fine motor development and later reading and math success (Grissmer, Grimm, Aiyer, Murrah, & Steele, 2010). Since I had noticed many fine motor struggles that dreadful first day, I decided this would be a good place, even though small, to start differentiating instruction. Creating ways to make the light at the end of the tunnel *appear* closer was imperative, and students choosing their “just right” pencils was just the way to start inching towards that light.

Most American children know the tale of Goldilocks and the Three Bears. Goldilocks, a small child, is walking in the forest and comes to a cottage which, unknown to her, belongs to a bear family who is also walking in the forest. She invites herself in and starts helping herself to all the bears’ belongings, searching for the item that is “just right” in several different categories. I used this phrase as a springboard to help the students relate to what we were looking for: finding a pencil that fit their perfect grip and style. I explained to them that they were going to try three different kinds of pencils, just like Goldilocks tried three different

items from the bears each time. First, they would try a skinny, traditional pencil, which was for students who, for the most part, already had good fine motor control. Second, they would try a wide pencil, or commonly called a Beginner pencil, for students whose grip and strength were mediocre. Lastly, they would try a skinny pencil stuck inside a plastic golf ball, which would force their hand to hold the pencil with the appropriate grip and allow them to practice this way. I encouraged them that their “just right” pencil should feel the best and would help their hand write their names the best.

I gave the students small pieces of paper, some with their names written on them for those who needed to trace rather than write freely. After each pencil I reminded them to think about how the pencil felt when they were trying to write their name. Was it too hard? Did it make their hand hurt? Was it too easy? At the conclusion of the lesson, I allowed students to pick the pencil that fit them “just right”. Most students chose the Beginning pencil, wider in width than a traditional pencil. I was not surprised by a lot of the choices, only a few. I did not want to allow or disallow any students’ choice because I wanted them to feel like they had an equal part in their differentiation, however some students I just was not sure about.

In the coming weeks I monitored their writing samples and work they produced after using their particular “just right” pencil. Roger, who chose the golf ball pencil, really did need it and I was pleased to see him using such a high level of thinking when choosing which pencil best suited his needs. However, Alie, who is regularly feisty when it comes to following my directions, insisted she

needed a skinny pencil, after choosing a wide Beginner pencil. When I showed her the work she created, I had to forcefully insist that she was not ready for a skinny pencil because her work is still not as up to par as it could be. It was a relief for me to see students who could manipulate a regular skinny pencil with ease also. Mya, Paula, Matthew and several others were students who stuck out to me as skilled students in fine motor development.

The hardest thing about this activity was insuring that students chose what was best for *them*, not choosing what their neighbor chose. I continuously reiterated that they should pick something that felt best for them and that at any time if they felt their “just right” pencil wasn’t working for them we could look into changing it. The students smiled a lot while making this choice. They discussed with the other students at their tables which pencil they were going to pick. Their level of pride in their selection was warming to see and I knew I’d made a good decision when deciding to differentiate so early. They would be using their pencils every day for the whole year and there was no better time to start then right away! After this activity was done I breathed out a sigh of relief and closed my eyes; I felt a small step closer to the end of the tunnel.

Open Ended Art

The next few weeks were a blur. The same instructions were repeated at least four times in one sitting, the same demonstrations of how to walk properly, how to hold scissors most effectively, how to sit on the carpet and listen carefully...the list went on. The students were very needy. With differentiation in mind, I gave the students many opportunities to succeed early by requiring little in

our art projects other than “don’t copy”. Some were very upset, claiming they did not know how to do what I asked, especially Aaron. He would often proclaim, “But Miss Liberto, I don’t know *how*,” in his most whiny voice. I didn’t want to give students direct steps. Open-endedness in an activity was one of the ways I would learn and respect each child’s individuality and in turn show the students how to appreciate each others’ uniqueness.

Others who were less concerned with a lack of direction but clearly needed those steps raised some red flags right away. Some of my students who lacked in fine motor strength and manipulation really worried me. In the same art activity Aaron was talking about, where students created a coconut tree like in Lois Ehlert’s Chicka Chicka Boom Boom, some had trouble ripping the paper to create the tree. Others had trouble holding the pencil to write their names, and still a handful had trouble simply staying on task. Liam’s eyes regularly wandered off for a minute after I gave directions, like he was not exactly sure what I’d just asked him. Ricky’s did too. But on the other hand, I had students who were excitedly ripping their paper, gluing it to make a coconut tree, adding their letters to it and walking around to show other students what they’d done. The best thing about creating such open-ended activities and such choice was that it gave my students a ton of pride and accomplishment. Just like with the “just right” pencils, students discussed their work with other peers. They engaged in meaningful conversations about their work. This was something I was thrilled to see so early in the school year. I was setting the stage for a time when my students would not only learn from me but learn from some of the best teachers: each other.

Choice Time Introduction: the Light was definitely clearer after this!

Student choice was one of the key components I had read about when researching for my literature review. When students had a choice in what they were learning they were far more likely to invest the effort to succeed in something. This was the inspiration for my Choice Time in our daily schedule. As I will describe later, scheduling was a task that was very hard to figure out and work around. Some ideas were set in stone as far as scheduling. I had to have the confidence in my research to change certain things that had been done that way for what seemed like forever. I wanted Choice Time to be almost like playtime, but with a more academic focus. As I mentioned in my Researcher's Stance, I used to teach in my district's preschool program. There we had set time aside where students engaged in "work time," a time where students worked in academically themed areas interacting with other students or teachers. During this time students were highly engaged in self-selected tasks at areas such as Nature Area, Fine Motor Area, Science Area, Music Area, Listening Area, Math and Manipulative Area, Writing Area, Easel Area and some others. I wanted to recreate "work time" in my kindergarten classroom. My problem was scheduling. At my preschool, the students were in the classroom almost a full day. My kindergarteners were only there for two hours. I needed to find a way.

My decision was to cut learning centers, which I will later discuss, by fifteen minutes. Last year, learning centers were a half hour long. Students were unengaged and often exhibiting disruptive behavior. This year, I cut learning center time in half and used the additional fifteen minutes for Choice Time. When

students finished their learning center work, they could then engage in Choice Time. To keep students from rushing, I sometimes set a timer, especially for students like Alie, who loved to be first no matter what kind of work she turned in.

I also needed a way to provide a clear visual of the areas that were for playtime versus Choice Time. Although I think Blocks and Role Play areas are great and teach students things they need to learn, I needed to cut some areas out of Choice Time to leave some left for play. I decided to put a blue “choice” word on every area sign that was for Choice Time and a pink “play” word on each area sign that was strictly for play time. It was easy to see and even easier for some students to tell other students.

With the classroom materials prepared, I put a blue Choice word above the following areas: Math Area, ABC Area, Writing Area, Music Area, Easel Area (chalk and white board markers), Listening Area, Puzzle Area, Book Area, Playdoh Area and Fine Motor Area. Eventually, I added more but this is what I started with. I also placed the same blue Choice word in our daily schedule. As soon as students walked into the classroom that day, some blurted out, “What does that blue word mean?” I told them we would talk about it during Calendar.

During Calendar, I explained the blue word in our schedule was Choice, a special time in our day where they could choose what they wanted to work on. I asked the students to walk around the classroom and notice all the areas with the blue choice word by their signs. One by one, students pointed out all the areas. I then had them follow me to each area so I could show them how to use the

materials located at each center. I showed them how to use the instruments and CD player at the Music Area. I showed them how to insert a CD using the most amount of care. I instructed them on how to determine the proper tools for writing in the Writing Area. I showed them how the drawers contained different kinds of paper for different kinds of writing, some were for making books or lists; others were for invitations or announcements. The Fine Motor Area started with games like pegboards and tongs with pom-pom balls. As I described each area, I could see their eyes light up with excitement. Some could not contain themselves, proclaiming, "I want to play there!" or "Who wants to play with me here?" At the end of the demonstration I allowed students to choose their areas. I required them to *stay* in their choice area the whole fifteen minutes. I needed to be sure they were experiencing each area to its fullest intention. I also required that they go to a different Choice area each day so they would experience them all by the week's end. After the first fifteen minutes of Choice Time, I rang the bell saying, "It's time to clean up from choice!" I was bombarded by the sounds of "Awww!" The students were disappointed the fifteen minutes were up already. I could feel a certain level of pride in them, and me, for selecting and creating such meaningful and engaging activities. The tunnel's end drew a little closer at the end of that first Choice Time.

The next day in large group, I told the students they were going to participate in a simple survey, a question you answer about what you like. I asked each student, "Did you like Choice Time? Yes or No?" and recorded their answer in tally marks on the board. Every student answered yes! I even told them they

should be honest; I wanted to truly know what they thought so we could make Choice a great time. No one changed his or her answer. I was so excited and relieved yet again, taking another important step toward my tunnel's end.

At the end of the week, the students were going to respond to another survey, this time individually. The students took their first survey of my research, titled My Favorite Choice Time Areas (Appendix D). I told the students to think about their three favorite Choice Time areas. First, I had them take out their green, yellow and red crayons. Then, I instructed them to color their very favorite area green. Then, they needed to color their next favorite area yellow and their least favorite area red. By the end of the survey, I knew which areas were the most popular and the least visited. It was very telling for me to know which areas would require more games or materials and which areas would require more exciting games to attract students to those areas. After I watched the students engage in certain areas all week, I was not surprised to see that Playdoh Area, Music Area and Fine Motor Area were the top three areas. I knew immediately which areas I would need to build up and that these three areas would need consistent remodeling of games or materials.

Finding their Zones of Proximal Development

I noticed within the first week that I had quite a range of learners in my classroom in areas like math, literacy, fine motor development and listening and following directions. In the coming weeks, the students completed many open-ended art activities or small group activities where they worked together. While they worked on creating their artwork, I walked around and took notice of how

well they stayed on task, how well could they understand the goal, even if it was a loose goal. Could they work with others? Did they understand and follow directions? Although my informal assessments were important as a base to see how students functioned in the context of an activity, it was also important to gather baseline data and simply know what they knew to determine their zone of proximal development. Using our district assessments, the students' scores were used to group them for what would later turn into groups for learning centers, therefore if they scored lower on either math or literacy, they were then placed in a lower group for both skills, even if they only scored low on one academic area. However, I did not want them to be grouped like years previous, and this idea was causing the light to go dim for weeks: scheduling.

Flexible Grouping and Learning Centers: the Brightest Light so far

I wanted to use the flexible grouping strategy I'd read about when researching for my literature review (Beecher & Sweeny, 2008; Hallam, Ireson, & Davies, 2004; Tieso, 2003). Flexible grouping is when students are monitored so consistently that they have the opportunity for change wherever and whenever necessary. I wanted my students to have this opportunity. I also didn't want their groups to be the same for every subject. In recent years of teaching kindergarten, learning centers were rotated and from Monday through Friday every table or group of students would have visited that center. There were previously five, that way each of the student groups had something to work on to keep them engaged. They were: Listening Center, ABC Center, Math Center, Art Center and guided reading/writing with the teacher. This structure did not allow students to move

freely between groups. If on Monday, the Green Square Table went to the Math Center, then Tuesday they went to ABC Center, unless the group of students was the same, some may never get to a center if they are constantly switching groups. Every time I pondered this, I felt the same dizziness I'd felt on the first day of school, and the horrific feeling that I would never get out of that tunnel. Then I had an idea: one center a day! The entire class could work on ABC one day, Math another, and so on. That way each day, students could be with different groups depending on the subject and their needs. Again, I sighed a small sigh of relief and thought, "Maybe I *will* see the other side of this tunnel this year..."

With my learning centers fear pushed aside, I needed to take the assessment results and start grouping my students. I also needed to cut out some centers. It was easy to decide to cut the Listening Center, because I decided to make it a large group activity where students would respond in their journals. I decided that not all my students would be ready to write and it was not developmentally appropriate for me to require it from all of them. While some students wrote simple sentences in response to a story they listened to, others simply drew a picture of their favorite part. Myself or a parent volunteer would then write the sentence they dictated, circling any kindergarten sight words that were used to show students how they might use our words in context.

That still left four centers and only three days: Tuesday, Wednesday and Thursday. Monday's were way too busy. This was the day in the curriculum that was spent introducing new letters, words, and other basic tasks. By the time I would finish these things, there was no time for a lesson *and* learning centers, so

it was decided: Monday's were out. Following in my guided writing footsteps, I also knew it was not developmentally appropriate to instruct in reading if the students were not ready. I am not talking about skipping read alouds for a whole class. However, I decided only to meet with my highest achieving students for guided reading groups. These were the students who had already mastered letter names and understood which letters made which sounds. Mya, Roger, Alie and Rob were my four students who had scored the highest on their letter assessment and had also been keeping up with their sight word knowledge enough to read them in context. Other students would complete their letter assessment while I met with these students to work on the guided reading book of the week. This would include our sight words for the week and usually the letter of the week. The group continued to be flexible and students would be added when necessary. For the time being, guided reading was only for my students who showed an exceptional understanding for letter knowledge.

October: the tunnel gets clearer

After the tears, battles and some days when students were often reprimanded, we all finally got into a consistent routine. Students were coming into the classroom ready to work on the projects at hand; they were grouped accordingly during center time, and Choice Time was making a big breakthrough. While it was slow at first, eventually many students worked in heterogeneous groups to write notes, stories and books. They worked together at the fine motor area to combine their fine motor strengths to complete a game. Others really enjoyed painting at the easel and showing the other classmate at the easel how to

paint what they are painting. Every time I looked around I saw smiling, highly engaged students and I forgot all about the tunnel vision and my first day of school panic attacks.

Our classroom climate was incredible! Students respected, helped and cared for each other. We even set up a bell for students to make announcements. During Choice Time, if you had something you wanted to share with the class you could ring it and students close by would turn their heads to listen to their fellow classmate announce something about their Choice Time accomplishments. Most of the time students would create a book and then request to read it to the class. I knew the element of choice had been one of the best changes I had made to my schedule this year. Students, on their own, had created heterogeneous groups where they learned from each other. Differentiated instruction had, on its' own, changed our classroom climate.

Usually, teachers are consistently stressed out, worried and burdened by the standards their students must meet. I, however, thought, "Well if they don't know it, I'm certainly not going to teach them it. I can't make them learn something they are just not ready to learn." With this newly found respect for my students' abilities and zones of proximal development, I had created a classroom where students did not feel the stress and burden from the teacher. Students felt welcomed here, accepted for what they knew. They talked with each other more calmly, respectfully and carefully. They were still five-year-olds and consistently interrupted me during large group times, but they were different than in other

years when I had taught. Their empathy and compassion for one another truly brightened my day.

Marie

On October 3rd, Marie, a fashionable student whose hair was always in place and one of our most outspoken students, ran over to me from the writing area. “Miss Liberto, Miss Liberto! Look, I made this!” Marie showed me the little writing tablet she’d been using. On it, in pink (of course) pen was written the word “the,” one of our sight words. Marie was a student whom I had not necessarily been worried about, since it was still the beginning of the year, but I had my eye on her since she was in my lowest groups for both literacy and mathematics. However, her fine motor skills were excellent; she had such control and wrote beautifully! I knew I needed to give her some time so the rest of her brain could catch up. I said to her, “It’s ‘the!’ You’re awesome!” Her usually beautiful face somehow became even more delightful after my comment, as she beamed from ear to ear. She ran back to her table spot to continue her work in the writing area. I heard her shuffle back over a minute later. “Look, now I wrote ‘we!’” I smiled back at her and I said, “You really did it! You wrote our word ‘we.’”

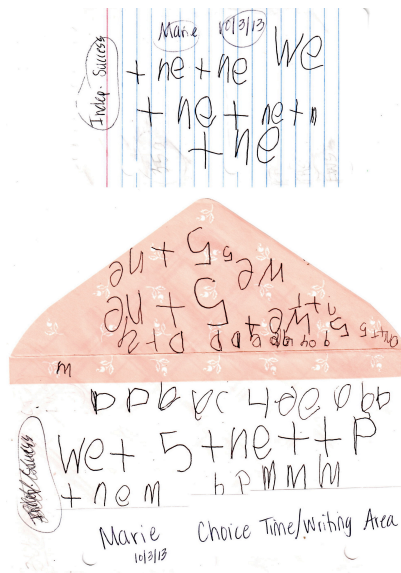


Figure 4.1 Marie's Sight Words

At the conclusion of Choice Time that day, Marie, a student who if judged specifically based on her assessment scores, would not look proficient, on that day, was. She used two words and while not in a sentence, I was so proud she understood the concept of writing and understood that if she wrote the symbols on the paper, people could read them. When choice time was over Marie gave me an envelope with the words “we” and “the” written all over it. Inside the envelope were her two small pieces of paper she’d created at choice time that day, both with the two words printed all over them. She gave them to me, just because, for no reason at all. They did not mean much to her. They meant a lot to me though. Although she could not tell, I knew she was learning. That day, the tunnel wasn’t dizzying at all. I could’ve walked right out. But then I remembered...there was still Henry.

Henry: every day was the first day

Henry was a student who puzzled me. Unlike Ricky, Marie, Nicole, Liam and a few others, Henry made little to no progress in goals that were measured on the kindergarten report card. I had been meeting with him and the others I just mentioned every day during learning centers. Most of these students were met with for both literacy and math, and so was Henry. When working with letter names and sounds, Henry could only remember and say the name or sound right after I would say it. He could not isolate sounds, not even just the beginning sound. Every day felt like a new tunnel vision with Henry, where he would forget all the subjects he'd learned the day before. I tried everything. We wrote in salt; we sang songs; we wrote inside puzzles to get his fingers and brain to connect to the same symbol and name. Henry could not remember the names or sounds of letters. It was not just letters or sounds; it was numbers and counting too. Henry knew four numbers. His one-to-one correspondence was mediocre, sometimes skipping objects while counting and resulting in the incorrect amount. I tried counting frogs, counting chips, matching numbers and puzzles to object amounts. Still nothing. Henry, I knew, was going to be a long tunnel, and one I might not get to the end of.

That was something that was hard for me to accept. All my students had made some form of progress in terms of our kindergarten learning standards by the end of October. Differentiated instruction was all about meeting students where they were and instructing them from there without any problems or bad feelings associated with having to teach different groups different skills. I was

happy to show my students success in their own ways. I celebrated small victories with Marie when she wrote her words on the notepad. I congratulated Ricky when he finally wrote his name all by himself. I was thrilled to move Nicole up to the on level group because she was learning her letters adequately. But Henry, what could I celebrate with Henry? My heart broke and my head spun as I pained over what was going on in Henry's head.

Henry's lack of any gain had worried me. I spoke with his speech teacher in our building to see if she was noticing the same things I was. I discussed with her how he could not remember letter names, sound and even isolate sounds within words to complete assessments. I explained to her how I had given him adaptations and accommodations for his weekly assessment. I described how instead of remembering which letter made the sound on all his own, I placed the go to cards in front of Henry for that week. If the letter was "Tt" then I would put the "Tt" for Turtle card on his table spot. When he was completing his assessment, he could compare whatever the picture was on the assessment to the go to turtle picture. This way he would not have to think of something out of the blue. Henry still struggled with this. He needed me to go through each picture, sometimes even struggling with the vocabulary. So all eight pictures, I would go through with him. I'd say, "t-t-toothbrush. Does that sound like t-t-turtle?" and he would say either yes or no. I did not usually change his answer. I wanted to get an accurate representation of what he thought and heard. We went through each picture like that.

He could not do the assessment without me. He would just sit at the table and wait, sometimes a behavior problem. However, during this time while the other students were taking this assessment, my highest four students were meeting with me for guided reading. I could not give all my attention to him all the time. So I had to just let him go for that ten minutes and just tell him to try his best without me first. I knew he couldn't do it alone. He could not isolate the sounds enough to hear or compare to the go to picture. However, what he did start doing was filling in the one picture if it was the same as the go to picture. At least he had visual discrimination: a small patch of light in an otherwise pitch-black tunnel.

Liam: the boy with the brightest heart

Liam, like Henry, worried me to a state of panic yet again. Liam was a sweet boy, one of the nicest in our class. He regularly left school and while trotting out the door to the bus looked back and yelled, "I love you, Miss Liberto!" Liam grew up with his father and grandparents in a loving household. However, it seemed that he had little experience with school-related ideas before starting kindergarten. He attended a preschool, but I am not sure for how long. Needless to say, Liam was one of those students who on the first week of school made me feel like the end of my tunnel was actually getting further away and I was actually taking steps backwards. For what seemed like a long while, but had only been the first month of school, Liam needed almost everything partially done for him. He needed directions repeated to him, center work started for him, and extensive work when teaching him how to write his name. Almost every activity

was adapted in some form to either accommodate his fine motor skills or his academic skills.

Slowly, Liam began making progress. I noticed during learning centers that Liam was isolating sounds by himself. He was able to pick the pictures out that started with whatever letter sound we were working on. He was also able to remember the letter's name we were learning that week. I'd also noticed a big change in his participation during large group. He'd begun raising his hand a lot more, especially during stories. He'd give his opinion about a character or make an inference about why something happened in the story. I decided to move Liam up in learning centers. He would now be working on the on-level work for fifteen minutes. I monitored his center work weekly and also at the end of the week with the letter assessment. He was holding his own. I couldn't have been more proud of this sweet little boy.

Another Choice Time Bright Light

On October 29th, Paula and Alie both wrote books in the writing area that day during choice time. Paula and Alie were both students who I would have described as above average. They were both students who knew all their letter names and sounds; however Paula, who sat in the front, puzzled me sometimes. Alie never wasted any time answering a question even without raising her hand. However, Paula never raised her hand and whenever I called on her she always answered, "I don't know." It seemed as though she knew things but did not know she knew them.

When she wrote her book this day, I was excited to point out to her what she knew. She had been working on this book all of choice and came up to me several times to ask me how to spell something. Her second page had a stenciled picture of a flower. She told me she wanted it to say, "I can make a garden." I told her, "Well I think you know some of those words, why don't you check our word wall and see if we have any of them?" She came back with the words "I", "can" and "a" and began writing her sentence. When she got to the word "make" I wrote it in for her. She filled in the word "a" next and I finished with "garden".

However, something happened on the next page that I was so happy I witnessed. Instead of coming over to me to ask for help, Paula began writing her sentence. It read, "Can I play?" with a backwards question mark but nonetheless, one was there. Then Paula wanted to write the answer, "yes." She turned to Mya, one of the highest achieving students in our classroom who is also very gifted in art, and asked her, "How do you spell yes?" Alie, who was nearby working on her book about birthdays, stopped working for a moment to listen to make sure Mya's answer to Paula was correct. Mya told her "y-e-s is how you write yes". Alie answered approvingly, "Yes Paula, that's how you spell 'yes.'" Paula was using Mya during this time to help her learn. The heterogeneous groups that students had naturally made during Choice Time were really starting to shine through as real assets to our classroom's daily schedule.

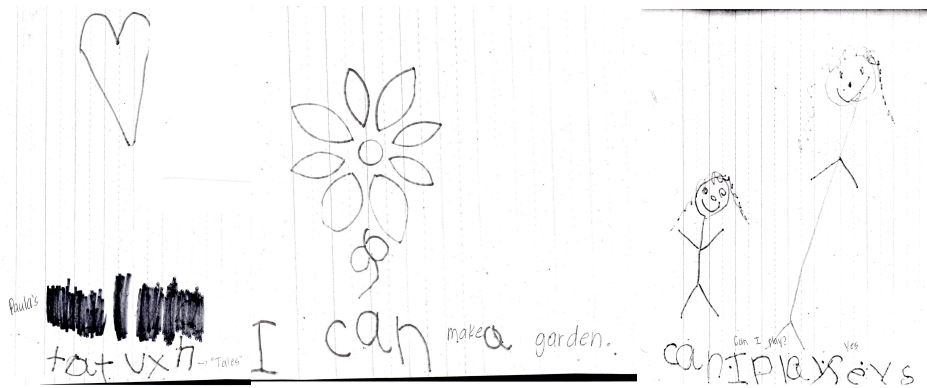


Figure 4.2 Paula's Story

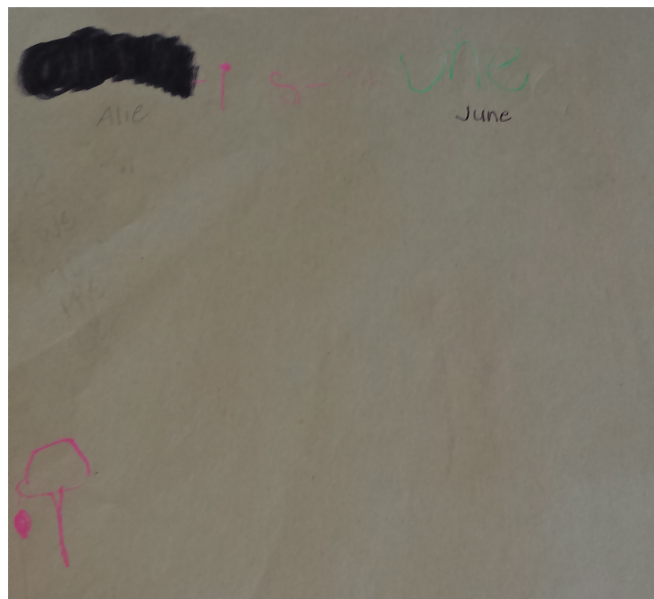


Figure 4.3 Alie's Story

Books, Books and More Books!

I couldn't keep up with the amount of books the students were making daily. Some would make one every day of the week, creating five books a week. Most times the students would barely write a word on a page. However, I never discouraged them. I would still ask them, "So are you the author and the illustrator?" when they would ring the bell to share their book with us before

specialist that day. Most times, the girls were the ones creating the books, including names from our classroom inside their story about wedding cakes, birthday parties or princesses needing rescued. I even appeared in their stories once or twice, which made all the students giggle whenever Catie or Marie would read their stories aloud and I would be a character in it. Making the so-called books was good for the students' confidence, especially students like Marie and Catie, who started kindergarten on the lower end of the standards scale. But it also increased fine motor strength and persistence in students like Andrew.

Andrew: our very own green Power Ranger

Andrew had a twin brother in the other kindergarten classroom. During kindergarten registration last year, his family asked what the best course of action would be when considering separating the twin boys or leaving them together. We advised them to separate them as soon as possible. The family took our advice and Andrew was the brother I was given. While Andrew knew all his letter names, sounds and number names and could represent his quantities, his fine motor development was a little weak. He struggled with scissors and when writing his name or writing numbers or letters, he seemed to take quite a bit of time.

Andrew loved Power Rangers. He also loved green. Put the two together and this was his heaven. I was extremely surprised to see Andrew frequent the writing area and make books daily. Most of his books were about some evil force the Power Rangers needed to defeat. This particular day, Andrew, writing in green of course, came over to me and asked me to help him spell Nighlok. I said

to him, “What did you say, night lock?” I had no idea what he was talking about, since I had not watched Power Rangers since about 1995 and there was only one kind, The Mighty Morphin Power Rangers. I asked him to repeat what he needed help with. He got a little more impatient with me and forcefully said, “Nigh-LOCK!” I still didn’t get it. I turned to Google to help us. I took my laptop to his table spot he was working at and Googled Power Rangers. Immediately, a huge array of different kinds of Power Rangers appeared. Sure enough, there were the Nighlocks, who were actually the villains in his illustration. I showed him the picture Google provided for me and he confirmed that that was indeed what he was talking about. He smirked a small smile and that was that. Andrew was very quiet.

However, what I did next really knocked his socks off. I got a sticky note and wrote his word on it. I said to him, “O.K. this is your word for today, Andrew. But maybe another day someone will want to use this word in a story. When you’re done looking at it, can you put this on our word wall? What letter do you think it should go under?” He answered N and beamed as he walked up to our word wall and stuck his Nighlok word under our Nn heading. While I continued to monitor Andrew’s fine motor strength and dexterity, I never again questioned his motivation to create fine illustrations and stories that captured his own imagination and the rest of the classes’ when he read to us that day the gripping and frightful tale about how the green ranger and all his faithful colleagues helped to destroy the evil Nighlok.

Surveying Center Work: Checking their Thoughts

Center time had been moving along through the month of October.

Students in the on-and-above levels worked in homogeneous groups in both ABC and Math centers on Tuesdays and Wednesdays.

In ABC center, on-level students worked on isolating initial sounds of the letter of the week and students in the above-level group worked on c-v-c isolation and writing the corresponding letters (usually one of the letters corresponded to the letter of the week). In Math center, students in the on-level worked on quantity representation, symbol representation and patterns and sorting. Above-level students worked on simple addition and subtraction. Once a week, students were surveyed so I could get an idea about how they thought their center time was going and if they thought they were learning. I wanted to see if students could think about what they were learning and make sense of it. The Daily Child Survey (Appendix E) was alternated between centers. One week the ABC Center was surveyed. The next, the Math Center was surveyed.

I asked students who had participated in centers that day to complete the survey. I would ask them to come over quickly during Choice Time. I would show them their center work and ask, "Is this your center work?" and when they would say "yes" I would go through the three survey topics, "Did you think your center was hard, just right or easy? Did you think it was fun or not fun? Did you learn or you did not learn?" If they answered that they learned, then they would tell me what they learned. This was a slow moving process in the beginning. Some students, like Mya, answered the same all the time, "I did not learn; it was

not fun.” Mya was very bright but she couldn’t possibly know everything. I struggled to find her zone of proximal development so she was not bored.

Close-Ended Responses to surveys

Other students said center work was hard for a different reason than I would have thought. For example, if an activity had a lot of fine motor steps, students like Andrew, Liam and Chris answered their center work was hard, not because intellectually they could not understand it, but because there was a lot to write. This was one way the surveys helped me differentiate my center work expectations. Students like Liam, Andrew, Ricky, Chris and a few others who had fine motor struggles were not penalized during center time because it took them a long time to write. Many times if I saw a student taking an inordinate amount of time on his or her center work I would simply discontinue if I saw they were doing it correctly on the problems completed.

Close- ended Responses: Did they really think that was easy???

One puzzling thing that happened during center work surveys was when the students’ answers did not match their completed work. Sometimes a student would say his or her work was just right or easy yet their answers were completely incorrect. I noticed this was happening often with some students, especially Paula.

Open- ended Responses

The third survey question I asked was the open-ended response. Most of the time these answers were my favorite. I could really tell the students who, in their own words, showed me exactly what their center work taught them how to

do. Below are some responses from several math center surveys that were right on with exactly what students were learning during center time.

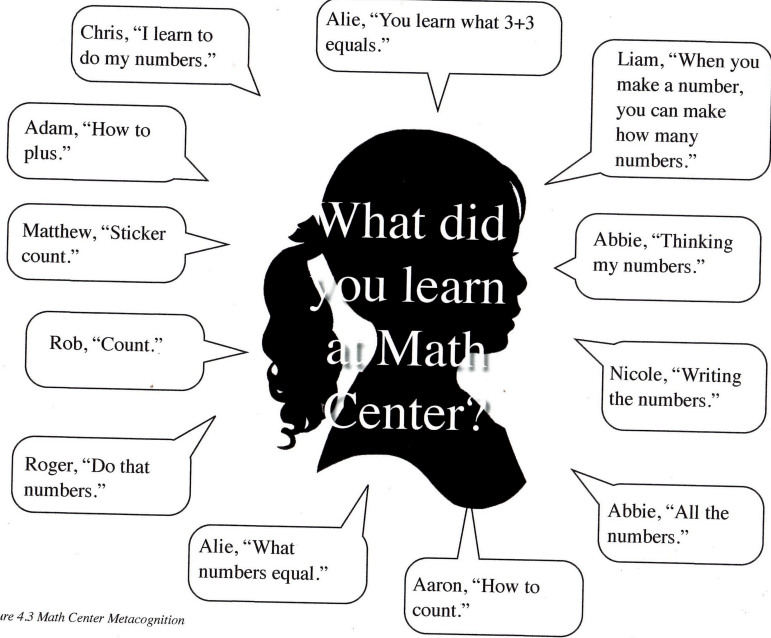


Figure 4.3 Math Center Metacognition

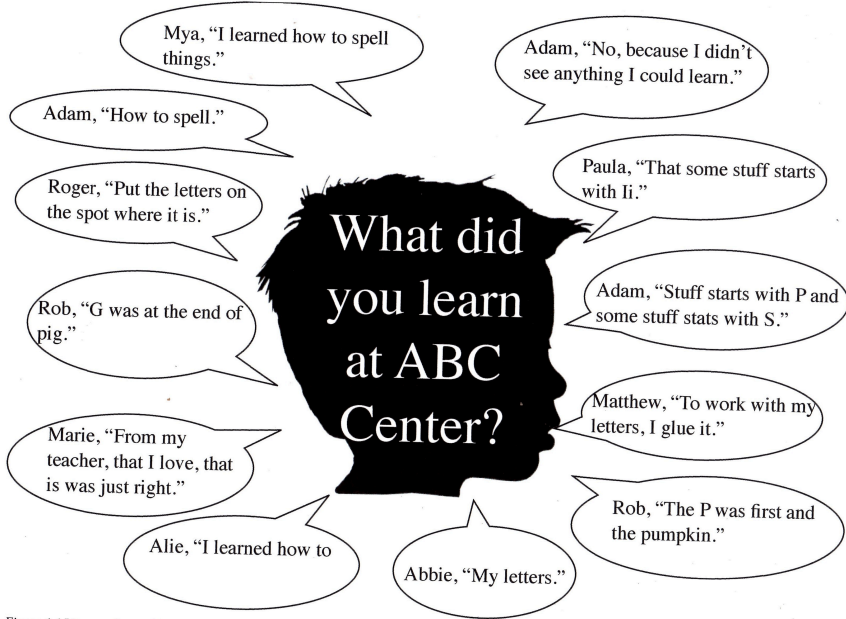


Figure 4.4 Literacy Center Metacognition

My instructional groups during center time: the below level

During ABC and Math center, I met with the lowest performing students. I figured the others could function fine on their own and some of them were even performing above level without my help. If I still met with some students for guided reading and provided those students who needed it guided writing soon, it was still all right if I'd only meet with the lowest students.

ABC Center

My group for the ABC center started out with Henry, Liam, Catie, Marie, Nicole and Ricky. These students were the ones who performed low on their letter name assessment in the beginning of the school year (what I used as baseline data). Within this small group, we worked a lot with letter discrimination and identifying the letter amongst others. Students also experienced a lot of tactile learning methods. One day, students wrote letters in salt. This really helped Liam and Ricky who struggled so much with even understanding where I was talking about putting their fingers when beginning to write the letter "A". I knew if they could not do it with their finger in salt, they would not be able to write it with a pencil in their hand. I split the group into two most days. While three on one side worked on a coloring discrimination page, the other three sat on my side of the table and we worked on letter formation. Sometimes we used the salt; other times we traced the letter with either puzzle pieces or tactile letter cards. As students traced the letter's formation, they would also chant the letter name like a song.

After each ABC center, I would scrutinize their work. Did they remember that letter? Could they remember the sound if we talked about pictures that started

with that sound? I evaluated their work and also took into consideration their end of the week letter assessments (Appendix H) when considering flexible group movement.

Half way through October, I noticed Nicole, Catie and Marie were getting their work completed correctly with my support during centers. They were also completing their weekly assessments with little or no errors. It was time they were moved up to the on-level group for ABC center. I monitored their center work and took note the kinds of errors they were making or if they were making any at all. I also continued to monitor their weekly assessments to notice any shift in their scores. All three students continued to stay afloat in the on-level group.

The three boys, however, were not making the same gains. Ricky was making a lot of progress, but I worried about his off-task behaviors. Sometimes with wondering eyes, it took him much longer to finish a task than others. I wanted him to be ready to work independently in the on-level group if I were sure he was ready to be placed there. My concern was the same with Liam. He was making gains and starting to isolate sounds a lot better in order to figure out initial sounds, but he was very distracted. I needed to be confident that he would be able to complete his work independently and correctly. In the end, I moved Ricky up to the on-level group and kept Liam in my learning center group. Henry was still having major struggles remembering any letter names, sounds or even isolating initial sounds. The two would remain with me as we continued to work on isolating sounds and working with letter names.

Math Center

Similarly in ABC Center, I met with my lowest students. These students happened to be Liam, Henry, Catie, Marie, Ricky and Abbie. We worked on similar tactile activities when working with number names and quantities. Students used the same puzzle pieces for tracing numbers, the same tactile cards and addition tactile cards that had been made from raised glue. While half of the students worked on my side of the table, other students used white boards with grab and count objects like mini erasers, cubes, or other manipulatives. Both student groups worked mostly on one-to-one correspondence work at first. I noticed many of these students would count an object twice or count so slow they'd touch two objects and only count for one. We worked a lot on touching and counting and I modeled many times the correct way to count. Students also practiced writing their numerals that matched with how many objects they counted.

Patterning and sorting were also skills students practiced during center time. We used many different manipulatives and games to practice both patterning and sorting. The most common tools that were used were already made pattern cards with bears. Students read the pattern card and finished the pattern with just one unit or kept it going. Another game students played during center time were a pattern unit card game. Students chose a pattern unit card and then made a pattern with at least three of those units. Before starting another, students needed to tell me their rule and how many units they had. This was an easy way to

watch each student work because they were all working independently to make their own pattern trains.

Around the end of October again, I noticed some students in my group were getting bored or understood the concepts I was teaching already. Catie, Nicole, Abbie and Liam were moved into the on-level math group and started working with higher numbers and quantity representation. I monitored their center work for the next few weeks to make sure the on-level was a good fit for them. While Liam struggled with fine motor skills, I could not put him in the below-level group; he already understood what I was teaching. As I mentioned before, I simply discontinued his work or required him to do far fewer problems than anyone else.

Marie, Henry and Ricky still remained in my small group for learning centers. They continued to work on quantity. However, now I began using the 10-Frame templates (Appendix I) that were being used in team with our Common Core math standards. I asked the students to make certain amounts. Then I would ask them, “What is one more?” or “What is one less?” This helped develop their number sense. However, Henry and Marie were still struggling with number names, not unlike letter names.

November: Shouldn't I be getting to the end of this tunnel by now?

While students had been in school for about six weeks now, I was starting to get nervous again. When was I going to see these monumental changes my study would be producing? When would I see the amazing changes they would all make? When was I going to go through one day without a pang of panic? Little

did I know, there were changes happening all around me that were too small to see daily, even though Liam, Henry and Ricky were still worrying me with their lack of alphabetic skills, Liam and Ricky's fine motor struggles, Ricky and Henry's lack of focus and attention. It was difficult to notice if any improvements were made because so much of their behaviors were still so unchanged. Sometimes it's easier to notice when you're looking back at the big picture. Instead of focusing so much on the unbearably long-trail tunnel on my summer bike trip, I needed to remember I would get to the end by pedaling, pushing one foot at a time. And that's what I needed to do in my classroom. Push one pedal at a time and appreciate the small distance I would go with each push.

Roger

In the beginning of my story, I cite Roger as saying, "What is she even talking about?" when I was talking during large group. Roger regularly was silly and needed redirection but as you have read, he was one of my brightest students and in my guided reading group since October. His will to make us laugh was stronger than any other in the class. I did love this about him even though it was incredibly distracting and sometimes a big problem. Most days, I could cope with his consistent interruption and silliness but November 13, I could not. He was fooling around with Matthew about four times too many and he lost both his green and yellow, leaving him on the red side for the day. This required me to report to his parents about his consistent distracting that morning. I also said, which I say to all my students whenever they lose their green, "I am sure that everyone here is very disappointed in you. Now we cannot put a marble in the

Green Leader Jar.” This usually incites many responses around me such as, “Yea I *am* disappointed” or “Roger that makes us really sad.” So today was no different. We could not put a marble in and all the students were disappointed. But what happened the next day nearly brought me to tears.

Roger came in the next morning having forgotten about being on red. The morning was normal. He was antsy but that was him and I accepted that that was who he was and we all loved him for it. But when it was Choice Time, Roger walked up to me when I was back by our sink. He said to me, “Miss Liberto, I am really sorry for going to red yesterday from talking to Matthew.” With tears in my eyes I answered him, “Roger, I am *so glad* to hear you say that. And I think all our friends would really appreciate hearing that too. Why don’t you go ring the bell and tell everyone what you just said to me?” Reluctantly, Roger approached to bell. He rang it twice. Everyone stopped working and turned their eyes on him. “Everybody...I’m sorry for loosing my green yesterday from talking to Matthew...” What happened next is a teacher’s dream. All of the sudden, half the class was crowded around Roger, hugging him and giving him words of encouragement. “It’s O.K. Roger.” “We accept your apology!” “We love you, Roger!” I cannot say this was the result of differentiated instruction but again my classroom climate had changed. It had become an empathic, loving environment where everyone wanted each other to succeed and do what they do best. Roger was good at making us all laugh. And we let him.

We All Teach Each Other

During Choice Time, the students learned many things from each other. I wanted them to understand that although I am the adult in the classroom and technically their teacher, we can all learn from each other (Freire, 1970). One way I did this during large group is to allow students to explain ideas before I gave my opinions. When learning the letter “Ii”, one of the words I focused on more was the “igloo”. Before discussing what I knew about igloos, I asked the students to raise their quiet hands if they knew anything about igloos. Aaron, Alie, Adam and Liam all offered explanations. Chris also said, “It’s a building made of snow.” I asked, “What kind of building, what for?” He responded, “A kind of like a...house!” I answered, “Yes! That is why some people call an igloo a snow house.” I posed the question about how they get the pieces of snow and ice to stick together. Some students thought it might be glue. I wondered out loud, “Maybe they use water and then it freezes and will stick together like glue.” A few minutes later, Liam offered a similar explanation to mine. It was nice to see the students engaged in talking about a topic they had no idea about.

I found a video on YouTube that was about two minutes long that showed a father and son building an igloo. I picked two vocabulary words out prior to watching the video: “collapse” and “compact”. I used collapse in a sentence to see if any students could figure out the meaning. “If you build the blocks too tall they could collapse. What do you think collapse means?” Aaron answered, “Something falling down.” “Yes, that’s right,” I said, let me right that on our board. Collapse: something falling down. Good one Aaron.” Then I give them the sentence for

compact. “When you go on vacation your clothes are compacted in your suitcase.” This was trickier so I gave them this definition. “Compact: packed together tightly.”

We repeated our words and definitions several times before watching the short video about the father teaching his son about building igloos. All the students were watching intently. They smiled when the boy’s first attempt at carrying the ice block results in him dropping it and eagerly wait to see his second attempt. Every child’s eyes were glued to my computer screen. When finished, they even begged to watch it again. Everyone but Abbie, who regularly feels the need to tell us when things are not funny or boring, smiled as we played the video again. Many students smiled or repeated one of our words when they heard it in the context of the video.

This day was meaningful to differentiated instruction because it showed many levels of engagement. Some students helped us to understand igloos, some helped us to understand vocabulary, and the video showed me that many different learners could all engage in one tool if you preface it in several different ways. The students went on to create their own igloos later that week and were pleased and proud when they showed their final product. “My snow pieces are very compact!” some said. I replied, “Very good idea. I’m sure yours won’t collapse!”

Writer’s Workshop

Toward the middle of November, I knew it was time to start writing. Most of my students were not ready. However, I had a handful of students, a lot of whom had visited the writing area daily during choice time, who were ready to

begin instruction in Kidwriting, a program our district had adopted that made use of the inventive spelling strategy. I had decided, since I took Listening Center out of my weekly rotation, that we would do this large group on Fridays. The first Friday, I put in a story, 10 Hooting Owls, on CD and told the students that afterwards we were going to draw and write about our favorite part. “Some of you will come with me to the circle table in the back, and some of you will stay here and work on your illustration until I can help you write your words.”

As I called them, Alie, Andrew, Mya, Paula, Marie and Chris dutifully followed me to the circle table after the book was over. I reminded them to draw their favorite part and then I was going to help them sound out their words to write their sentences. While some were drawing their illustrations I would ask one at a time what their favorite part was. We would work together to either figure out which one of our sight words they would need or what sounds were in words they did not know how to spell. Alie and Mya had no problems at all. They sounded out beautifully and heard most sounds in their words. Chris could hear his sounds but his fine motor really caused him to struggle writing the letters. Andrew could not hear the sounds as much as I thought he could. He needed more scaffolding than I thought when working out his words he did not know how to spell. Marie was just totally unprepared. I could not have been more wrong about her. I thought since she went to the writing area daily that she would be motivated enough to work a little harder, being that she didn't exactly know all her letter names or sounds. However, she could not even isolate the initial sounds of words. I found myself having to give her the go to picture to give her a clue. Even then

she struggled. I pulled back, only requiring her to put the beginning sound of words, not even any other sounds she heard. “This is really hard...I don’t remember that letter...F? T? P?...I don’t know all my letters yet!” She kept guessing. I could see she was entering that stage I’d read about in brain research, where it was too hard and releasing the chemicals to put up her guard (Tomlinson, 1998). I made a note that she was definitely not ready for Kidwriting and assuming she wasn’t working hard enough couldn’t have been more wrong. Developmentally, she was still working on phonemic awareness and the ability to hear the sounds. I could not expect her to write the letter to match a sound she couldn’t even hear yet.

Meanwhile, the rest of the class was noisily drawing, or not drawing, their favorite parts. This book was very silly and so the students were very spiritedly drawing and discussing their favorite parts with one another. “I like when the owls were with all the squirrels, that was *so* funny!” “Oh me too, Roger, I love that part too!” “I like when they were riding the skateboards!” “Hey that’s what I drew!” As I listened to their conversations with their table neighbors, I went around to students and asked them what their illustrations were about. I wrote their words for them since this was the first time. For some students, I would ask them what letter I should write first, to at least get them thinking about what they’d write. I also circled our sight words I used in their sentence to write. As I used my blue pen to circle words, I saw students’ faces smile as they saw they recognized words they needed to tell about their favorite parts.

Differentiated Assessments

Like Tomlinson (2005) suggested, I not only differentiated my instruction but also my assessments. For parent teacher conferences at the end of November, I wanted to report on students' alphabetic knowledge (which letters and/or sounds they knew), number knowledge (names) and sight word recognition. I offered students a variety of choices to show what they knew. They had the traditional paper with all the letters and numbers displayed out of order (Appendix E), traditional paper with sight words displayed (Appendix F), flashcards with individual letters on them, flashcards with textured numbers on them, sight words flash cards and our daily chart with letters on them. Students could also choose to sing or chant the letters too while looking at the traditional paper. When each student arrived, I'd say, "I need you to tell me what you know about letters. You have a choice. Do you want to sing the letters? Use flashcards? Look at a paper? It's your choice." The student would pick which method they felt was the most comfortable for them. This was really interesting for me to see because many students, like Marie, who previously was upset about not knowing her letters, wanted to keep coming over every day and telling me which letters she knew. Mya also, even though I knew she knew all her letters. Some memorable ones were Alie choosing to make a song about the letters and Ricky using the chart. The students all *wanted* to tell me what they had learned. They were excited to choose a method and I was excited to see what they had learned.

Most students made progress. The students who had made the most progress were Catie, Liam and Ricky. I couldn't have been happier for all three of

them, especially Liam. He really struggled so much with fine motor, I was glad to see some other strengths were building up to take the load off his fine motor weakness. Catie really blew me away! She went from being in the lowest group at the beginning of the year and needing my scaffolding weekly in learning centers to knowing almost every letter and sight word!

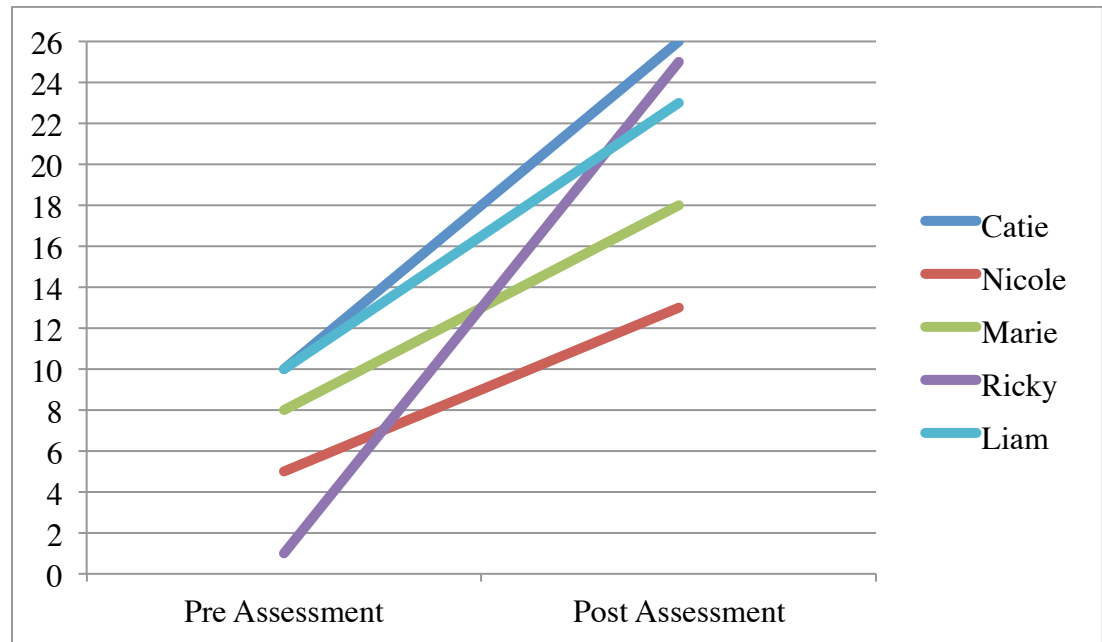


Figure 4.6 Uppercase Letter Assessments

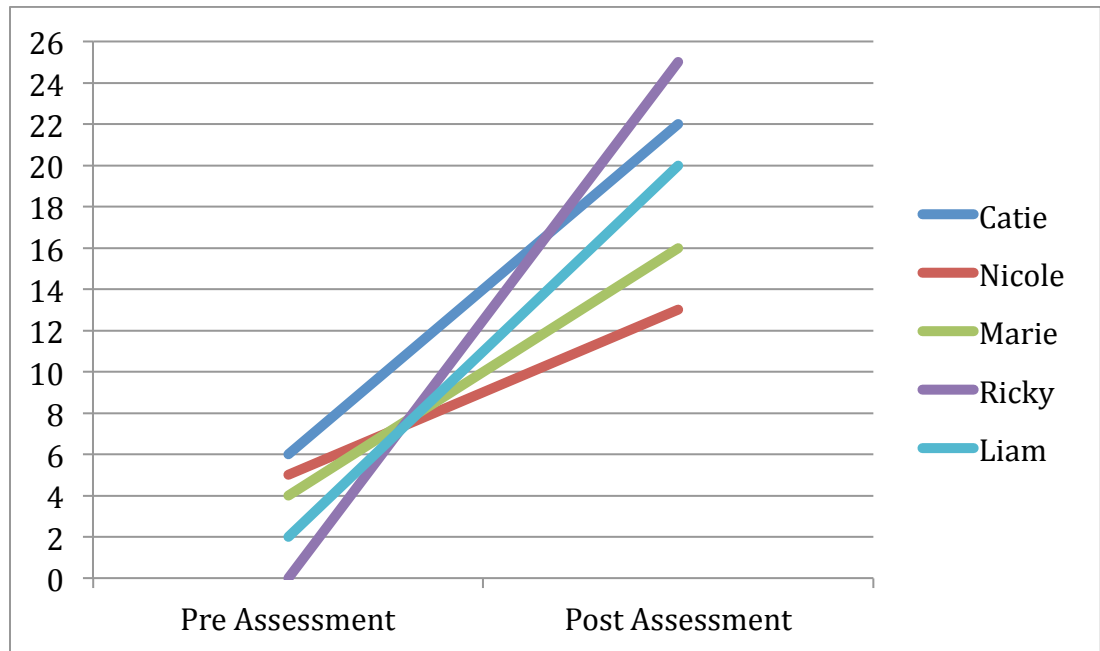


Figure 4.7 Lowercase Letter Assessments

When reviewing their results, I beamed with pride as I walked out of the tunnel. The bright light of the sun shone down and covered me with a warm feeling of success. My only sadness was with *Henry*.

Henry's big break-through: celebrating the small victories

Henry went from knowing three letters in September, to only knowing one letter in November. He knew one sight word and the same amount of numbers as his pre-assessment. I was devastated. Once again, I was struck with the same feelings of panic and light-headedness. Why hadn't Henry made any progress yet? Hadn't I done enough? I moved his seat; I gave him adaptations and accommodations for his center work and his assessments. I repeated directions for him. I gave him opportunities to succeed with questioning techniques. What was I missing? Couldn't there be just *one* triumph; a sign that Henry was making some sort of progress in our classroom and was learning.

At the end of November, I got my wish. After learning centers, Henry went to the Writing Area for Choice Time. He selected two pieces of yellow paper from the paper drawers and took them to his desk. He walked over, grabbed the stapler from its place near the bell and stapled his yellow pages together. He worked all fifteen minutes, using his pencil to illustrate something at his table spot. At the conclusion of Choice Time, I rang the bell to signal clean up time. I saw Henry finishing his work, clean up and place his stapled yellow sheets on the ledge of our easel where students put their books they have written. I did not say anything at that moment.

Later, when students were ringing the bell to make an announcement or read a story they made during Choice Time, Henry stood up and got in line. I thought he would make an announcement about one of his cousins or his grandmother, which he'd done once before. But he did not. He rang the bell and walked over to the easel and picked up the two yellow pieces of paper stapled together. He said, in difficult speech to understand, "Me da aufor and illstrator." I looked at him, stunned, and asked, "Henry did you make a book?" He nodded his head and smiled. "And you're the author and the illustrator? Ok! Let's hear your book," I said.

Henry's first page had an illustration of two vehicles with their fronts facing each other, as if they'd been in an accident. Henry read, "Monser chuchs cashing." The other students stared intently at him while he read. Then he turned the page. On the next page was a large rectangle drawn and next to it was a shape with eyes. Henry read, "Batman cimbing da wall." I beamed at Henry. He had

made a book! He hadn't a clue what letters would actually make those sentences but I was so proud of him. He used Choice Time to create something just as the other students. We all clapped for him as he walked to his book bag and placed his book inside.

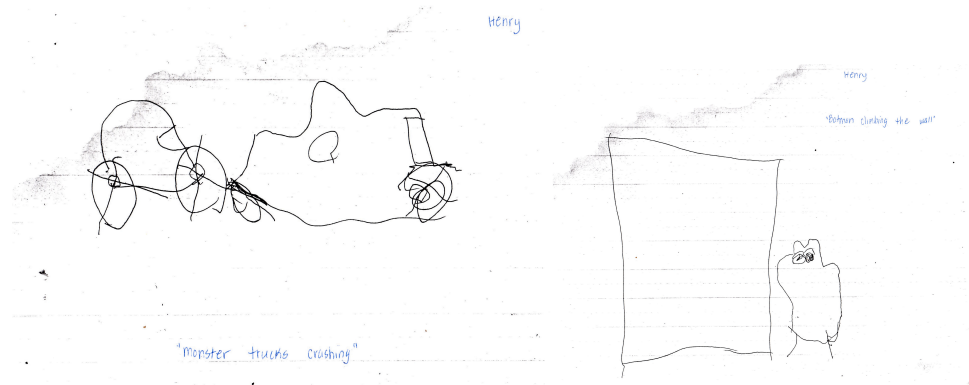


Figure 4.8 Henry's Big Breakthrough

On that day, Henry's book carried me all the way through the tunnel and out into the fresh air. I knew he had a long way to go. I knew Henry would always need accommodations and adaptations. But I also knew he was home here. He had made a break through and while it was a small step for him, it was one that I will never forget. On that day, Henry knew what it was like to succeed. On that day, so did I.

DATA ANALYSIS

In my study, data analysis started right away. I began collecting data the first day through my field log and continued throughout my study and added other forms of collection such as observations, student work, surveys and assessments.

Field Log

I used my field log to document the daily behaviors and interactions of my students as well as my thoughts and reflections. At the end of each day, I wrote the things I observed or saw in the classroom: anything the students did that was powerful to my study and especially phrases the students may have said in the process of learning. The journal was organized in a chronological order so it was easily referred back to. After each activity or discussion point, I would reflect on what I saw or heard and make changes to student groups, make changes to my schedule, reorganize materials or change a method of instruction. Most times the field log observational narrative was in conjunction with a piece of student work or survey results. Sometimes though, instances happened where I had overheard a child during Choice Time or learning centers and it was more appropriate to reflect on their behavior alone, without any corresponding documents.

The field log is where I noticed similarities in my forms or methods of differentiation. After reflecting on behaviors of students, I could pick out when I used certain methods of differentiation. When I reflected on learning centers, I used the codes “accommodation”, “adaptation”, “explicit modeling and examples”, “fine motor”, “scaffolding” and “tools” to describe exactly how I differentiated each student’s learning center. After reflecting on Choice Time, I

used the codes “learning from peers” or “favorite Choice area”. If I reflected on a large group discussion or art project, most of the time I used two codes: “open-ended response” or “open-ended task” to show that students were not held to a certain standard all the time.

When I began giving the assessments, I reflected a lot about the different choices the students made and the progress some had shown since the beginning of the study. Here I used the code “assessment” to bring attention in my field log to the fact that assessments were given and students most likely all chose to do things a little bit differently. It was similar to using the same code if students’ weekly assessments were differentiated. The important findings from my field log were:

- When students were struggling or excelling in an area.
- Certain differentiation strategies were most effective.
- How happy students were to show what they knew in a variety of ways and still remain accurate.
- What helped the classroom function best (scheduling)?

Observations

I took the opportunity to observe the students for at least fifteen minutes a day during Choice Time. This was a time when I walked around the room jotting quick notes about meaningful conversations I heard or work I’d seen being done that was a step in the right direction. Other times, my observations occurred while I was instructing. Sometimes, when the students were at learning centers, I would write notes about their responses to questions or problems they faced. Later, I

would detail the happenings of that day and include more detail about their struggles or responses they had. Another time I observed my students was during large group instruction, especially during open-ended conversations. While leading a discussion, it was difficult yet crucial to note engaging students' conversations to then explain more thoroughly. My observations at all these times were critical to evaluating students' zones of proximal development and their successes they were accomplishing in our classroom.

My observations are where I initially saw a lot of negative things happening during instruction time, when students were working or during Choice Time. These are where a lot of codes dealing with frustrations came from. Codes I knew I would need were the struggles the students faced, or in short, my reason for needing to differentiate instruction. The codes were named first with their subject area, like math, then the skill requiring the need for differentiation. Some codes within this category were "math one-to-one correspondence trouble", "fine motor control", "fine motor scissors trouble", etc.

Observations became filled with positive codes. I noticed a lot of great things happening in the classroom due to the increased differentiation in my instruction such as an increase in letter knowledge, a more interactive large group discussion, motivated learners and a general attitude change within the classroom. Codes related to success stories within my field log were necessary to show my methods were working. Some of these codes were not always related to academic success necessarily. A few had to do with simply completing a task with enjoyment or being considerate of another student. Some examples of these codes

were “Choice Time Engagement”, “math early computation”, “fine motor success”, “kid quotes”, etc. The most important findings from my observations were:

- Student struggle led to frustration.
- How valuable Choice Time was and what students were learning from it.
- Students could learn from each other just as much, if not more, than they learn from me.
- Students, when highly engaged, had meaningful learning experiences.

Student Work

I collected a lot of the students’ work and assessments. Every learning center usually produced tangible products and I almost always made sure to store them with my field log, especially students who made a huge gain or showed a particular struggle. Other times I would photograph students’ finished products, especially if it resulted in error or success. I was certain to save some of the books and other artifacts my students made during Choice Time, as these were key testaments for the argument that Choice was valuable and highly motivating to my students. Assessments were stored as well to analyze how well students were grasping topics or how well they were coping in a flexible group due to a recent change. Journals were also considered as a source of student work at times if students wrote a particularly exemplary sentence.

Many of my codes were born from the students' work. Some frustration codes like "fine motor control" and "math pattern trouble" were easy to observe and notice after the students would turn in work they had completed during learning centers.

Positive quotes (see Figures 4.3 & 4.4) that developed from the students' work were those of success such as "math patterning", sorting and early computation success, "fine motor scissors control", "early writing success", and "literacy phonics success". Although the list continues, these are some codes that were developed when students' work from learning centers or general work time had shown.

Two other codes that the students' work influenced were very important. "Flexible grouping movement" and "flexible grouping affirmation" were necessary to my study. I used the students' work they'd completed during learning centers to either decide to move them up or down a level or to decide if after they had moved if it was the appropriate level of challenge.

Weekly assessments the students handed in were sometimes differentiated in some way. I then used the code "assessment" in conjunction with "accommodation" or "adaptation" depending on which applied. The main findings from students' work were:

- When students needed to be moved out of their learning center group.
- Similarly in observations, the value of Choice Time and the need for it.

- Metacognition showed me who understood their learning task.

Surveys

I surveyed students at the beginning of the year about their favorite Choice Time area. This was important to reflect on the areas that would be the most important and require the biggest amount of upkeep. I administered this survey at the conclusion of my study to determine if opinions changed throughout the weeks. Another survey I gave was in response to their learning center work. At the conclusion of students' learning centers, I would ask them to come over and answer questions about the ease and purpose of their learning center. Students would use metacognition to answer if their work was too hard, just right or too easy, whether it was fun or not, and what they learned. It was important for me to use this survey as a tool to reflect if students understood the purpose of their work and if they found it motivating.

The code "survey metacognition" was created when students made a great connection between their task and their learning. This helped me to see how well students understood their learning. Most of the time this code coincided with the code "kid quote" if they said something meaningful about their learning. The main findings were:

- Again, metacognition showed me who understood their learning task.
- Why a student did not understand a topic.
- What motivated them to do their learning center work?

- Learning styles of my students, as well as their interests as learners (Choice Areas).

Bins

My codes made it easier to go back and easily understand what happened at any given day without rereading a whole page of field notes. This was also beneficial when I grouped these codes together into larger categories, or bins. To keep all my codes straight and accounted for, I created a coding index, which listed all my codes and page numbers of my field log where that code was used.

After all these codes were spread all over my field log, I needed to find ways to connect them all. I noticed a clear pattern. First, I had a group of codes that directly spelled out *why* I needed to differentiate instruction. These codes discussed the frustrations my students were having when learning, different than general classroom frustrations like following directions or lack of time. These frustrations were due to a lack of cognitive understanding and I titled this bin: Frustrations: Lack of Differentiated Instruction (Figure 5.1).

The next bin, called Strategies for Differentiated Instruction, was what I planned to do to decrease these frustration codes in the first bin. Exact strategies were coded in my field log and placed in this bin to show the methods used to combat the educational frustrations some students were experiencing during daily instruction.

The final bin, titled Results of Strategies, were codes that described the successful experiences happening in the classroom as a result of the differentiation strategies I employed during my ten week study.

Once all my bins and codes were sorted, it was easy to see what were important findings in my study. I used the graphic to make connections and findings statements about what I learned throughout my study of differentiated instruction.

Research Question:

What are the observed behaviors and reported experiences when I differentiate instruction (D.I.) in my kindergarten classroom?

General Frustrations

- Bad Attitude
- Frustration
- Time
- Following Directions
- Large Group Attention

Frustrations- Lack of Differentiated Instruction

- Math Pattern Trouble
- Fine Motor Scissors Trouble
- Math Sorting Trouble
- Math One to one Correspondence Trouble
- Fine Motor Control
- Letter naming Trouble



Strategies for Differentiated Instruction

- | | |
|--------------------------------|-----------------------|
| -Accommodation | -Tools |
| -Adaptation | -Survey |
| -Assessment | -Scaffolding |
| -Explicit Modeling & Examples | -Learning from Peers |
| -Fine Motor | -Favorite Choice Area |
| -Flexible Grouping Affirmation | |
| -Flexible Grouping Movement | |
| -Open-ended Response | |
| -Open-ended task | |



Results of Strategies

- | | |
|------------------------------|-------------------------|
| -Literacy Phonics Success | -Survey Metacognition |
| -Math Early Computation | -Visual Discrimination |
| -Math Pattern Success | -Choice Time Success |
| -Math Sorting Success | -Choice Time Engagement |
| -Math Number Sense | -Student Pride |
| -Math One to One | -Kid Quotes |
| Correspondence Success | -Early Writing Success |
| -Fine Motor Success | -Pre-Reading Skill |
| -Fine Motor Scissors Success | |
| -Math Quantity Symbol Match | |

THEME STATEMENTS

The purpose of this study was to explore and find an answer to my research question, “What are the observed behaviors and reported experiences when I differentiate instruction in my kindergarten classroom?” I specifically thought I would find gains in my students’ academic levels but I knew at first I would see struggle while I found their appropriate levels of instruction.

While differentiated instruction was not exactly based off general frustrations, they were always considered when planning and preparing for another task.

Some students had many general frustrations such as following directions or time that hindered their ability to perform a skill or complete a task to its fullest intent. Certainly students’ instruction was not based on these four general frustrations listed in this bin, but it was a contributing factor, especially for students who needed the explicit modeling and instruction, a code later listed as a method of differentiated instruction. While this bin was important it coupled with the next bin to provide a challenging learning situation for students who fell into both bins. I knew I needed to ease the frustrations in at least one of the bins, if not both.

Students struggled regularly with many tasks such as math and literacy concepts like sorting, letter naming and other academic skills. Students also struggled with fine motor tasks like cutting, writing their name or copying

shapes or symbols. These frustrations helped me to determine exactly where differentiation was needed.

Before I began differentiating my instruction, I needed to discover what my students were capable of on their own. This led to a lot of frustration on both our parts. It sounded a lot like what Dewey (1938) described during the chapter in discussion with the criterion of an educative experience,

“This lack of mutual adaptation made the process of teaching and learning accidental. Those to whom the provided conditions were suitable managed to learn. Others got on as best they could. Responsibility for selecting objective conditions carries with it, then, the responsibility for understanding the needs and capacities of the individuals who are learning at a given time. It is not enough that certain materials and methods have proved effective with other individuals at other times. There must be a reason for thinking that they will function in generating an experience that had educative quality with particular individuals at a particular time... The principle of interaction makes it clear that failure of adaptation of material to needs and capacities of individuals may cause an experience to be non-educative quite as much as failure of an individual to adapt himself to the material” (p. 45-47).

It was difficult to sit back and wait to see if students would figure it out on their own. Not only did students struggle with academic tasks like letter naming, one-to-one correspondence and patterning but also with skills known to be needed to

function in the classroom such as scissors trouble and fine motor control when writing their names or copying basic letters. As Vygotsky (1978) said,

“Learning which is oriented toward developmental levels that have already been reached is ineffective from the viewpoint of a child’s overall development. It does not aim for a new stage of the development process but rather lags behind this process...the only “good learning” is that which is in advance of development” (p. 89).

While this is true for the students who were completing tasks too easy for them like Vygotsky describes, it was just as ineffective for students working at levels too difficult for them. This led to my next bin, the bin that described methods where I strived for the “good learning” that Vygotsky was referring to.

Each research-based strategy aimed to meet the students at their appropriate levels and to provide support so every child was successful to some degree. Some strategies were more successful than others, but all played a part in differentiating some form of small group, large group or open choice time, to help close a student’s academic achievement gap or enhance already mastered skills.

Here is where the strategies I employed were seen the most. Like Dewey (1938) describes,

“There is incumbent upon the educator the duty of instituting a much more intelligent, and consequently more difficult, kind of planning. He must survey the capacities and needs of the particular set of individuals with

whom he is dealing and must at the same time arrange the conditions, which provide the subject matter or content for experiences that satisfy these needs and develop these capacities. The planning must be flexible enough to permit free play for individuality of experience and yet form enough to give direction towards continuous development of power” (Dewey, 1938, p. 58).

I needed to provide students with meaningful learning experiences that were on their developmental level. I had a variety of methods in doing this, whether it was a simple accommodation or an entire adaptation. I had to employ a kind of planning that was going to meet students where they were and encourage what Dewey describes as a “continuous development of power.” During learning centers, where students’ work was leveled to meet their instructional need, and during Choice Time, where students created heterogeneous groups, both gave students the form yet free mode Dewey talks about. The students made progress, which connected to the next theme: success.

Students made individual gains in many academic areas of the classroom due to the strategies put in place to help them succeed. However, students’ social/emotional gains are more noticeable when exuding pride in their work and showing joyful, meaningful engagement.

Many students made academic gains noticeable at the post-study assessments. Areas like math and literacy showed gains in skills like letter naming, one-to-one correspondence, early computation skills and pre-reading

skills. Fine motor skills increased when students learned the control their pencils or scissors with better strength. Emotion gains seemed to be the most meaningful when students show pride in their work and remain happily engaged in their Choice Time work.

The students' successes were highly related to the methods put in place for the ten weeks. Students achieved more when they were met on their instructional level and scaffolded rather than expected to learn at the standard because it was a developed expectation by the district for all students.

“The goals of teachers are to meet all students at their starting points and to move each one along a continuum of growth as far and as quickly as possible. Learning has no ceiling” (Tomlinson, 1998, p. 55).

Tomlinson describes perfectly that there is no “ceiling” on learning; that students will continue to grow once you find their level. Many of my students have continued to push higher and higher. For those who have not, we repeat the cycle again: find their level, scaffold their learning, measure their goal. These themes are never ending and neither is differentiated instruction.

The Next Step...

I learned a great deal when differentiating the level of instruction for my students this year. There are some practices I will never change after this, like Choice Time and learning centers. My next steps in action research are to continue to influence the minds of other educators about differentiation. Yes, it's hard and time consuming but the pay off for my students has been tremendous. I

will continue to effect their social-emotional development by offering them chances to succeed during work assigned and work they are inspired to create. I will continue to allow them to show me what they know in a variety of styles, for at least one assessment period. I want to look further into developmentally appropriate practices and take time to provide learning center activities that are just as engaging as Choice Time. Finally, I want to always, always, always remember that *every* child, though they may block the light at first, will guide you to the end of their tunnel.

REFERENCES

- Beecher, M., & Sweeny, S. M. (2008). Closing the achievement gap with curriculum enrichment and differentiation: One school's story. *Journal Of Advanced Academics, 19*(3), 502-530.
- Dewey, J. (1938). *Experience & education*. New York, NY: Touchstone.
- Fine motor skill. (n.d.). In *Wikipedia*. Retrieved September 25, 2013, from http://en.wikipedia.org/wiki/Fine_motor_skill
- Freire, P. (1970). *Pedagogy of the oppressed*. New York, NY: Bloomsbury
- Grissmer, D., Grimm, K. J., Aiyer, S. M., Murrah, W. M., & Steele, J. S. (2010). Fine motor skills and early comprehension of the world: Two new school readiness [Where's the rest of this entry?]
- Hallam, S., Ireson, J., & Davies, J. (2004). Grouping practices in the primary school: What influences change?. *British Educational Research Journal, 30*(1), 117-140.
- Hendricks, C. (2012). *Improving schools through action research: A reflective practice approach*. (3 ed.). Upper Saddle River, NJ: Pearson Education.
- King-Sears, M. E. (2001). Three steps for gaining access to the general education curriculum for learners with disabilities. *Intervention In School And Clinic, 37*(2), 67-76.
- King-Sears, M. E. (2007). Designing and delivering learning center instruction. *Intervention In School And Clinic, 42*(3), 137-147.
- King-Sears, M. E. (2008). Facts and fallacies: differentiation and the general education curriculum for students with special educational needs. *Support For Learning, 23*(2), 55-62.
- Lawrence-Brown, D. (2004). Differentiated instruction: Inclusive strategies for standards-based learning that benefit the whole class. *American Secondary Education, 32*(3), 34-63.
- Learning to read and write: Developmentally appropriate practices for young children. (1998). *Reading Teacher, 52*(2), 193-216.

- Levy, H. M. (2008). Meeting the needs of all students through differentiated instruction: Helping every child reach and exceed standards. *Clearing House: A Journal Of Educational Strategies, Issues And Ideas*, 81(4), 161-164.
- McNiff, J., & Whitehead, J. (2010). *You and your action research project*. (3 ed.). Abington, OX: Routledge
- Peck, G. (2012). *The potomac river: A history and guide*. (pp. 29-30). Charleston, SC: The History Press.
- Subban, P. (2006). Differentiated instruction: A research basis. *International Education Journal*, 7(7), 935-947.
- Sumida, A. Y. (2005). "Loko i'a": Enriching educational waters for hawaiian children. *Educational Perspectives*, 38(1), 39-46.
- Tieso, C. L. (2003). Ability grouping is not just tracking anymore. *Roeper Review*, 26(1), 29-36.
- Tomlinson, C., & Kalbfleisch, M. (1998). Teach me, teach my brain: A call for differentiated classrooms. *Educational Leadership*, 56(3), 52-55.
- Tomlinson, C. (1999). Mapping a route toward differentiated instruction. *Educational Leadership*, 57(1), 12-16.
- Tomlinson, C. (2000). Reconcilable differences: Standards-based teaching and differentiation. *Educational Leadership*, 58(1), 6-11.
- Tomlinson, C. (2005). Grading and differentiation: Paradox or good practice?. *Theory Into Practice*, 44(3), 262-269.
- Tunnel Vision. (n.d.). In *Wikipedia*. Retrieved February 1 2014, from http://en.wikipedia.org/wiki/Tunnel_vision
- Tunnel vision definition*. (2012, June 14). Retrieved from <http://www.medterms.com/script/main/art.asp?articlekey=24514>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

APPENDIX A: HSIRB Proposal

Dear Kelly,

Thank you for submitting your edited proposal form. The Moravian College Human Subjects Internal Review Board has accepted your proposal, “Differentiated Instruction in the Kindergarten Classroom.” A copy of your proposal will remain with the HSIRB Co-Chair, Dr. Adams O’Connell, for the duration of the time of your study and for up to one year from the approval date indicated by the date of this email.

Please note that if you intend on venturing into topics other than the ones indicated in your proposal, you must inform the HSIRB about what those topics will be. Should any other aspect of your research change or extend past one year of the date of this email notification, you must file those changes or extensions with the HSIRB before implementation, awaiting HSIRB approval of the changes.

We do still need to collect your electronic signature, so please respond to this email with your name and project title in the subject line. Dr. Grove can provide his electronic signature by replying to this email with his name in the subject line. Your replies will serve as your signatures.

Please do not hesitate to contact me if you have any questions. Good luck with your research.

Sincerely,

Dr. Virginia Adams O'Connell
Co-Chair, HSIRB
Moravian College
hsirb@moravian.edu
voconnel@moravian.edu
(610) 625-7756

APPENDIX B: Principal Consent Form

Dear Dr. XXXXXXXXXXX,

As you know, I am currently working on my Master's degree at Moravian College for Curriculum and Instruction. I am presently working on my thesis, which has been approved by a board at Moravian College and is titled, "Differentiated Instruction in the Kindergarten Classroom". My research is about differentiating kindergarten learning to support the needs of all my students. During this study, I will use the data I have gathered about my students to provide a greater learning experience for each child. I will consider elements like learning style, choice and learning centers to be the backbone of my instruction within the classroom. I will change my learning center time to provide greater differentiation and implement flexible homogeneous grouping. The element of choice will be used daily as part of my effort to differentiate heterogeneously after each learning center is complete. I will also provide greater differentiation during large group by varying style and answer techniques. The purpose of my research is to provide leveled instruction to meet the needs of all my learners and give each student what they need to grow and make progress.

I will use observational data and surveys to decide which students need which types of instructional differentiation. Differentiated learning centers provide intense work in small groups with things like letter names, sounds and sound associations. I will use a variety of research-based strategies from my data collection plan including, but not limited to tactile letter experiences, phonemic awareness picture/sounds card association and letter tile manipulation. A variety of activities will be utilized to incorporate the whole child in our new center experience. Students will also exercise the element of choice when picking a follow-up activity when their center work is complete.

This study will take place in my kindergarten class from September 9 until November 15, 2013. I will be collecting data during my research process. Some of the methods I will use are field logs, examples of student work, student surveys, and observational checklists. I will only use information and data from students who have parental permission to participate in my research. All students' names will be kept confidential, as well as the name of the school district and any other participating faculty members. Any child may withdraw from the study at any time without penalty. In a letter to parents, my contact information is listed should parents have questions about my study. If a child is withdrawn, I will not use any of the data gathered about the child in my study.

My faculty sponsor at Moravian College is Dr. Joseph Shosh. He may be reached at Moravian at XXX-XXX-XXXX or email at jshosh@XXXXXXXXXX.XXX. If you have any questions or concerns about my teacher action research, please let me know. If not, please sign and return the bottom portion of this letter. Thank you in advance.

Sincerely,
Kelly Liberto

I attest that I am the principal of the teacher conducting this research study, that I have read and understand the consent form and received a copy. Kelly Liberto has permission to conduct this study in her kindergarten classroom in XXXXXXXXXXX XXXX Elementary School.

____/____/____
Date

APPENDIX C: Participant Consent Form

Dear Families,

I am currently working on my Master's degree at Moravian College for Curriculum and Instruction. The course I am presently enrolled in will help me to complete my thesis. The topic of my research for the semester is about changing kindergarten instruction to support all students.

Changed instruction will provide intense work in small groups with things like letter names, sounds and sound associations. I will use a variety of research-based strategies from my data collection plan including, but not limited to tactile letter experiences, phonemic awareness picture/sounds card association and letter tile manipulation. A variety of activities will be utilized to incorporate the whole child and different learning styles in our new learning experiences. Choice time will also be used in the classroom. This is different than play and students will choose and academic-themed activity to follow their center work. Areas for choice will be: Music Area, Writing Area, Fine Motor Area and so on.

This study will take place in my kindergarten class from September 9 through November 15, 2013. I will be collecting data during my research process. Some of the methods I will use are field logs, examples of student work and student surveys. I will only use information and data from students who have parental permission to participate in my research. All students' names will be kept confidential, as well as the name of the school district. Any child may withdraw from the study at any time without penalty. If a child is withdrawn, I will not use any of the data gathered about the child in my study.

If you have any questions or concerns about my teacher action research, please let me know by email at kliberto@XXXX.XXX.XX.XX or call at XXX-XXX-XXXX. If not, please sign and return the bottom portion of this letter. Thank you in advance.

Sincerely,

Miss Kelly Liberto

To Miss Liberto,

I, _____, give my permission for _____ to take part in your research.

(Your name)

(Child's name)

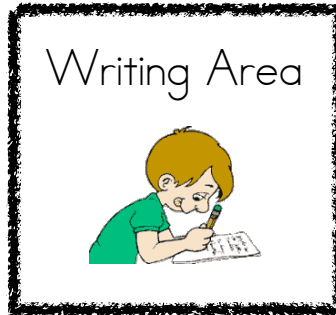
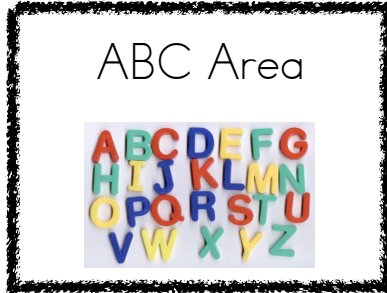
(Guardian's Signature)

(Guardian's Signature)

____/____/____
Date

APPENDIX D: Favorite Choice Areas

My Favorite Choice Areas



APPENDIX E: Survey: Daily Child Survey

Daily Child Survey

Today's center was hard. ☹️

Today's center was easy. 😊

Today's center was not fun. ☹️

Today's center was fun. 😊



Today's center I learned.

Today's center I did not learn.

Today I learned...

Daily Child Survey

Today's center was hard. ☹️

Today's center was easy. 😊

Today's center was not fun. ☹️

Today's center was fun. 😊



Today's center I learned.

Today's center I did not learn.

Today I learned...

Appendix F: Traditional Letter/Number Assessment Form

A Z B Y C X D W E V
F U G T H S I R J Q
K P L N M O

a z b y c x d w e v
f u g t h s i r j q k
p l n o m

0 8 6 1 5 9 4 2
7 3 10

20 11 19 14 17 18 15
12 16 13

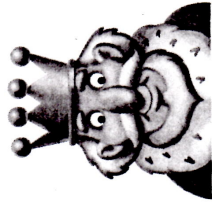
APPENDIX G: Traditional Sight Word Assessment

I	what	blue
can	little	green
am	said	brown
we	here	purple
the	was	orange
like	she	black
a	he	white
see	has	zero
go	look	one
to	with	two
have	my	three
is	me	four
play	where	five
are		six
for		seven
you	<u>EXTRA WORDS TO</u>	eight
this	<u>KNOW</u>	nine
do	red	ten
and	yellow	

APPENDIX G: End of the Week Letter Assessment Form

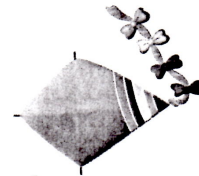


1.



Four sets of handwriting lines (top solid, middle dashed, bottom solid) for writing the names of the items in section 1.

2.



Four sets of handwriting lines (top solid, middle dashed, bottom solid) for writing the names of the items in section 2.

©Macmillan/McGraw-Hill



Phonics: /k/k, /k/ck

Say the name of each picture. Write the letter k below the picture if its name begins with the /k/ sound. Write the letters ck below the picture if the name ends with the /k/ sound. Repeat the names of the



At Home:

Ask your child to name each picture. Have your child tell you whether each word begins or ends with the k sound.

APPENDIX I: Ten Frame Template

Name _____

Date _____

Counting and Comparing

Ten-Frame

© Pearson Education K

Session 1.7

Unit 2

7