

Students Asking Questions in the Middle School Mathematics Classroom

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*Asking questions is a vital part of student learning. Teachers ask students questions in order to get their minds working and thinking. Students ask questions in order to gain more knowledge or satiate their curiosity. If a student has trouble asking questions in the classroom they might miss an important step and become lost. In a class, such as math, it is vitally important to be able to ask questions. If a student is trying to work on a math problem but does not understand a concept and is afraid to ask questions the student may not do well in math, become frustrated, give up, or become discouraged. Through observational research, a survey, and interviews I found that some students have difficulties asking questions in the math classroom.*

## **Section 1.0 Introduction**

My research investigated how teachers can encourage students to ask more questions in the math classroom. Asking questions is crucial to student learning. Some students, especially those with learning disabilities, find it even harder to ask questions in the classroom. I became interested in doing this research because as student, I knew that my fellow classmates were always afraid to ask questions. As I got older the same thing occurred in my college classes. At a graduate level the same thing happened. Students wanted answers but were afraid to ask questions.

### *1.1 My Story*

As a student I often felt ostracized in classes that I did not do well in. I was viewed as a “smart kid” and had the extra pressure from my peers of knowing everything. When I showed up in a remedial Global History class all my classmates thought I was in the wrong room because I was a “smart kid.” With this view from my classmates I was determined to do well in the class and prove to myself, my classmates, and my teachers that I did not need to be in a remedial class. While I was diligent at taking notes and participating in class I still did not want to ask questions in front of the class for fear of looking dumb. I was already in the remedial class and did not want my classmates to

think I did not understand the material and needed more help than I was already receiving.

Throughout college this pattern continued. Class size went up and it was scary to ask questions in front of a lecture hall full of students. Staying after class to talk to the professor one on one or emailing them later was something that was easier than asking a question in class. Even approaching a professor after class was intimidating because I did not want to feel stupid because they know the information and it comes naturally to them.

Being in front of the room has given me a new perspective of how students feel, because I have been in their shoes. I give students more opportunities to ask questions. When a student starts a thought I encourage them to continue it, even if it is “wait, I do not get it.” I will review the concept again and find out if the student understands. If there is still confusion I will have a student try to explain it to see if a different voice or understanding will help the student. I think that being more aware of student questions will make me a better teacher and help my students understand math.

## Section 2.0 Literature Review

### *2.1 Student views on asking questions*

Our classrooms are unique, diverse places. No two classrooms are the same, and no two classes are alike. The student's content knowledge, experience, learning style, and attitude are what make a classroom. These variations are also what give students challenges in the classroom. In reviewing several studies (Firth, Greaves, & Frydenberg, 2010; Kortering, deBettencourt, & Baziel, 2005; Pavri, & Monda-Amaya, 2000; Symonds, Lawson, & Robinson, 2008; and Turner, Midgley, Meyer, Gheen, Anderman, Kang, Patrick, 2002) I found that students with disabilities have low self-esteem and self confidence. This low self-esteem and self confidence leads to students being afraid to ask questions and seek the help they need to help their education (Symonds, Lawson, & Robinson, 2008). Turner et al (2002) found that students "struggle to escape being labeled as stupid" (p. 89). When students have questions and they ask them often times other students will laugh at the student or the question because they already know the answer or think that it is an easy question to answer. This discourages students from asking questions in the future. Symonds et al (2008) suggests that some students do not ask for or seek help because they do not know they need help or that they can do better if they seek help.

## *2.2 Classroom Structure*

Turner et al (2002) believes that it is not only how a student learns and the background they come from, it also depends on the structure of the classroom. Turner et al (2002) discusses two types of classroom structures: performance goal structure and mastery goal structure. A classroom based on a performance goal structure has students competing against each other to receive praise and high grades whereas a classroom with a mastery goal structure is focused on supporting student learning and understanding, for the enjoyment of learning. In this study it was found that students that were given mastery goals worked harder and had higher scores in problem solving than students who were given performance goals. The mastery goal structure also had students expanding on their answers which demonstrate a mastery of the subject rather than a repetition.

## *2.3 Teacher's role*

Kortering et al (2005) asked students what teachers could do to help them excel in Algebra. The students had a range of ideas that included the following: allowing students to work in groups or with partners; seeing more technology in the classroom to help with teaching; having the teacher give more encouragement when working on class work, homework and studying for quizzes and test; give more examples in class; give less work; review more before taking the test/quizzes; give more time for class work/homework.

Students from the Kortering et al (2005) study were also interested in test taking strategies, learning how to take tests along with being prepared with the material was the

best criteria for success. A few students would like to have peer or senior tutors to help them understand the material and possibly teach it in a way they understand, a way that might be different from the way the teacher taught the content. Another recommended suggestion from the students were incentives, candy, free homework passes, and bonus points for answering questions correctly or giving input into the class discussion.

#### *2.4 Students' coping strategies*

Firth, Greaves & Frydenberg (2010) believe coping strategies are established at a young age and have broken coping strategies into three categories. These categories are: productive, nonproductive, and reference to others. Each of these strategies has a breakdown of components and students can exhibit coping strategies from more than one category. Productive coping includes actions such as working hard to solve a problem, relaxing, and thinking positively. Nonproductive coping is the converse of productive coping. Students who exhibit nonproductive coping strategies seem to ignore the problem, blame themselves, scream and yell to alleviate stress or tension, worry, and wish the problem would go away. Students who exhibit nonproductive behavior may also not have a way to cope or may simply keep the problem to themselves. Reference to others include students seeking close friends or professionals, social or spiritual support, trying to belong, and being socially active.

Pavri and Monda-Amaya (2000) breaks coping into four strategies they have found are most often used by fourth and fifth graders with learning disabilities. These four strategies are solitary activities, seeking out others, distracting behaviors (from loneliness) and passive solitary activities. Solitary activities include participating in

activities that are done alone, such as drawing or playing by ones self. Seeking others includes finding someone else to play with or to talk to. Passive solitary activities may prolong the feeling of loneliness because the student is not actively seeking a way to make themselves feel better by finding something to do or finding someone to play with. Distracting behaviors include thinking about things outside of the classroom that make them feel better. Fifty seven percent of students asked if using these coping strategies helped them feel less lonely stated these strategies helped.

### *2.5 Gaps in knowledge*

While reviewing these studies, it appears as though some students do not have a voice in how they are being taught. Students are experts on how they learn, whereas teachers are experts in their content area. It would take time and effort to pair students with teachers who have a teaching style conducive to the student's learning style. The purpose of this study was to investigate ways to encourage students to ask questions in the mathematics classroom without fear of their peers or afraid of being labeled "dumb"

### 3.0 Methodology

#### 3.1 Sampling

The population for this study was three middle school math classes at a middle school in Central New York. Two of these classes were 8<sup>th</sup> grade and one was 7<sup>th</sup> grade. There were a total of 58 students in the three classes; out of these 58 students 51 of them participated in the study. This was a convenience sample.

All students were given a parent/guardian permission form that had to be signed and returned in order to participate in the study. Along with the permission form information was sent home about the study including methods of data collection and the purpose of the study (Appendix A). Students were also requested to sign the permission form to show that they agreed to participate in the study. Written permission was obtained from the principal of the school and the teacher of the classroom. The SUNY Oswego Human Subject Committee had also approved the research design previous to starting the study. All names used are pseudonyms to provide anonymity and confidentiality to the students.

Out of the 51 students who agreed to participate in the study 13 of these students were identified as having Academic Intervention Services (AIS). I was focused most on these students because they are often the students who need the most help in class or may have lower self-esteem.

#### 3.2 Instruments

Throughout my research I used several kinds of instruments in order to gather data. The first instrument I used observations utilizing classroom seating charts. With

these seating charts I recorded when students raised their hands to answer questions and when they asked questions. I observed the students for three weeks recording the same information each week. I used observations because they are minimally invasive and students are more likely to be less distracted

The second instrument I used was a survey (Appendix B). The survey had six questions ranging from open-ended questions, to true false. This gave students opportunity to express themselves on the survey. The six questions asked students specifically their grade in the class, if they do well in math class, if they ask questions when they do not understand a concept, what they think about math class, and what can be done to improve their math class. I had a total of 48 students complete the survey, which was about 83% of the participants. I used surveys because I wanted to collect a large amount of data from as many students quickly. I also wanted student input on several different aspects of their class.

The third instrument I used was index cards. At the beginning of each of the three classes I handed out index cards. I asked students to put their name on the index cards and record with a tally mark whenever they had a math related question throughout the class. At the end of the class I collected and recorded when students said they had questions. I did this twice. I used the index cards as a means of “getting into students’ heads.” Sometimes it is easy to see when a student is puzzled; it is harder to see these puzzled faces from the back of the room.

The fourth and final instrument I used was interviews (Appendix C). After looking at the initial data I chose two students from each class. One student who had volunteered to answer questions several times and one student who had not volunteered to answer

questions. During the last week of the study I had a brief interview with the six students and asked them five questions. I conducted individual interviews to get a better sense of some of the students and how they felt about their math class.

### *3.3 Procedure*

For the first week I observed students using seating charts. I used a new seating chart for each class and each day. At the beginning of each class I would record on the seating chart who was absent so I knew why they did not answer or ask questions. Throughout the class I would tally who answered questions and who asked questions.

The second week I continued using seating charts to record student participation. I explained to the students that their teacher would not see the survey and that it would not have an impact on their grade. I handed out the surveys, allowed students to complete them and collected them. I sorted the surveys by class. I continued using the seating charts to record answering and asking questions.

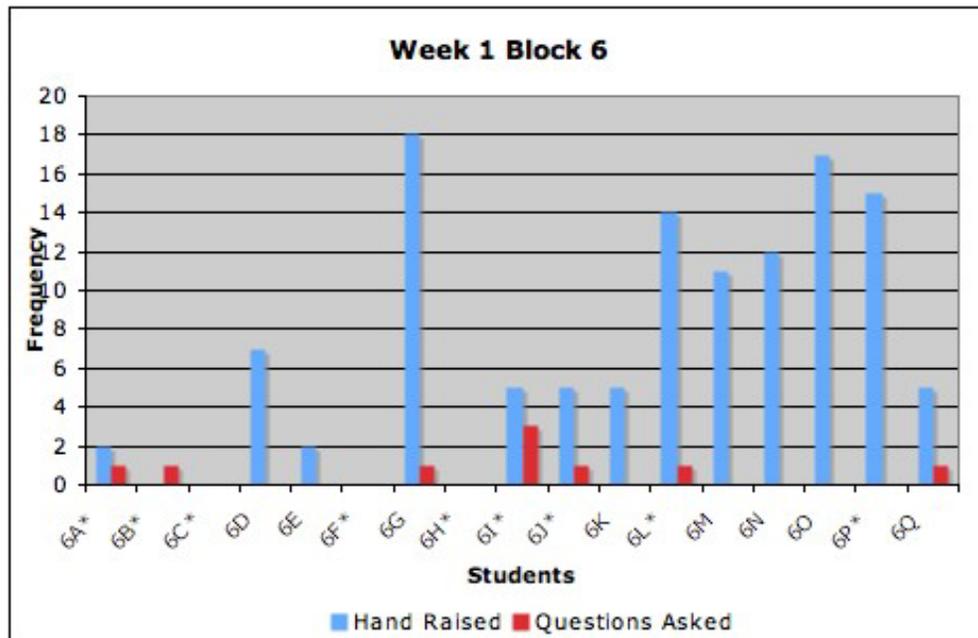
During the third week I handed out index cards and asked students to record when they had a math related question. I reminded students that participation was voluntary and that it did not affect their grade. I continued to record when a student raised their hand to ask a question. Doing both the observations and index cards allowed me to compare the student data and observations.

During the fourth week I observed students and interviewed six of them. At the end of the period I asked each student into the hallway individually. I asked students if it was all right to ask them questions then proceeded with the interview. After the interview I thanked them for their time and went back to class.

## Section 4.0 Results

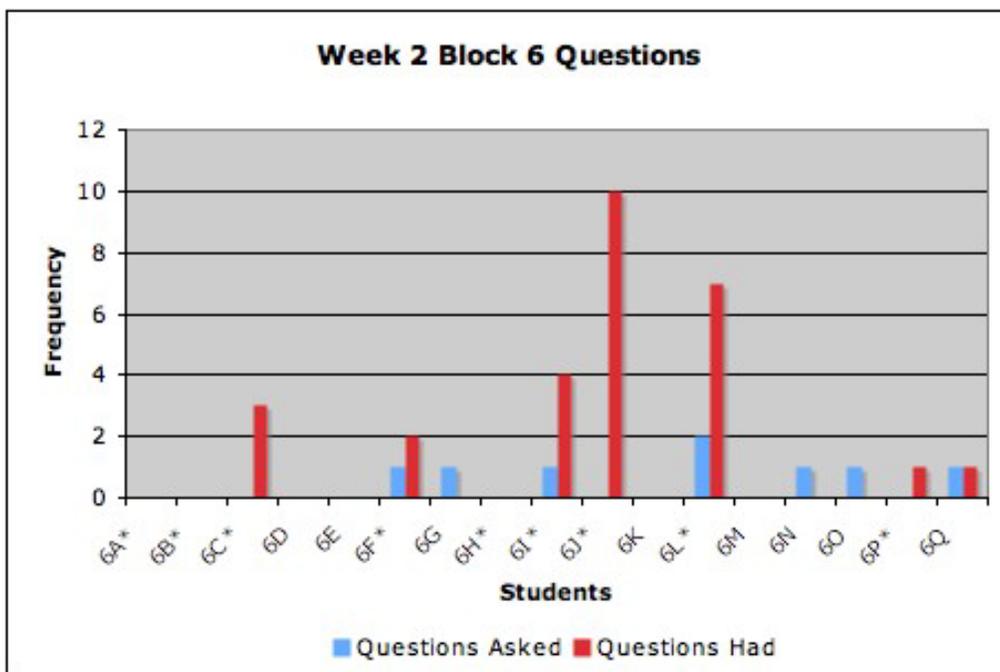
### 4.1 Observational Data

After each class I recorded the number of times a student raised their hands in class to volunteer answers and to ask questions. After recording the data in this way a trend started to appear as to who was volunteering to answer questions and which students were asking questions. The following is a chart from the first week of observation in Block 6. Block 6 was an 8<sup>th</sup> grade math class with thirteen students in the class that participated. Out of these thirteen students nine students were identified as needing Additional Instructional Services or AIS. During the first week there were approximately 118 hands raised to volunteer answers when the teacher asked a question. The students asked only nine questions.



The students with the stars (\*) next to their identifier are the nine students identified as needing AIS

After having students use the index cards to record when they had questions I recorded the number of times they stated they had questions, when they raised their hand in class to volunteer answers, and when they asked questions. The results were astonishing. The following chart compares when students said they had questions and when they raised their hand and asked a question. During the second week there were a total of 124 hands raised to volunteer answering questions. There were only eight questions asked this week. Students indicated, on the index cards, that they had 28 questions through out the week.



As you can see from the chart students had more questions than they asked. Student 6J\* is identified as having AIS and reported that s/he had ten questions over a two day time span. Over these two days this student did not ask one question. The major question is why? Student 6Q had one question and asked one question, an equal balance, was the question s/he had the question that was asked?

The charts from the other two classes look similar. In one class one of the student's data reported that s/he asked more questions than s/he had. This makes me think that some of the students were forgetting to report when they had a question. In the three classes I observed, during the second week, there was an average of 104 questions students had and only 28 of those questions were asked.

#### 4.2 Survey

After the survey was given I composed the data using surveygizmo.com. I found this was the best way to organize all 48 responses to the survey. The first question on the survey asked students to tell me about their math class. No other parameters were set. The most common answer was "it is fun" 30 out of 48 students (or 63%) stated that their class was in some way "fun." One student wrote: "I love this math class. It's fun and the work is not too hard and not too easy." Several other students did not use the word fun but alluded to the fact that they were enjoying the class (see table 1).

**Table 1: Tell me about your math class.**

Student Responses	Number of Students (out of 48)	Student Comments
Fun	30	"It's interesting. We have lots of fun. My class is full of smart and nice people."
Hard	3	"Math class is fun. It has it's hard/confusing time but I like it."
Boring	3	"It is kind of boring. I sometimes feel like going to sleep. I like the activity since I get to hangout with my friends."
Easy	9	"Math is easy, I guess, I don't have a hard time in it."

The second question asked students what their current grade in math class was and gave five options: A 100-91, B 90-81 C 80-71 D 70-66 F 65 or below. Students were instructed to circle one of these answers. Only one student did not answer. The results to this question are found in figure 1.

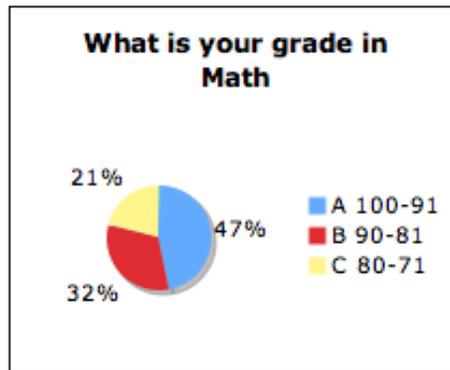


Figure 1

Twenty-two students (47%) reported they had an A in math class, 15 students (32%) reported they had a B in math class and 10 students (21%) reported they had a C in math class. These answers made me think highly of the students and of the teacher.

The third question asked students if they do well in math class and used a likert scale ranging from strongly agree to strongly disagree with seven choices (see figure 2).

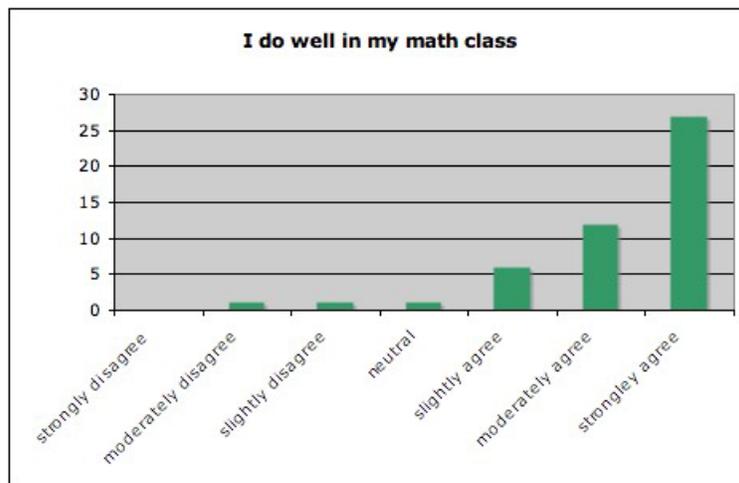


Figure 2

Twenty-seven students reported that they strongly agreed that they are doing well in math class. To me this result means that only 27 students are satisfied with the grade they currently have in math. Only two students disagreed that they are not doing well in math.

The fourth question was a true or false question with a follow up. The question asked students if they asked their teacher to clarify a concept they do not understand. Thirty-eight students (79%) reported true, that they ask their teacher to clarify if they do not understand a concept. The other ten students (21%) reported false, they would not ask their teacher to clarify if they do not understand a concept. The follow up question of why or why not produced some surprising results for 7<sup>th</sup> and 8<sup>th</sup> graders (see Table 2). Thirteen students stated they asked questions because they wanted to get it right on a test or quiz or get the best grade possible. Ten students stated that they asked questions so they would better understand the concept being taught. These answers shocked me because I do not think of 7<sup>th</sup> and 8<sup>th</sup> grade students being aware and focused on their grade as much as these students.

**Table 2: Asking the teacher to clarify**

	Number of Students (out of 48)	Student Comments
True	38	“Because you are suppose to ask the teacher.”
Test/Quiz	13	“I ask so I will know what to do if it is on a test or quiz.”
Better Understanding	10	“I do that so I have full understanding for what I am doing.”
False	10	
Shy/Embarrassed	2	“Sometimes I get a little shy in front of the whole class”
Ask Other Students	3	“First I usually ask someone next to me.”
Want to try it on their	4	“I think I would want to try it

own first		out a couple of times and then later on ask a teacher for help.”
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The fifth question asked students to rate ten different implementations from 1 to 10 one being the most important and 10 being the least important. Several students had trouble with this question and it was difficult to obtain accurate results. With the difficulty in answering the question surveygizmo.com was still able to compute the data given and produce an overall ranking for the implementations (see table 3).

*Table 3*

	Ranking
Group or partner work	1
Review more before tests/quizzes	2
More hands on activities	3
Give rewards for good performance	4
Give less homework	5
Give more examples in class	6
Verbal Praise	7
More technology in the class	8
Peer Tutoring	9
Give more homework	10

The final question asked students if there was anything else they would like to add about their math class. Most students said no there was nothing they wanted to add. One student requested more homework, several stated that it was a good class and they enjoyed being in it, one student wanted to spend more time on units, and several students said they wanted to be in math class longer because it was their favorite subject.

*Table 4: Is there anything else you would like to add about your math class?*

Additional Information	Number of Students (out of 48)	Student Comments
No	34	“It's fine the way it is. Nothing really needs to be changed”
Enjoy Class	6	“I really like this math class.”
More Homework	1	“That we only get about 1 sheet of homework and as much as I hate homework I think we should get 2 sheets every couple of days.”

### 4.3 Interviews

During the last week of observations I identified two students from each class that I wanted to interview. I identified these students by looking at the data from each class and picking a student who volunteers to answer questions frequently and a student who does not volunteer to answer questions. The interview consisted of five questions. Some of the questions were similar to the questions on the survey.

For the first question I asked students what they do if they do not understand something in math class. Two students stated that they understand everything in class. The other four students stated that they ask questions. One student said sometimes they do not do anything at all.

I asked students in the second question if they ask their teacher if they have a question. One student said yes, one student said sometimes, and the other four said no. The reasons why they do not ask questions (question three) are as follows: “I don’t want to be embarrassed,” they ask their friends, and because they know everything and do not have questions.

The fourth question asked students if their classmate's reactions affect them asking more questions. Five students said no. The one student who said yes also said that he was afraid that his classmates would laugh at him.

The final question asked students if there was anything their teacher could do to help them feel more comfortable asking questions in the classroom. Four students said that what she was doing was working and they were doing well in class. One student said: "she could give more examples and practice skills more in class." The other student did not know if there was anything his teacher could do for him.

### Section 5.0 Discussion

Our classrooms are a unique and diverse place, to learn new information. There are no two classrooms that are the same. The student's content knowledge, experience, learning style, and attitude are what make up a classroom environment. These classroom components will create challenges for students in the classroom.

Throughout my research I was confronted with the question: "why are students not asking questions?" During my research a student told me "I do not want to be embarrassed" when asked why he did not ask questions in class. Another student stated that they were shy and did not want to ask questions in the classroom. These student responses demonstrate that students are aware of how other students view them in the classroom. According to Turner et al (2002) students "struggle to escape being labeled as stupid" (p. 89) and this is why they do not want to ask questions in front of the class.

Some responses to my student survey included giving more examples in class, review more before tests and quizzes, and more hands on activities. The responses from my survey directly relate to what Korterling, et al (2005) found in their study that included: teaching at a slower pace, make class more fun, and give students encouragement while working on class work and homework.

Some students responded in my survey that they did not ask questions because another student usually asks the same question, they ask their fellow students, or they want to try it a few times before asking for help. Symonds et al (2008) suggest that some students do not ask for or seek help because they do not know they need help or that they can do better if they seek help. I think encouraging students to seek help will ultimately help them in math class and when they enter the work force.

After doing this research a student said to me “that was a stupid question” referring to a question that she had asked. Instead of saying yes or no I simply stated, “that was not a stupid question, it was a refresher question.” I was proud of her for asking the question even though she thought it was a “stupid” question.

### Section 6.0 Interpretation

After conducting this research my belief that some students do not ask questions in class was confirmed. The results that surprised me the most were the index cards and how often students have questions but do not ask them in class. One student had ten questions over a two-day period and it made me wonder what I could do to help this student ask more questions. It was interesting to see how students recorded how many questions they had. It was also interesting to see how many questions went unasked in a class.

From the survey given to students there were several responses that surprised me. Some of these responses included when the students were asked why they do or do not ask questions 27% of students asked questions because they wanted to make sure they got the correct answer on a test or quiz. This answer surprised me for 7<sup>th</sup> and 8<sup>th</sup> grader students because I did not think they were concerned with their grade. A second response from the survey that I found interesting was that students who responded that they would not ask questions in class because they wanted to try the problems on their own first. This was a response I was not expecting but happy to receive. It was refreshing that students wanted to try to understand the content themselves before asking for the answer.

A third response from the survey was that students wanted more group or partner work. I thought this was interesting because while I was doing my observations students worked in groups frequently. This response made me wonder if I was observing in a unit that had more group work and that it is not normally this way in the class. I also wondered if the students were thinking about their classes overall instead of their math

class. It was nice to see that 63% of students indicated that they were having fun in math class and that everyone reported they had a “C” average or better in math.

A fourth response from the survey was reviewing more before tests/quizzes. I believe that students always want to review more before they are assessed on their knowledge. One way to do this without taking up class time would be to design or find a website that allows students to practice their skills on their own time. This way the students who want to review more have the option and students who do not want to review or feel confident in their skills do not miss homework points for not doing a review sheet or extra problems in class.

### *Section 6.1 Limitations*

Although my study was interesting and educational there were some limitations. One of the greatest limitations I encountered was time. I was only able to observe three days a week for this four-week period. I did notice a trend in who was asking questions and who was not asking questions. Another limitation I encountered was that I did not know the students, because I did my observations in someone else’s classroom. Along with not knowing the students it was difficult to keep track of their hand raising because the seating charts I was given were incorrect and students would change seats often.

### *Section 6.2 Implications*

The research implies that alternative ways to ask questions in the classroom is needed. Students have several different reasons for not asking questions in the classroom including that they want to figure out the problem on their own. If students do not ask

questions in the classroom they will not obtain the knowledge they need in order to understand what is being learned in the classroom. This research also implies giving students more time to work on problems by themselves before giving them the answers or going over the problems as a class.

### *Section 6.3 Recommendations*

If this research was to be repeated I would like to try some of these alternative ways of asking questions. Have students write questions down and leave them on their desk so the teacher can walk by, grab the question, read it to the class and answer it. Having a question box in the class, like a suggestion box, where students can drop their questions at the end of class would be helpful. Each class could be color coded so the teacher knows which class to answer the question in. Another alternative way for students to ask questions is to give students index cards or scrap pieces of paper and have them write one thing they learned from class and one question they may have. Allowing students to ask questions in this fashion gives them confidence and the students are not afraid of being made fun of and receive the information needed to achieve. I would also like to see if technology would allow students to ask questions.

### *Section 6.4 Further Research*

Recommendations for further research include replicating the study with more time and with a larger diverse population. Also measuring students' self esteem in the math classroom would enhance this study. I believe there is a direct correlation between

how proficient students are in math and how often they ask questions or volunteer to answer questions in the math classroom.

*Section 6.5 Outcomes and Conclusions*

Asking questions is an important aspect of the classroom. Several students believe that if they have a question, someone else will ask that question. This research has reinforced my belief that students do not ask questions in the classroom. I did not have an opportunity to measure student self-esteem in relationship to math. I do believe that there needs to be an increase in the ability of students to ask questions. This may include alternative ways for students to ask questions. Developing these alternative ways to allow students to ask questions may prove difficult and challenging but will help students succeed in the mathematics classroom.

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Appendices

Appendix A- Letter of Permission from the Principal

Appendix B- Letter of Permission from Cooperating teacher

Appendix C- Parent/Guardian Permission Slip

Appendix D- Student Survey #1

Appendix E- Student interview

Appendix A

Letter of Permission from the Principal

To Whom It May Concern:

I have read over the proposal for Martha Fitzsimmons' research about students' self-esteem and how it affects students' ability to ask questions in the classroom. I agree to let Martha Fitzsimmons observe in Chestnut Hill Middle School.

I understand that Martha will be seeking additional permission from parents/guardians for student participation in this research. I also understand that all data collected will be kept anonymous and that students can withdraw at anytime without penalty.

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Principal Peter Ianzito

---

Date

Appendix B

Letter of Consent from Cooperating teacher

Dear Sir or Madam:

My name is Martha Fitzsimmons; I am a graduate student at SUNY Oswego and I am looking to conduct research in your classroom. I am interested in looking into how often questions are being asked in the math classroom and to identify the reasons behind why students are not asking questions.

This research is voluntary and confidential. Research will be conducted in several ways including surveys, observations, and interviews. The data collected from this research will be used to increase student's self-esteem and give students the confidence to ask questions in the classroom. This research will also benefit classroom teachers in helping their students succeed.

Student's grades will not be affected by their participation in the study or any answers given on surveys. Students may withdraw from the study at any time without penalty.

Your signature below verifies that you have agreed to allow your classroom to be used for academic research. If you have any questions, please do not hesitate to contact me through my email [Martha.Fitzsimmons@gmail.com](mailto:Martha.Fitzsimmons@gmail.com). You may also contact Dr. Faith Maina, my academic advisor, at (315) 312-2641. If you have any questions about your rights as a research participant, please contact Dr. Friedman, Chair of the SUNY Oswego Human Subjects Committee at (315) 312- 6381.

Thank you for your time,

Martha Fitzsimmons

I \_\_\_\_\_ agree to allow Martha Fitzsimmons to conduct the research outlined above in my classroom. I understand that my students can withdraw at any time without penalty and that all data collected will be confidential.

\_\_\_\_\_

Teacher Signature

\_\_\_\_\_

Date

\_\_\_\_\_

Researcher's Signature

\_\_\_\_\_

Date

\_\_\_\_\_

Researcher's Name

Appendix C

Parent/Guardian Consent Form

Dear Parent/Guardian:

My name is Martha Fitzsimmons and I am working in collaboration with your student's math teacher to conduct research for my Master's thesis. I am interested in looking into how frequent questions are being asked in the math classroom by students and the reasons behind why some students are not asking questions.

This research is voluntary and confidential. Research will be conducted in several ways including surveys, observations, and interviews. The data collected from this research will be used to increase my knowledge to help the self-esteem and confidence of my students to feel more comfortable asking questions in class. This research will also benefit classroom teachers in helping their students succeed.

Student's grades will not be affected by their participation in the study. Students may withdraw from the study at any time without penalty.

If you have any questions please do not hesitate to contact myself through my email [Martha.Fitzsimmons@gmail.com](mailto:Martha.Fitzsimmons@gmail.com) or Dr. Faith Maina, my academic advisor, at (315) 312-2641. If you have any questions about your rights as a research participant, please contact Dr. Friedman, Chair of the SUNY Oswego Human Subjects Committee at (315) 312- 6381. Please sign the statement below and have your child return it to his/her math teacher.

Thank you for your time,

Martha Fitzsimmons

I \_\_\_\_\_ give permission for my student  
\_\_\_\_\_ to participate in the research outlined above. I  
understand that this research is voluntary and that my student can withdraw at any time  
without penalty. I understand that all data collected will be confidential.

\_\_\_\_\_

Parent/Guardian Signature

\_\_\_\_\_

Date

I \_\_\_\_\_ agree to participate in the research outlined  
above. I understand that participation is voluntary and that I can withdraw from the  
research at any time without penalty. I understand that all data collected will be  
confidential.

\_\_\_\_\_

Student Signature

\_\_\_\_\_

Date

\_\_\_\_\_

Researcher's Signature

\_\_\_\_\_

Date

\_\_\_\_\_

Researcher's Name



