

Celebrating the Differences!
Looking at the Relationship Between Gender
Differences and Learning Styles in Kindergarten

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If I consider gender differences when planning and implementing station activities, in what ways can I help to improve the focus and engagement of my kindergarten students?

Background Information

Description of Teaching Context

This inquiry project took place at Panorama Village Elementary School in State College, Pennsylvania. I had been student teaching as a part of the full-year PDS program. My placement was in a kindergarten classroom with a female mentor teacher, and there was one female paraprofessional in the room. Our class consisted of 21 students, 11 boys and 10 girls. The majority of the students came from white, middle-class families. As teachers, we enjoyed the strong support and involvement of the parents. Within the class, there was a wide range of ability levels. Even so, by February all of the students were above the school's expectations for the end of the year. The students were strong in their phonemic awareness, and their emergent writing and reading skills were strong as well. Behaviorally, the class worked well as a group, with only three or four students who were observed for behavior concerns.

Reasons for Inquiry

Before I began this internship program, I had read several research articles on gender differences. I was intrigued by how genetic makeup and environmental influences can affect how boys and girls learn. As I began observing in my own classroom, I noticed that there were differences in how each gender responded to the classroom environment (Personal Journal, Fall 2004). I began to wonder if the classroom was set up in a way that favored one gender over the other.

When I observed our morning station activities, I noticed that many of the students needed reminders to stay on task, and they only seemed to be engaged in certain types of activities. I began to wonder if I could help the students to be engaged in the activities and improve their feelings of success if I was more sensitive to their gender-specific needs. I did some initial reading on the subject, and I discovered that boys and girls typically approach learning in very different ways. As a teacher, I thought I might be able to improve the success and confidence of my students if I tried to match my teaching style to their needs.

Student Profiles:

John*:

At the beginning of the year, John immediately stood out as a high-achieving student. He excelled in his artwork, alphabet recognition, mathematical understanding, and his ability to self-direct his learning. He rarely needed reminders from the teachers to stay on task. John was self-motivated, a strong leader, and he adapted very well into the school environment.

After Christmas break, the other teachers and I began to notice some subtle changes in John's behavior. He still did well in his work, but he was not pushing himself as much, and he did not seem to be seeking out new information as often. A less subtle change was his behavior during station activities. His attentiveness dropped, and he began to need reminders from the teachers to stay on task. The teachers noticed that he was fidgeting in his chair, staring at other students' work, and daydreaming more often.

At this point, I began to wonder what was affecting his focus and engagement. After talking with him, it did not seem that he found the activities too hard or too easy. I began to question if the activities and the teaching styles in the room were not matching his needs.

William:

Throughout the year, William has struggled in the classroom because of his inability to attend to activities and stay focused. He rocks in his chair, plays with his pencil, walks around the room, makes random movements, and talks to his neighbors in order to avoid work. At several station activities, including Kid Writing¹, he is unable to complete the activity without constant teacher supervision.

William's ability level is difficult to determine because of his behavior issues. It appears that he has good alphabet recognition, and he can successfully read his sight words during Kid Writing. He can sound out most words for his journal, but he needs teacher assistance. It seems that he simply cannot focus enough to sound them out on his own. In terms of mathematical ability, his number sequence and one-to-one correspondence seem to be strong. He enjoys playing with pattern blocks and creating designs. However, he struggles with transferring his designs from the blocks to a picture representation with paper pattern pieces. I noticed that his avoidance behaviors increase when these types of activities are included in the stations.

William exhibits many stereotypical "boy" behaviors, such as requiring constant movement and struggling in his verbal development. However, his attention difficulties seem to be more extreme than the other boys in the class. I am interested to see if I can improve his focus and engagement by choosing different station activities and altering my teaching style.

Sarah:

Sarah is a high achieving student. She seems confident in her abilities and she appears content in the classroom environment. Her phonemic awareness is very strong, and she is very

¹ Kid Writing is a literacy program that focuses on phonemic awareness and using environmental print to develop sight words. Students write in their journals each day by drawing a picture and writing their story. Teachers provide "adult writing" to model correct spelling.

independent with her Kid Writing stories. She takes great pride in her stories and enjoys sharing them with the teachers. She is not afraid to sound out difficult words and think of new story ideas. Sarah is also strong in mathematical reasoning. Her counting sequence and one-to-one correspondence are strong. She enjoys making pattern designs, but she seems to struggle with transferring the block design to a piece of paper. This may suggest some difficulty with spatial reasoning. Overall, her skills are very strong.

The reason that I chose to observe Sarah relates more to her engagement instead of her focus. Sarah is a very quiet student, and she usually only opens up when talking one on one. I noticed that she only gets excited about the Kid Writing station, and she does not seem to have a strong interest in the other activities. My goal is to see if I can find more activities that match her interests, and thereby increase her engagement and learning. I also hope to include some small group, cooperative activities where she can practice verbalizing her ideas and taking a role in the group.

Julie:

Julie is a very artistic student. She enjoys any activities that include drawing or creating something. Her drawings are not above average, but she takes great pride in her work and enjoys the process. Julie is at an average level of achievement for both linguistic and mathematical skills. She seems confident in her alphabet recognition, phonemic awareness, and her ability to write in her Kid Writing journal. The teachers are trying to help her develop these skills further and stretch her understandings. In terms of mathematical reasoning, her counting sequence and one-to-one correspondence are good. She recognizes patterns and enjoys creating designs with the pattern blocks.

Behaviorally, Julie shows more stereotypical “boy” characteristics. She often stands to do her work, and she seems to need some type of constant motion. She is easily distracted, and she receives reminders from the teachers to stay on task. Julie often fidgets in her chair or at carpet time by playing with her shoes, hair, or an article of clothing. Despite these actions, she does not receive as many reminders from the teachers as the boys do. She is not as loud with her behaviors, and her lack of focus is more likely to go unnoticed. I was curious when I saw these “boy” behaviors from Julie, and my goal is to see if she responds more positively to station activities that meet her active needs.

**Names changed.*

Research Support for Gender Differences

My goal of helping students feel confident and successful in their learning is the main reason for this inquiry project. As I began to read literature on gender differences, I found that I could meet my goal more effectively if I considered how my teaching is perceived by each gender. One study showed the following results:

“Students whose learning styles match their teachers’ teaching styles tend to learn more and experience school more positively than students whose learning styles clash with their teachers’ styles of teaching”
(Grossman, p.24, 1994).

I began to wonder how the differences between boys and girls could influence my planning and teaching.

Not all boys and girls fit exactly into gender stereotypes, but there are some patterns that have been shown in several research studies. For instance, it has been shown that girls tend to work better in “cooperative learning environments,” where they can be more focused on the group rather than their own personal goals (Grossman, 1994; Gurian, 2003). Boys respond better

to “competitive and individualistic” activities where they feel that they can master their own environment (Grossman, 1994; Gurian and Henley, 2001). Based on this information, I know that I want to provide both types of environments during station time in order to meet both genders’ needs.

In addition to these preferences for different learning environments, the activities that each gender prefers are also different. Since girls tend to have higher verbal functioning, they tend to prefer activities where they can work with others and share ideas (Grossman, 1994). They are less concerned with the materials and more concerned with whom they are working with. Boys tend to develop their visual/spatial skills more quickly than girls, and therefore prefer activities that involve “manipulating materials and using numbers, logic and computers” (Grossman, p. 22, 1994). Providing a variety of materials and activities can allow each gender to participate in activities that they feel confident doing, and it can also challenge students to try new things.

Behavior is the third major area where gender differences are evident. Boys tend to have higher activity and aggression levels than girls. Researchers suggest that this is caused by higher testosterone levels in the male brain. However, they are still uncertain as to whether this hormone causes the higher levels or if it just predisposes boys to choose these types of activities (Grossman, 1994). Since most classrooms favor activities that are sedentary, this can cause conflicts with a boy’s natural tendency for movement. Girls, however, are “more able to self-manage boredom” and stay engaged in sedentary activities (Gurian, p.59, 2003). One teacher noticed that, “girls can maximize their potential in a more sedentary, language-oriented environment, and boys seem to grow best when they are active and setting up their own challenges” (Gurian, p.85, 2003). These observations are important for teachers to consider as

they plan their daily activities. Having a balance of sedentary and active stations or lessons can help both boys and girls to grow and learn confidently.

Wonderings and Sub-questions

Question

If I consider gender differences when planning and implementing station activities, in what ways can I help to improve the focus and engagement of my kindergarten students?

Sub-questions

- Are the station activities currently geared toward the girls?
- What activities does each gender seem to be engaged in the most?
- Would the boys benefit from more movement and manipulation based activities?
- Would it be more effective to have the students work in same-sex groups?
- Would incorporating a movement break (such as recess or dancing) help to improve their engagement?
- Would the boys respond to a competitive element in the activities?

My Inquiry Plan

How the Inquiry Was Carried Out

Since my inquiry was focused on station activities, I decided to divide my inquiry into two sections. First, I observed the student's behaviors during their regular station activities for three weeks. My goal was to get a baseline for their behaviors and to note which activities seemed to be the most engaging. I was looking specifically at how the boys and girls responded to the activities, in order to note any differences or similarities. My mentor teacher and my advisor also assisted me in taking notes of our observations.

For the second part of my inquiry, I planned to do interventions during my full-time teaching and planning month. My goal was to plan specific interventions for the students over a four-week period. Based on my first set of observations, I created a list of ideas about which activities the girls and boys might respond to. I tried to carry out each intervention several times in order to notice any patterns or changes in the student's behaviors.

Methods of Data Collection

For each section of the inquiry project, I intended to have three methods of data collection. During the first section, I focused mainly on collecting data through observations of the four students. I created a recording sheet, which had two main sections. The first section specifically defined "focus" and "engagement." Since these two terms were the main elements of my inquiry question, I felt it was important to define them. Also, these terms can have different meanings for each teacher, so I wanted to be clear about what I was looking for. The terms were defined as follows:

What is Focus?

- E- eyes on work
- NR- no reminders to continue work
- S- standing/sitting in a manner that does not hinder work
- H- hands are involved in work, not random movement
- ND- no daydreaming
- NS- not staring at others' work/ other tables
- NW- not walking around room

What is Engagement?

- D- discussion is related to activity
- Q- asking questions related to topic/ activity
- VE- verbally expresses desire to do activity
- M- shows excitement through movements: rushes to center, animated facial expressions
- P- shows pride in work, wants to share with teachers/peers

I created an abbreviation for each element of the definition in order to make it easier to record observation notes. Below the definition, I included a table for recording notes on each station.

The table included the name of the activity, gender composition of each group, a row for each

student being observed, and a space to record a check or minus for each element of the definitions. (Refer to Appendix A for examples)

For the second method of data collection, I created a set of interview questions. The questions were designed to assess each student's preferences for station activities, and to learn more about their perceptions of the activities. I interviewed each of the four students I was observing during their free-play time. Since the students were only five and six years old, this limited their ability to talk about why they liked certain activities and to elaborate on their thinking processes. However, I was able to get a better understanding of their preferences and how this might relate to their gender or personality (Refer to Appendix B for interviews).

For the final method of data collection in the first section of the project, I created a parent survey. I sent one survey home with each of the four students that I was observing. My goal for this survey was to find out if the parents had noticed any gender specific behaviors in their children, and to obtain a more detailed description of their child's likes and dislikes. Since the students had not provided lengthy responses during their interviews, I thought the parents might be able to share what their child talked about at home in terms of their schoolwork. Unfortunately I only had one parent return the survey, but her responses were still helpful (Refer to Appendix C for parent survey).

For the intervention section of my inquiry project, I also used three methods of data collection. My main method was recording observations, as I had done during the previous section. I modified my recording sheet slightly in order to focus on one intervention at a time. I kept the same definitions at the top of the recording sheet, but I only included one table on the sheet. I left a significant section of the sheet open for notes, because many of my observations were written out or recorded as student quotes (Refer to Appendix D for notes).

The second method of data collection was also similar to the first section. I used the same interview questions with the students in order to see if any changes could be noted in their responses. My goal was to see if their attitudes or preferences had changed as a result of the interventions (Refer to Appendix B for interviews).

In order to include a visual representation of my interventions and their effects on student engagement, I used photographs of the students working as my third form of data. I tried to take pictures of the students displaying one or more of the elements from my definitions of focus and engagement. This method of data collection helped me to use a different form of evidence to support my claims (Refer to Appendix E).

How the Data Was Analyzed

After my collection of data was complete, I began to read over the information that I had gathered. My observations provided the most insight into the behaviors of the students. I used my observations from the first stage of data collection to determine what the students' behaviors were like prior to any intervention. I looked at their ability to keep their minds and hands on their work, and their observable excitement for the activities. This was used as a baseline for my analysis. I compared these results with my observations during the interventions to see if there had been any change. I looked for any overall trends, as well as specific changes with just focus or engagement.

The interviews that I conducted with the four students in the beginning were also used as a baseline. After completing the follow-up interviews after the interventions, I compared the results of the two surveys. I was looking for any changes in their preferences of activities or for working with other students.

After reviewing and comparing my data, I tried to determine if I had answered my questions. I looked to see if there truly were gender differences, and if they responded differently to the interventions. I experimented with different ways to organize my findings. After several different trials, I found that the patterns and changes were best expressed by using the two key words I was looking at: focus and engagement. I wrote these two words on a paper and listed all of the ways I had observed these terms from each piece of data. This list guided the final analysis of my observations.

What I Learned- Claims and Evidence

As I was collecting all of my data, I began to wonder if gender differences were really noticeable in kindergarten students. It seemed the boys and girls had similar struggles, and they tended to respond positively to the some of the same interventions. I had observed more distinct gender differences in my third grade partner classroom, such as boys preferring math and science activities and girls enjoying language related lessons. I was beginning to wonder if my beliefs about gender differences did not apply to younger students.

However, as I began to reflect on the students' work and their responses to different activities, I began to see that there are subtle differences between genders even at the youngest ages. These differences should influence how teachers plan and implement their station activities, because a student's focus and engagement is influenced by their learning style. The following claims highlight the different needs that I observed for each gender, and why certain intervention activities are successful for one or both genders.

- **Focus**

Because boys tend to have more difficulty focusing on activities than girls as a result of their high activity level, teachers should include activities that involve movement, manipulation, or strategy to keep them focused during station time.

As I began to analyze my notes from the first three weeks, I looked at both words that I was basing my observations on: focus and engagement. Focus referred to keeping their eyes, hands and minds on their work, not daydreaming or staring at other students' work, and not wandering around the room. Engagement meant being involved in discussion related to the activities, asking questions about the activity, expressing excitement verbally or physically, and showing pride in their work. When I looked at each table and the different sections I had created for each word, I began to notice a pattern. It seemed that the boys had more negative checks (meaning they did not exhibit the desired behaviors) in the "focus" side of the table (Appendix A). Their negative marks had more to do with their ability to stay on task, rather than their ability to get engaged in the activity. Both boys that I observed received numerous checks for not keeping their eyes on their work, their hands to themselves, and their minds on their work. They also showed their need for movement by walking around the room and not keeping their hands on their work. I found that I had commented on this observation earlier in my journal as well:

"The boys tend to need a lot of reminders for moving around too much and losing focus on their work" (Personal journal, Spring 2005).

Since this pattern seemed to appear several times, I wanted to find out if it was accurate.

In order to find out if this pattern was true, I added up the number of negative checks that each boy received (Appendix A). Then I added the number of negative checks that each boy received just for focusing problems. For William, I found that 60% of his negative marks were for not focusing on his work. For John, he received 63% of his negative marks for not focusing.

In order to compare this with the girls' behaviors, I added up their negative checks as well. Sarah received only 26% of her negative marks for focusing problems, and Julie received only 19%. These percentages show which area each student had the most difficulty with, and it seems clear that the boys were struggling most with their ability to focus.

Once it became apparent that the boys struggled the most with focusing, I began to wonder which activities caused the most difficulty for them. I looked through my observation to find the activities where the boys received the most negative checks. For William, activities that included only drawing or writing often led him to lose focus more quickly. He often seemed to enjoy the activities at first, but he could not maintain his focus from more than 5-10 minutes. He struggled with activities such as adding writing to his pattern block scene, drawing winter clothes on a person, coloring a picture of a heart for his portfolio, coloring a nursery rhyme book, and kid writing. These activities all focus on coloring or writing alone, which seem to be a struggle for William. When I looked at John's activities, he seemed to do fine with writing, but he also struggled with staying focused on coloring activities. During his interview he said that he does like to color, but he seems to struggle with self-managing during that type of activity.

What interventions can help and why?

- ***Recess Incentive***

William was my most difficult case during these observations. He had the most trouble focusing, and his constant movement hindered his work. I noticed that our station activities usually lasted for 1- 1-½ hours, and this seemed too long for him to control his energy.

In my readings I found that boys have a better time focusing if they are given short movement breaks (Grossman, 1994). When I asked William what his favorite station activities

were during my interview, he immediately said “Recess!” even though it is not a station (Appendix B5). Therefore, I decided to try and use a recess initiative to help improve William’s focus. I announced to the class that we would be able to take a short recess break if they all worked really hard and got their work finished. During that intervention, I observed that William was trying harder to manage his off-task behaviors, even though he still struggled. He came up to me during the first part of our morning and announced, “I’m working really hard!” I praised him for his work, and the class enjoyed the short recess break. Shortly after we got back inside, William came up to me again and said, “Miss Hopkins! I finished my centers! I finished all my centers. I worked really hard!” (Appendix D1). His comments showed that a small movement incentive could help to motivate even the students who have the most difficulty attending.

I continued this intervention throughout the three weeks. William commented on his hard work on several mornings. He did still struggle with his focus, but he had more positive days than negative. I also observed that this intervention was more effective for the boys than the girls. While William was highly motivated by the recess, Sarah did not seem to be influenced by it. On the first day of the intervention, she continued to work slowly and had to stay in for the first half of recess to finish her work (Appendix D2). Movement activities do not seem to be an incentive for her to get her work done.

- ***Shorter Activities***

For John, his behaviors were not as distracting as William’s. However, I still wanted to help him stay focused on his activities. My advisor had observed for me one morning, and she pointed out that John was most concerned with the length of the station activities. He enjoyed them the more when they were quick and he could feel a sense of accomplishment. When I asked him why he liked one of the activities he said, “Because it was so quick!”

During my interventions, I choose activities that would be 10-15 minutes in length. This allowed John to move through the activities more quickly. He showed more positive focusing behaviors, such as needing fewer reminders, keeping his eyes on his work, and not daydreaming. I think it is better to have more activities that are shorter when you have students who struggle with attending and focusing. This intervention seemed to be positive for both the boys and the girls because their negative marks declined for these activities. Girls are better able to focus for longer periods of time, but they do well with short activities as well.

- *Competitive Games*

In my readings and in my observations, I noticed that boys enjoy activities that involve competition. During my initial interviews with both William and John, they both stated that they enjoyed games because it is fun to try and win (Appendix B1 & B5). For several mornings, I introduced math games that required the students to work with a partner. These interventions had a very positive response, from both the boys and the girls. I noticed that the boys enjoyed the games because they were trying to win and gain status with their friends (Appendix E7). The girls enjoyed them because they got to socialize with their peers and interact. Both genders enjoyed the games for different reasons, and it helped all of them to become more focused and engaged.

When I observed the boys playing the math games, I noticed that they made the games competitive, even if that was not the original intention. They seemed to be most focused on games where they were trying to win or get finished first. They also did not seem to care who they worked with.

William was focused on the “counters in a cup” math game, and I noticed that his eyes were on the game and he was talking with his partner about the game. He smiled and laughed

with his partner and told a teacher, “This is fun!” (Appendix D5). During the racing bears game, he helped his partner learn the rules, and he explained, “Your turn!” He smiled and laughed with his partner. John was also focused and engaged with this game. He told me later in his follow-up interview that he liked it because “Usually I win” (Appendix B2). I think that providing non-competitive and competitive games can be a great motivator for boys, and it can help to improve their focus.

- **Engagement**

Because girls tend to have more difficulty becoming engaged in activities than boys do, teachers should include activities that involve peer interaction to encourage discussion and interest during their station activities.

As I observed the boys having difficulty with focusing, I found that the girls were stronger in this area and weaker in engagement. In general, Sarah and Julie were able to focus on the activities and self-manage their behaviors over a longer period of time. During the activities that the boys had struggled with (such as coloring nursery rhyme books and the picture of the heart), Sarah was able to keep her eyes and her hands on her work without frequent reminders. Julie, even though she had more movement than Sarah, was also able to focus on the activities for up to 20 minutes. I had found this observation to be supported by research as well, because girls have been found to have better self-management during activities when they are bored (Gurian, 2003).

Even though I was glad to see that the girls were able to focus, I was concerned about their apparent lack of engagement in the activities. As I mentioned before, engagement means being involved in discussion related to the activity, showing interest and excitement verbally or physically, and showing pride in their work. Julie would often rush through her station work in

order to get finished as quickly as possible. When she was coloring at the nursery rhyme book station, her conversation with her neighbors was off-topic and her work was sloppy. She did not show pride in her work by sharing it with teachers. One teacher asked her to go back and work on her coloring more. After reviewing my observations of Julie, I found that 81% of her negative marks were for a lack of engagement (Appendix A).

Sarah was the student that I was most concerned about in terms of engagement. She is typically a very quiet student, and this carried over into her station work. I observed that she usually sat down at her station and worked silently for 15-20 minutes. Her work was slow and she did not talk about it with other students. It was good that she was not talking too much and distracting other students, but I wanted to see her engaging in conversation about the activities with her peers. When I did observe her talking with her closest friends, the conversation was off-topic and she was not able to do her work at the same time. After looking over my observations of Sarah, I found that 74% of her negative marks were for a lack of engagement (Appendix A).

What interventions can help and why?

▪ *Cooperative Activities*

After observing the girls' engagement difficulties, I tried to think of ways to help them work with their peers on station activities. I wanted to encourage them to engage in activity related discussion and help them develop their teamwork and communication skills. I found a cooperative drawing activity where a group of four students work on their own drawing for two minutes. After the first two minutes, they trade papers and draw on their peers' paper for two minutes. This cycle continues until everyone has drawn on each student's paper.

When I introduced this activity to my intervention group, I was encouraged to see how the girls responded. After I gave the directions, both Julie and Sarah began to focus on their

drawing by having their eyes on their work. When the first session was done, they both began to talk with their peers about what they had drawn. Julie excitedly shared with her neighbor about her picture, "It's a dried up lake!" (Appendix D3). Sarah was looking at what each student was drawing, and she was laughing with John. At the end of the activity, both girls shared their final drawing with the group and gave their picture a title. I was very excited to see the girls discussing the activity and showing pride in their work.

- ***Cooperative/Competitive Games***

As I mentioned before, the girls also responded positively to the cooperative and competitive games intervention. While the boys were focusing on the competitive aspect and trying to win, the girls seemed excited to be working with a partner and interacting with them. I noticed that Julie always had her eyes on her partner and the game during the counters in a cup game. She smiled and laughed with her partner, and she responded to her partner's comments and actions. When I interviewed Julie later, she said that she liked to work with friends because "...sometimes you get to be partners. We take turns" (Appendix B4). The only reminders she needed during this activity were to use an inside voice when she was laughing with her partner.

I observed the most significant change in Sarah during the math games. She became very animated by smiling and laughing with each of her partners. During the counters in a cup game, she smiled when her partner guessed the right number of buttons. When it was her turn to guess and she got the right answer, she exclaimed, "I knew it!" When she was unsure of an answer, she took time to think and was very proud when she answered correctly. For the block matching game, Sarah discussed the activity with her partner and showed pride in their work when they were finished (Appendix E 11 &12). During the racing bears game, Sarah was very talkative while I was observing. She explained, "Mary has a pattern!" When I returned later she said, "I

only needed one more, and when I had two I won.” At the end of the activity, her partner said, “That was a fun game Miss Hopkins.” Sarah replied, “Yeah! Fun!” (Appendix D6). Sarah’s engagement with her partner and the activity was easy to observe, and it was encouraging to see her interaction with her peers.

- ***Manipulatives***

My final intervention focused on using manipulatives to improve focus and engagement. The use of manipulatives for encouraging learning with boys is strongly supported by researchers (Gurian, 2003). I found this activity to be effective for both genders, but girls had more noticeable results for increasing their engagement. The boys were engaged in this type of work, but they still lost focus if the activity was longer than 10-15 minutes (Appendix E3-6). For the girls, I observed that they were more likely to engage in conversation with their peers when they were using manipulatives. During a ladybug math activity, Sarah was talking with her neighbors about ladybugs and how many math sentences she was writing (Appendix E5-6). She showed two teachers that she had done ten math sentences, and she was only asked to do four (Appendix E8).

During the 3-D blocks station, Sarah was working with a partner to match the faces of the blocks to their game board. She smiled in response to her partner guessing the right block, and they exchanged high fives. Sarah talked about the activity with her partner by explaining, “Ok, we need one more.” When she and her partner were finished, they called me over to see their work. She exclaimed, “Miss Hopkins, we got all of it!” Sarah’s conversation about the activity and her excitement to work with a partner was a big change from her previous silent, slow work at stations (Appendix E11-12).

Julie also responded positively to the manipulative activities. At the ladybug math station, she was focused on the activity and showed pride in her work by showing a teacher (Appendix E1-2). During the shape match game, she received all positive marks for engagement, and she was smiling and laughing with partner. When they had trouble finding a shape, Julie and her partner talked about the shapes and worked together (Appendix E9-10). Julie did not rush as she had been with other stations. She seemed engaged in the activity through conversation and working out the problems. She also showed pride in her work by showing it to me when she was finished.

- **Exceptions to the Rule**

Some students exhibit behaviors from both gender stereotypes, therefore teachers need to be careful not to assume that each student will respond to activities that are geared toward their gender. Teachers should offer a variety of activities to meet all needs.

It is important to remember that not all students fit perfectly into their gender stereotype. Researchers point out that:

“Teachers cannot match their teaching approaches to their students merely by treating all female students one way and all male students another way. Male and female students function too similarly to make that feasible. Even in areas where there is a gender difference, not all females and males conform to a particular gender stereotype.” (Grossman, p. 131, 1994)

For example, Julie did not fit into the typical girl mold that most teachers would expect. When I observed her during station activities, she was often standing up at her seat and engaging in other movements during her work. Most of the other girl students would sit relatively still in their seats to do their work, but Julie needed several reminders to sit properly in her chair to prevent falling.

Also, during Julie’s first interview she indicated that she does her best work when she is by herself (Appendix B3). Girls are most often described as wanting social interaction and preferring to engage in discussion with peers while working. When Sarah was asked the same

question, she stated that it was easier for her to work with her friends. These two atypical behaviors that Julie exhibits are an important reminder for teachers. We should not assume that all girls will act the same, or that all boys will act the same. Having that kind of attitude can be as harmful as thinking that all boys and girls should act the same. Both gender groups have different needs, and within those groups there can be even more diverse needs. As a teacher, I feel it is important to be sensitive to the needs of all students, and to make my best effort in getting to know each one of my students.

There are other factors that influence a student's focus and engagement; therefore teachers need to be sensitive to the difficulty level of an activity and/or a student's background when judging the effectiveness of an activity. Gender differences do not always explain why a student likes or dislikes an activity.

While the needs of the different genders can affect students' engagement and focus, teachers should be careful not to solely focus on this one aspect alone. My observations of the students in my class helped me to see other important areas to consider, which affect both genders equally.

For instance, I noticed that both boys and girls lose focus and engagement quickly when they perceive an activity to be too hard. One day I noticed that William was having a really hard time focusing on an activity with pattern blocks. He had started out well by building his shape, but then he began to mess up his design several times. Since I thought that boys tended to respond well to activities with manipulatives, I was puzzled by his behavior. After observing him for a while longer, I noticed that he was avoiding the second part of the activity. The students were supposed to transfer their design on to a sheet using paper pattern blocks. William kept messing up each design he made because he thought it was too hard to transfer the design. In this case, his inability to focus was not related to his gender needs, but rather his own skill level.

Another time that I noticed this type of problem was during a pattern block and writing activity. The students created a pattern blocks scene and then wrote a sentence about their picture. While I was observing Sarah, I noticed that she was receiving several reminders from the teachers to stay focused on her work and get finished. She spent almost 25 minutes at this one station. Since I know that she enjoys her Kid Writing, I was not sure why she was having difficulty. Later that week, I reflected in my journal about what I had observed:

“...I noticed that Sarah was avoiding her work by talking and daydreaming. When I looked at her work, it was messy and only had one word finished. When I talked to her later during our interview, I found out that she thought this activity was really hard”
(Personal journal, Spring 2005).

Again, I was able to see that the activity did not match her skill level, and did not necessarily have to do with her gender preferences.

Conclusions and Future Direction

Implications for Future Teaching

After completing my data collection and analysis, I was very encouraged by the things I had learned. I felt that I had a better understanding of how gender differences can affect the focus and engagement of even the youngest students. When I thought of how this information would influence my future teaching, I considered the question: “How will I set up station activities to meet the needs of both boys and girls?” After reviewing my research, the answer seemed clear-Variety!! All students, whether they are boys or girls, have different needs, learning styles, and skills. In order to set up the most successful learning environment, the key is providing a variety of station activities. By including some cooperative activities, games, manipulatives, coloring,

writing, etc., I will feel confident that I am meeting the various needs of my students in some way. If I focus on just one type of activity, some of my students will be at a disadvantage, and they will not feel as confident in their learning.

While some students do not fit into a gender specific learning style, providing activities that target each gender will still allow you to meet each student's needs. For the girl students who exhibit more "boy" behaviors, they will simply respond more to the boy-directed activities. The same would be true for boys who show more "girl" behaviors. In my own classroom, I would provide some activities that target the boys, such as keeping the activities shorter, using short manipulative activities instead of just writing or coloring, and using games to teach concepts and foster teamwork. I would also provide activities for the girls, including cooperative activities to encourage on-task discussion, cooperative games to foster friendships and practice skills, and manipulatives to help with on-task discussion and visual learning. By providing a variety of these activities, I feel that I will be doing my best to match the various learning styles of my students.

New Wonderings

- What other activities could help the boys to focus on their work?
- What other activities could encourage the girls to be engaged in their work?
- At what age do gender differences become more distinct?
 - At what age do they prefer working with the same gender?
- Are there other learning style factors that I could consider to help my students be focused and engaged?
 - Gardner's intelligences?

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Personal Journal, Fall 2004. (See Appendix F)

Personal Journal, Spring 2005 (See Appendix F)