Not the Same Five Hands *Again!*:
Increasing Student Participation in Whole-Group Discussions

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Description of Teaching Context

As a Professional Development Intern for the 2008-2009 school year, I am working in a fourth grade self-contained classroom at Park Forest Elementary School in the State College Area School District. My classroom consists of twenty-four students. There are thirteen girls and eleven boys who make up this unique blend of nine and ten year olds. While the large majority of students in the classroom are Caucasian, three are African American. In addition, there is one student diagnosed with Autism, one with Aspergers, one with ADD, and one with ADHD.

Considering academic levels, there are noticeable variations among this group of students. Four students, one boy and three girls, receive full-time Learning Support for reading, writing, and mathematics, and spend approximately half of the school day out of the regular education classroom. Another female student, who has been diagnosed with Autism, also receives support outside of the regular classroom in almost all subject areas. Specifically with regards to reading levels, seven students in our class are above grade-level, eight are at the expected fourth-grade reading level, and nine are below grade-level. All of the students below grade level receive reading support in the form of Learning Support or Title I aid. Considering math levels, seven students in the classroom perform above grade-level, nine perform at grade-level, and eight perform below grade-level. Three of the students performing above grade-level attend Math Enrichment once a week. The students performing below grade-level receive Learning Support or attend Title I for additional help in math.

This classroom is equally diverse when considering the apparent behavioral patterns among students. There are no consistent, disruptive behavioral problems among any students in the classroom, though two students are at times challenging in terms of their behavior. One student is in need of consistent emotional support; she receives aid from school on a weekly basis. The students diagnosed with Autism and Aspergers express specific behavioral patterns
and needs; a Para is present in the classroom at all times to provide extra support for both of them. In addition, five students receive speech support at varying times throughout the week.

The overwhelming majority of students in this classroom are easy to get along with and work well with others. Based on my observations and interactions with students over the past seven months, there are a handful of students who are outgoing, eager, and high-achieving. The most avid and consistent participators, in terms of volunteering ideas, comments, and questions in both small and large group instruction, are among this group of students. The students in the classroom who have the most trouble with social relationships are those suffering from ADD, ADHD, Aspergers, and Autism, or have challenging behaviors. Although these students do participate in both large and small group discussions throughout the day, it is not as voluntary or as consistent.

**Wonderings and Questions**

Through my experience in my fourth grade classroom, I have come to believe that participation is an essential part of every lesson. Verbal participation, in terms of hand raising and sharing ideas and questions aloud, and nonverbal participation, in terms of eye contact and body posture, allow the teacher to assess students’ understanding, while also reflecting students’ level of engagement during a given period of instruction. Student participation helps to build a community of active learners where everyone feels comfortable contributing thoughts and questions. As a teacher, a classroom like this is the utmost desire, and I strive to teach in a way that encourages a community of learners.

Unfortunately, the same few students in this classroom continuously participate, while many others remain outwardly quiet. I became intrigued with whole-group participation because all of my students seem to offer comments more regularly when they are in a small group setting,
yet are more hesitant in the large group setting. Because I highly value participation, and I have always been a participatory learner myself, I decided to explore ways to increase the overall participation rate during whole-group instructional time and activities so that a variety of students participate on a more regular basis (See Appendix P for Inquiry Brief and Annotated Bibliography).

Main Wondering

My curiosity about the participation habits of my students led me to the following wondering: How will implementing a variety of participation strategies work to increase the overall verbal and nonverbal, whole-group participation rate in among fourth grade students?

Sub-Wonderings

- How do other teachers define or characterize “participation?” What value does participation hold in different classrooms?
- How do students define “participation?” What value does it hold for them?
- What are some of the reasons that appear to hold some students back from voluntarily participating and/or demonstrating body language that suggests engagement?
- What strategies are best to increase verbal participation? Nonverbal participation?
- How do students respond to the participation strategies implemented? What are their thoughts and feelings about them?

Data Collection

Clear Description of Data Collection

In order to explore the participation habits of my students and to assess the effectiveness of various strategies implemented, I collected several different types of data. Data collection was done before, during, and after the implementation of whole-group participation strategies.
Prior to implementing my inquiry, I gathered information and collected data through several different methods, including research. I designed and conducted an anonymous student survey, which was completed by sixteen students. The survey first asked the students to reflect on their thoughts about participation, including what it means to participate in a class discussion, the importance of participation, what “good” participation looks like, and why they choose to participate. The second half of the survey required students to rate their individual participation rate in a variety of different subject areas and settings using a scale from 1 (never) to 5 (frequently). It also asked students to rate their level of comfort about participating in the same variety of subject areas and settings on a scale from 1 (extremely uncomfortable) to 5 (extremely comfortable). My intention in conducting this survey was to obtain information regarding students’ perceptions of participation in general as well as their beliefs, habits, and feelings about their own participation. Also, the results provided me with information that was used to help select participation strategies to implement (See Appendix A for Student Survey and example).

In addition to a student survey, I administered a teacher interview for the primary purpose of gaining insight into my colleagues’ beliefs and views of student participation. I also used this interview to determine what value participation holds in their classroom, how they evaluate participation, what participation strategies are used, and what they believe impacts or influences student participation. I was able to interview six teachers at Park Forest Elementary School: a kindergarten teacher, a 1st/2nd multiage teacher, a 3rd grade teacher, a 4th grade teacher, a 5th grade teacher, and the music teacher. This provided me with a variety of different perspectives on student participation. As I conducted each interview, I scripted the responses that I received for each question. From the information obtained, I was able to compare the views and beliefs of other teachers to the beliefs of my students. I also was able to gain ideas about participation
strategies to use and factors that influence student participation. (See Appendix B for Teacher Interview and example).

Finally as part of my data collection prior to intervening, I charted each student’s participation using a systematic data collection method. I designed a key, which included the verbal participation characteristics I was interested in observing – hand raised, called on, question asked – and the nonverbal participation characteristics I was interested in observing – eye contact and head up. In three-minute increments for a period of 15 minutes, my students were surveyed for these participation behaviors during four whole-group discussions. Since whole-group discussions occur usually while students are sitting in their desks or on the carpet in their rows, I created two data recording sheets that pictured an aerial view of both of these seating arrangements. Before an observation, I would record the initials of the student on the spot where they were positioned during the discussion so that I could easily record their behaviors during the observation periods. To eliminate confusion, students’ participation behaviors were recorded on a new chart for each discussion observed. The main purpose in collecting this data was to have a baseline verbal and nonverbal participation rate of the class to compare my intervention data to in order to assess the effectiveness the strategies had in increasing student participation. (See Appendix C-D for Systematic Data Collection Charts).

During

The next phase of data collection took place over the course of my intervention. In order to gain insight on my main and sub-wonderings, I implemented several different participation strategies in hopes of increasing whole-group participation in my class so that more students were participating in discussions, both verbally and nonverbally, on a more consistent basis. Six strategies were implemented. One strategy, the circle seating arrangement strategy, had the students sit in a circle formation during whole-group discussions. After a given question was
asked, the pre-think/pre-write strategy provided students with time to think about it and write down their ideas independently before sharing aloud. The think-pair-share strategy had students think about the question and formulate an answer first, followed by discussing with a partner, and then finally sharing aloud with the class. A fourth strategy used provided each student with a mini-chalkboard. When a question was asked, each student wrote down their answer and then displayed it in the air for the rest of the class to see. The token economy strategy rewarded each student for participating. Each time a student volunteered or commented, they were given a chip. Students who consistently demonstrated other participatory behaviors, such as having their hand up, head up, or eye contact, were also given chips. The last strategy was a reverse token economy. At the beginning of the discussion, each student was given a set amount of tiles. Each time they participated, they were able to hand in one of their tiles with the goal of “spending” all of them by the end of the discussion.

As I implemented each of these participation strategies during whole-group discussions, my mentor recorded students’ participation behaviors as I taught using the same systematic method that was used to collect the baseline participation rates. To eliminate confusion between strategies, each discussion was recorded separately. My main purpose for collecting this data and for using a consistent method was to be able to compare the rate of participation during each strategy implementation to the baseline data and also to the rates during other strategies. Doing so allowed me to effectively assess the effectiveness of each strategy on increasing participation in my classroom (See Appendix F for an example).

In addition to the systematic data collected during my intervention period, I also collected data on discussions with anecdotal records. Two of my intervention strategies, the token-economy and the reverse token-economy, were observed in this way. For the token-economy, I recorded how many tokens, or chips, were earned at the end of the discussion for participation.
With the reverse token-economy, I recorded how many tokens, or chips, each student was given to begin with and how many each student had left at the end of the discussion. This way, I could see how many chips were “spent” through participation. Other anecdotal notes related to student tone, topic of discussion, specific comments or questions students ask, specific student behaviors during whole-class discussion, and so on. The primary purpose of this data was to support or provide further information about specific discussions (See Appendix F-G for examples).

After

After the participation strategies were implemented, I wanted to gather further information on their effectiveness. To do this, I designed a set of interview questions for seven randomly selected students in the class, ranging from high participators to low participators. The questions asked the students to reflect on their thoughts and feelings about each of the strategies used, such as “Before you are asked to share an answer to a question aloud, do you like time to think about it? Why?” and “How did earning something for participation affect your decision as to whether or not to participate?” I also asked the students if there was anything else that I could do to increase their desire to participate or make them feel more comfortable participating in whole-discussions. My intention in conducting these interviews was to discover what my students’ thought of and felt about the participation strategies I implemented and how or why it influenced their participation behaviors (See Appendix H for Student Interview questions).

Data Analysis

Steps Taken to Analyze the Data

Throughout the inquiry, I carefully planned and collected data that I felt would enable me to gain insight into my main wondering and sub-wonderings and arrive at some conclusive answers.
Prior Intervention Student Survey Analysis

The survey I administered to students was extremely informative in terms of understanding students’ beliefs and feelings about participation. To analyze the results, I read through each of the sixteen responses by section. After reading through each response, I looked for patterns in students’ views of and beliefs about participation. I did this by categorizing the responses for each question by theme and calculating percents for how many responses fell into each category. The data collected from this survey was compared to the responses received from teacher interviews (See Appendix I for Survey Data: Question Response Summaries).

The second and third portions of the survey asked students to rate how often they participate and also to evaluate their level of comfort about participating. After reading through each survey, I compiled the results and represented them in two charts: one for how often they participate and one for how comfortable they feel about participating. This way, I could easily observe patterns in the data based on the number of students who chose each rating. I noted the questions where the data clumped (a great deal of responses around the same rating) and where the data was spread out, ranging from 1-5 with no clear clumps. For students who circled a 1 or a 2 for any of the questions on the participation comfort survey, I asked them to explain why. I found these responses very informative with regards to revealing some of the factors that can influence participation. I compared the student responses to the data collected from teachers about participation influencers and also to the feedback students gave about the strategies used to assess patterns (See Appendix J for Student Survey Data: Compiled Responses).

Teacher Interview Analysis

Interviewing teachers in my school provided me with a great deal of information and data concerning student participation. Once all of the interviews were finished, I read through each of the six scripted responses. Similar to the student surveys, I categorized the responses for each
question based on observable themes and calculated percents to determine how many responses fell within each category (See Appendix K) This provided me with an easy visual and means for comparison since many teachers provided multiple responses for each question, and thus, their responses were recorded in multiple categories. Looking over the compiled results, I was able to gain information pertaining to the value teacher see in participation and the specific behaviors they look for. I was able to compare the responses received from the teachers to those of the students in order to observe patterns, similarities and discrepancies. Since almost every teacher surveyed claimed to look for behaviors like hand raising, questioning, sharing ideas, eye contact, body posture, and facial expressions, I decided to collect data on both verbal and nonverbal participation for my inquiry. Many of the strategies that teachers claimed to use in their classrooms to increase participation provided me with ideas about which strategies to implement during my inquiry. Some of the strongest data collected and analyzed from the teacher surveys was in response to the question, “List three things that you believe impact student participation.” After categorizing these responses, I was able to compare the data to students’ responses about their participation habits. (See Appendix K for Teacher Interview Data: Question Response Summaries)

Systematic Data Collection Analysis

The systematic data collection analysis was the most involved analysis process. Because my main desire was to compare the baseline data to the intervention data, I took the same steps to analyze the baseline data collection as I did to analyze the data collected during each strategy implementation. I decided to analyze each observation chart independently to avoid confusion. I took the first baseline observation chart and counted how many students were present during the discussion. I then counted how many times each student was observed. This was a constant number for all students since data on each student was collected every three-minutes. In this
particular lesson, 15 students were present, and they were each observed 2 times during the
discussion. By multiplying the number of students by the amount of times they were observed
(15 x 2), I was able to figure out the total amount of participation opportunities available during
the discussion. For this particular one, there were 30 possible participation opportunities.

After figuring out the number of participation opportunities, I went through the chart and
tallied the number of each of the observed behaviors recorded: the number of hands raised (H),
number of students called on/answering (X), the number of questions asked (?), the number of
students who had eye contact with the speaker (0), and the number of students who had their
head up (↑). I was able to take the total for each behavior and divide it by the total number of
participation opportunities in the discussion to calculate a percentage. This percentage
represented the amount of times, out of the possible participation opportunities, that a specific
behavior was observed. For example, during the first baseline collection, 4 hands were raised
during this discussion. Out of the 30 opportunities to participate, students raised their hands
13.3% of the time. After calculating a percentage for each of the observed behaviors, I averaged
the percentages for verbal behaviors and the percentages for nonverbal behaviors. This way, I
ended up with an overall verbal and nonverbal participation rate for each discussion analyzed. I
repeated this same process for each of the 12 whole-group discussions that were observed.

Here is an example of the mathematical steps I took to analyze each observed discussion

<table>
<thead>
<tr>
<th>Type of Participation</th>
<th>Behavior</th>
<th># Of Times Observed</th>
<th># Of Times Observed/Total # of Opportunities</th>
<th>Percentage Participation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal</td>
<td>H</td>
<td>4</td>
<td>4/30</td>
<td>13.3%</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>2</td>
<td>2/30</td>
<td>6.7%</td>
</tr>
<tr>
<td></td>
<td>+</td>
<td>0</td>
<td>0/30</td>
<td>0%</td>
</tr>
<tr>
<td>Nonverbal</td>
<td>0</td>
<td>19</td>
<td>19/30</td>
<td>63.3%</td>
</tr>
<tr>
<td></td>
<td>↑</td>
<td>19</td>
<td>19/30</td>
<td>63.3%</td>
</tr>
</tbody>
</table>

Baseline Data: Day 1 (2/19/09)

# Of students observed: 15
# Of observations for each student: 2
# Of opportunities to participate: 15 x 2 = 30
For the discussions where baseline data was collected and for those where a specific strategy was used more than once, I averaged the verbal participation rates together and the nonverbal participation rates together to calculate an average for each strategy. Taking this step made it easier to compare the participation rates of strategies to the baseline data and strategy to strategy. *(See Appendix M for Systematic Observation Data Chart)*

The final step I took was to assess the effectiveness of the participation strategies implemented in increasing my students whole group participation rates. The percentages I calculated allowed me to compare the rates of verbal and nonverbal participation found for each strategy to the baseline data and also compare the strategies to each other to determine effectiveness. Combining this data into one chart and displaying it in three graphs, one for verbal participation, one for nonverbal participation, and an averaged one, allowed me to easily see which strategies appeared to be the most effective in terms of increasing student participation. Finally, I looked at my results and searched for patterns in the data and possible reasons for why certain strategies encouraged more student participation than others. *(See Appendix M for Participation Graphs)*

**Anecdotal Note Analysis**

Data on two of my participation strategies was collected using a slightly different method than the four other strategies implemented. I created a chart for the token-economy strategy and the reverse token-economy strategy. After collecting the data, I was able to analyze the results, including the average number of tokens, or chips, earned for participation during the discussion where the token-economy was initiated, and how many chips were “spent” on participation during the reverse token-economy strategy. I was also able to look for patterns in the data and analyze how the data collected for these strategies compared to the baseline data and the data collected for other strategies.
With regards to all of the other anecdotal notes that I took throughout this inquiry, I sorted them according to the strategy used during the discussion. This additional information was used to enhance the collected data in a variety of ways. I looked for both commonalities and discrepancies between the data and the anecdotal records and tried to determine their meaning, significance, and implications (See Appendix N for Anecdotal Records Charts)

Student Interview Analysis

The final data collected during this inquiry was obtained through conducting interviews with a selected group of students regarding the participation strategies I implemented. To analyze this data, I read over all of the responses that I received from students. Afterwards, I categorized the answers according to common themes for each of the 7 questions asked and compiled the results into a chart. I looked for patterns within the answers to these questions and also began to compare the student responses to the data collected from the discussion observations of the strategies in action. Particularly, I noted discrepancies in the data and instances where data from the responses was supported by observations. See Appendix O for student interview response summaries)

Explanation of Findings

After analyzing my data through the methods outlined above, I identified patterns and trends across the data that allowed me to make several strong claims regarding the effectiveness of various strategies in increasing verbal and nonverbal student participation rates during whole-group discussions.

Claim #1: Students participate, both verbally and nonverbally, at a higher rate during whole-group discussions when specific participation strategies are implemented within the classroom.
My main wondering throughout this inquiry focused on how implementing a variety of participation strategies would affect the overall verbal and nonverbal participation rates among my students during whole-group discussions. After collecting data during whole-group discussion, and analyzing student interview responses regarding their thoughts and feelings about the strategies implemented, it became apparent that when a teacher uses participation strategies like the ones I implemented, for example the think-pair-share, circle seating arrangement, token economy, etc., students do in fact participate at a higher rate. These strategies work to encourage participation, both verbal and nonverbal, in a variety of different ways.

After analyzing each whole-group discussion, I assessed the verbal and nonverbal participation rates for the baseline and for each strategy and then compared these results. For each of the discussions where a participation strategy was implemented, students’ verbal and nonverbal participation rates were significantly higher than when no strategy was used. When a participation strategy was used to encourage participation during a whole-group discussion, I saw more hands raised, a larger variety of students sharing ideas or questions aloud, and more students sitting with their heads up and maintaining eye contact with the speaker. When I asked the students a question and had them do a pre-think/pre-write to get their ideas down on paper before sharing aloud, students exhibited verbal participation behaviors 48.5% of the time during the actual whole-group discussion. This was significantly higher than the baseline, where students exhibited verbal participation behaviors only 15.03% of the time during whole-group discussions. More specifically, I noticed that four of the most hesitant participators during discussions where no strategies were implemented participated a total of 9 times verbally and 17 times nonverbally in this discussion. During this same discussion with a pre-think/pre-write, students’ displayed nonverbal participation behaviors 70.6% of the time compared to 45.7% of the time during discussions lacking a participation strategy. Although the verbal and nonverbal
participation rates did fluctuate from strategy to strategy, all of the overall participation rates
during lessons where strategies were used were higher than lessons where strategies were not
used (See Appendices L and M).

In addition to strong support from the systematic data collection, the claim that students
participate at a higher rate during whole-group discussions where participation strategies are
implemented is further strengthened by anecdotal records and student survey responses. For two
of my participation strategies, the token-economy and the reverse token-economy, I assessed
their effectiveness in increasing participation through anecdotal notes. Through the analysis of
this data, I found that students did participate more during these discussions than they did during
discussions where no strategy was used. During the discussion where the token-economy
strategy was implemented, students earned a tile every time they participated verbally. Looking
at the results, every student participated at least once; 10 out of the 15 students present, or 66.7%
of the students, participated two or three times during the fifteen-minute discussion; and 20% of
the students participated four or five times. This shows that almost 90% of the students
participated at a medium to high level, or participated at least two times during the discussion
(See Appendix N). When students were asked to reflect on how earning something for
participation affected their decision to participate, all surveyed students stated that this made
them want to participate more. To explain his answer, one student stated, “Earning a tile made
me want to participate more because I wanted to get more tiles. I wanted to collect the most.
Also, it was fun and different.” Instilling a bit of competition through rewarding students for
their participation, and changing up the usual routine seemed to keep the students engaged in the
discussion (See Appendix O).

During the discussion where the reverse token-economy strategy was used to increase
participation, students began with a set number of tiles. They were able to “spend” them through
participating. The results revealed that two out of the three times this strategy was used during a whole-group discussion, every student spent all of their tiles. The third time the strategy was used, 96.3% of the tiles were spent; only two students were left with one of their three original tiles at the end of this discussion (See Appendix N). When asked to comment on how having something to get rid of affected their decision to participate, every student surveyed claimed that it made them want to participate more. To justify her answer, one student explained, “It made me pay attention more because I just wanted to get rid of the tiles. Plus it was fun, like a game.” These comments reveal that students too recognize the increase in their participation behaviors during certain discussions where strategies are implemented (See Appendix O).

Claim #2: When teachers recognize and consider the participation needs and comfort levels of their students, students will participate more during whole-group discussion.

Several of my sub-wonderings revolved around questions concerning the factors that influence student participation, how students see themselves as participators, and strategies that work best to increase verbal participation and to increase nonverbal participation. Through analyzing all of the data I had to support these sub-wonderings, I arrived at the conclusion that when students’ ideas about their own participation, their participation needs, and their levels of comfort about participation are considered during whole-group discussions, the rate of participation increases.

The data collected suggests that when students are given the opportunity to think about and discuss their ideas and questions before sharing aloud, they are more likely to participate verbally in a whole-group discussion. The verbal participation rates for the pre-think/pre-write and think-pair-share strategies were the highest out of all the strategies implemented: 48.5% and 49% respectively. The students exhibited verbal participation behaviors approximately 24%
more during these discussions than they did during discussions without an intervention, 29% more than when the chalkboards were used, and 6% more than when the circle seating arrangement strategy was used (See Appendices L and M). Additionally supporting this data, each interviewed student claimed to like having time to think about his or her answers independently before sharing them aloud and also to share and discuss his or her ideas with a partner before sharing out loud. Reasons for these feelings included being able to “double-check my answer and make sure it’s right,” “have more time to think about the question and what it is asking,” “hear what others have to say,” and “talk through our ideas and questions to find the right answer together.” One student said, “I don’t think I’m very good at math and I don’t participate a lot because of that. I don’t want to share an answer that’s going to be wrong. But when I got to talk to another person about my answer and I noticed our answers were similar, I became more confident and I wanted to share my idea with the class” (See Appendix O). Related to this, a student’s level of confidence was one of the main influences that teachers say impacts participation (See Appendix K). Providing students with a chance to talk with peers or process the question independently appears to encourage them to share their answers later with the whole class. Overall, when students have the opportunity to formulate a response, verify their answers independently or with a partner to feel less anxious and more confident, they are more likely to share those answers aloud during whole-group discussions.

In order for students to be successful participators, they need to feel like they are a part of the classroom community. Through interviewing teachers concerning the factors influencing student participation, classroom community was mentioned the most (See Appendix K). Students need to feel that their answers are valued and that they will not be made fun of if they are wrong in order to be comfortable enough to share those ideas aloud. The chalkboard and circle seating arrangement strategies increased student participation, especially nonverbal participation,
because they help create a sense of community during whole-group discussions. During the student interviews, all students mentioned enjoying the circle seating arrangement because they can see and hear everyone. The same students also stated that they enjoyed using chalkboards to show their answers because “you can see many other people’s ideas” and “everyone can share what they’re thinking.” One specific student stated, “Using chalkboards is fun because there is more of an opportunity to share your answers. It’s not just one person chosen to answer. Everyone is involved” (See Appendix O). During this time, students exhibited more nonverbal participation behaviors, such as heads up and eye contact with the speaker: 90.4% for the circle seating arrangement strategy and 68.9% for the chalkboard strategy (See Appendices L and M). This shows that students are engaged in these community-like discussions and they value what others have to say by giving the speaker(s) their attention.

The last piece of evidence that supports this relates to discussion settings. Students are more likely to participate in a discussion when the whole-group setting takes on characteristics of a small group setting. From the initial survey that I administered to students asking about their comfort level with regards to participation, 8 students circled somewhat comfortable to describe their feelings about participating in whole-group discussions. Three students circled the rating below that, 4 circled the rating above, and only 1 student stated they felt extremely comfortable. In contrast, 10 students claimed feeling extremely comfortable about participating in small group discussions, 5 chose the rating below that, and only 1 student chose somewhat comfortable. To further support this, one student said they circled a low comfort level for whole-group discussions because, “I don’t think my answers are right or I’m not comfortable sharing them with everyone because I don’t like talking in front of a lot of people.” Another student stated, “I don’t want to say the wrong thing in front of the whole class. It’s just easier to talk with a smaller
group, so you can discuss your ideas and if your wrong, only a few people know” (See Appendix J).

All of this information helped me to understand that for many students, sharing aloud with the entire class can be an anxiety-causing event. Many students do not feel confident enough about their answers or responses or do not feel comfortable with speaking in front of everyone in general. Students need that small group setting experience, even during whole-group discussions, to help them become more confident participators. Several of the participation strategies I implemented helped to meet this need. The think-pair-share provided students with time to think about their answers and discuss them with a partner to “double check” in a small-group setting before opting to share with the whole group. Students gained confidence in their answer and how they articulate their ideas when this strategy was used and the overall participation rates reflect this (See Appendix O). The chalkboard strategy also carried characteristics of a small-group discussion by making the larger-group seem smaller. When using this strategy, every student participated by providing an answer for every question asked (See Appendix O). This is similar to small-group discussions where everyone has the opportunity to share their individual ideas and questions with the group. If a student’s answer is wrong during a typical whole-group discussion, the entire class has heard their incorrect answer and explanation and the student often experiences feelings of discomfort. Unlike this, the discrepancies between answers written on chalkboards fueled the discussion since several different answers were usually apparent. Not arriving at the correct answer was less embarrassing for students. Overall, these two participation strategies work to meet students’ needs and comfort levels and thus increase participation.
Claim #3: There is a correlation between students' and teachers' beliefs about participation. The behaviors and attitudes that teachers expect regarding participation are recognized, prioritized, and defined similarly by students.

One of the most interesting discoveries that I made during this inquiry was related to how others, including teachers and students, think about participation: what it means to participate, the value participation holds, and what behaviors characterize participation. After analyzing the data from my student surveys and teacher interviews, I noticed numerous similarities in the responses that I received, demonstrating that students appear to understand the expectations that teachers set for participation.

When asked to describe what they thought it meant to participate in a class discussion, 12 students mentioned sharing your ideas, 6 mentioned doing what is expected, 4 mentioned listening, and 3 mentioned raising your hand (See Appendix I). When commenting on one of the participation strategies used in a whole-group discussion, one student said, “I noticed that everyone had their hands up more and they were all paying more attention. I realized that this is how we should participate every day and that this is how you and [mentor teacher] want us to be.” Similarly, when teachers were asked this same question, the categories for their responses were as follows: sharing your ideas, doing what is expected, raising your hand, and showing engagement (See Appendix K). Teachers and students both define or characterize participation through the display of similar behaviors and actions. This mutual understanding of what participation is helps to foster successful discussions.

In addition, teachers and students both recognize the importance of participation. Sixteen out of the sixteen students surveyed and six out of six teachers interviewed said, “yes” when asked if participation was important. After analyzing the survey data, I noticed that two categories of responses were identical for both teachers and students; they both believed
participation was a way to learn more and a way to feel a part of the classroom community. Teachers stated that participation is important because it is one of the easiest ways to evaluate student understanding. One specific teacher commented that participation “provides a glimpse into what students know and understand and what misconceptions they have.” In turn, students claimed that participation is important because it is a way to “get good grades.” These two beliefs go hand-in-hand. When a teacher can assess and determine positive student learning, the student will receive better grades. Overall, teachers and students both recognize the importance of participation and believe it is important for many of the same reasons. Knowing and understanding how important participation is, students are more apt to participate (See Appendices I and K).

Lastly, teachers and students both recognize similar behaviors as cues for participation. The five top responses from students included raising your hand, silent mouths while listening, staying focused to get work done, having eye contact with the speaker, and sitting up straight. Likewise, the five top cues that teachers say demonstrate participation include hand raising, eye contact with the speaker, good body posture/language, silent mouths while listening, and high quality work. It is evident that students recognize the participation behaviors that teachers expect. In addition, students also demonstrate these behaviors. During my inquiry, students participated by raising their hands, maintaining eye contact with the speaker, sitting up straight, offering ideas and comments on their work, and sitting silently. Not only do students recognize the proper participation behaviors, but also they display them during whole-group discussions. The more they displayed these behaviors, which was evident during discussions where strategies were implemented that asked students to perform specific behaviors, the higher the participation rates of individual students and the whole class. When students understand the participation behaviors that are expected, they are more likely to demonstrate these behaviors and participate
more successfully overall (See Appendices I and K).

**Reflections and Implications for Future Practice**

As an educator, this entire process has been a valuable learning experience. From this inquiry, I have made several important and useful discoveries about student participation during whole-group discussions. First, I have learned that when discussions incorporate specific participation strategies, such as a think-pair-share or a token-economy, student participation rates do increase. These strategies provide some variety to the usual question-answer routine of discussions. The more interesting and engaging that the discussion is, the more students will participate verbally and nonverbally. During this inquiry, I had the opportunity to try out several different whole-group participation strategies with my class and they all yielded positive results. Since all of these strategies were effective in increasing students’ verbal and nonverbal participation during whole-group discussions, I will continue to use strategies in my future teachings to encourage more participation from my students.

Through this inquiry, I have also learned that when students’ participation needs and comfort levels are recognized and considered during whole-group discussions, they are more likely to participate. Some students need extra time to process the questions that are asked, especially if they are not simple recall questions. In addition, various students need time to discuss or double-check their answers before sharing them with the whole group in order to gain confidence in their answers and the way in which they communicate their ideas clearly. In addition, talking in front of the whole can also be a daunting task for some students. Helping to make the large group setting feel more like a smaller group setting can alleviate these feelings to an extent; students are generally more comfortable participating in a small group. Furthermore, students need to feel that they are a part of the classroom community in order to feel that their
answers are valued and that they will not be teased when they are wrong. Participation strategies that work to reinforce the idea of a classroom community can be extremely beneficial and can raise participation rates significantly. In my future teachings, I will be sure to gain an understanding of my students and what their feelings are about participation. I will implement strategies that work to meet their needs and feelings in order to create an atmosphere where students want to participate all the time and feel comfortable with their own responses and how the class will perceive them.

Finally, I have learned the importance of establishing participation expectations with my students. Through this inquiry, I found that the teachers in my school and students in my class held similar beliefs and feelings about participation. This correlation might not be found everywhere though. Informing students about what it means to participate, the value I see in participation, and how the appropriate participation behaviors will help them understand what is expected during whole-group discussions. When students know what is expected of them and see the value in it, they are more likely to follow through with that action. In this case, students who understand what participation is and why it is important for them and for teachers will have the skills and knowledge needed to participate successfully.

This topic of student participation will always be a wondering of mine, especially since the strategies that work extremely well for one class will not always increase participation to the same degree in another class. I would like to continue to explore what factors influence student participation, including confidence, anxiety, subject matter knowledge, and interest, and how I can cater specific participation strategies to target these factors. Ultimately, it is my goal as an educator to create a classroom where all students want to participate and are willing to share their ideas in a variety of different ways. I want students to begin to build these skills in order to help
them progress towards becoming confident individuals who feel that their thoughts, ideas, and beliefs are valuable.
Appendix A – Pre-Intervention Student Survey

Answer the following questions. Please be honest!

What do you think it means to participate in a class discussion?

Is participation important? Why or why not?

Describe what good participation looks like.

Why do you participate? Please be specific.
Answer the following questions on a scale of 1-5. Please be honest!

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

In one school day, how often do you volunteer answers, comments, or ideas?

| 1 | 2 | 3 | 4 | 5 |

In one school day, how often do you volunteer answers, comments, or ideas in whole class discussions, like a math discussion?

| 1 | 2 | 3 | 4 | 5 |

In one school day, how often do you volunteer answers, comments, or ideas in small group discussion, like reading groups?

| 1 | 2 | 3 | 4 | 5 |

How often do you volunteer answers, comments, or ideas during a math lesson?

| 1 | 2 | 3 | 4 | 5 |

How often do you volunteer answers, comments, or ideas during a writing lesson?

| 1 | 2 | 3 | 4 | 5 |

How often do you volunteer answers, comments, or ideas during a reading lesson?

| 1 | 2 | 3 | 4 | 5 |

How often do you volunteer answers, comments, or ideas during a spelling lesson?

| 1 | 2 | 3 | 4 | 5 |

How often do you volunteer answers, comments, or ideas during a social studies lesson?

| 1 | 2 | 3 | 4 | 5 |

How often do you volunteer answers, comments, or ideas during a science lesson?

| 1 | 2 | 3 | 4 | 5 |
Answer the following questions on a scale of 1-5. Please be honest!

<table>
<thead>
<tr>
<th>Extremely Uncomfortable</th>
<th>Somewhat Comfortable</th>
<th>Extremely Comfortable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

How comfortable do you feel about participating in general?

| 1 | 2 | 3 | 4 | 5 |

How comfortable do you feel about participating in a small group discussion, like reading groups?

| 1 | 2 | 3 | 4 | 5 |

How comfortable do you feel about participating in a whole-class discussion, like math or science discussions?

| 1 | 2 | 3 | 4 | 5 |

How comfortable do you feel about participating in a math lesson?

| 1 | 2 | 3 | 4 | 5 |

How comfortable do you feel about participating in a writing lesson?

| 1 | 2 | 3 | 4 | 5 |

How comfortable do you feel about participating in a reading lesson?

| 1 | 2 | 3 | 4 | 5 |

How comfortable do you feel about participating in a spelling lesson?

| 1 | 2 | 3 | 4 | 5 |

How comfortable do you feel about participating in a social studies lesson?

| 1 | 2 | 3 | 4 | 5 |

How comfortable do you feel about participating in a science lesson?

| 1 | 2 | 3 | 4 | 5 |

If you circled a 1 or a 2 for any of these questions, please explain why in the space below.
Appendix B – Teacher Interview Questions

Inquiry Project: Teacher Interview

Name: ____________________________
Grade Level: _____________________

How would you describe or define student participation?

What value does participation have in your classroom? In other words, is participation important or unimportant? Why?

How do you evaluate participation?

What cues do you look for in your students to indicate they are participating?

Do you use any participation strategies in your classroom? Please list and briefly describe any below.

What are some things, if any, that you do to increase participation in your classroom (rewards points, wait time, etc)? Have you found them to be effective?

List 3 things that you believe impact student participation.
Inquiry Project: Teacher Interview Sample

Grade Level: 3

How would you describe or define student participation?
Student participation is students taking an active role in their learning. This could be done verbally or physically. Some students do not feel comfortable speaking in front of others, but you can watch how they respond with their body language and see/know that they are engaged and participating.

What value does participation have in your classroom? In other words, is participation important or unimportant? Why?
Participation is important in my classroom. Students have different learning styles and participating in a variety of ways is conducive to learning. I value participation because it gives me a glimpse into what the students know and understand as well as what misconceptions they may have.

How do you evaluate participation?
I evaluate participation by the amount of effort and time students put into being an active learner in my classroom. It has nothing to do with whether they are “right” or “wrong” in the way that they respond, but rather, that they are making an effort to take an active role in their own learning.

What cues do you look for in your students to indicate they are participating?
I look for how often students raise their hand, answer questions, focus on what is going on in the classroom. I also watch for how they respond to others and how they connect to what is going on in the classroom.

Do you use any participation strategies in your classroom? Please list and briefly describe any below.
Yes. I do a lot of “pair share” in large group settings to allow the more “shy” and/or reluctant students to at least have a chance to talk to someone else in the class. I also have used a “speaking ball” to encourage students to talk. The person who has the “speaking ball” is the one who gets to talk to the rest of the group. That person then gets to pass the ball to the next person who wants to speak. I use positive feedback by saying, “I like how so-and-so is raising his/her hand,” or “Wow! I love to see so many people wanting to share!”

What are some things, if any, that you do to increase participation in your classroom (rewards points, wait time, etc)? Have you found them to be effective?
Meeting with students in small instructional groups is one way that I find to be very effective. This gives the quieter and less “aggressive” students a chance to talk without having to compete with more vocal children. I also go to students one-on-one and ask them about what they are thinking. This is a not-threatening way to find out what children are thinking.

List 3 things that you believe impact student participation.
1.) A sense of security, 2.) trust that people will not make fun of them if they are wrong, 3.) knowledge that all ideas are valued.
Appendix C: Data Collection Charts

Inquiry: Observation of Student Participation - Carpet

Key
Verbal Participation
R = Hand Raised
X = Called on/Answered
? = Student question

Nonverbal Participation:
R = Eye contact w/speaker
F = Read up

Key
Verbal Participation
R = Hand Raised
X = Called on/Answered
? = Student question

Nonverbal Participation:
R = Eye contact w/speaker
F = Read up

Inquiry: Observation of Student Participation - Desks

Key
Verbal Participation
R = Hand Raised
X = Called on/Answered
? = Student question

Nonverbal Participation:
R = Eye contact w/speaker
F = Read up

Teacher Desk

Key
Verbal Participation
R = Hand Raised
X = Called on/Answered
? = Student question

Nonverbal Participation:
R = Eye contact w/speaker
F = Read up
Appendix D: Baseline Data Collection Example

Intervention: None
Appendix E: Intervention Data collection Example

Intervention: Pre-Think/Pre-Write Strategy

<table>
<thead>
<tr>
<th>Key</th>
<th>Key</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal Participation</td>
<td>Nonverbal Participation</td>
<td></td>
</tr>
<tr>
<td>H = Hand Raised</td>
<td>0 = Eye contact w/ speaker</td>
<td></td>
</tr>
<tr>
<td>X = Called on/Answered</td>
<td>+ = Called on w/out hand raised</td>
<td>Head up</td>
</tr>
<tr>
<td>? = Student question</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix F: Intervention Anecdotal Note Examples

**Intervention: Token-Economy**

<table>
<thead>
<tr>
<th>Student</th>
<th>Chips Earned</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>3</td>
</tr>
</tbody>
</table>

**Intervention: Token-Economy**

<table>
<thead>
<tr>
<th>Number of Students</th>
<th>Number of Chips Students Began With</th>
<th>Number of Chips Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>23</td>
<td>2</td>
<td>46</td>
</tr>
<tr>
<td>18</td>
<td>3</td>
<td>52</td>
</tr>
</tbody>
</table>
Appendix G: Specific Anecdotal Notes on Students Examples

Notes: Pre-Write Intervention

Four most hesitant participators participated a great deal:

- **1** – 4 observations of head up and eye contact, 2 observations of hand up
- **2** – 4 observations of head up and eye contact; 1 observation of hand up
- **3** – 4 observations of head up and eye contact, 2 observations of hand up, 2 observations of called on
- **4** – 3 observations of head up and eye contact, 3 observations of hand up, 2 observations of called on.
Appendix H: Student Interview Questions

1. Do you participate more during whole or small group discussions? Why do you think that is?

2. Before you are asked to share an answer to a question aloud, do you like time to think about it? Why?

3. Do you like to share your ideas with a partner before sharing out loud? Why? (like a think-pair-share)

4. How did having something to get rid of, such as tiles, effect your decision as to whether or not to participate?

5. How did earning something for participation effect your decision as to whether or not to participate?

6. Do you enjoy having a whole-class discussion sitting in a circle? Why?

7. Do you enjoy using chalkboards to show your answers? Why?

8. What are some things that I could do to help you participate more?
### Appendix I: Student Survey Response Summaries

#### What do you think it means to participate in a class discussion?

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Number of Student Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share your ideas</td>
<td>12</td>
<td>42.9%</td>
</tr>
<tr>
<td>Do what is expected</td>
<td>6</td>
<td>21.4%</td>
</tr>
<tr>
<td>Listen</td>
<td>4</td>
<td>14.3%</td>
</tr>
<tr>
<td>Raise hand</td>
<td>3</td>
<td>10.7%</td>
</tr>
<tr>
<td>Learn more</td>
<td>3</td>
<td>10.7%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

#### Is it important to participate?
16 out of the 16 students surveyed said “Yes”

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Number of Student Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A way to learn more</td>
<td>7</td>
<td>41.7%</td>
</tr>
<tr>
<td>Don’t miss out/feel included</td>
<td>3</td>
<td>17.6%</td>
</tr>
<tr>
<td>A way to get good grades</td>
<td>3</td>
<td>17.6%</td>
</tr>
<tr>
<td>A way to share ideas</td>
<td>2</td>
<td>11.8%</td>
</tr>
<tr>
<td>To know what to do</td>
<td>2</td>
<td>11.8%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

#### Describe what good participation looks like

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Number of Student Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raising hand</td>
<td>8</td>
<td>21.1%</td>
</tr>
<tr>
<td>Silent mouths</td>
<td>8</td>
<td>21.1%</td>
</tr>
<tr>
<td>Doing work/focused</td>
<td>8</td>
<td>21.1%</td>
</tr>
<tr>
<td>Eye contact with speaker</td>
<td>5</td>
<td>13.2%</td>
</tr>
<tr>
<td>Sitting up straight</td>
<td>3</td>
<td>7.7%</td>
</tr>
<tr>
<td>Asking questions</td>
<td>2</td>
<td>5.1%</td>
</tr>
<tr>
<td>Sharing ideas</td>
<td>2</td>
<td>5.1%</td>
</tr>
<tr>
<td>Cooperating</td>
<td>2</td>
<td>5.1%</td>
</tr>
<tr>
<td>Getting good grades</td>
<td>1</td>
<td>2.6%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>39</td>
<td></td>
</tr>
</tbody>
</table>

#### Why do you participate?

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Number of Student Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>To learn more</td>
<td>8</td>
<td>33.3%</td>
</tr>
<tr>
<td>To get good grades/personal improvement</td>
<td>7</td>
<td>29.2%</td>
</tr>
<tr>
<td>It’s fun</td>
<td>3</td>
<td>12.5%</td>
</tr>
<tr>
<td>To know what to do</td>
<td>2</td>
<td>8.3%</td>
</tr>
<tr>
<td>To contribute ideas</td>
<td>2</td>
<td>8.3%</td>
</tr>
<tr>
<td>It’s expected</td>
<td>1</td>
<td>4.2%</td>
</tr>
<tr>
<td>To get work done</td>
<td>1</td>
<td>4.2%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>24</td>
<td></td>
</tr>
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## Appendix J: Student Survey Compiled Data on Participation Frequency and Comfort

### Participation Frequency Compiled Data

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>2</th>
<th>Sometimes</th>
<th>3</th>
<th>4</th>
<th>Frequently</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>In one school day, how often do you volunteer answers, comments, or ideas?</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>In one school day, how often do you volunteer answers, comments, or ideas in whole class discussions, like a math discussion?</td>
<td>1</td>
<td>0</td>
<td>10</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>In one school day, how often do you volunteer answers, comments, or ideas in small group discussion, like reading groups?</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>8</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>How often do you volunteer answers, comments, or ideas during a math lesson?</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>How often do you volunteer answers, comments, or ideas during a writing lesson?</td>
<td>1</td>
<td>0</td>
<td>12</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>How often do you volunteer answers, comments, or ideas during a reading lesson?</td>
<td>1</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>3</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>How often do you volunteer answers, comments, or ideas during a spelling lesson?</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>How often do you volunteer answers, comments, or ideas during a social studies lesson?</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>How often do you volunteer answers, comments, or ideas during a science lesson?</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td>16</td>
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</tbody>
</table>
### Participation Comfort Compiled Data

<table>
<thead>
<tr>
<th>Question</th>
<th>Extremely uncomfortable</th>
<th>1</th>
<th>2</th>
<th>Somewhat comfortable</th>
<th>3</th>
<th>4</th>
<th>Extremely comfortable</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>How comfortable do you feel about participating in general?</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>10</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>How comfortable do you feel about participating in whole-class discussions?</td>
<td>0</td>
<td>3</td>
<td>8</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>How comfortable do you feel about participating in small group in small group discussions?</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
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<tr>
<td>How comfortable do you feel about participating in a math lesson?</td>
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<td>0</td>
<td>5</td>
<td>8</td>
<td>2</td>
<td></td>
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<td></td>
<td>16</td>
</tr>
<tr>
<td>How comfortable do you feel about participating in a writing lesson?</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>How comfortable do you feel about participating in a reading lesson?</td>
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<td>0</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>How comfortable do you feel about participating in a spelling lesson?</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>7</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>How comfortable do you feel about participating in a Social Studies lesson?</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>7</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>How comfortable do you feel about participating in a science lesson?</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>7</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

If you circled a 1 or a 2 for any of these questions, please explain why:

“I don’t really enjoy math.”

“I circled 2 because writing isn’t my best subject. I don’t think I’m good at it”

“I don’t often have any answers or I’m not comfortable with my answer”

“I don’t want to say the wrong thing in front of the whole class”

“It’s easier to talk with a smaller group.”
Appendix K: Teacher Interview Response Summaries

How would you describe or define student participation?

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Number of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raising hand</td>
<td>4</td>
</tr>
<tr>
<td>Doing what is expected</td>
<td>4</td>
</tr>
<tr>
<td>Sharing ideas</td>
<td>3</td>
</tr>
<tr>
<td>Showing engagement</td>
<td>2</td>
</tr>
</tbody>
</table>

What value does participation have in your classroom? In other words, is participation important or unimportant? Why?

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Number of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate understanding</td>
<td>4</td>
</tr>
<tr>
<td>Increase learning</td>
<td>3</td>
</tr>
<tr>
<td>Shows student confidence</td>
<td>2</td>
</tr>
<tr>
<td>Shows good classroom environment</td>
<td>1</td>
</tr>
</tbody>
</table>

What cues do you look for in your students to indicate they are participating?

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Number of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raising hand</td>
<td>3</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>3</td>
</tr>
<tr>
<td>Sitting up straight</td>
<td>3</td>
</tr>
<tr>
<td>Silent mouths</td>
<td>2</td>
</tr>
<tr>
<td>High quality work</td>
<td>1</td>
</tr>
</tbody>
</table>

Name 3 things that you believe influence student participation

<table>
<thead>
<tr>
<th>Influence</th>
<th>Number of Teachers who Suggested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom community</td>
<td>7</td>
</tr>
<tr>
<td>Level of confidence</td>
<td>5</td>
</tr>
<tr>
<td>Peer anxiety</td>
<td>2</td>
</tr>
<tr>
<td>Knowledge of subject matter</td>
<td>2</td>
</tr>
<tr>
<td>Interest in subject matter</td>
<td>2</td>
</tr>
<tr>
<td>Teacher’s Beliefs/Encouragement</td>
<td>3</td>
</tr>
</tbody>
</table>
Appendix L: Intervention Data Analysis – Charts

<table>
<thead>
<tr>
<th>Participation Strategy</th>
<th>Verbal Participation Rate (%)</th>
<th>Non-Verbal Participation Rate (%)</th>
<th>Average Participation Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None – Baseline</td>
<td>15.03</td>
<td>45.7</td>
<td>30.4</td>
</tr>
<tr>
<td>Circle</td>
<td>43.3</td>
<td>90.4</td>
<td>66.9</td>
</tr>
<tr>
<td>Pre-Write</td>
<td>48.5</td>
<td>70.6</td>
<td>59.6</td>
</tr>
<tr>
<td>Think-Pair-Share</td>
<td>49.0</td>
<td>60.9</td>
<td>55.0</td>
</tr>
<tr>
<td>Chalkboards</td>
<td>20.0</td>
<td>68.9</td>
<td>44.5</td>
</tr>
</tbody>
</table>

Appendix M: Intervention Data Analysis – Charts
## Appendix N: Intervention Data Analysis – Anecdotal Record Charts

### Intervention: Reverse Token-Economy

<table>
<thead>
<tr>
<th>Number of Students</th>
<th>Number of Chips Students Began With</th>
<th>Number of Chips Collected</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>1</td>
<td>24</td>
<td>100</td>
</tr>
<tr>
<td>23</td>
<td>2</td>
<td>46</td>
<td>100</td>
</tr>
<tr>
<td>18</td>
<td>3</td>
<td>52</td>
<td>96.3</td>
</tr>
</tbody>
</table>

### Intervention: Token-Economy

# Of students: 15

<table>
<thead>
<tr>
<th>Level of Participation</th>
<th>Number of Students</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero (0 tiles earned)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Low (1 tile earned)</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>Medium (2-3 tiles earned)</td>
<td>10</td>
<td>66.7</td>
</tr>
<tr>
<td>High (4-5 tiles earned)</td>
<td>3</td>
<td>20</td>
</tr>
</tbody>
</table>

Each student participated an average of **2.73** times
Appendix O: Student Interview Response Summaries

1. Do you participate more during whole or small group discussions? Why?

Six out of seven (6/7) students stated they participate more during small group discussions. Reasons: more opportunities to talk (3 students); more opportunities to discuss (1); opportunity to hear different ideas.

2. Before you are asked to share an answer to a question aloud, do you like time to think about it?

7/7 students said YES (100%). Reasons: chance to double check answers (5), need time to “think about” the question (2).

3. Do you like to share your ideas with a partner before sharing out loud? Why?

5/7 Students said YES, 2/7 were INDIFFERENT. Reasons: Share ideas (3); discuss ideas (2); hear others (2); figure out the right answer together (1).

4. How did having something to get rid of, such as tiles, effect your decision as to whether or not to participate?

7/7 students said it made them want to participate MORE. Reasons: desire to get rid of them (4); want to pay attention (1); fun (1).

5. How did earning something for participation effect your decision as to whether or not to participate?

7/7 students said it made them want to participate MORE. Reasons: desire to get as many tokens as possible (7).

6. Do you enjoy having a whole-group discussion sitting in a circle? Why?

7/7 students said YES. Reasons: can see everyone (6), can hear everyone (4), different setting (2); can see directions or demonstrations easily (2).

7. Do you enjoy using chalkboards to show your answers? Why?

7/7 students said YES. Reasons: fun (2), everyone can share (2), can see others’ ideas (3), time to think as you write (1).
Appendix P: Inquiry Brief & Annotated Bibliography Increasing Student Participation

Teaching Context

As a Professional Development Intern for the 2008-2009 school year, I am working in a fourth grade self-contained classroom at Park Forest Elementary School in the State College Area School District. My classroom consists of twenty-four students. There are thirteen girls and eleven boys who make up this unique blend of nine and ten year olds. While the large majority of students in the classroom are Caucasian, three are African American. In addition, there is one student diagnosed with Autism, one with Aspergers, one with ADD, and one with ADHD.

Considering academic levels, there are noticeable variations among this group of students. Four students, one boy and three girls, receive full-time Learning Support for reading, writing, and mathematics, and spend approximately half of the school day out of the regular education classroom. Another female student, who has been diagnosed with Autism, also receives support outside of the regular classroom in almost all subject areas. Specifically with regards to reading levels, seven students in our class are above grade-level, eight are at the expected fourth-grade reading level, and nine are below grade-level. All of the students below grade level receive reading support in the form of Learning Support or Title I aid. Considering math levels, seven students in the classroom perform above grade-level, nine perform at grade-level, and eight perform below grade-level. Three of the students performing above grade-level attend Math Enrichment once a week. The students performing below grade-level receive Learning Support or attend Title I for additional help in math.

This classroom is equally diverse when considering the apparent behavioral patterns among students. There are no consistent, disruptive behavioral problems among any students in the classroom, though two students are at times challenging in terms of their behavior. One student is in need of consistent emotional support; she receives aid on a weekly basis. The students diagnosed with Autism and Aspergers express specific behavioral patterns and needs; a Para is present in the classroom at all times to provide extra support for both of them. In addition, five students receive speech support at varying times throughout the week.

The overwhelming majority of students in this classroom are easy to get along with and work well with others. Based on my observations over the past seven months, there are a handful of students who are outgoing, eager, and high achieving. The most avid and consistent participators, in terms of volunteering ideas, comments, and questions in both small and large group instruction, are among this group of students. The students in the classroom who have the most trouble with social relationships are those suffering from ADD, ADHD, Aspergers, and Autism, or have challenging behaviors. Although these students do participate in both large and small group discussions throughout the day, it is not as voluntary or as consistent.

Rationale

Throughout my experience thus far in the Professional Development School program and in my fourth grade classroom, there have been a few specific experiences that led me to this specific inquiry on increasing student participation. First of all, through method course work, I have acquired a great deal of information on the importance of student engagement, and have learned various strategies and ways in which to engage students in a variety of lessons. Through this, I have developed a belief that if a student is not engaged in a particular lesson, his or her learning will not be enhanced and thus the lesson will not be effective for him or her. To avoid this problematic situation, I try to engage my students during my instruction and especially in discussions. Ideally, I want every student to come to a new level of understanding as a result of any lesson that I teach. I tend to measure the success of my teaching through assessing what the students have learned and what they are still unsure of. Classroom discussions are one of the easiest ways to measure this informally. Based on this, I consider student participation to be an essential part of my classroom and a must for any lesson. Participation, whether verbal or nonverbal, allows for me, the teacher, to assess students' understanding, and it also reflects the level of engagement students have during any given period of instruction or activity. The rate of participation or the
engagement level of my class during certain lessons or discussions serves as feedback about my teaching or instructional techniques, too. To me, classrooms that have a high level of participation are seen as those that encompass a community of engaged learners who feel comfortable to contribute individual thoughts or questions. As a teacher, I strive for a classroom like this and I strive to teach in a way that encourages this.

Back in December, I experimented with a new management strategy as part of a “Task Journal” assignment. After carefully considering what new management strategy to implement, I chose a participation strategy based on general observations I had been making of my class. Here is an excerpt from the journal entry I wrote on December 11, 2008:

During the lessons I teach, the same students raise their hands to participate all the time. Although a student may be following along closely, understand the material, and know how to answer the questions I ask, I have no way of actually knowing unless the student raises his or her hand and offers a comment. The more a student participates, or at least raises his or her hand and to participate, the more involved I know they are with the lesson. Because of this, I decided to experiment with a new management style for participation during my DOL and Spelling lesson. Before the lesson began, I told the students that I see the same hands every day during this time. I also stated that I knew a lot of them had something to offer but were choosing not to. In addition, and most importantly, I told them that when they participate, or at least raise their hands, I know they are paying attention and understanding the lesson. If they are not raising their hands, I have no way of telling whether or not they are on-task or if they understand what we are discussing. To solve this problem, I explained that I was going to use our cup of classroom popsicle sticks. When I asked a question, I told the students I would draw a popsicle stick. Whoever’s name was on the stick was the one who would provide an answer for the question…if they were unsure of the answer, they could choose a classmate to help them out.

Although this strategy worked well when I implemented it and students whose names I did draw did participate, it did not help to increase the overall voluntary participation rate of the students in my class. Those who participate consistently continued to do so, and those who do not continued to appear disengaged. In addition, I felt as though I was putting too many students “on the spot;” I feared that this forced participation strategy would eventually discourage students from participating on their own. I began to really wonder at this point how I could encourage students to voice their comments and questions on their own during whole-class discussions.

Unfortunately, to this day, the same few students in my fourth grade classroom continuously participate, while many others remain outwardly quiet. I have become especially intrigued with whole-group participation because all of my students seem to offer comments when they are in a pair-share or small group situation, yet are more hesitant in the large group setting. My curiosity spiked even more when I noticed that some of my most consistent participators tended to shy away from commenting in certain subject areas, and some of the more hesitant-to-participate students displayed disengaged behaviors, such as a lack of eye contact and poor posture during certain subjects. I began to wonder why this was occurring. Because I value participation so highly, and I am and have always been a participatory learner myself, I decided that I want to explore ways to increase the overall participation rate during whole-group instructional time and activities so that a variety of students participate on a more regular basis. In this process, I hope to learn what influences student participation and what strategies I can implement to increase the participation rate among my students.

**Wonderings**

*Main Wondering:* How will implementing a variety of participation strategies work to increase the overall verbal and nonverbal, whole-group participation rate in among fourth grade students?
Sub-Wonderings

- How do other teachers define or characterize “participation?” What value does participation hold in different classrooms?
- How do students define “participation?” What value does it hold for them?
- What are some of the reasons that appear to hold some students back from voluntarily participating and/or demonstrating body language that suggests engagement?
- What strategies are best to increase verbal participation? Nonverbal participation?

Data Collection

For this inquiry, I plan to collect data, including baseline data, intervention data, and follow-up data, using several different strategies or methods. I also plan to collect data from a variety of different sources, including teachers and students. A detailed outline of my plan for data collection follows:

Systematic Data Collection Checklist: Whole-Group Discussion Participation

Throughout this inquiry, I will use a checklist to track the participation rate of my class. Prior to implementing participation strategies, I will use this checklist to collect data on my students’ current participation rates. I will chart each student’s participation (verbal and nonverbal – eye contact, posture, head position). I have designed a key so that all of my observations will be recorded systematically and consistently. Overall, I will record the number of times each student participates voluntarily, the number of times they raise their hand and the number of times they participate via forced participation (just called on). During discussion periods, I will look to see if the student is participating nonverbally. This baseline data will be collected for approximately one week. After that, I will be able to analyze the checklist and look for patterns.

The participation rate checklist will also be used to collect data about my students' participation rate as I implement new participation strategies. Using the same checklist and key as I used to collect baseline data, I will track student participation during each of the weeks I implement a new strategy. Each strategy will be tracked using a different checklist. This way, at the conclusion of my inquiry, I can compare the rate of participation between strategies and also compare that to my baseline data since all data was collected in the same way.

Anecdotal Records

When necessary, I will supplement checklist data with more specific anecdotal records to document my observations. These anecdotal records might be related to student tone, topic of discussion, specific comments or questions students ask, specific student behaviors during whole-class discussion, etc. They will work to supplement checklist data and provide additional context. These anecdotal records could also be taken from any filming that could be done of whole-group discussions in my classroom.

Student Survey

General Participation: In the initial survey, I will ask students to answer four questions about participation. These questions ask students to define participation, explain its important, describe what “good” participation look like, and explain why they participate. From this survey, I will be able to collect data on what my students think participation is and what it looks before I implement any interventions. I will be able to compare the information my students provide with my own expectations for class participation and assess whether discrepancies exist.

Personal participation: The main purpose of this survey is to provide me with information about each student’s perception of his/her participation habits as well as feelings about participating. The first half of the survey asks students to rate their individual participation rate in a variety of different subject areas using a scale from 1-5. The second half of the survey asks students’ to rate the level of comfort feel about participating in the same variety of subject areas using a scale from 1-5. From the initial administration of this survey, I will be provided with information on how often students believe they participate. I can compare this to the actual participation data I gathered using the checklist. From the
second half of the initial survey, I can collect data about how comfortable students feel participating in certain subject areas. In addition, I will base the strategies I choose to implement on the data I collect from this survey and the patterns I observe.

**Student Interview**

*Post-intervention student interviews:* After implementing participation strategies, I will interview a select group of students. From this interview, I want to gain feedback from the students on the strategies I implemented and if the strategies have changed their desire to participate and feelings about participation.

**Teacher Interview & Survey**

*Teacher interview & survey about participation:* This teacher interview will be done prior to implementing participation strategies. From this interview, I hope to gain information pertaining to how other teachers in a variety of grade levels describe and characterize participation, what participation behaviors they look for, the value participation holds in their classrooms, what participation strategies are used, and what they believe impacts or influences student participation. The surveys will contain the same questions as the interview. I will be able to compare this data not only to my own beliefs about participation but also those initial beliefs of my students. It is possible that I will also gain ideas about participation strategies from these interviews and surveys.

**Timeline**

**January 18th-24th**
- Brainstorm potential topics for inquiry – Look at PDS website for ideas
- Begin creating corresponding questions for these topics based on my specific wonderings and/or interests about them
- Re-read chapter 2 in Dana and Silva to get an idea on question formatting and words

**January 25th-31st**
- Select one topic to pursue for inquiry and identify my main wondering
- Meet with PDA for help with clarifying idea and forming question – look at samples
- Form a question based on my wondering and begin brainstorming sub-wonderings/ sub-questions
- Begin to develop a plan for inquiry – Where do I want to go with this? How do I want to accomplish that? (research, data collection, etc)

**February 1st-7th**
- Refine questions about main wondering and sub-wonderings
- Begin to identify what I want to focus on with regards to student participation variables (Multiple intelligences? Perceived ability/confidence? Time of day?)
- Brainstorm a tentative plan for inquiry (beginning, middle, end) including how I want to collect data, when I want to implement strategies, when I want to analyze results, etc
- Begin to form a plan for taking baseline data – checklist, survey
- Begin research and planning for Inquiry Brief

**February 8th-14th**
- Continue researching wondering topic
- Start and finish writing Inquiry Brief – including all necessary parts
- Write annotated bibliography based on resources collected and read
- Develop checklist for collecting baseline data about class participation
- Develop or locate surveys to administer to students (1. Defining participation 2. Perception of their participation and comfort participating
- Develop interview questions to administer to faculty members
• Begin planning how to collect baseline data on current participation rates in whole-group discussions/instruction (verbal – who raises hands, who contributes comment or question; nonverbal – eye contact, body posture). Ask mentor or PDA to take data while I teach Math

February 15th -21st
• Inquiry Brief – due Wednesday the 18th by midnight
• Define “participation” (my definition)
• Begin collecting baseline data on current participation rates in whole group discussions/lessons using systematic data collection chart Ask mentor or PDA to take data while I teach Math
• Administer student surveys
• E-mail PFE faculty members about interview. Set up interviews with faculty members (ideally 1 from each grade level)
• Begin to interview faculty members

February 22nd -28th
• Revise Inquiry Brief based on feedback – final draft due February 28th to PDA
• Continue and finish interviewing faculty members using the questions I have designed about participation
• Analyze notes from interviews, compare it to data collected from student surveys
• Analyze baseline data collected from students by looking for patterns - choose a focus (multiple intelligence or perceived ability/confidence) and possibly focus subject area
• Brainstorm a list of potential participation strategies to implement based on baseline data collected, research, ideas from other teachers, etc.

March 1st – 7th
• Implement participation strategy #1. Take anecdotal notes and use checklist
• Implement participation strategy #2. Take anecdotal notes and use checklist

March 8th-14th
• Spring Break

March 15th-21st
• Implement participation strategy #3. Take anecdotal notes and use checklist
• Implement participation strategy #4. Take anecdotal notes and use checklist

March 22nd-28th
• Overflow week (more strategies?)
• Begin to look for patterns in data collection.
• Develop interview questions for students pertaining to the participation strategies implemented

March 29th-April 4th
• Interview individual students about the different participation strategies implemented during this inquiry
• Begin to analyze results and form claims– did participation rates change when strategies were implemented? What strategies yielded the highest participation rates?

April 5th-11th
• Finish analyzing results and form claims
• Write final paper – Due to Peer Reviewer and PDA on Sat April 11th

April 12th-18th
• Edit/Revise final paper
• Plan presentation – speech and power point

April 19th-25th
• Finish editing/revising final paper – Due Wednesday April 22nd
• Practice speech
Inquiry Annotated Bibliography


http://teaching.berkeley.edu/bgd/participation.html.

a. In general, this article provides information on strategies that encourage student participation in discussions and ways to maintain a high level of participation. Beginning with a description on why student participation is important, the article refers to the job of an educator as one who engages all students, keeps them talking to each other, and helps them develop insights into the material. Information is presented in three general sections with individual strategies listed and described underneath each of the following headings: General Strategies, Tactics to Increase Student Participation, and Tactics to Keep Students Talking. The strategies suggested are unique in variety, ranging from those that discuss the classroom environment to those that involve grouping strategies, nonverbal cue use, discussion of participation with students, reward system use, and teacher behavior modifications. As I begin my inquiry, the section on tactics to keep students talking will be especially useful for me since my goal is not only to increase participation but to also maintain that. Since all of these strategies can be implemented to serve specific purposes related to participation, I can reference this list as I plan and implement participation strategies in my class to increase participation and sustain that higher rate. Because of the variety, I can select strategies that are most applicable to my students and their current perceptions of confidence and that work for a variety of subject areas.


a. The focus of this handout is on how participation provides an opportunity to assess and promote learning. The uniqueness of this piece is found in the description of the goals of student participation in the classroom. It will be useful to compare these goals to my own expectations for participation as well as the views of other teachers. After a general discussion on participation, the article is broken up into three different sections: Shaping the Environment, Planning, and Listening and Responding. Overall, it can be stated that in every class, student participation can be improved if a teacher devotes time and thought into shaping the environment, planning each time session, and carefully considering the way interactions communicate an attitude about participation to students. What is most useful about this article is that not only are strategies and techniques recommended under each of the three broad topics, but they are also described in depth with multiple ideas, things to consider, modifications, and reasons why they are effective. When consulting these strategies as I start the intervention stage of my inquiry, I will easily be able to decide which ones might be beneficial to use for my class based on the section it falls under (environment, planning, listening and responding) and on the descriptive overview of each technique. Also, the list of links and references at the conclusion of the article provides me with avenues for further research pertaining to these ideas.

a. This handout, compiled for the MiddleWeb Reading/Writing Workshop discussion group, lists twenty different strategies to help engage students primarily with reading and writing, although it is suggested that the strategies could be used with other disciplines too. Underneath of each strategy is a description of the activity, task, or technique. The clear explanation of the purpose, procedure or process for carrying out, and the end product makes each strategy extremely appealing and seemingly easy to implement in any classroom. The strategies described vary from ones that hold individual students accountable for participation and understanding to those that require group or partner work and sharing. Other strategies suggest ways to encourage and include answers from every student in the class during discussions. The length of time for these strategies also vary from ones that take a few minutes to others that will occupy most of the class period. Overall, this will be an article to consult when beginning to plan participation strategies to implement. Because of the wide variety and room for modification, I will be able to select strategies that fit the purposes I desire and that will benefit my students the most.


a. This source refers to the interviews that I will administer to various elementary teachers in my elementary school including Kim Wilson, (1st/2nd grade) Ron Myers (4th grade), Jen Cody (5th grade), and Pam Karwoski (3rd/4th grade). Interview questions will pertain to student participation in general and in their personal classrooms. This teacher interview will be done prior to implementing participation strategies. From this interview, I will gain information concerning how other teachers in a variety of grade levels define participation, what cues they look for to indicate participation, the value participation holds in their classrooms, and how they evaluate participation. In addition, teachers will be asked to list some of the participation strategies they use or have used and describe what they believe are some of the variables that impact or influence student participation. I will be able to compare this data not only to my own beliefs about participation but also those initial beliefs of my students. It is possible that I will also gain ideas about participation strategies from these interviews to use during my intervention stage. Many teachers who were not able to meet for an interview answered the same questions via a survey. This information provides similar insight.


a. This portion of Natalie Rathvon’s book discusses a variety of classroom management interventions that can be used to serve a variety of different purposes including organizing the environment, establishing rules and procedures, managing transitions, and so on. The section titled “Organizing a Productive Classroom Environment” is most applicable to my inquiry due to its discussion on how the classroom environment impacts student performance and behavior. After providing a summary of the research done relating to the classroom environment and student behavior, including participation, a strategy for increasing student participation through using a semicircular desk arrangement is described in depth. An overview of the strategy, its purpose, and required materials are noted. Three different observation options, a list of
intervention steps, and evaluation options are also mentioned and described. This article's credibility and strength lies in the research supporting participation strategies related to the classroom environment. In addition, because the strategy suggests lists multiple observation and evaluation options, it can be used for a variety of different purposes and can be adapted to fit a variety of classrooms. As I begin the inquiry process with surveys, interviews, baseline data collection, and intervention planning, it will be important to realize and consider the impact the environment has on student participation and the level of confidence students have about participating.


a. The primary purpose of this chapter is to explain the development of children’s self-efficacy, a part of Bandura’s social cognitive theory, as it particularly relates to academics. The first portion of this piece is designed to provide a definition for self-efficacy and differentiate it from other similar ideas, such as self-concept, effectance motivation, and perceived control. Next, the article discusses the development of self-efficacy and elaborates on the influences that family, peers, school, and transitions have on the development and maintenance of self-efficacy. The following section describes gender and ethnic differences in self-efficacy, which are mainly influenced by societal expectations and stereotypes despite research proving them wrong. One of the most relevant sections for my inquiry is the one titled “Self-Efficacy for Learning and Achievement.” The considerations students make about engaging in a learning task and things that affect students as they engage in activities are described in the paragraphs that follow. What adds greatly to the strength and credibility of this article is the wealth of research scattered throughout and also discussed in depth in the last section of the article. Research on how self-efficacy correlates with many educational aspects, including achievement, learning strategies, and instruction is presented. In addition, research on the effects of instructional practices on self-efficacy is addressed. Because this section deals with processes of informing students of their capabilities and motivating them to perform well, the information will be valuable to consider as I conduct student interviews and implement participation strategies. This article also provides some insight into one of my sub-questions.


a. This research article begins by providing previous research that addresses some of the factors that motivate children to learn, including student beliefs and attitudes that predict motivation and the benefits of high motivation. This beginning portion also briefly describes teacher behaviors that have been shown to effective in promoting student motivation. Following this overview information, a study, examining the effects of teacher behavior on student engagement and in particular the effects of student motivation on teacher behavior in the classroom, is introduced and the methodology is explained. After the results are explained in detail, a summary of findings
concludes the article. The results of this study are particularly relevant for my inquiry. The study found that teacher behavior influences student engagement and in turn, student engagement influences teacher behavior. One of my sub wondering questions the relationship between teacher behavior and student participation. Not only does this article provide a foundation for this wondering, but it also provided me with insight on the reciprocal relationship. Knowing that this relationship exists, I now not only want to consider what affect my behaviors have on my students, but how my students motivation and engagement influence my behavior when implementing participation strategies and assessing student engagement.


a. This report of a research study examines how student participation, viewed as a work habit, is related to a combination of both student factors and features of the classroom context. The beginning of the report discusses the development of a positive work habit in school, concluding that work habits arise from the interaction of both characteristics of the student and of the learning environment. In my inquiry, I know that I need to consider this interaction and develop strategies that account for both. Before presenting the research study, participation is addressed as a productive work habit: it facilitates learning, provides students with opportunities to learn and practice knowledge, and provides opportunities to examine student thinking. Factors that influence student participation, such as motivation, teacher instruction and achievement goal structures, and the association between personal and environmental factors are discussed. The strength of this article lies in its comprehensive overview of participation backed by research. The latter half of the article discusses a study designed to explain students’ participation in classroom learning activities by considering the “simultaneous interaction of personal and environmental factors.” It was discovered that student participation changed from one year to the next even though the personal achievement goals of each student examined remained relatively consistent. Overall, student participation reflects a unique interaction between personal factors and the opportunities and constraints of the classroom context. As I implement various participation strategies, I need to consider personal factors and environment factors, as well as the interaction that exists between them. Examining this relationship will surely lead to insightful findings.


a. The primary purpose of this BBC article is to provide parents with information and suggestions about children’s confidence and self-esteem. In particular, this website is designed as a resource for parents of elementary aged children. Information on why “good self-esteem” is desired both inside and outside of the classroom, as well as how school life and friends can take a toll on a child’s confidence is provided. Also listed in this article are a variety of strategies that parents can use to help boost their child’s confidence. Included in this list are ideas pertaining to acknowledging feelings, focusing on successes, giving praise and positive feedback, listening and
reflecting, encouraging independence, and respecting interests. There is also a section that helps parents evaluate whether they are helping or hindering their child’s confidence. Although these tips are designed for parents, there are a variety of ideas that I can use and consider for both my student and teacher surveys and interviews in order to gain an idea of how confident my students feel and if teachers use any strategies or techniques to help foster confidence in their students. These are also suggestions that I will want to keep in mind as I work to develop and implement participation strategies in my classroom that will not only increase student participation rates but also the students’ confidence in participating successfully.


a. This book, serving as both a teacher and parent resource, provides references to expectations about children’s growth and development in the classroom by age. Each section contains a narrative description, growth patterns, classroom implications, and appropriate curriculum of and for each age group from 4-14. In compiling this book, the author combined ideas and observations from his personal experience as a classroom teacher and teacher educator with other educational theories; he presents this key information in a readable format of short narratives and bulleted points. The sections titled “Nine Year Olds” and “Ten Year Olds” will be particularly helpful for me as I plan and implement my inquiry. Knowing information about the typical social, cognitive, and language growth patterns of this aged students and the classroom implications of these developments will provide me with information as to what I can expect from my students during classroom discussions. I can also use this information to plan and implement participation strategies that focus on the specific growth and development of my nine and ten year old students.