The Motivation-Participation Connection

Formerly:
Hands to the Skies & Eyes Off the Prize:
Intrinsically Motivating Students to Participate

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I. Teaching Context

I conducted this inquiry project during my yearlong tenure as an intern in a self-contained fourth grade classroom at Ferguson Township Elementary School. Ferguson Township is a member of the State College Area School District in the rural setting of Pine Grove Mills, Pennsylvania. The class in which I interned was composed of twenty-two individual learners, twelve of them girls, ten of them boys. Six of these students receive Title I support in math, reading, and/or spelling. Three students have Individualized Education Plans for speech while three students receive aid from an Instructional Support Team. The majority of the students in my classroom are Caucasian, with one Korean student and one Hispanic student being the only minority representation. There is an even distribution among the students in terms of socioeconomic status, ranging from lower-middle, to upper-middle class. It is also important to note that the cultural and socioeconomic demographics of my classroom as a single unit generally reflect those of the school as a whole. The school does make a genuine attempt to acknowledge and celebrate diversity, even through there is not much contained in the school itself.

II. Inquiry Development and Rationale

Throughout my observations, it had been made clear to me by both my cooperating teacher and supervisor that I had developed certain tendencies when calling on students to participate in the classroom. I was told that I tend to call on the same students repeatedly during my teaching. To verify this, my supervisor shared some data with me that she had collected during one of my lessons. She informed me that I had called on a particular student no less than eleven times in a single sixty-minute lesson. Her findings had not come as a surprise to me at that time. I am, and always have been, fully

aware of my calling patterns when it comes to student participation. I made sure to make this known to my cooperating teacher and supervisor.

When I was questioned as to why I called on this student so frequently, my response was as simple as it could have been: "He had his hand up." This led to further investigations into my calling patterns. I was asked why I was so hesitant to call on those students who were not as eager to volunteer. I have always had the firm belief that probing a student who does not seem to be paying attention or is not voluntarily engaging in discussion can, in time, lead to a severe decrease in self-esteem and motivation for that student. Because of this pedagogy, I chose to only select those students who volunteer their answers to share them with the class. There was also a naïve part of me who believed that each student who does not participate is choosing not to do so simply because they are confused or do not have an answer which they believe to be correct. I realize that some students may be less inclined to participate merely because they simply do not want to, but at that point in my professional development, I was not ready to take such a risk by calling on these students.

With some convincing from my colleagues and supervisors, I began to branch out more with my calling patterns. I began to call on students who I felt would have been able to answer my questions or provide insights to our discussions, even though they had not volunteered their thoughts. More often than not, I was correct in my assumptions and the students provided adequate responses to my questions.

This change in practice led me to further examine the lack of participation in certain students. Why were they so adamant on keeping their thoughts to themselves? In talking with teachers and fellow interns, I found that it is a common epidemic that nearly every classroom has a handful of students who always participate, another handful who very rarely do, and the rest of the students, who fall somewhere in between.

But the question still remained: Why do students choose not to participate? Using the philosophical query posed by Levin & Shanken-Kaye that states, "If you know the whys you can develop the hows" (23), my inquiry started to take form. I decided that if I could determine why my students chose not to participate, then, eventually I could determine what actions I could take in order to motivate and influence students to change such habits. It was here that my inquiry project was conceived.

III. Research

My first goal in researching my inquiry topic was to find out exactly how fellow educators defined participation and why it is viewed as such an important entity of any successful classroom. In my research, I came across the following definition. As Hudson and Bruckman note:

> "*Participation* in a conversation involves taking the roles of both speaker and listener at some points during the conversation. Unlike *engagement*, which only requires active mental attention, participation requires that listeners also contribute to the discussion" (2).

As teachers, we are constantly stressing the importance of student engagement. What Hudson and Bruckman argue is that, sometimes, particularly during discussions, it is not enough for students to be engaged. Assuming that, as educators, our goal is to provide equal opportunities for success to all of our students, then having a discussion in which the teacher engages in discourse with only a handful of students greatly neglects the learning of the majority of the class. Although those students not actively participating in discussion may be engaged in the happenings of the classroom, they will not value the topics being discussed nearly as well as those contributing to the discussion. The classroom environment is one that aims to create a learning atmosphere that allows for the success of all students.

If what Hudson and Bruckman claim of participation is correct, then the success of all students cannot be assured unless there is participation from all students.

After establishing a working definition of the topic at hand and its role in the common classroom, I sought to find out what factors influence students to participate the most. Throughout my research, I came across many theories as to why students feel more or less inclined to participate in the classroom. There were two essential reasons that seemed to remain consistent in many theorists' rationales. Julianne C. Turner and Helen Patrick summarize these two factors in their article, *Motivational Influences on Student Participation in Classroom Learning Activities*. The authors state the following regarding factors of participation:

> ". . . participation varies among students, and for some opportunities to learn do not arise. Important factors regarding whether students participate include students' motivation to learn and the kinds of environments and supports for participation offered through classroom instruction" (3).

Simply stated, two main factors that contribute toward a student's desire to engage in classroom discourse are that student's motivation to participate and the level of comfort that student feels in the classroom. In an effort to gain a better understanding of this argument, I chose to further research and analyze both of these contributing factors further.

Motivation, as discussed by Levin and Shanken-Kaye, is a direct product of a student's expectation of success in a given task and how important that task is to the student (96). In order for students to expect to succeed in the classroom, they would have had to be successful in similar previous tasks. I took particular interest in the way this theory could relate to participation. If a student had previously attempted to answer a question without success, that student's expectation to succeed may diminish each time his or her answer yields a similar result. Over time this could have a

significantly negative impact on the student's motivation to participate. Correlatively, if said student does not expect to succeed, then the value that student places on participation is also likely to diminish. In other words, students are not likely to place high personal value on what they do not succeed in.

These same authors also discuss student comfort levels in the classroom as an aspect of self-esteem. They argue that self-esteem is made up of four key components, those being: 1) how significant that person feels they are in the opinions of others, 2) the confidence that person has in his or her abilities, 3) that person's ability to help others, and 4) the level of control that person feels they have in a given task (Levin & Shanken-Kaye 108). These four characteristics of high self-esteem also lend themselves well to participation. Students must be confident in their abilities if they are to offer a response to a question. Also, if students do not feel that their peers and teachers value their opinions, or that their opinions will not contribute anything beneficial to the group, then those students may be reluctant to share their thoughts.

Finally, I began to look into which methods of assessment teachers use when evaluating participation rates. With a combination of research materials and responses from fellow educators in my building, I was faced with an overabundance of information, some of which will be discussed in further detail in the remainder of this paper. Most methods I came upon in my research were somewhat similar in nature and nearly all were directed and facilitated by the teacher. One study, however, discussed how teachers could place the opportunity for assessment in the hands of their students. A study conducted by Stacy Zaremba and Dana Dunn discussed how rates of involvement changed when twenty-six undergraduate psychology students were asked to assess and reflect on their own rates of participation.

The rationale Zaremba and Dunn's provide for their study examines the inaccuracies that teachers could encounter when evaluating students' participation levels. This rationale is briefly described in the following quote:

> "Whatever its quality, teachers must evaluate and measure students' level of class participation. Most participation measures are vague and subjective, yet instructors must grade students fairly…" (191).

Although this study was conducted with college students, I felt that the methods used could be adapted to more appropriately accommodate an elementary setting.

My research left me with asking more questions than I had when I started. I wanted to know how to positively influence all of the key factors that encourage students to participate in class. I wanted to know what correlation (if any) existed between certain strategies and rates of participation and to what degree they were effective. From these thoughts, my wonderings began to develop.

IV. Questions & Wonderings

The driving intention of my inquiry has been to answer the question, "Why do students choose to participate or not participate in the classroom?" As my inquiry developed many other questions and sub-wonderings surfaced. Many of these sub-wonderings further evolved and/or became the greater focus of my inquiry. The further questions inspired by this driving question of inquiry were as follows:

- What strategies can teachers implement in order to help students feel more comfortable speaking their minds in the classroom?
- What strategies for improving rates of participation are most effective in the classroom?
- What strategies can teachers implement in order to influence students to *want* to participate more in the classroom?

- What relationship exists between intrinsic/extrinsic motivation and rates of participation?
- What relationship exists between student comfort/confidence in the classroom and rates of participation?
- Will having students self-assess their participation rates have an influence on rates of participation?

V. Inquiry vs. Improvement

It is pertinent to the credibility of this query that I distinguish my rationale, questions, wonderings, and processes as methods of inquiry and not of a project seeking improvement. As the main wondering of this paper indicates, the sole purpose of this investigation has been to discover why students choose to participate or not participate. Along with this I also aimed to see what effect certain strategies would have on student participation. The developing aim of this inquiry is not to necessarily observe improving rates of participation among students or to implement activities that would assure increased rates of participation from my students. Although an observable improvement in rates of participation may occur throughout the course of this inquiry, such a result is not necessary for the completion or success of the project. What this inquiry does aim to examine, however is what relationship (if any) exists between teacher motivational strategies and rates of student participation in the classroom.

VI. Inquiry Plan Description

I began this inquiry with my own thoughts about student participation in mind. What I did not have, however, were the perceptions of two other essential factors in the equation: those being the

perceptions of other teachers and of the students themselves. Thus, I decided that the first step in my inquiry development was to collect some data from these two vital sources.

I first administered an anonymous survey to my students asking them to examine their own levels of participation. At the same time, I placed in every teacher's mailbox a request for any thoughts and/or strategies they routinely implemented in their classrooms. Once I had received the completed surveys and responses from various teachers, I began to record and analyze the data I was presented with.

Upon analyzing the results of the survey and questionnaire I began to research different aspects of participation related to the data I observed. These aspects included, but were not limited to, strategies and contributing factors to students' levels of participation. The bulk of my research led me to conclude that the two main influences on student participation are motivation and the self-esteem that students have in their classroom. From this conclusion, I was able to begin to implement strategies in the classroom to observe relationships between these factors and rates of student participation.

Before implementing strategies based on my initial research, I wanted to collect some data on the current rates of participation among the students in my class. In an effort to pre-assess rates of participation in my classroom, I asked my mentor teacher to collect some raw data over the course of several days. Every time a student raised his or her hand during my teaching, my mentor would record it on a chart with a tally mark. I would collect the data during my mentor's teaching as well. It's important to note that this data does not reflect how many times a student was called on, rather, how many times a student *offered* to participate by raising his or her hand.

After I had collected sufficient data in this respect, I began to examine what, if any, correlation existed between certain teaching strategies and rates of student participation. It is also important to

note that this method of data collection continued throughout the rest of my inquiry with the intention of comparing teacher-recorded data and student-recorded data with the particular strategy that was being implemented in the classroom at that time (the student-recorded data process is described in the following paragraphs). All raw data was averaged and compiled into a cumulative chart that displays the results of each strategy.

The first strategy I chose to implement was based on Zaremba and Dunn's 2004 study. In this study, students found that frequent self-evaluation encouraged them to participate more often (192). I decided to distribute a paper (or "Green Paper" as was commonly referred to) to students in which they would record the amount of times they would raise their hands in a given day with tally marks. The students assessed themselves in this manner daily throughout this inquiry.

Aside from providing the students with the opportunity to self-evaluate their own rates of participation, the Green Paper also helped me monitor the accuracy of the students in their recordings. By comparing rates of participation as recorded by the students with those recorded by the teachers, I was able to observe any major deviations in teacher and student recorded data. Although I expected to notice some difference between the two sets of data, I felt that the numbers recorded by each of the respective parties should be relatively close in number.

Shortly after administering the self-evaluation technique, I began having students reflect on their results daily. At the end of several school days, students were given a reflection form to fill out. This form asked students to compare their participation rates between days and also to provide a brief explanation as to why their participation changed from day to day. This reflection form was used sporadically throughout the rest of my inquiry, especially during periods in which there was a transition between strategies.

The next step in my inquiry process was to introduce a reward system for participation. I decided to go about this by utilizing a reward system that was already established in my classroom earlier in the year. Whenever my mentor or I had 'caught' someone doing something nice or well, we would give him or her a 'fish ticket,' upon on which the students would write their names. Fish tickets were put into a fish bowl throughout the week, and every Friday five names would be drawn from the fish bowl. Those five students whose names were drawn received an opportunity to select a prize from our treasure box.

I decided to pair the fish tickets with the Green Paper that the students were still using to keep track of their rates of participation. I told the students that each time they achieved five marks on their Green Paper, they would receive a fish ticket. To assure that the class time would not be interrupted, I told the students that fish tickets would be distributed at the end of the day when the students totaled their tally marks. I also told the class that if the class, as a whole recorded five hundred for the week, their reward would be a pajama day before the end of the school year.

My final activity involved random calling patterns and praising students who took risks by participating when they were not completely sure their answer was correct. During the time that this strategy was put into effect, I would select students to participate by randomly drawing from a jar of popsicle sticks with their names on them. Whenever a student's name would be drawn, it would remain out of the jar until each of his or her classmates' names were drawn. Once all name sticks were drawn, they were replaced in the jar and the process would start over again.

Once all of my in-class inquiring was complete, I compiled my data onto a single table in order to make comparisons. By pooling and analyzing this evidence, I was able to make certain claims that will be discussed in the latter part of this paper.

VII. Data Collection & Analysis

Author's Note: Any examples of student work can be found in APPENDIX B. All names listed throughout each of the appendices are pseudonyms.

A. Student Survey

A.1. Student Survey: Collection

I began collecting data by surveying my students about different aspects of participation. (APPENDIX A.1). This survey asked students to share their thoughts on various aspects of participation; the students were asked to not include their names on the survey to assure anonymity. The survey consisted of five questions asking students to provide information as to how often, in which subjects, when, and why they do or do not participate.

A.2. Student Survey: Analysis

To analyze this data, I recorded all answers provided by my students. I then transferred the information from the tally graph into a chart of raw data (APPENDIX C.1, C.1.2).

Upon analyzing the results of the survey, I found that (on a scale of one to five, five being the most) the average level of participation, as perceived by the students, was roughly 3.6. This told me that, on average, students felt they were participating at a somewhat moderate frequency. It is also important to note that no student rated his or her participation level a 5 (always) or a 1 (never). From this, I can gather that each student in my class believed that he or she, at the very least, participates sporadically.

B. Letter to Teachers

B.1 Letter to Teachers: Collection

Shortly after administering the aforementioned survey to my students, I sent out similar queries to teachers. In each teacher's mailbox, I placed a short letter asking that they provide me with any and all strategies they felt worked particularly well in their classrooms in terms of facilitating participation from students (APPENDIX A.2).

B.2. Letter to Teachers: Analysis

The responses I received from these experienced educators greatly varied. I observed many different strategies in their responses, although some tended to have a common end to be justified by various means. There was very little overlap in terms of specific strategies the teachers implemented in their classrooms. In general, most strategies had their roots in positive reinforcement and a reward system. I recorded each response that I received and charted them accordingly (APPENDIX C.2).

C. How Many Times Students Raise Their Hands (Pre-Data)

C.1. How Many Times Students Raise Their Hands (Pre-Data): Collection

Upon analyzing the student surveys and teacher responses, I began to collect some more raw data from my classroom in terms of rates of participation before implementing any strategies. Whenever my mentor or I was teaching, her or his respective counterpart would observe how many times students raised their hands during a given lesson. The recorder would simply add a tally mark in a column next to the corresponding students' names whenever those students raised their hands. It is important to note that whether or not that student was called on was irrelevant to this data. I simply wanted to know how often students volunteer their opinions and answers, rather than how often they often get to voice them.

C.2. How Many Times Students Raise Their Hands (Pre-Data): Analysis

Similar to my previous methods of data analysis, I began by converting these tally charts into a similar graph with raw data in the form of averages (APPENDIX C.3., C.4.). This data showed some inconsistencies with the first survey I administered. Although most students did participate fairly often, there were several who did so minimally, if at all.

I then compared the results of a given day with the strategy that was being implemented at that time. These strategies included self-evaluations, a reward system, and randomly calling on students paired with praise for correct answers and taking risks when students were unsure of their answers. Further explanation and analysis of these strategies will be discussed in greater detail later on in this section. After two weeks of recording, I felt I had enough data to establish a trend. I then began to implement these strategies in the classroom. The strategies I chose to execute follow in chronological order with greater detail.

D. Self-Evaluation

D.1. Self-Evaluation: Collection

The first approach I used placed the task of recording participation rates in the hands of the students. Throughout each school day, students were asked to record (with a tally mark, check, etc.) the number of times they raised their hands on a blank graph (APPENDIX 1.7). As previously mentioned (and as will often be referred to throughout this paper), students commonly referred to this graph as their "Green Paper." Keeping consistent with my previous methods of data collection, whether or not students were asked to share their thoughts did not carry any weight in the data. The emphasis was placed strictly on attempts at voluntary participation. Students would total their tallies at the end of each school day. This data simply provided me with first-hand student recorded rates of participation.

The students were asked to keep their Green sheet with them to make recordings during each class period of the day with only two exceptions: 1) The students did not use the chart during math class. This was simply because my students were homogeneously grouped at the beginning of the school year for math placement. In an effort to not skew any data, and as a courtesy to the visiting math students and other math classroom, I decided to exclude math class from the study. I realize that this act, in itself, can skew my data, but I feel that the inaccuracies would have been much greater had this sacrifice not been made. By having the students switch for math class, roughly half of my homeroom class would have had insufficient data in terms of teacher recorded rates of participation. 2) For the aforementioned reason (as well as courtesy to the respective teachers) the students were also asked to not bring their charts to special classes (art, music, etc.).

Prior to putting the chart into effect, I set some specific guidelines as to what constitutes "raising your hand." First, the students were told that simply putting their hands in the air would not count towards their chart. I told the students that in order to receive a mark, they must raise their hands to answer a question, ask a question, participate in a discussion, or share some important information. Students were also informed that asking to go to the bathroom or to get a drink were not criteria that would count towards a mark on their charts. In order to solidify the ground rules for what would qualify for a tally mark on their Green Sheets, I fielded several questions (many of them humorous in nature, or witty attempts earn marks) until both teacher and students were clear on the subject.

D.2. Self-Evaluation: Analysis

I began by transferring the raw data from each student's Green Sheet into a larger composite table. This raw data was, again, averaged and transferred to the composite table. I continued to observe discrepancies and correlations as the detailed processes for collecting previous data describes.

E. Self-Evaluation Survey

E.1. Self-Evaluation Survey: Collection

After several days of having the students record participation levels on their Green Sheets, I started to administer a self-evaluation form (APPENDIX A.8). The form was given to students at the end of each day so that they may reflect on their levels of participation. Through this brief questionnaire, the students were able to provide information about their changing or stagnant rates of participation as well as their own perceptions as to why this change did or did not occur.

E.2. Self-Evaluation Survey: Analysis

Because they provided information on more than one aspect of my inquiry, the analysis for the self-evaluation surveys took place over an extended period of time. They first allowed me to compare student perceptions of participation with teacher perceptions. Minor deviations were observed, but these deviations remained rather consistent and occurred across the board. It is my estimation that these variations can be attributed to the fact that students were more likely to observe each of their own instances of participation, while it was less likely for the teacher to accurately note the hands of each of the twenty-two students every time one of those students participated.

Secondly, the self-evaluation surveys allowed me to note any observable change in participation that took place due to any of the proceeding strategies. Any adjustments in levels of participation that took place were more easily observed with the aid of this survey. The open-ended question also provided me with a great deal of insight as to the reasons why students felt they participated more or less as compared to when previous strategies were used.

F. Reward System

F.1. Reward System: Collection

I then began to experiment with a reward system that so many teachers had cited as a viable option for encouraging participation (APPENDIX C.2). Through I do acknowledge that rewards are a form of extrinsic motivation, I felt that the direction my inquiry was headed in was such that sources of motivation were to be acknowledged, but not discriminated against. Intrinsically motivating my students to participate was no longer my goal, as observing correlations between rates of participation and different strategies began to take precedent.

I told the students that for every five checks they earned on their Green Sheets, they would earn a fish ticket (description of the implications for "fish tickets" and guidelines for the distribution of them are outlined in section **VI. Inquiry Plan and Development**). The students were also told that, if they recorded five hundred marks on their Green Sheets by any given week's end, they would receive the prize of having pajama day at school in the near future.

F.2. Reward System: Analysis

An alteration needed to be made to this strategy almost immediately after its implementation. As the first day progressed, I noticed (through casual observation) that students' participation levels were exponentially higher than usual. I took a rough count of how many times they had raised their hands just past midday and found that they had nearly met their goal for the week. It became apparent to me that the students would meet the weeklong goal I had set by the end of the first day. Thus, I decided to make some changes in my reward system strategy.

I first told the students that I thought they would most likely reach their goal by the end of the day. I also let them know that because they were participating so frequently, I did not have enough fish tickets to distribute to everyone. The students were then informed that in place of fish tickets, they would have the opportunity to earn a pizza party. The students were very enticed and delighted at this news. I explained the new conditions of attaining the reward to the students. The conditions were that

if the students surpassed their goal and recorded one thousand, one hundred eleven marks on their Green Sheets, they would receive a pizza party along with pajama day. The students did achieve this goal by the end of the school day. I purposely chose to set a goal I felt students would be able to reach by the end of the school day rather than the end of the week because of how difficult and tedious collecting such excessive data was.

Again, I continued to observe tally counts made by both the students and my mentor. I compiled these results into two respective tables. I then compared the raw data and averages with that of my previously recorded data. In addition, I continued to administer the student self-reflection survey during this time. These student reflections were also examined. Because the data produced by this strategy was so overwhelming, additional tests were not carried out beyond the initial day of implementation.

G. Random Calling with Praise

G.1. Random Calling with Praise: Collection

The final strategy I put into practice in my classroom focused on random calling patterns. I placed each student's name on a popsicle stick and placed those sticks in a jar. Throughout my lessons, I randomly drew sticks from the jar in order to choose students to participate. Whether or not the selected students had their hands up was irrelevant to my selections. If the students that were selected expressed uncertainty in their abilities to contribute significantly, I encouraged said students to take a risk. Regardless of the outcome, I was sure to praise each student for taking that risk and showing me that eh/she was actively thinking about the current discussion. When a student's name was chosen, it was removed from the jar. I continued to draw names until all had been removed from the jar, upon which all sticks were replaced and the process started over again.

As this strategy was implemented, I noticed that participation rates were beginning to decline. In my opinion, knowing that the selection of students would be completely random discouraged students from voluntarily participating. I then decided to use this strategy as a supplement rather than a primary means. I enforced this idea by reverting to the "name jar" at specific points of the day when I observed fewer students participating.

G.2. Random Calling with Praise: Analysis

To assure consistency with my previous methods of data collection and analysis, I observed tally counts as recorded by both students and teachers. Again, averages were added to my chart. I also continued to compare these raw data and averages with information recorded prior to strategy implementation. Student reflection surveys were continually administered and observed during this time as well.

H. Cumulative Data Averages

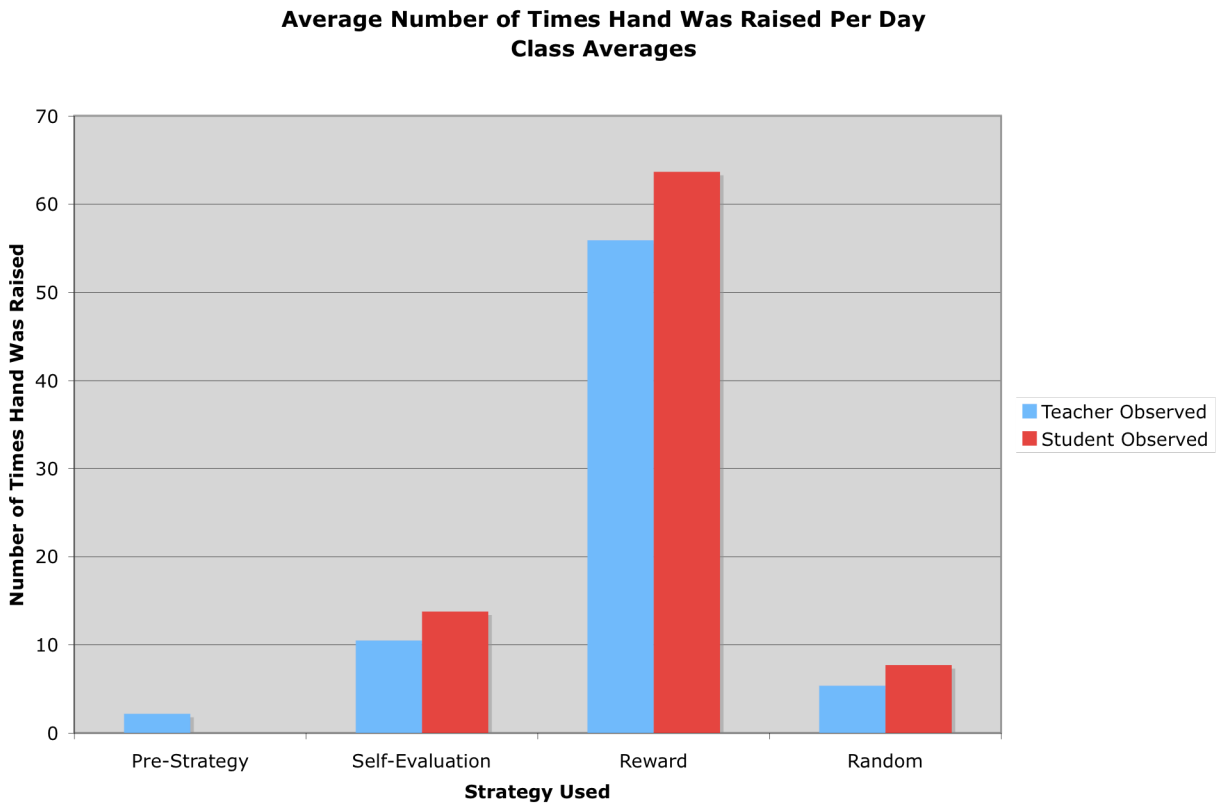
H.1 Cumulative Data Averages: Collection

Once I collected all of the data from the previously mentioned sections had been collected I compiled it into a single chart. The data presented in this chart is the computed average rates of participation for each student during the time that each strategy was implemented as recorded by the teachers and students, respectively (APPENDIX C.3, C.4). Whole class averages were also calculated. I then converted the data into charts which can greater illustrate any changes that were observed (APPENDIX C.3.1, C.4.1).

H.2 Cumulative Data Averages: Analysis

I then compared these average rates of participation for individual students as well as the rates of the whole class. To make this visualization easier, I converted the raw data from the aforementioned charts into two graphs representative of teacher and student recorded data, respectively (APPENDIX C.3.1, C.4.1). These graphs showed the change in participation for each individual student. Through analyzing this data, I was able to recognize which strategies facilitated greater rates of participation (and with whom) and which strategies were not as successful. I also cross-referenced these numbers with the daily reflections completed by the students to gain insight as to why the students were more or less responsive to the particular strategy that was in place at that time.

In order to gain an idea of the change in participation influenced by these different strategies as it applies to the entire class, I again constructed a graph.



Though this graph, changes in participation can be viewed as a function of the entire class.

VIII. Claims

Claim A: An almost universal reason given by students for their lack of participation is that they do not know the answer to a given question.

Claim B: Self-monitoring and reflecting leads to short-term increased rates of participation among students.

Claim C: When used as the primary means of selecting students to participate, randomly drawing student names seemed to discourage voluntary participation compared with other techniques.

IX. Evidence

A. Claim A Evidence

The first claim that I feel is supported by the data produced by this inquiry is that one of the main reasons students choose not to participate is because they do not know the answer to a given question. The first (and most concrete) instance of evidence towards this claim surfaced when I administered a pre-assessment survey of participation to my students. Twenty-two students were asked numerous questions concerning perceptions of their own levels of participation. When asked, "Why don't you participate?" each of the twenty-two students surveyed cited "I don't know the answer" as a valid reason (APPENDIX B.1).

Later on in my inquiry process, a daily questionnaire was administered to supplement the students' self-evaluation. When new strategies were being introduced, students often noted an increase in their rates of participation. They frequently cited "knowing the answers to more questions" on that particular day (APPENDIX B.3) as the reason for this increase. From this, it is only logical to infer that had the students perceived that they did not know as many answers, they would not have

participated as much. It is important to note that the degree of difficulty in terms of material taught and questions asked was considered typical of the rest of the school year by both my mentor teacher and myself during this time.

While it is possible that the students may have known the answers to more questions from day to day, many students frequently noted this answer as the reason why they participated more often. The fact that student participation increased exponentially the day they learned they had the opportunity to earn a reward seems like logical rather than coincidental. I feel that, in this case, correlation does imply causation. It is plain to see from the graph in APPENDIX C (C.5) that student participation levels rose exponentially when posed with the opportunity to earn a reward, and were significantly lower elsewhere. Had the "I don't know the answer" theory held true, it would have been virtually impossible for student participation to increase at such a rate. I find it highly unlikely that students just so happened to know the answers to the fewest amount of questions when I had not implemented any strategies to facilitate participation. It almost seems fair to say that stating, "I don't know the answer" can be viewed as a scapegoat for a student's lack of participation.

B. Claim B Evidence

The first observable change in participation levels came when students were asked to keep a daily running total of the number of times they participated. Students were curious as to whether or not these charts would be graded or shared at parent-student-teacher conferences. I was quick to assure them that the charts were not intended for such purposes.

As noted in the table and graph **(APPENDIX C)**, participation rates as perceived by both students and teachers increased significantly. As suggested by the previously mentioned research,

assessing themselves on a daily basis seemed to encourage the students to participate more often than previously recorded.

I also feel it is important to note that these changes were observed over a relatively short time span when compared to an entire school year. This data was recorded over several weeks, and, although it remained constant, I do not feel the data is sufficient enough to substitute a long-term claim. It was with that in mind that I chose to word my second claim in the way I did.

C. Claim C Evidence

Referring to the same graph, it is clear that the 'random' strategy was the least successful at encouraging student participation. The positive reinforcement paired with this strategy did seem to have a positive effect on students' self-esteem, but it was easy to observe fewer hands being raised during this span of time.

After I noticed that this trend remained consistent, I decided to decrease the frequency with which I utilized this random calling pattern. Instead of drawing names at random on a consistent basis, I began to use it only when I saw fewer hands being raised during a given lesson. When I reverted to using this strategy as a supplement rather than a principal motivator, higher rates of participation were observed.

It seems fairly obvious that random calling patterns, when used as a primary or dominant strategy, will actually cause rates of participation to decrease. If students know that the opportunity for voluntary participation is all but eliminated, then participation itself is ultimately meaningless. By using an unsystematic method (such as the name jars) as the sole means for selecting students to participate, I essentially took away the students' opportunities to volunteer. This, in turn, diminished the value the students placed on sharing their thoughts with the class. I feel this ultimately led to a

decrease in motivation *to* participate. When I used the jar was used as a supplement, I immediately observed higher rates of participation.

X. Conclusions

When I first began this inquiry, I had hoped to discover ways in which teachers can intrinsically motivate their students to participate in class. This was derived from the theory that intrinsic motivation is the most effective way to influence students to participate while also making that desire to participate meaningful. The biggest implication for my future teaching that I reached through inquiry was that while lack of participation is commonly referred to as an epidemic in education, there are numerous strategies that teachers can implement to remedy it. In just the few short months I involved myself with the topic, I researched and implemented many approaches to raising rates of participation.

Much like many other aspects of education (e.g. assessment, lesson planning, etc.) encouraging participation may not be effective by using only one method. A variety of routines, implemented in varying fashions seem to prove most effective. As noted earlier, it may not be enough to engage students in a lesson, for engagement does not necessarily include active learning. Actively participating in discourse is essential to creating a learning environment that promotes success for all students. By using multiple strategies to encourage participation, teachers can assure that they are being more efficient in establishing an such an environment where students not only feel comfortable participating, but one in which they actually want to participate.

Though some may argue that intrinsic motivation (unlike the reward system formerly discussed) is the most meaningful way to encourage participation, other methods that do not

necessarily follow that paradigm can also be effective when used in ways beneficial to the whole class. In this way, extrinsic motivators (such as the pajama day) can encourage students to be actively involved in classroom discussions. Although *why* students participate is just as important (if not more than) as *how often* they do so, I feel that extrinsic motivators can prove to be effective when used as a single aspect of a repertoire of practices.

XI. Still Wondering

The word 'conclusion' can be very misleading when being discussed as an aspect of inquiry. The process of inquiry is a vicious cycle that begins with a wondering, develops new wonderings as it progresses, and ends with even more wonderings. Even calling inquiry a process is misleading; the word cycle sounds like a more appropriate fit. By reaching the 'conclusion' of my inquiry, I was left with several new wonderings. They include:

- **Will allowing students to self-monitor their own participation increase rates of participation over a long period of time (i.e. an entire school year)?**
- **Why do students perceive themselves to "know more answers" on days when rates of participation are higher in comparison to days when they don't?**

  It is important to note that this data must be accumulated over time. Data that suggests this over a period of several days cannot disprove this student's reasoning. A student may very well know more answers on one day compared to another.
- **If teachers do opt to utilize a variety of strategies to encourage participation, does the order in which those strategies are implemented have an effect on participation rates?**
- **Will praising student effort (either paired with another strategy or on its own) yield higher rates of participation over a long period of time?**

Works Cited

Hudson, James M. and Amy S. Bruckman. "The Bystander Effect: A Lens for Understanding Patterns of Participation." The Journal of Learning Sciences 13.2 (2004): 165 – 195.

Levin, James and John M. Shanken-Kaye. From Disrupter to Achiever: Creating Successful Learning Environments for the Self-Control Classroom. Dubuque: Kendall/Hunt, 2002.

Turner, Julianne C. and Helen Patrick. "Motivational Influences on Student Participation in Classroom Learning Activities." Teachers College Record. 106.9 (2004): 1,759 – 1,7985.

Zaremba, Stacey B. and Dana S. Dunn. "Assessing Class Participation Through Self-Evaluation: Method and Procedure." Teaching of Psychology 31.3 (2004): 191 – 193.

-A.1-

1. **On a scale of 1 to 5, how often do you participate in class? (Circle one)**

1	2	3	4	5
Never		Sometimes		Always

2. **Why do you participate? (You can circle more than one)**

I know the answer
I want everybody to think I'm smart
I like my teacher
To understand things better
For Fish Tickets
I think my teacher likes it
I get a grade on it in my report card
To prove that I'm right
To ask important questions

3. **Why don't you participate? (You can circle more than one)**

I don't know the answer
I don't want to be embarrassed if I'm wrong
I don't like the subject
My teacher doesn't like to hear my answers
I don't understand the question
The question is boring
I'm not paying attention
I don't like my teacher
I just don't feel like it

4. **In what subjects do you participate the most? (You can circle more than one)**

Math	Spelling	Reading	Social Studies
Science	Art	Music	P.E.
Library	Opening		

5. **In what subjects do you like to participate the most? (You can circle more than one)**

Math	Spelling	Reading	Social Studies
Science	Art	Music	P.E.

Library Opening

-A.2-

Hello Ferguson Teachers,

As a part of my inquiry project, I've chosen to analyze student participation in the classroom. One of my first strategies is to find out what types of strategies teachers use to encourage participation from their students. What I am asking of you is to please share with me (either via informal conversing or email) any strategies you've found to particularly effective or ineffective in encouraging classroom participation. Any insight you could provide me with would be greatly appreciated. Thank you in advance for your help! ☺

Chris Salerno, Intern – Room 24
cjs1029@psu.edu

- A.3-

HOW MANY TIMES STUDENTS RAISE THEIR HANDS

-Pre-Data-

Name	Day 1	Day 2	Day 3	Day 4	Day 5
Amanda					
Abby					
Alfred					
Bethany					
Chadwick					
Donald					
Derek					
Ella					
Emma					
Ewan					
Kathleen					
Kristin					
Lanolin					
Lilly					
Lucas					
Mary					
Mark					
Miguel					
Ronald					
Tammy					
Wallace					
Samantha					

- A.4-

HOW MANY TIMES STUDENTS RAISE THEIR HANDS

-Self-Evaluation-

Name	Day 1	Day 2	Day 3	Day 4	Day 5
Amanda					
Abby					
Alfred					
Bethany					
Chadwick					
Donald					
Derek					
Ella					
Emma					
Ewan					
Kathleen					
Kristin					
Lanolin					
Lilly					
Lucas					
Mary					
Mark					
Miguel					
Ronald					
Tammy					
Wallace					
Samantha					

- A.5-

HOW MANY TIMES STUDENTS RAISE THEIR HANDS

-Rewards-

Name	Day 1	Day 2	Day 3	Day 4	Day 5
Amanda					
Abby					
Alfred					
Bethany					
Chadwick					
Donald					
Derek					
Ella					
Emma					
Ewan					
Kathleen					
Kristin					
Lanolin					
Lilly					
Lucas					
Mary					
Mark					
Miguel					
Ronald					
Tammy					
Wallace					
Samantha					

- A.6-

HOW MANY TIMES STUDENTS RAISE THEIR HANDS
-Random Selection-

Name	Day 1	Day 2	Day 3	Day 4	Day 5
Amanda					
Abby					
Alfred					
Bethany					
Chadwick					
Donald					
Derek					
Ella					
Emma					
Ewan					
Kathleen					
Kristin					
Lanolin					
Lilly					
Lucas					
Mary					
Mark					
Miguel					
Ronald					
Tammy					
Wallace					
Samantha					

-A.7-

Name_____

How Many Times I Raised My Hand Today

Date	Number of Times I Raised My Hand	Total
April 17		
April 18		
April 19		
April 24		
April 26		
April 27		
April 28		

-A.8-

Name: _____ Date:_____

How many times did you raise your hand today? _____

Did you raise your hand more or less today than you did yesterday?

_____

By how much? _____

Why do you think you raised your hand more/less?

_____

_____

_____

-A.9-

1. **On a scale of 1 to 5, how often do you raise your hand in class? (Circle one)**

1	2	3	4	5
Never		Sometimes		Always

2. **Do you think you participate more or less than you did before? _____**

3. **Why do you think you participate more/less?**

_____

_____

_____

4. **What influences you to participate the most?**

_____

_____

_____

-C.1-

On a Scale of 1 – 5, How often Do You Participate?

1 (Never)	0
2	1
3 (Sometimes)	8
4	13
5 (Always)	0

Why Do You Participate?

I know the answer	15
To understand things better	14
To ask important questions	13
I get a grade on it in my report card	7
I think my teacher likes it	4
I like my teacher	2
For fish tickets	1

Why don't you participate?

I don't know the answer	22
I don't understand the question	11
I don't want to be embarrassed if I'm wrong	4
I just don't feel like it	2
I'm not paying attention	1

-C.1.2-

In which subjects do you participate the most?

Phys. Ed.	12
Math	11
Music	6
Social Studies	6
Spelling	6
Opening	5
Science	3
Library	2
Art	2
Reading	2
Writing	1

In which subjects do you like to participate the most?

Phys. Ed.	15
Math	11
Spelling	9
Opening	6
Music	5
Social Studies	5
Art	3
Library	2
Science	2
Reading	2
Writing	1

-C.2-

Teacher Responses: How to Encourage Participation

(STRATEGY USED – NUMBER OF RESPONSES NOTED)

Positive/constructive responses to wrong answers or taking a risk – 7

Reward system – 7

Set goals (reminder on desk) – 2

Wait time – 2

Tone of voice – 2

Secure classroom environment – 2

Call on kids who don't volunteer – 1

"Help" a stuck student – 1

"Whisper to a neighbor" – 1

Have students paraphrase what was just said – 1

Thumbs up if agree/disagree – 1

Connect to student experience – 1

Personal story – 1

Small groups – 1

Work at board – 1

Physical arrangement of room – 1

Remind students of expectations of behavior – 1

Student choice – 1

Required engagement – 1

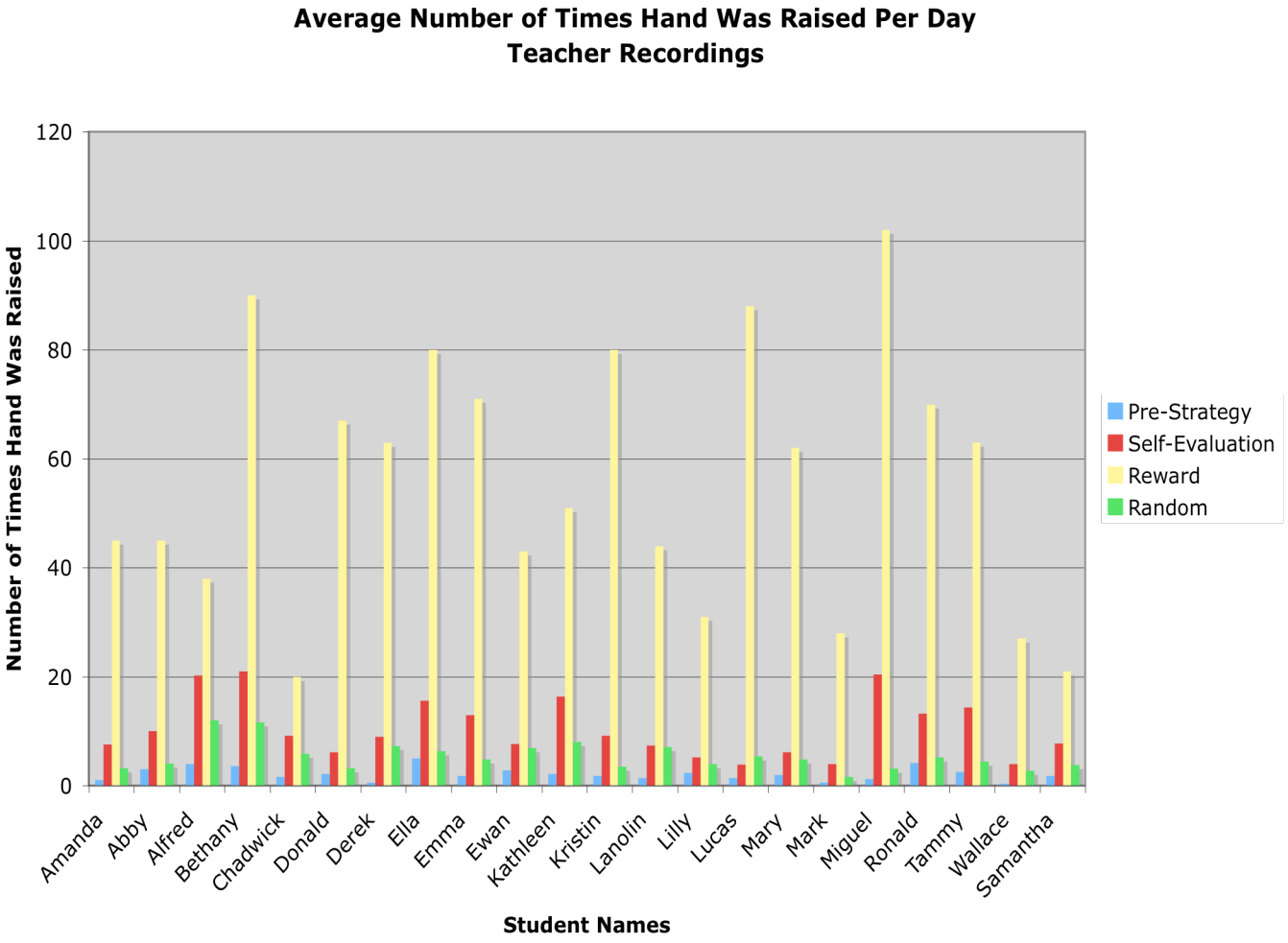
Structured instruction – 1

-C.3-

Average Number of Times Hand was Raised in a Given Day
Teacher Recordings

Name	Pre-Strategy	Self-Evaluation	Reward	Random
Amanda	1.0	7.6	45	3.2
Abby	3.0	10.0	45	4.1
Alfred	4.0	20.2	38	12
Bethany	3.6	21.0	90	11.6
Chadwick	1.6	9.2	20	5.9
Donald	2.2	6.1	67	3.2
Derek	0.6	9.0	63	7.3
Ella	5.0	15.6	80	6.3
Emma	1.8	13.0	71	4.8
Ewan	2.8	7.7	43	6.9
Kathleen	2.2	16.4	51	8.0
Kristin	1.8	9.2	80	3.5
Lanolin	1.4	7.4	44	7.1
Lilly	2.4	5.2	31	4.0
Lucas	1.4	3.9	88	5.4
Mary	2.0	6.1	62	4.8
Mark	0.6	4.0	28	1.6
Miguel	1.2	20.4	102	3.1
Ronald	4.2	13.2	70	5.2
Tammy	2.6	14.4	63	4.4
Wallace	0.4	4	27	2.7
Samantha	1.8	7.8	21	3.8
CLASS	2.2	10.5	55.9	5.4

-C.3.1-

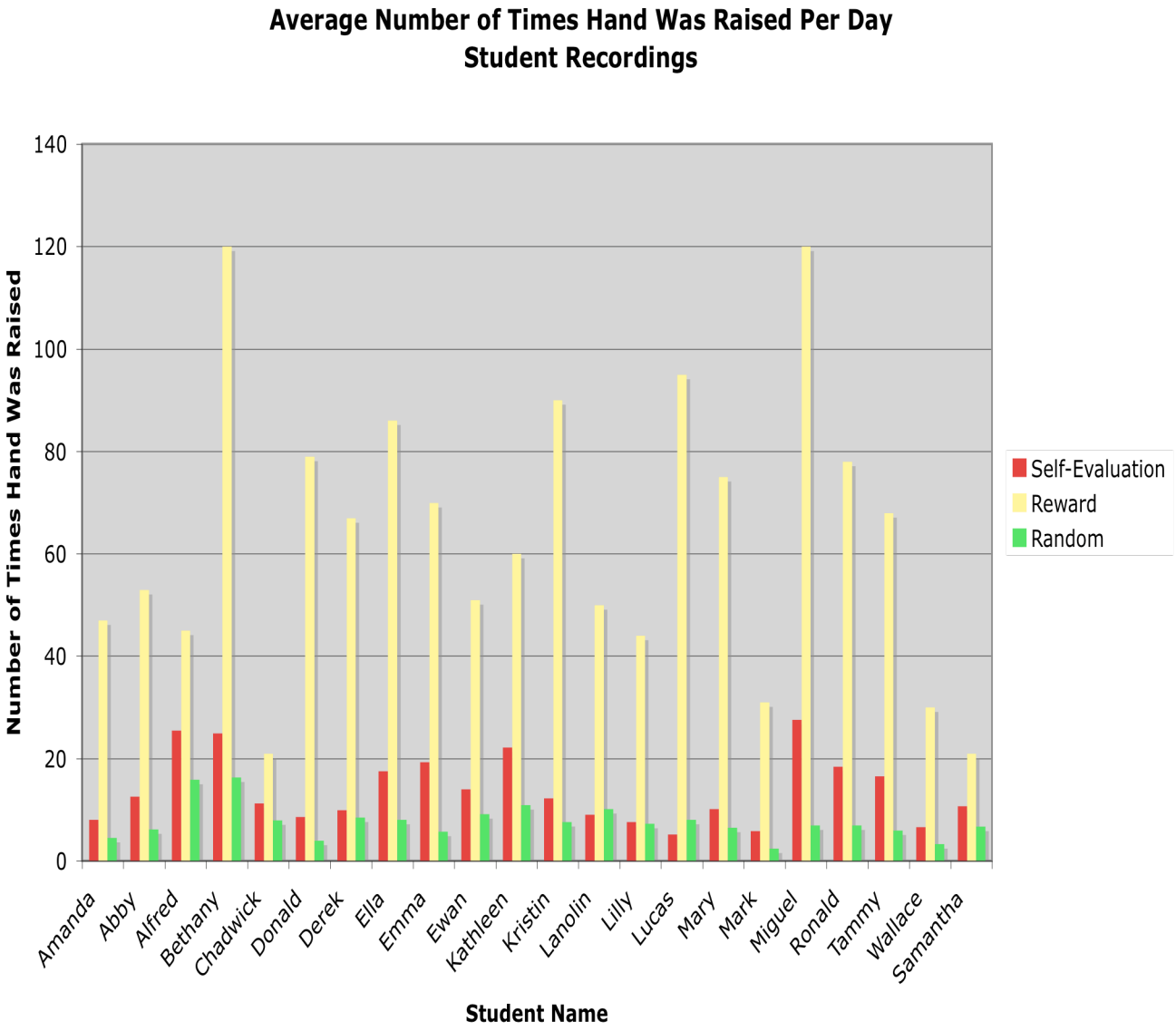

Average Number of Times Hand Was Raised Per Day
Teacher Recordings
Number of Times Hand Was Raised
120
100
80
60
40
20
0
Amanda
Abby
Alfred
Bethany
Chadwick
Donald
Derek
Ella
Emma
Ewan
Kathleen
Kristin
Lanolin
Lilly
Lucas
Mary
Mark
Miguel
Ronald
Tammy
Wallace
Samantha
Student Names
Pre-Strategy
Self-Evaluation
Reward
Random

-C.4-

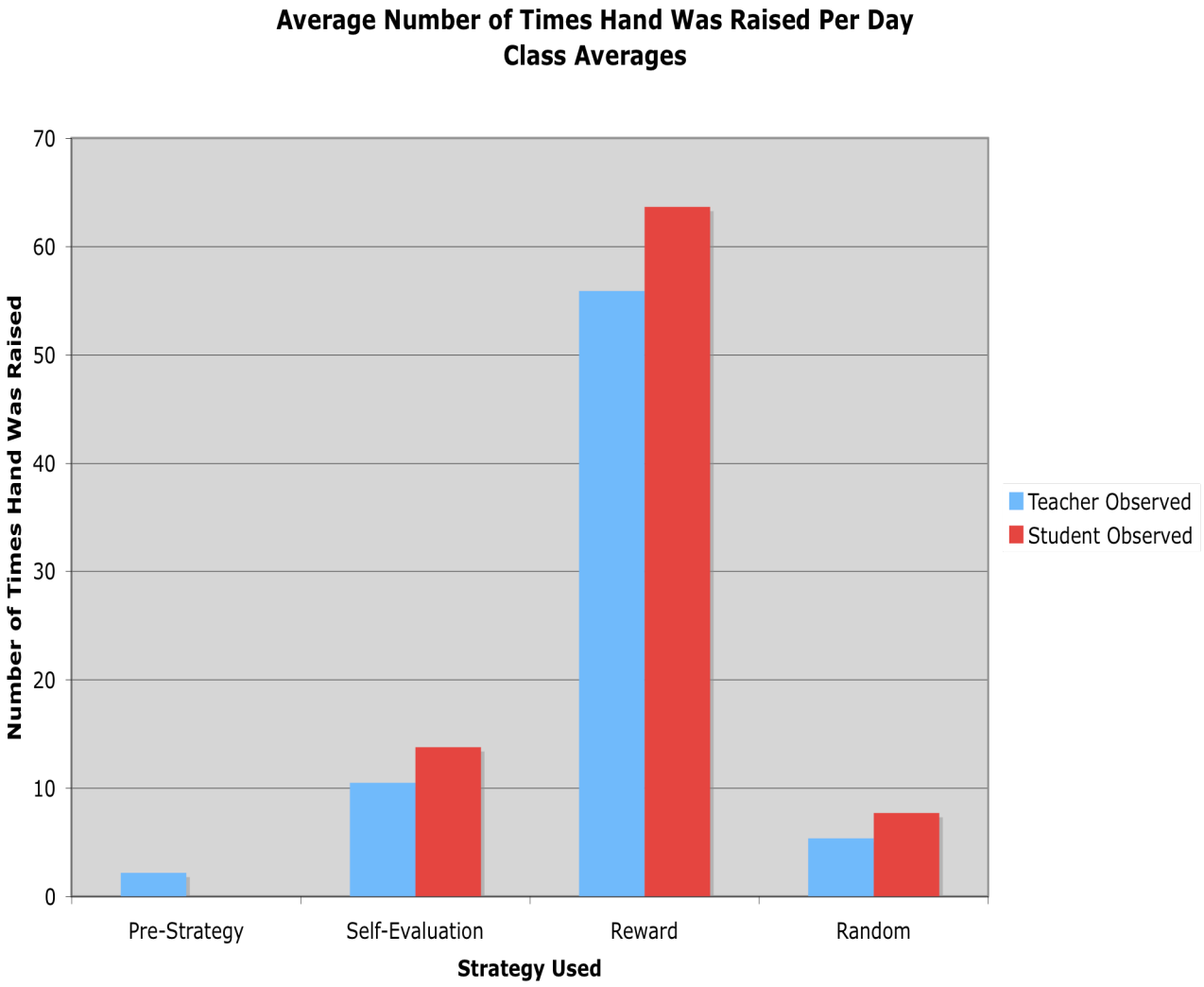
Average Number of Times Hand was Raised in a Given Day
Student Recordings

Name	Pre-Strategy	Self-Evaluation	Reward	Random
Amanda	-	8.1	47	4.5
Abby	-	12.6	53	6.2
Alfred	-	25.5	45	15.9
Bethany	-	24.9	120	16.3
Chadwick	-	11.3	21	7.9
Donald	-	8.6	79	4.0
Derek	-	9.9	67	8.5
Ella	-	17.5	86	8.1
Emma	-	19.3	70	5.7
Ewan	-	14	51	9.2
Kathleen	-	22.2	60	10.9
Kristin	-	12.3	90	7.6
Lanolin	-	9,0	50	10.2
Lilly	-	7.6	44	7.3
Lucas	-	5.2	95	8.0
Mary	-	10.1	75	6.5
Mark	-	5.8	31	2.4
Miguel	-	27.6	120	6.9
Ronald	-	18.4	78	7.0
Tammy	-	16.5	68	6.0
Wallace	-	6.6	30	3.3
Samantha	-	10.7	21	6.7
CLASS	-	13.8	63.7	7.7

-C.4.1-


Average Number of Times Hand Was Raised Per Day
Student Recordings
Number of Times Hand Was Raised
140
120
100
80
60
40
20
0
Amanda
Abby
Alfred
Bethany
Chadwick
Donald
Derek
Ella
Emma
Ewan
Kathleen
Kristin
Lanolin
Lilly
Lucas
Mary
Mark
Miguel
Ronald
Tammy
Wallace
Samantha
Student Name
Self-Evaluation
Reward
Random

-C.5-


Average Number of Times Hand Was Raised Per Day
Class Averages
Number of Times Hand Was Raised
70
60
50
40
30
20
10
0
Pre-Strategy
Self-Evaluation
Reward
Random
Strategy Used
Teacher Observed
Student Observed