Inquiry Based Learning

Action Research Question: "What happens when I design lessons to include the use of outside experts to teach students to approach inquiry based learning tasks with procedural methods that mirror those within a discipline?"

In order to answer this question, I examined closely the subsequent questions as I conducted my research:

- What happens to student motivation?
- What happens to student participation in collaborative groups?
    - How is the depth of their conversations impacted? (Ex: Do they provide rationale for their responses? Do their responses to each other show evidence that they are listening to each other?)
- What happens to the types of questions students generate (higher-level)?
- What happens to students reading and math growth (MAPS and ISAT)?

Rationale:

At my school, students receive test prep instruction throughout the school year. From September-mid-March, students spent one hour four days a week working on computer software that is aligned to standardized test standards instead of attending a resource class such as library or art. From mid-March-June, students returned to their resource classes but instead spent one hour every day working on this software instead of receiving instruction from their classroom teacher.

At the beginning of the year, many of my students entered my room reading below the expected 3rd grade levels. I could see their frustrations throughout the day as they lowered their heads, failed to participate, day-dreamed, or acted out. When given the opportunity to complete a task at which THEY felt they could be successful these negative behaviors were minimal. To motivate students to participate in all activities, I wanted to build their confidence in being an "expert" at some aspect of the task at hand, whether it was their ability to command the group, lead the academic discussion, seek answers using technologies, or utilize their understanding of how work is done within the discipline. I created inquiry groups for students to collaborate in as they investigated various topics. When students viewed group work as a shared responsibility and safe places for them to learn, motivation was heightened because competition between classmates was lessened. I also planned to enlisted the help of experts within the field being studied in order to assist students in having a developed understanding of how work is done in that discipline.

At the beginning of the year, my students talked over each other instead of taking turns. When I entered a group discussion they directed all comments to me rather than to peers and no longer self-directed. In an attempt to encourage community learning and assist students in being college and career ready as described in CCSS (Common Core State Standards), I taught students to work in collaborative groups and to follow established listening and speaking norms. Students gained a developing understanding of why collaboration was beneficial to experts as they mentored students, shared experiences, and suggested guidelines/procedures for student work

within the discipline. Students began to take responsibility for their learning and their investigation through the self-esteem they built by knowing that they were doing work that mirrored that of an expert as well as through self-assessments, evaluations, and reflection.

Students were beginning to generate their own questions but they were often lower level questions that require them to remember or apply instead of analyze or evaluate. I taught students the importance of asking higher level questions and how doing so positively impacted their learning as they generated questions about topics of their interest and relied on their developing understanding of disciplinary literacy to find answers. I created a "devil's advocate" role where a student tried to stomp their group by asking controversial questions or giving inaccurate information to encourage deeper explanations and use of textual examples.

Through collaborative inquiry groups, students had the opportunity to learn about how work is done in various disciplines (science, social science, writing, mathematics, performing arts, etc.) and applied these understandings to their own investigations and creations. Students developed a deeper understanding of the topics at hand as they worked in collaborative groups, studied sub-topics of their choosing, and participated in authentic learning experiences. I also secured partnerships with outside professionals so that students were able to more closely learn about and mirror the work of those within each discipline. These partnerships also aided in student motivation and participation as they are able to more closely see how their learning was directly related to working being done outside of school.

School Context:

My 118 year old school enrolls 350 students in a building built for over 1,500 students. Our enrollment dropped 23% over 5 years due to 4 charter schools opening in the neighborhood. This caused the loss of 10 teaching positions. Our neighborhood has the 3rd highest murder rate in the city. Our mobility rate is high at 19% because the area unemployment rate is 24% causing families to move for work. 9% of our students receive special education services for learning disabilities, emotional/behavioral disorders, & autism in both inclusion & self-contained classes. There is no air conditioning. Last year my room reached 98º in June & 6 students became ill. The student population is 99% African American. 96.6 % of the students are designated low income and this year all students receive free breakfast and lunch. Our average daily absence rate is 7%. I partner with parents to encourage attendance. 70% of the students meet/exceed standards in reading & 76.8% in math on our state mandated achievement test. We do not make Adequate Yearly Progress per No Child Left Behind mandates in reading & math so students receive test preparation. I am mandated by my network, a sub-division of my district, to give 1 math & 8 reading tests every 4 weeks. The tests are created by an outside source, take 30 minutes each, and are culturally biased. I was told not to teach social science or science during the peak test preparation times of January-May. This year I was told by my network to begin giving 5 week science assessments that they created, however my school does not have the needed FOSS science kits to teach the curriculum.

My school provides me with one over-head projector and one refurbished "teacher" computer to be used for entering attendance and grades. Through fundraisers, grant writing, and personal funds I also have 3 refurnished desk tops, 1 laptop, 1 printer, an LCD projector, an iPad2, a Flip camera, and a digital camera that students and I use throughout the day. The other 25 teachers in

the school share 2 LCD projectors. There are 2 computer labs in my school however students are only allowed to use them when taking the MAPS test three times per year or to complete test preparation software. Research, investigations, presentations, and other authentic technology uses are limited to the resources that I have secured for my classroom. I spend over $1200/year of personal funds on supplies, incentives, technology maintenance, etc. for my students and classroom.

Our school enrollment is low because of mobility, condemned housing in the neighborhood, and charter schools. Within a mile radius there are 4 other elementary schools which were built years ago to accommodate the large number of students that Sumner could not take due to being over capacity. Students transfer in and out of our school on a daily basis. Last year I started the school year with 23 and ended with only 12 of my original students though 4 new students enrolled throughout the year. This year, I began with 23 students and will end with 27.

For the greater majority of my action research I had 25 students in my classroom all of whom are African American. 12 are boys and 13 are girls (2 additional girls transferred into the class in March and April). According to parent questionnaires about half of the students have contact with their fathers. 2 students have been adopted by family members who are not their biological parents and 1 student is living in foster care. This student missed over 111 days of school last year and is 10 years old and in the 3rd grade. He suffers from depression and emotional/behavior issues. Though we have a good relationship he had to be taken to the local psychiatric treatment center via ambulance after becoming violent with a social worker and threatening to kill himself. In mid-May he became violent with me when he attempted to hit me with a stick and chair and threatened to kill me. Two days later he was removed from his home by the police after doing the same thing to his younger sisters. Many students need glasses but either do not have them or they are broken. Last year I was able to secure funds through donations to purchase glasses for a student who had been wearing the wrong prescription for over two years in glasses given to him by the school.

I have known the majority of my students for at least 2 years through older siblings or simply because we have been in the same building. One student is repeating 3rd grade this year and I requested that he be in my class. Students in my class this year like to give me hugs. I have had to establish a "rule" for hugs before and after school only because they wanted to give a hug after asking a question, when getting in line, or when I picked them up from lunch for example. For the most part, they follow my directions/requests and when I do correct them they quickly correct their behavior. By mid-September, students were learning to be respectful to each other and began to utilize "friend sentence starters" to expand on each other's ideas, give feedback, and invite peers into conversations. I noticed a dramatic difference in their collaboration behaviors since implementing these conversation starters. Students self-assess themselves often and rely heavily on their own assessments and reflections of their participation and work.

Literature Review:

The struggle for students, specifically minorities with lower socioeconomic statuses, to be adequately prepared for college and/or careers after graduating is at the height of educational issues. With teacher accountability on the rise in the form for standardized tests for students, authentic learning experiences are being bulldozed by test prep and direct teaching practices that

leave little room for critical thinking and exploration (Daniels & Harvey, 2009). As part of my action research, I created various inquiry based units to help ensure students receive authentic learning experiences that really do align with tasks and thinking required to be successful young adults. John Dewy, one of America's first constructivists, lays the foundation for my action research in what has come to be known as inquiry learning. Aligning to this theory, I focused on three key principals in my units:

> Cultivating and producing "involved citizens capable of successfully participating in and contributing to a democratic society," 2. "a problem-based learning approach, central to which is motivating learner's interest," and 3. "promoting collaboration, cooperation, and use of democratic style." (Tracy and Morrow pg. 49, 2006)

Outside experts to promote involved citizens

To promote the first principal of producing involved and successful citizens, I created interdisciplinary units that focused on mirroring the work of professionals within the discipline being studied. To ensure that students followed procedural methods and so that they would have a developing understanding of how work is done within the discipline I enlisted the help of outside experts to mentor my students throughout each unit. The new national set of educational standards, Common Core State Standards (2010), promotes a disciplinary and interdisciplinary approach to literacy and, in their standards handbook, states that the motivation behind this push is the need for students to be "proficient in reading complex informational text independently in a variety of content areas" which mirrors that of work done in both college and business worlds. By me bringing in experts in the fields of social science and science, students developed understandings for how work and reading are done within that discipline. As they read articles, analyzed interview question, or conducted experiments they better developed what CCSS says is "a foundation of knowledge in these fields that will also give them the background to be better readers in all content areas." In agreement with constructivist views, this idea of disciplinary literacy "emphasized the development of students' cognitive abilities, such as reasoning and decision making." (Tracy and Morrow pg.49, 2010) When students are active learners rather than passive recipients of knowledge, they are empowered to take ownership of their learning as well as self-direct their learning (Shih,J-L., Chuang, C.-W., & Hwang, G.-J., 2010) meaning that they too become experts and developers of further investigations.

Inquiry-Based Projects

By charging students with becoming active participants in their learning process the "attention is shifted from the subject-matter content to the method used in imparting the knowledge." When students were engaged in inquiry based projects that followed constructivist design, they focused more on the process by which they took to acquire new information including the development of "learning skills, information search and retrieval, and learning how-to-learn." (Etuk and Afangide, pg. 33, 2008) Students' cognitive and metacognitive skills were developed when using

this design and researchers believe that "the learning skills so acquired will remain life-long while the specific intellectual skills are likely to be forgotten with time" (Bigge,1971, as cited by Etuk and Afangide, pg. 33, 2008). Constructivist design, specifically Dewey's Activity Curriculum, promotes students' curiosity by providing them with interesting experiences and encouraging them to identify, investigate, and solve problems. Similarly, my units encouraged the on-going process of inquiry learning where students answered a question and almost instantaneously developed another one to investigate. (Tracey and Morrow, 2010)

Developers of CCSS (pg.3, 2010) also insist that:

To be ready for college, workforce training, and life in a technological society, students need the ability to gather, comprehend, evaluate, synthesize, and report on information and ideas, to conduct original research in order to answer questions or solve problems, and to analyze and create a high volume and extensive range of print and non-print texts in media forms old and new.

They reiterate that conducting research and interacting with and creating media should be a part of students' day-to-day activities.

It is important to keep in mind that simply giving students the freedom to pose questions and seek answers did not guarantee meaningful learning. Research shows that cognitive regulation is needed when doing these tasks and should "involve the recursive processes of planning, monitoring, and evaluating during learning." (Shih,J-L., Chuang, C.-W., & Hwang, G.-J., pg. 51, 2010) I created templates and tools so that these ideals were incorporated into students' learning. This practice allowed me to continue to be what Daniels and Harvey (pg. 7 2009) refer to as the teacher being the "facilitator of learning rather than the vessel of knowledge."

Collaboration Skills

"Dewey criticized competition in education, and instead promoted collaboration and cooperation." (Tracy and Morrow, pg. 49, 2010.) I often saw the competition in activities become the driving force in students shutting down and losing motivation. Struggling students felt that they could not "win" so they would give up while higher students reaped the rewards of verbal praise and material possessions but failed to push themselves further than the expectations set forth by the teacher (Pink, D.H., 2009) Students followed a set of predetermined collaborative group work norms and continually assessed and reflected on their ability to work with others to deepen partners' and their own understanding of concepts. Daniels and Harvey (pg. 12, 2009) explained that when teachers design lessons to include collaboration, students "reach new levels of energy, authenticity, and depth." They outgrow their current selves by challenging each other's thinking, explaining their own ideas, and sharing their findings in presentations for classmates.

Through my literature review of inquiry based learning I came to believe that my mind set must be on teaching and learning through constructivist lenses. While I knew that my school would continue to have mandates that may not align with this theory, I tried to implement school mandates in ways that allowed students to investigate concepts to discover answers as well as the opportunities to reciprocally teach and learn from each other. As part of my action research, I hoped to show others in my school how students' academic levels, speaking and listening skills, and overall motivation to learn increased through my shift in instructional practices.

Data Collection Methods:

1. I collected baseline reading and math scores (MAPS). I collected updated reading and math scores (MAPS) at the middle and end of the year.
2. I collected samples of student work and writings about their work within disciplines.
3. I monitored students' self-evaluations of collaborative group work throughout the year. I used the same rubric to record my observations and evaluations.
4. I photographed, videotaped, and interviewed students throughout the units to further evaluate and find evidence of their mastery of objectives. I also used these mediums to support or negate the interventions/practices that I was including in my lessons.
5. I relied heavily on student exit slips and surveys to gauge motivation towards completing tasks, understanding of concepts, and to determine collaborative group work successes and areas of need.
6. Weekly/every few days I would summarize "ah-ha" moments, reflections, student comments, etc. in my teacher journal. This online journal allowed me to retrace my steps when looking for patterns and to reflect on how both my students and I grew as learners.

Analysis of Data:

According to my MAPS data in September, 14 out of 24 students, or 58%, were performing below expected 3rd grade levels in reading and 15 out of 23 students, or 65%, in math.

The observations I made and recorded in my teacher journal and students' self-evaluations became the basis for my assessment of student progress. I found that my observations and evaluation of students centered around clusters of students who, at the beginning, of the year I grouped based on their initial guided reading levels. For the most part, these students shared similar traits in terms of their understanding of how to effectively collaborate with their peers. At the beginning of the year I observed these student groups working in collaborative groups to assess their baseline abilities in terms of giving feedback, taking turns, expanding on each other's ideas, and respectfully agreeing or disagreeing. I found that no student had mastered all of these skills and that many students were only utilizing 1-2 of the expected group work norms. I saw the following patterns:

Intensive	Strategic	Developing

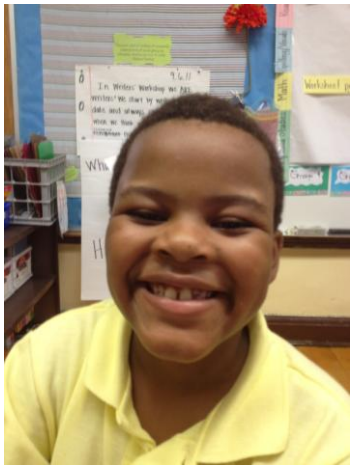
Bottom Two Reading Groups Taiwon, Greg, Kale, Miracle, Vernesha, Diontae, Anayjha, Jermal, Shirika, Austin, Eddie	Mariah, Dan, Sydney, Amaya Wright, Patrick, Pierre, Precious, Le'Andre, Latia	Highest Reading Group Zyon, Ashayla, Trinity, Carvel, Amaya Williams
• Reluctant to participate • Rarely "expanded on ideas" • Gave little to no feedback • Very quite even when asked a question • Easily distracts with, for example, taking a part a mechanical pencil, or putting too much focus on irrelevant things such as not participating because they needed to sharpen their pencil even though they did not need to write anything (Though Diontae is in my bottom 2 reading groups his collaboration skills align with students in the "developing" category. He was in my class last year too.)	• Highly motivated to share their ideas about a topic • Agreed with high students • Expanded on others ideas adding their own ideas as well • Mostly gave rationale for answers after prompting • Easily distracted from original question though able to remain on task rather than "playing or goofing off" Patrick's collaboration skills align more with the Intensive category.	• Highly motivated to share their ideas about a topic • "Ruled the Roost"- never/rarely allowed others to be a part of the discussion • Never/rarely invited others to share their ideas • Not aware of the fact that they were monopolizing the conversation • Grew easily frustrated with lower students • May have given rationale for why they answered a certain way but only used their opinion and not text examples or facts • Distracted from original questions • Expanded on each other's ideas adding their own as well (Though Amaya Williams is in my highest reading group she is very timid and gets intimidated easily in a group. When paired with students like Zyon, Latia, or Le'Andre she does exemplify the highest of collaboration skills.)

Who are these students?

In addition to analyzing my students as a whole, I also focused on four students whom I felt represented each group of students in my class. The following is a brief snapshot of each child based on my personal relationship with them as well as from their classroom presence both academically and socially. The names have been changed to maintain anonymity.

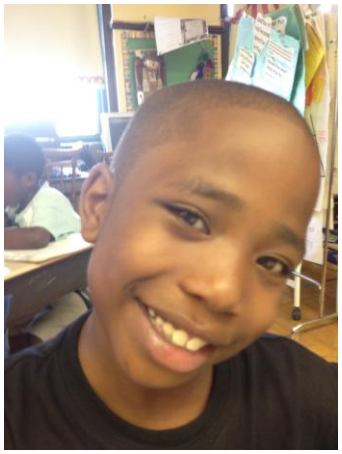
Patrick (Intensive)

Patrick lives in household that consist of his father and uncles. This year his mother re-entered his life after leaving him, his father, and his brother 3 years ago. Though I have had numerous meetings with his father about his tardiness, Patrick comes to school no earlier than 30 minutes late each day. Upon seeing that he was in my class at the beginning of the year, his second grade teacher said, "Get ready. He will bother every kid in your class." While I tried to maintain an open mind about Patrick, I quickly learned that he struggles to get along with his peers and tries to make up for their lack of attention toward him by throwing things, yelling out at inappropriate times, or even burping loudly over and over. Around October, Patrick's father asked that I remove him from his group and to allow his desk to sit away from other students at the front of the room. Most of my energies this year went into assisting Patrick in being able to work productively with a group of his peers. No matter that kind of day Patrick has had, in the time it takes for us to walk down three flights of stairs, Patrick has "moved on" and is waiting at the bottom to give me a hug. He lives across the street from the school and each day as I drive home he runs out of his house and waves at me. Patrick is very capable of doing kind things to others and can be extremely helpful around the classroom. When he is caught doing something positive or had a good day in his resource class his classmates always congratulate him and praise him in my presence.



Jermal (Intensive)

Jermal was an unexpected subject. I did not plan on following him closely but as my research went on I began to see him transform. Jermal's mother is cognitively delayed and is illiterate. He has two younger siblings and his grandfather and aunts appear to be his and his mother's and siblings' main caregivers. At the beginning of the year, Jermal did not talk very much during class nor did he stand out as a developing or proficient collaborator. Around December, Jermal began asking if he could stay with me after school. He now stays 1-2 times per week in addition to coming early. Jermal is, in my eyes, a fun loving 8 year old boy. You can see his bright smile from a mile away. He is kind to everyone in our classroom even when others may not treat him the same way. Jermal has patience that many 8 year old, and adults, do not posses. Jermal excels at working in small group settings and is the "text example king" especially in his guided reading group.



Mariah (Strategic)

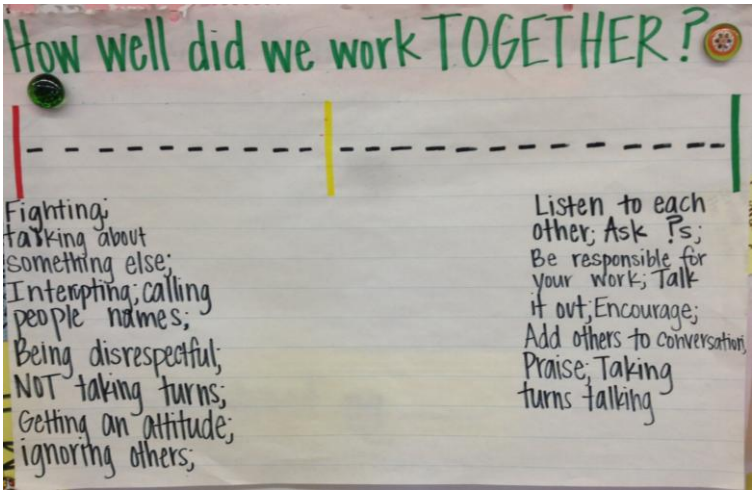
Mariah quickly sprang from developing to proficient at collaborating and is now a student who I consider to be one of the best collaborators in my class. She has a very sensitive heart and works hard to include all students in our room. If someone is upset Mariah is the first person by their side to comfort them. Many times she is the voice of reason in our room as she calmly explains the rationale for her friends and peers to "just do the right thing" in various situations. I chose Mariah to closely observe because I was interested in how she might develop her skills. Mariah's patience is a key reason that Patrick is able to be successful in collaborative groups. She has a way of encouraging and including him that most of the other students in my class do not possess. When others are talking, I can see the wheels in her head turning as she looks back in the text for something to support her feedback to the discussion or uses parts from her peers' comments to build her own.

Trinity (Developing)

When planning for the needs of my highest group, I realized that their needs were quite different from others and that I would need to focus some strategies on self-regulation in terms of "sharing the floor" and knowing when to conclude one conversation and begin another topic, we eventually came to calling this "beating a dead horse" (Diontae often misused the figurative language "hitting the nail on the head" when he thought the conversation needed to shift.) I chose Trinity to follow from the highly developed group as she proved from early on to show examples of struggles that many students in this group faced. At the beginning of the year, Trinity was known to get visually frustrated with others in her group who she believed were not working as hard as she was. She would often times yell at them or ask to work on her own. Trinity is new to Sumner this year and participates in extracurricular activities including dance and violin outside of school as well as the after-school programs that are offered on our campus. She is very well spoken and very intrinsically motivated to exceed. Trinity gets upset if she cannot immediately do something that I assign but graciously accepts feedback and guidance. For example, I suggested that she make note cards of terms or concepts that she was struggling to remember so that she could reference them when working on the test prep software in the computer lab. Not only did she begin doing this but she independently keeps up with the note cards based on what she sees as her areas of need and even includes pictures or diagrams that further assist her.

Action Research Narrative and Data Interpretation

Starting during the first week of school, I began to train students in the ways of collaboration. I showed them videos of my previous students working in groups and asked them to evaluate the behaviors as effective or not effective. I then guided students to create a collaborative group work continuum that outlined positive and negative group work behaviors. Multiple times each day I asked students to end their group work by evaluating, for themselves, how well they were able to work. Sometimes I used a sticky note with their group's number on it to provide a visual representation for their self-assessment and as a reminder of their goals for the following group work time. I also gave students a "friendly sentence starters" cube that provided sentence stems such as "I agree/disagree with you because…", "_____, I haven't heard from you in awhile. What do you think?", "I see what you are saying. Have you thought about it this way…", and several more. This gave students a working model for how they could talk to each other. In addition to these tools, students used the collaboration norms that they listed on the continuum to create a self-assessment rubric and reflection sheet that they used 1-2 times per week after working together.



I knew that my research was going to focus on inquiry based units and how they affected students' academic success, collaboration skills, and motivation. Within the first weeks of school I had already begun to implement the Common Core aligned social science unit that I had developed over the summer that focused on the essential question "How do people overcome obstacles and challenges?" when I realized from their surveys and through conversations and observations that students really had no experience with social studies much less social science. Students reported that their previous teacher had not taught social studies, an all too serious reality in many CPS elementary classrooms. Around this time I also met a woman by the name of Dr. Laura Backstrom who just so happened to be a member of the Junior League of Chicago with me. When she introduced herself and stated that she was in her final year of school pursuing her doctorate in sociology I was eager to secure her as a guest speaker in my room. When I told my students that she would be visiting they began doing their own preparations without being prompted. Students brainstormed questions to ask her and recorded them in their journals. They paired up to evaluate each other's questions and decide which ones were most important. Even

those who did not initially record their questions pulled out their journals while she was there and took notes as others interviewed her. She told them about her research process, which we later created an explicit poster of, as well as the official procedures that she must take within her discipline including having participants sign a document agreeing to participate and publishing her findings.

> *I am more encouraged than ever that my students WANT to conduct research. They had so many questions about sociology for Dr. Backstrom and surprisingly none of them were focused on personal questions such as, "How old are you?" Do you like..." but rather their questions were focused on her work. She explained the procedures that she follows when conducting investigations and told students that they were already following the steps that she does. Many students took notes voluntarily and asked questions based on those notes. WOW!*
> Teacher Journal from Oct. 8, 2013

Throughout the course of our unit students referenced "What would Dr. Laura do?" and began to look at their research through the lens of a social scientist. She checked in with students often and they sent her emails with questions about their process.

Students were really able to practice their collaboration skills as they got into the collecting and analyzing data lessons of the unit. They used what they had learned about speaking and listening to interview family members and friends about obstacles and challenges that they overcame and even solicited responses to an online survey from Dr. Laura's college students as well as their friends and family. As students collected data they also met to analyze it in their collaborative groups, just as Dr. Laura had shared that she did when conducting her own research. I began to notice that when paired with the right students, even students in my lowest two reading groups began to rise to the expectations of group work. While they might not challenge another student, these students described before were now sharing their ideas and explaining their thinking. However, three students, Patrick, Eddie, and Taiwon (sometimes Diontae) continued to struggle working with any group. I noted the following observations about Patrick in my teacher journal on October 23:

> *Mrs. Moore, I want to be a so-see-al-o-gist. Man that's a hard word but I want to be one.*
> Dan Perkins after interviewing Dr. Laura

"Pat was exiled from his group (pictured at the three desks) because he struggled to get along with anyone. The other group members gave him more than enough fair changes but he strives for negative attention throughout the day and this multiplied when he worked in a small group. Pat worked best when sitting at a table close to but not with his group members. Pat is a student who desperately needs to be able to work with others. I am working to train him in the joys of positive attention and use the phrase (positive attention) often to point out when he is going the right thing. I also need to continue working with students on how to encourage students like Pat to participate in a way that is beneficial to the whole group. Oddly enough while sitting close to but not with his group he did do his work and did not bother the other group who was working at his table. Go Pat!"

I continued to have students record their successes and areas for improvement on a self-assessment rubric and goal setting sheet. Through these, I was able to capture student's evaluations and reflections about their work. I noticed that most of students responses centered around what other students in their groups were doing wrong and not so much on their own contributions to the group. For example, Mariah noted on Oct. 25 that Patrick was talking over others in their group. She asked me to remove her from his group because he was "being mean to her" and "calling me out my name." On the other hand, Patrick's response that day indicated that he felt that his contributions to the group work was equal and effective giving himself a 9 because "I shared my ideas and only interrupted a little." I began giving written and oral feedback to students about ways that they could independently handle "stressful" or uncooperative group members in a respectful way. Mariah and I had an informal conversation in the days following her request where I thanked her for being patient with Patrick. Together we brainstormed ideas for how to encourage Patrick, and other students whom exhibited similar traits, so that they might better understand and utilize positive collaborative group work strategies. I asked her to share some of these ideas, without mentioning who specifically she might direct these tactics towards, before students' next collaborative meeting. Mariah shared that she planned to "talk in a nice voice and not yell" at the person who was not working well or being disrespectful, that she would "ask that person to please not interrupt," and "tell that person that they could talk next if they would wait for someone else to finish." I thought that the first strategy showed Mariah's understandings of how respect goes both ways, even when the other person is doing something inappropriate. She also understood that when other people in their group had yelled at Patrick or got visibly frustrated it simply "fueled the fire" and encouraged his negative behavior.

As collaborative group work continued I began to notice patterns in students' willingness to work in their groups. Many of the students who I described as being less proficient in their collaborative skills were reporting that students in their groups were yelling at them and being "mean." I observed Trinity, a student whom I had listed as most proficient in collaborative group work, grow extremely frustrated at two girls in her group for not being prepared for their meeting (they had not brought in their homework which consisted of interviewing someone about overcoming a challenge so that the group could analyze it) and talking to/hitting each other. The two girls immediately shut down and refused to work and Trinity came to me crying saying, "I always have to do all the work by myself." On this same day in my teacher journal I recorded:

> *Group 4- Latia, LeAndre, Zion, Eddie, Amaya Williams- Eddie's attitude got in the way of his success with this group. Though his group members did practice encouraging approaches he often shut down. He was not willing to analyze more than his given interview which was sparse. This is probably due to his reading struggles. I wonder if the fact that the other students were more advanced than him contributed to his attitude. Would he have worked better with at least one other student that worked more closley on his level? Zyon and Amaya took detailed notes throughout the unit and really studied the data they collected. Amaya found me in the morning to tell me about the things she had thought about at home related to the essential question.*

I wondered if my creation of heterogeneous groups was actually holding my students back from being their most successful. After all, I was trying to give students the power in this research and wanted them to make choices that would make them successful. Students knew whether or not the groupings in which I had placed them were working or not and if they weren't I had to be willing to allow them to change. Luckily, with further intervention and coaching on positive reactions to group members, Trinity and her group were able to stick together through their data analysis. Later, I overheard her utilizing a sentence starter that I had suggested when she said, "Good job! I really like your thinking." She also began bringing stickers and would give them to her group members when they were prepared for their meeting, share their ideas, or acted in other positive ways. Some groups did change though, and on November 5, I wrote:

> *Mariah, Peirre, Ashayla, Taiwon's group formed because students were not happy in their assigned groups. In the end all students except Taiwon worked fairly equally and more successfully together. Taiwon is extremely below expected 3rd grade reading levels and struggles to self-direct or participate in group work. Though I worked with him one-on-one, this unit seemed to be extremely difficult for him especially since he did not even do his own interviews to be able to analyze. Ashalya and Mariah took charge and instructed Pierre as to what to do- this worked well for him and he followed their direction without getting off task or arguing with them. The girls also found ways for Taiwon to participate though the task that he did were less academic and more "do this*

so that you have something to do so that we can do our work" such as taping data that the other 3 group members had written onto sheet that they told him to.

After students synthesized their data to draw conclusions about the phenomenon, they arranged themselves into groups, based on their similar interests, to publish their findings for an audience. In their groups they decided to publish using one of the following: an iPad app called "ShowME," green screen technology to produce a "news report", or an informational bulletin board all of which outlined their research process and results. Unfortunately the publication part took a lot longer than I had anticipated as students were writing scripts and creating visuals using new technologies (iPad, flip camera, laptop, etc.) in which they did not have much experience. When asked to complete various parts of their presentations at home few students returned with complete work. (This is not unusual as homework completion is a constant struggle in my classroom and throughout our school.) I asked groups to combine ideas from group members' homework in order to write their scripts or create their presentations but most groups just used whomever they viewed as the smartest students' work instead of trying to tie in everyone's pieces. There was however 100% involvement in the in class creation, preparation, and execution of the group presentations. I was able to see the common core standards and students development of disciplinary literacy skills come alive as they presented their findings to an audience at the end of the unit.

Students dressed in their "professional clothes" to present their findings to a group of college students from Dr. Laura's class and other students throughout our school. They answered questions about their research from the audience as well.

I asked students to reflect on their first inquiry unit experience by having them answer a series of open ended questions. I then categorized their responses based on my beginning of the year evaluation of their collaboration proficiency which included intensive, strategic, and developing.

Student Name	Favorite Part	Least Favorite	What did you do really well on?	Greatest Challenge	Comments:
Eddie	the color codes	Some of the challenges	The color codes	Letting Latia share and everybody share	Why is I is Zyon group
Austin	Working with my group and we had fun doing it and we got through making the	My least favorite part was having a argawment with my	Reading my part of the poster and my goup did too because we worked	Working with the group and we had some problems with working with	I had fun woking with the group and it helped me with knowing how do people overcome

	poster	team working.	together	each other in the group	challenges and obstacles.
Anajha	Putting the pichters up, taking turns	My least favorite part was writing	On talking	Putting it in orther	Do you have a challenge.? Because I have a challenge.
Jermal	How we worked together so we can finaih the social science.	My least favorite part was when we got to work as a group because we was working to hard	How I pull my reading up because I had to practice a lot to read the page.	My greatest challenge was when we ad work work hard to be done. Because I didn't stop until it get harder for me.	My feeling was happy because I did my best.
Sharika	My favorite part was when we worked in a grup together. Because we worked together as a grup.	Whan we was looking at patters because it was hord.	When we talk to Dr. Laura Backstrom		
Patrick	My favorite part about social science is when we introwd our paring (parents) and did the green screen.	When we had to get my group to work and kwoerate (cooperate) and be happy with others	Wall overthing (with everything) and I help people I think so because it was easy [to work together]	When we did the green screen because it was so fun and cool.	That I like social science and doing the green screen.
Taiwon		Take the pichr the overcome the challenge (Taping things onto the billboard for his groups presentation)	The taiping the pubr (taping the pieces of data that his group members gave him to the colored paper)		
Le'Andre	Color codes because it was fun	Having to righting one of the challenges because I fergot what to right	I think I really well on everything because I gave good feedbake.	When Le'Andre got his tonsel removed because I was sad.	Could you take Eddie and Latia off the group because they wont callaberat with the grop. PS can I make a simple machine because it fun.
Latia	The color codes because it is something fun to do	Having to read all the challenges because it is hard to read ever one by myself.	I did really well on mu writing because it is fun to write.	To the perfore in frot of everybody because so time I am sky (shy).	I was scraed because people from Mrs. Miller class was launing at me.
Amaya Williams	May favorite part was doing interviews because I better learned how my family overcame a challenge and I could guess other people would overcome challenges by interviewing them.	My least favorite part was underlining the color codes because we had to read stories and figure out what to underline and it was really hard to figure out what the challgneges was because it was a lot of stuff to read, so it gave me a hard to listen and figure out what's	I think I did well on reading articles carefully because I could really understand what was going on and answer the questions.		

		going on.			
Mariah	I like the part when we had to proroma vito (produce a video)	Working with a grop tring to gather everyone to gather (working with her first group)	Grathing everyone to gether working as a grop working together because everyone started working ok (working with the group she chose)	Getting infomachn fom my grop	
Pierre	Talking with Mrs. Larig callge students and with Mrs. Laria	The people I was around	My social science [project]		That I love math, social science, reading, and storys
Amaya Wright	Gitting to meet th students and jalo and git to see miss Lara	Trying to recored stuff it was hard because we could not git it right	I think I did good on wrhiteing and talking	My moms and my teachers after school (finding people to interview)	We had sum troble with Pat. Can we do simple machisn on saishal sions (social science)
Sydney	How we all worked all reorganized our data with our group it was fun.	How it was challengins and a hard little thing.	How I was a good teammate and friend to others.	How we worked with our paper and group.	I want to say I feel great about it because everything makes me feel like I am going to explode.
Precious	Write the sript and color code because it was fun	Reading the article because it was hard to read whem a little	Making the billboard because we work together	Working with my group because they wasn't paying atinotion	I didn't like working with my group or put the thing in order it was fun color coding in making the billboard
Dan	When we first went on our turn and started taking because it was our turn	When people keep messing up. And did not know the words [in their script] because in my head it made it look like me [who was not prepared].	Me knowing all of the words and me talking out loud because I was practicing	Organizing our data. Putting the right color codes on the right paper because it was hard	Truing peple to do their work and tring to encorege them because they wasn;t doing that they supposes to do.
Trinity	My favorite part was interviews and color coding my data analyzing questions. It helped me to learn.	My least favorite part was the people I was around. Looking for patterns	I think I did really well on drawing conclusions	My partners	
Diontae	The billboard because we was to find think (we had to find things from our research)	Look for think because we had to look thell think (we had to look and think a lot)	Avethink decuac I help (Everything because I helped)	Look for think decuac it has heav (look for things because it was hard)	I love avethink becuac it was fun.
Ashalya	Coding data because it was fun findings the categories	Drawing conclusions because it was hard to do and somethings it was tricky	My presentation because I thought I spoke loud and clear for everyone to hear	Drawing conclusions for the same reason	I would like to say I had fun hearing what people been through and it inspired (inspired) me.
Zyon	Doing the interview was my favorite part because we can have	Working with Eddie and Latia because Latia was making	Trying to work with my group and doing my best. ☺ P.S. (I worked	Making the script was my greatest challenge in the	How do you make the green screen animated. Could you tell Trinity to

	a better understanding people's challenges.	jokes and Eddie was laughing at them.	with the people I can trust. ☺)	unit because I had to really think about what I was going to say.	hold the cam carefully so it doesn't look like our heads are in the air.

As I interpreted the intensive students' responses I saw that students thought that disciplinary activities such as color coding data when looking for patterns were "hard." 3 students specially wrote about how they enjoyed working with their partners while only 1 student directly related that he did not like his partners. I think that this shows how the intensive students appreciated being able to work with partners as it assisted them in completing tasks that they may have otherwise not been able to complete on their own due to academic ability or social interference. Jermal and Patrick's responses are similar in that they both express pride in their group work. Jermal notes that it was difficult to work in a group while Patrick relays that he did a great job in his group by "helping people to think." **Strategic students' responses** showed an over-all deeper level of reflection than students at the intensive level. Here, 4 students voiced concern over their group members and said that they viewed their collaboration as a struggle while only 1 student mentioned anything positive about their collaborative experience. Mariah's response about her group being the best and worse parts of her work are telling of my decision to allow students to choose their partners mid-unit. Once she was able to choose who she worked with, she was able to enjoy the collaborative group work process. When I looked at developing **students' responses**, I saw the most reflective of writing out of the three groups. 3 students voiced concerns over their group members and no student positively remarked on working with their peers. I thought that Dan's comment is particularly interesting and telling of this group of students as his reflection focuses on him looking bad because one of his partners was not prepared. Trinity again brought attention to the fact that she struggled to find a respectful ground with her initial group members but that she gained insight on the essential question by doing both research in texts and through interviews.

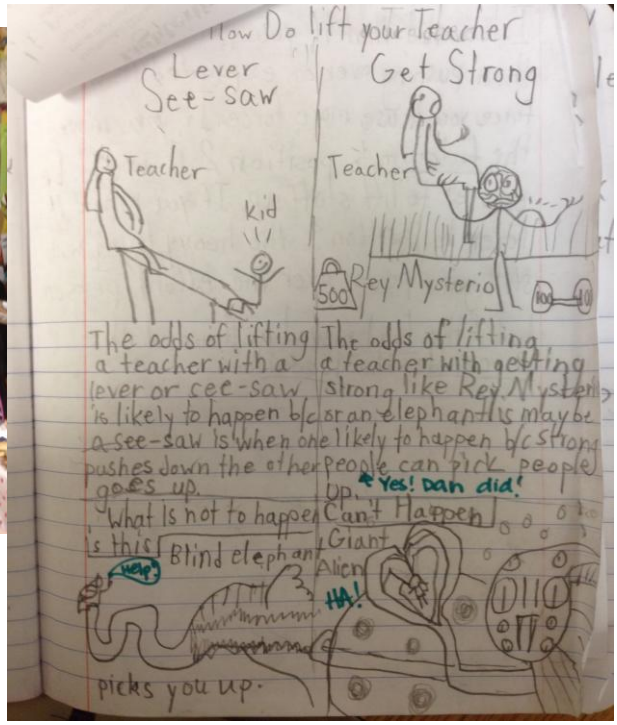
With the success of the initial inquiry unit, I was excited to switch gears and begin a science and math integrated unit with my students. This unit posed more problems as I was never able to secure a real scientist to come to speak to students however it also allowed for an excellent opportunity for students, and me, to change our definition of an expert. Around the same time, I had begun using problem-based teaching during math. Many students had been discouraged by a few problems because the problems required critical thinking and analysis, something that most students were not used to. Again, I wanted to encourage them to believe that they do know something and *that* something could help them uncover new learning, and many times a deeper understanding of the new learning, as long as they didn't give up when faced with a difficult problem. So, to aid in their belief that students too are experts, I had my students Skype with 8th grade math "experts" in Mississippi. These teenagers explained their problem solving strategies and gave my students tips on following through with problems,

analyzing the various parts of problems and then employing all of the strategies that they could to solve it. They also encouraged my students to not worry about getting the "right answer" but rather to focus on their thinking process and the ways that they went about solving the problem. This really hit home with Trinity, who cried during the first time that I gave her a problem because she was afraid that since I had not taught her how to do it she would get it wrong and get a bad grade. After Skyping with the 8th graders Trinity and I had a conversation:

Trinity: Mrs. Moore, they were just kids how do they know everything?
Me: They don't know everything. Would you say you learned something from them though?
Trinity: Yeah. Now I know not to be worried about getting the answer wrong. But are you going to give me a bad grade if I do?
Me: Your grade comes from your strategies and your thinking. Did you try everything that you knew to try?
Trinity: Yes, but when Zyon showed me his paper we did different things but we both got the same answer. I guess we used different strategies. So is that okay if we work it out in whatever way makes sense to us?

This conversation showed me that Trinity, like many students in my class, were terrified of doing something "wrong" and getting a bad grade. It made me wonder how this fear might be limiting my students critical and analytical thinking skills since they were worried to think outside of the box or to do something in a way that, as Trinity said, "makes sense to us" instead of waiting for me to tell them how to do something (in a way that, honestly, makes the most sense to *me*.) After an action research meeting in December I wrote: "Sue has a way of making me feel like everything I do is brilliant. I walk in with self-doubt yet when I am talking about my work in the classroom I feel like I am doing something so remarkable. She has a way of encouraging me and helping me to have confidence that what I am doing makes sense. How can I do a better job of bring this back into my classroom? If I want my students to take ownership of their learning then they must feel like they have ownership and have the confidence to make decisions on their own without me." I decided to be more conscious of my actions by taking a step back and trying to focus on being an aid to my students learning instead of the ring leader.

The second inquiry unit focused on the question, "How do simple machines help us do work?" After Skyping with the expert students, my students organically began identifying their peers' strengths and reaching out to them as experts. While students had always gravitated towards who they believed to be the brightest students when allowed to choose their own partners, now students were looking at other factors such as their ability to work in groups and/or use technology and, after a few observations and class experiments, how much the individual student knew about the procedures of scientific inquiry. (Note: A few students are enrolled in science club after school.) Diontae, a student who is in my lowest reading group became a hot commodity because he was an iPad expert. In fact, Jermal and a few other students began coming to school 45 minutes early each day so that Diontae could teach them how to use features on the iPad too.



Above: Trinity tries to "lift the teacher" on her own. Later, students learned that it would be easier to do with a lever. Right: Zyon's journal entry after this activity.

As the unit got under way, students conducted at least one experiment with each simple machine. Students previously reported little to no experience with small group science experiments so I should have know better than to expect that the same group work expectations would easily transfer over to this new discipline. As soon as I started students on their first experiment there was an uproar of student arguments over who was supposed to do what, how steps were to be completed, and so on and so forth. I thought surely their developing expertise in collaborative group work had flown out the window and that I was in the midst of a whole new class. After about 8 minutes of mayhem I called students back to their seat, experiments far from complete, and had them instead begin discussing what was going on in their groups. Students voiced that "---- was sitting in the way. ---was leaning over the experiment and no one else could see or that it was ruining the measurements." Many admitted that they had not been the most respectful in terms of handling these discrepancies either. That afternoon, as I threw myself a pity party over

students' lack of transfer of collaborative group work skills between disciplines I began to revisit students' reflections and my teacher journal from the first unit, I had begun to wonder what other steps I could take to assist all students in being able to participate equally and respectfully in their collaborative groups but had never fully followed through with my wondering. I decided to create role necklaces that students could wear that marked them as reader, writer, technology coordinator, and many more. This way everyone had a role and a responsibility in the group. This also meant that struggling readers or writers would not be chastised by other group members for "not working" since they would theoretically have a role in which they could be successful. Students' responses to the necklaces were positive. Carvell shared, "Now we know what we posed to do. No one saying I want to do it, now I want to do this." In other words, his group members were focused on their role throughout the experiment and did not bounce around from trying to do one thing to another. This way, he said, "all of the work got done."

Left: Boys in this group wear their role necklaces to show what they are responsible for during their experiment.

A rather surprising statement came from Latia: "I didn't know those things that was on the necklace go into collaborative group work." When I asked her more about her exit slip response she stated, "We just did some of those things before but now we know that we have to do them in our groups. We all have a job. You can't just not do your job."

In addition to students mirroring the discipline in terms of collaborative group work I was also interested in how they viewed themselves as an actual scientist. I posed the question: Did you feel like a scientist when doing this experiment? Students used the following scale, which I created with descriptors, to show their feelings and included explanations as well.

-0 students responded with a 1which read: "Not at all. I don't even know what a scientist would do during an experiment."
-1 student scored herself at a 2 which read: "I felt like some of what I did was like a scientist but I was a little confused about what they might do."
-3 students scored themselves at a 3 which read: "I kind of felt like a real scientist. I knew some of what they might do during the experiment."
-17 students scored themselves as either a 4 or 5.

Their rationales are listed below:

4- I felt mostly like a real scientist. I mostly talked to my partners, checked for accuracy, and thought like a scientist would.	5-I felt JUST like a REAL Scientist. I talked to my partners, checked for accuracy, and thought like a scientist would during the whole experiment.
3 students All 3 students' explanations revolved around disturbances in their group. Mariah, for example, responded "Scientist do not get bothered [in their group]."	14 students Jermal: I felt just like a scientist because I did what I supposed to do. Taiwon- Because me, Trinity, Amaya, and Kale were acting like a real scientist. Trinity told us how to act. She said scientist do not sit down. (By him sitting down he was messing up the reading of the scale and giving his group inaccurate data.) Patrick- I was asking questions and helping people. Trinity- We were asking questions. Talking about each observation. We made a hypothesis. That made me feel like a real scientist.

As I further analyzed and reflected on students responses I was drawn to Taiwon's response about Trinity telling him what to do. While I will not say that "standing up" is something that shows his expert understanding of the field of science, I do believe that the way that Trinity interacted with him shows both her developing positive and respectful leadership skills as well as her understanding of science experiment norms. She knew that his sitting down was causing the measurements in their data to be inaccurate and rather than yelling at him, like she might have done before, I overheard her calming explain why he should stand up and how it would negatively impact their measurements if he didn't. I was also surprised by Patrick's response because his assessment of himself and mine were quite different. He told Mariah that he was going to slap her, bothered everyone in his group, and followed me around complaining about his group members. During the experiment he was eventually removed from the group and then from the class as well because of his behavior. When I inquired further, he explained that in the beginning he was asking questions but that when he wasn't given the opportunity to answer someone else's question he got mad. "I wanted to help them, Mrs. Moore. Why should I always be nice and they aren't to me?" he said. This was perplexing to me as I had observed extreme patience and an overly careful demeanor towards Patrick from his partners. I began to wonder if his perception of himself as a collaborator and group member was automatically negative because of his past experiences in groups. In my teacher journal I reflected:

> *Taiwon has had a breakthrough and though his responses may not always be correct or supported he is participating much more than before. He was fully engaged in the science experiment and no one in his group complained about him. The opposite is true for Pat--no one wants to work with him. I have to make a conscious effort to change the way that I interact with Patrick in hopes that other students will to. I am making sure that I hug Pat or call on him---praise him more than usual so that others will see positives in him. I just hope that he can handle himself and that he will be able to see his strengths and fed on*

them rather than the negative attention that he seems to seek. Maybe it's because negative attention is easier for Patrick to get.

The end of the science unit came during the beginning of our test prep window so students were not able to complete an elaborate final project like they did during social science. I was curious though to see how the absence of a science expert to mentor them and many small experiments vs. a unit long investigation would impact their views of either disciple. Therefore, I asked students to reflect on their work within both disciplines posing the question, "Which have you liked better so far?"

Science	Social Science	Both
Jermal- I want to be a scientist when I grow up. Miracle- I want to be a scientist when I grow up. Zyon- I liked science because you get to do simple machines and experiments and get to interact with friends and it's my favorite subject. Patrick- Because we get to do experiments (interestingly enough he has not really been able to do any of the experiments because of his behavior.) Amaya Wright- Because its better than S.S	Sydney- We work together and I do my best with friends. Plus its one of Dr. Laura. Mariah- It is fun and I learned more about social science. (I wonder why this is…Mariah continues to not want to participate in science. She refused to work in one group before the start of the experiment which is very unlike her…I think that she gets frustrated with others who have a hard time staying on task and science has required much more self regulation which some students are still struggling with.) Pierre- Social Science is my favorite.	Kale- They both teach you something and teach you better. Dan- Because both was fun and educational. Latia- Both because I like doing Science and social science because it is fun and I learn a lot of stuff from those two things Amaya Williams- We both learned a lot about simple machines and how people overcome challenges. Anajha- Both are fun and I learn a lot Sharika- Both because I might think about being a scientist and social scientist. Cavell- Because you get to see new things and try new things Ashalya- In science we get to do fun experiments and in social science we get to do research on those fun questions. Taiwon- Fun experiments we can act like scientists. When you grow up you can decide if you want to be a scientist or not. Scientist tell more and they can make their name out of plastic (reference to field trip) Trinity- Science helps me to learn about simple machines. Social science helps me to learn about history. Austin- both because they are both good to learn about and they will help us get up to fourth grade

		Eddie- they are really get me going Le'Andre- I like being both.

As I analyzed students' reflection, I wondered if they understood that there is MORE to each discipline than just the concepts/topics in which they have studied. It was obvious that they had very little experience with these disciplines outside of 3rd grade. With each of the two previous units I felt like perhaps I could have broadened the scope of learning for students or rather that the way I designed the proceeding units might do a better job of integrating multiple yet related topics. For example, during the social science unit I could have taught different cause and effect relationships in history that were related to overcoming challenges in addition to the heavy reliance on data collected from student interviews.

After Christmas I began to run into scheduling issues and the inquiry units no longer had a block of time in my day anymore. I was strictly mandated to teach only tested subjects before my students took the state standardized test in March and then from March-June was asked to take my students to work on test prep computer software for one hour each day. I had to get creative with my inquiry units and how I could integrate them into my core subjects of literacy and math. I also had to find ways of making sure that I allowed time for my students to collaborate for authentic/meaningful purposes even though my school's focus was shifting to test preparation. I decided to implement two things that I felt would hold me accountable to my original action research question and would satisfy my school mandates: 1.) integrated literacy and social science unit and 2.) a morning writing and discussion time.

I began a unit that focused on the essential question, "How and why do people establish communities?" This time, I selected historical fiction and nonfiction texts that I used during my Readers' Workshop shared, partner, and guided reading time that all ~~lent~~ insight to this question. I paired the texts with close reading text dependent questions that I felt would assist my students in gaining a deeper understanding of both the content and the text structures. They worked in both self-selected (shared/partner reading tasks) and teacher assigned (texts used in guided reading groups) partnerships to complete tasks that eventually lead them to being able to synthesize their findings and draw conclusions about, "How and why do people establish communities."

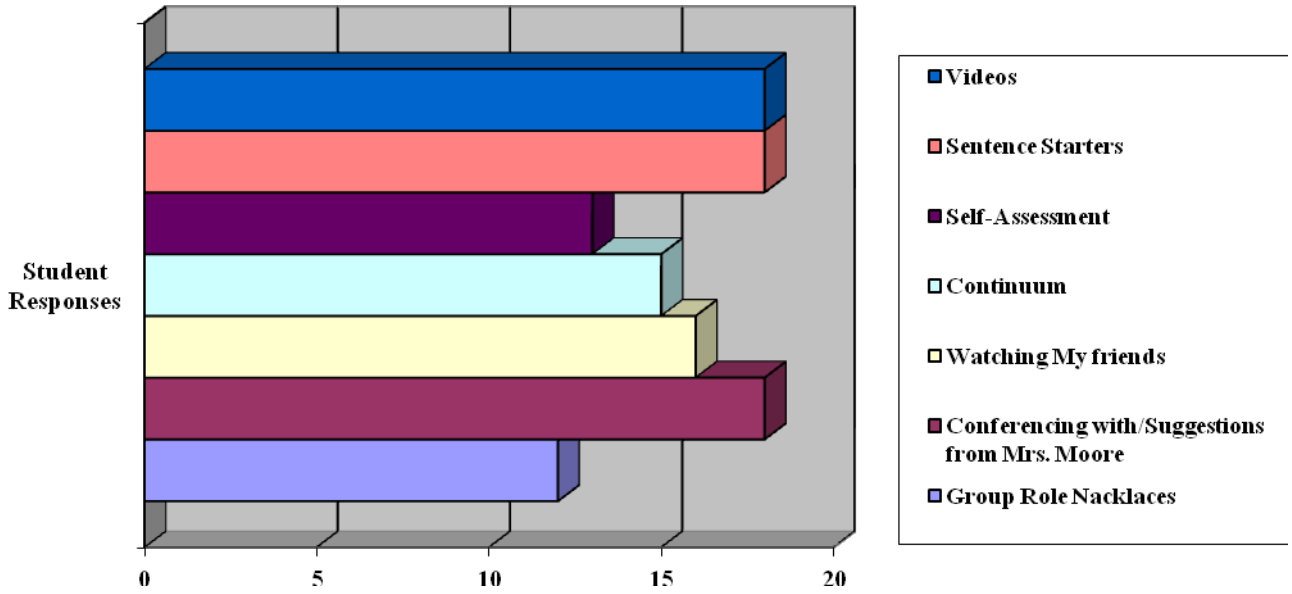
Each morning I also began posing thinking questions for students to respond to based on a novel that we were reading about the Underground Railroad. After students wrote their thoughts, I set the timer for 5 minutes, chose a person to start the conversation, and sat back to listen. Patrick found himself struggling to get a word in and often yelled out that he wasn't getting to share or would just interrupt/talk over someone until he was able to share. Ashayla suggested that students begin following a protocol of giving a thumbs-up when you are finished sharing and then that person calling on someone with their hand raised to share from there. The one thing that

I noticed though was that students had no way of knowing if who they were calling on wanted to agree, disagree, or start a new discussion topic. I shared this with the 4th grade teacher at my school and she suggested that I implement sign language that would signal students' desired response. After a week of using these signs in my class, I wrote:

My students are even more proficient in their communication. Even Patrick waits until the speaker has given a thumbs-up and if nothing else, it is now a classroom norm that everyone can be held accountable to. Mariah is the sign language super star and does an excellent job of evaluating the signs she sees so that she is not always calling on someone who agrees with her. Carvell is also utilizing the "move on to a new question/topic" sign and helping the class as a whole to not get stuck on just one topic for too long… Teacher Journal, April 2, 2013

While discussing this unit with an action research cohort member I mentioned that I was having a hard time with this period in my research because I didn't feel like I was really teaching anything new related to collaboration. I was a little discouraged by this and felt like I wasn't doing everything I needed to for my students. My cohort member said, "So what you're saying is, your students are able to do most if not all of the things that you have taught them about collaboration on their own?" I thought for a second and then, with a rather large smile on my face and a warm feeling in my teacher heart, said, "well yeah, I guess they are…"

Now mind you, no student is perfect, nor are most adults, when it comes to collaboration. My students, however, have the tools and strategies to be effective in their collaborative groups. So that I could get an idea of how students were preserving their own progress and additional needs, I asked them to reflect on their collaborative group work progress. I asked students to choose as many of the categories as they liked to show which they felt helped them become better collaborators.



Students then chose the 2 that they felt most assisted them in being good collaborators and explained specifically how it helped.

Group Role Necklaces	Conferencing with/Suggestions from Mrs. Moore	Watching my friends collaborate and learning what to do and what not to do from them
-First I didn't know those things that was on the necklace go into collaborative group work. –Latia Now we know what we posed to do no one saying I want to do it not I want to do this. -Carvell	Helped us understand how to take turns. We listen to our friends and take turns. Mrs. Moore tells us stop talking over people.- Kale Mrs. Moore always tell me to work and don't pay attention to her, pay attention to your group.-? (I do say this during group work because at the beginning of the year students had a tendency to stop working together and only talk to me when I entered a group. I have been encouraging eye contact with group members, too.) She helped us become a group. -? Vernesha-? They encourage me to some of the things that I don't know. –Eddie Help me and gave me advice and help me with my work. –Patrick Sometimes Mrs. Moore taught us how and why to be collaborative group workers. -Austin	If there is something that I don't know they will not just tell me the answer. They will explain what the answer is. –Mariah I would better understand what I am learning in my group and why am I doing the project.- Amaya Williams When I did not no things. – Shirika They encourage me because there was lots of fun things. – Eddie Because friends gave me advice if I have one [question]. – Patrick

Collaborative Group Work	Collaborative Group	Friendly Sentence Starter Cubes

Continuum (poster with red, yellow, green)	Work Self-Assessment Sheet	
The red, yellow, and green.- Vernesha We got to share what color we think we worked best. I got to release anything or emotions about how I worked. –Trinity It told me what to do and what not to do in order to be on green and not on red. It also helped me to see that even if someone does something to you, you don't have to do anything back. All you need to do is ignore them. –Zyon I wanted to be at the green and didn't want to be at the yellow or red because they were not good enough for me and it wasn't for my group. -Dan	It helps you give your own feedback and your teacher gives you your own feedback what you learned.-Kale To help me see where I am collaborating at. –Diontae When I looked back at it I know to improve on this and that and to keep doing the good things. -Ashayla	So I wouldn't be screaming out. –LeAndre They have helped me use words like "I agree, I disagree", and others.-Sydney It help us not to keep talking for people can join in the conversation.-Precious To talk to people and to get my thinking started and to do the right thing. –Diontae Doing disagree and disagree-I like to give feedback because it is good to give feedback because sometime it make people feel more confident. –Pierre It helped me to learn what to say when I am with a group. -Trinity It made me figure out how to speak to others when you want to say something back. It also helped me to know that if you speak too much and you want to let someone else talk you use cubes.- Zyon At the beginning of the year I did not know that stuff until Mrs. Moore showed me that. –Latia It taught me how to say I disagree, I agree, I haven't heard from you in awhile. -Dan

Watching videos of Mrs. **Moore's old class and seeing** (evaluating) how they worked together.	Additional Comments from Students:
So I could help-Leandre When I see them hugging doing things together, working in groups, makes me want to do it to. –Sydney At the beginning of the year I did not know how to collaborate with people. –Shirika Because it gave us feedback and more things that teach us about not to shout out loud when the teachers is talking. –Precious When I wanted the video she	Getting visits from people helped me because I could learn more about their career and learn more about more important things for the project we're doing. –Amaya Williams Ms. Laura. She tell me how to collaborate with other groups and my class.- ? Dr. Laura. We worked together for Ms. Laura.- ? Working in a group with people I like helped me become a better collaborator because if I was in a group with someone I didn't like I wouldn't get my work done. -Carvell Levels of thinking and questioning helped me because when I looked at it I knew what level of thinking I wanted to be and I wanted to be high not low.- Ashayla The way you put us in groups-Leandre Ask questions- Amaya Williams Get visits from experts- A.W. Sometimes I get an attitude and I listened what my teacher and group tell me what to do-Kale Learning From Mrs. Moore and Mrs. Moore giving me pointers-Sydney Listen-do not get an attitude-Precious What you here from other do you do it and doing agree and disagree-Pierre We all see and know each other and Mrs. Moore said that 2 brains are better

showed us it made me more smarter and help me learn things that I haven't heard of before.-Pierre.	than 1-Zyon We all are see and know each other and my partners gave me meaningful feedback-Latia And being myself-Patrick Being in a group with people I like-Carvell The posters-Anahja Levels of thinking and questioning poster and Dr. Laura Backstrom-Ashayla

Students also evaluated their growth from the beginning if the year using the collaborative group work rubric.

-20 out of 25 students' scores improved from the beginning of the year.

-3 students' scores stayed the same-10 (Zyon, Diontae, and Latia)

-1 student (Eddie) responded that he "didn't know right now"

-1 student (Mariah) lowered her score from a 10 to a 9 explaining that "I am mostly prepared for collaboration. I always get distracted and people always be mean to me and I always get a F and I am a sloppy writer." I could not believe Mariah response, as I believe her to be one of the most proficient collaborators in the whole class. As I thought about my interactions with her that day, I remembered that I had commented privately on one of her writings, saying that I wanted her to work on her penmanship. She later told me that she shared that information with her collaborative group and that there was some conversation about whether she would write for their group. This hurt her feelings as she was usually the person in her group who would write. When I realized that Mariah thought that my feedback and her partners reactions made her less of a proficient collaborator I went to talk to her. She explained that she'd had a bad/sad day and was being hard on herself. We talked about how she had grown throughout the year and compared how she collaborated at the beginning of the year to the present. With a smile on her face and a renewed sense of self-worth, Mariah decided that she most now collaborated at a 10. I would say that I whole heartily agree.

Conclusion

At this point in the year I can honestly say that all of my students have improved in their ability to collaborate and communicate in a way that allows them to effectively learn from each other. I notice still that students, who began in the intensive category, including Patrick and Jermal, are much more likely to participate when they are not being dominated by their peers in the developing category. For example, when working in her guided reading group, Kale now leads discussions, cites text examples, and invites in others who have not had a chance to share. Ta'Lynn, a student who transferred from the suburbs into my room in February, is in the same guided reading group and told me that she didn't get to collaborate with her friends in her old classroom the way she does in ours. "When I get to talk to them it helps me understand things that I missed in the story," she said. Patrick continues to have on and off days but he does understand the classroom collaboration norms and many days he does follow them. He still very much struggles to work in small groups unless I strategically place him with students such as Mariah or Latia who constantly encourage him and include him. Some days though even that grouping leads to him accusing the girls of "messing with him" which I have never seen with my

own eyes and is widely disputed by everyone else in his group. He has become an all-star "devil advocate" though and enjoys challenging his group members' ideas and helping them to further explain their thinking. Jermal is also more inclined to speak up in smaller groups rather than in the whole group discussions. When he does share with the whole group though his responses are well thought out and it is evident that he has listened to his friends' responses in order to formulate his own. The strategic group of students, which included Mariah, has also made leaps and bounds. These students now mirror the developing group, which included Trinity, and together they lead and carry most discussions in the classroom. With the exception of a few, most of these students, while they excel in collaborating with each other, rarely find ways to include students from the initial intensive group in the conversations. This is however something that I continue to promote and offer suggestions about. Around April, Trinity began using a behavior management model that I use with the class, which consists of positive and negative marks, in her small group meetings. She said that it helped her group members make sure that they were being respectful and that everyone was getting a chance to talk. Students in these groups are also nearly proficient at supporting their claims with text evidence. During a morning discussion, Diontae opposed another student saying, "But what does it say in the text? You cannot make a prediction just because you think so. You always have to have a text example." My students MAPS scores have also been positively impacted by the changes in my practices related to my action research. At the end of the year in reading, 24 out of 25 students' scores improved with 56% of students meeting or exceeding their goal. 14 out of 25 students' scores are "on grade level" (56%) compared to only 42% of students on grade level at the beginning of the year. In math, 100% of students' scores improved with 92% of students meeting or exceeding their goal. 17 out of 26 students' scores are "on grade level" (65%) compared to only 35% of students on grade level at the beginning of the year.

Policy Implications and Recommendations

Based upon my research I am making the following recommendations:

School Level

- By the end of August 2013, I will conduct a professional development for all teachers that will outline my process and resources that I have found successful. 5-8 initial lessons (roughly 30 minutes each) on how to communicate effectively should be introduced at the beginning of the year in every classroom and continued throughout the year.

-By September 2013, 100% of classrooms will implement some form of "collaborative group work" instruction whether it be directly from the materials I have provided or created by the individual teacher.

-Dedicate 5 minutes at the beginning of each weekly teacher team meeting to discuss and receive feedback on successes and areas of need with collaborative group work in the classroom.

-Create a database of student videos for teachers and students to watch and assess for positive and negative group work behaviors at the beginning of the year.

Classroom Level

- Provide time to teach, re-teach, and expand on collaborative group work norms throughout the year.
-Allow time daily (5-8 minutes) for students to talk about, evaluate, and reflect on their collaborations.
-Each classroom should discuss their own expectations for group work and create a rubric that includes school wide language, which students can use as a self-assessment for accountability and reflection.

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