Influence of Mathematics Anxiety Towards Junior High School Students' Performance in Mathematics

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Abstract:- **Mathematics is significantly relevant in everyone's lives, especially for students. Nevertheless, regardless of how important the subject is, many students seem to worry about it. Mathematics anxiety was often associated with the performance of students in mathematics. This study aimed to determine the influence of mathematics anxiety on junior high school students mathematics performance at Muertegui National High School. The study utilized a descriptive-correlational survey design. In this study, 250 junior high school students in Muertegui National High School were sampled and identified using stratified random sampling. Using a survey questionnaire as a research instrument to gather the data, the 5-point Likert scale was used for scoring purposes. Descriptive statistics such as frequency, percentage, standard deviation, mean, and average weighted mean were analyzed and processed using MS Excel Analysis ToolPak. Pearson Product Moment Correlation was used to get the r value, while Correlation Calculator Website was used to get the p-value. The findings showed that the mathematics performance level of junior high school students in Muertegui National High School was good. However, some students still received poor grades for the subject. In addition, the study revealed that mathematics anxiety negatively affects the mathematics performance of the students in Muertegui National High School. The study also revealed no significant relationship between mathematics anxiety and the mathematics performance of the students. Thus, it is recommended that the school have relevant learning strategies and materials for improving mathematics teaching and learning effectiveness for the students.**

Keywords:- Anxiety, High School Students, Influence, Mathematics, Performance.

I. BACKGROUND OF THE STUDY

Mathematics is undeniably essential, with numerous applications in various aspects of life. People are aware of the importance of mathematics in their daily lives. However, despite the subject's importance, many students appear anxious about it.

According to Al Mutawah (2015), mathematics anxiety is nervousness and confusion when performing and comprehending mathematics. The researcher also stated that it was a general word for several problems that would make students anxious, fearful, and concerned. In addition, Bentil (as cited in Essuman et al., 2021, p. 6564) stated that students' anxieties of failing mathematics because they thought it was too complicated and their fear of being unable to handle mathematics were all reasons why they experienced mathematics anxiety.

Mathematics appeared as one of the most challenging subjects and became a nightmare for students at all educational levels when student achievements in courses were assessed (Ciftci, 2015). Several international psychological studies reported that students were apprehensive in engaging about the subject. However, studies that have focused on mathematics anxiety said that if it is not addressed soon once, considerable harm would be done that may result in a significant reduction in mathematics performance (Al Mutawah, 2015).

Meanwhile, in the Philippines, the student's problem-solving abilities and their level of mathematics anxiety rank among the many challenges and worries associated with mathematics teaching and learning (Santos et al., 2015). Mathematics anxiety is a common problem because so many children struggle with it in school, and mathematics anxiety is the primary cause of Filipino students' poor performance in mathematics classes (Delgado & Kassim, 2019). Furthermore, according to a study by Dodongan (2021), the study believed that students who experienced mathematics anxiety might be less driven to pursue, engage in, and thrive in the subject.

Mathematics anxiety is particularly prevalent inside the school. Unfortunately, there is a lack of research regarding mathematics anxiety in Muertegui National High School since most studies focused only on other subject topics. Thus, this interested the researchers to undertake the study; hence, it is intriguing and worthwhile.

This study intends to understand how mathematics anxiety affects students' mathematical performance. Thus, the researchers conceptualized this study. Furthermore, the results of this study will aid teachers and parents in understanding the state of mathematics education today in identifying strategies for raising student achievement in mathematics across all grade levels.

II. THE PROBLEM

➢ *Statement of the Problem*

This study aims to determine the influence of mathematics anxiety on junior high school student's performance in Mathematics at Muertegui National High School.

• *Specifically, it Answers the following Questions:*

✓ What is the demographic profile of the respondents in terms of age and sex?
✓ What is the mathematics performance of the junior high school students in Muertegui National High School?
✓ What are the different mathematics anxiety experienced by junior high school students in Muertegui National High School based on their mathematics performance?
✓ Is there a significant relationship between mathematics anxiety and the mathematics performance of junior high school students in Muertegui National High School?

➢ *Hypothesis*

• H_o: There is no significant relationship between mathematics anxiety and mathematics performance among junior high school students.
• H_a: There is a significant relationship between mathematics anxiety and mathematics performance among junior high school students.

➢ *Significance of the Study*

• *Department of Education.*

This research study will give benefit to Department of Education as it will help the school to determine what it needs to do to reduce students' mathematics anxiety, and it will also provide the students with healthcare support.

• *Teachers.*

The teachers who guide and teach their students in their academic endeavors will profit from this research project, and they will also help find solutions to the specific problem arising in the classroom.

• *Students.*

This research study will also benefit the students because it will enable them to identify whether they have mathematics anxiety and provide them with self-help tips.

• *Future Researchers.*

These upcoming researchers will significantly benefit from the findings of this study, and it provides them with insight into mathematics anxiety because they will be familiar with thoughts regarding mathematics anxiety.

➢ *Scope and Delimitation of the Study*

This research study focuses only on determining the influence of mathematics anxiety on the performance of junior high school students in mathematics. This research study limits only to junior high school students, and in mathematics, other grade levels and subjects will not be included. The research study will be conducted from November 2022 to February 2023.

The gathering of the data will be conducted at Muertegui National High School. The target respondents are the grade 10 junior high school students enrolled in the school year 2022-2023. The data will be collected through survey instruments.

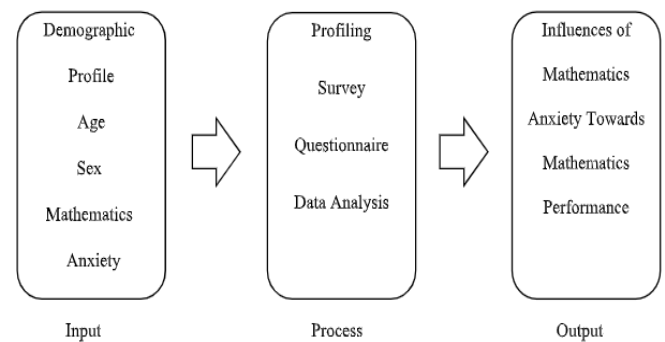➢ *Conceptual Framework of the Study*

Fig 1 The Schematic Diagram of the Input, Process, and Output Approach of the Study

This conceptual framework shows the input, process, and output approach of the study. The input includes the demographic profile of the respondents and mathematics anxiety. The process includes profiling, survey questionnaire, and data analysis, while the output is the influence of mathematics anxiety towards mathematics performance.

➢ *Operational Definition of Terms*

• *Grade 10 Students.* This refers to the study's respondents currently enrolled in Muertegui National High School.
• *Influence.* This refers to the effects of mathematics anxiety on the mathematics performance of the respondents.
• *Mathematics.* This refers to the subject where students learn and are taught to solve numerical computations or calculations.
• *Mathematics Anxiety.* This refers to the mentally uncomfortable state of mind experienced by students caused by impending or expected problems that prevent them from manipulating numbers and solving mathematical problems.
• *Mathematics Performance.* This refers to the extent to which a student has attained their short or long-term educational goals in mathematics.

III. REVIEW OF RELATED LITERATURE

Mathematics was essential in our lives, and children were taught mathematics to help them comprehend the numerical data that was provided to them and to enable them to carry out both simple and sophisticated computations. According to Delgado and Kassim (2019), the primary source of mathematics' significance was using mathematics

as a tool to address issues in everyday life. Despite this, students frequently hold the view that mathematics is a challenging subject and challenging to learn.

Sadly, beyond the importance of the subject, many students seem to worry about it. A person who experienced tension, agitation, or panic involving mathematics circumstances was said to have mathematics anxiety (Yang, as cited in Al Mutawah, 2015, p. 239). Hence, due to the significance of the topic, studies were done to identify mathematics anxiety in order to establish what causes it and how to reduce it in students (Sule, 2017).

To begin with, relevant research started in the 1970s; the study by Richardson and Suinn (as cited in Essuman et al., 2021, p. 6562) was the first to define it as tension and anxiety that prevent people from manipulating numbers and solving mathematical computations in a variety of real-world and academic contexts. Since then, others have persisted in their efforts, encouraged by research demonstrating that mathematics anxiety was highly likely to have originated in the classroom (Newstead as cited in Essuman et al., 2021, p. 6562) and that it not just affects one's ability to perform numerically (Preston as cited in Essuman et al., 2021, p. 6562). Parallel to this, Tsanwani (as cited in Hlalele, 2012, p. 268) mathematics anxiety was when people were asked to solve a mathematical issue, some individuals experienced this condition, characterized by panic, disarray, and mental paralysis.

Moreover, Dodongan (2022) stated that mathematics' present position in the school system was made worse because it was a complex subject, and some students claimed they did not want to or were not interested in the subject. They have given up on the idea that they cannot do it rather than being pushed. Furthermore, poor-academic performance, weak learning of higher-level abilities, and low achievement in mathematics were all effects of the student's failure to comprehend, master, and develop mathematical skills.

Specifically, Al Mutawah (2015) stated that mathematics anxiety is described as discomfort brought on by performing mathematical tasks. It mainly affects a sizeable portion of people inside the school (Devine, as cited in Al Mutawah, 2015, pp. 239 – 240). Thus, it is possible for students to experience increased heart rate, to feel as tough as they cannot solve mathematical equations, or to decide not to enroll in mathematics classes (Sheffield & Hunt as cited in Al Mutawah, 2015, p. 239).

Similarly, Fennema and Peterson (as cited in Reyes, 2019, p. 24) students who struggled with attention and low self-esteem were likelier to have cognitive mathematics anxiety. It was discovered in the study by May (as cited in Reyes, 2019, p. 24) that students who passed their exams had more self-esteem and less anxiety than those who failed. Thus, it was found that self-efficacy and mathematics anxiety was connected.

In accordance, Arem (as cited in Sule, 2017, p. 2) defined mathematics anxiety as an emotional, mental, and physical reaction to the process of thinking mathematically and solving problems, which was brought about by unpleasant past experiences with mathematics. In addition, the degree of discomfort experienced by students in reaction to circumstances involving mathematical problems that were perceived as a danger to their self-ability was characterized as mathematics anxiety (Trujillo & Hadfield as cited in Sule, 2017, p. 2). As a result, children who anticipated failure had trouble trusting in their aptitudes for the future (Sule, 2017).

Furthermore, this so-called mathematics anxiety was essentially the result of unpleasant mathematics classroom experiences (Segumpan & Tan, 2018). In comparison, Mutodi (as cited in Segumpan & Tan, 2018, p. 4) said that many children experienced a tremendous deal of anxiety due to standard mathematics classroom procedures. The researcher continued by saying that using teaching strategies that involve fewer lectures, more student-directed classes, and more discussions was likely the best way to ease tension among students as well as to reduce mathematics anxiety.

Whereas, Ashcraft (as cited in Essuman et al., 2021, p. 6563) revealed that students who avoid mathematics are less proficient, exposed to it less, and do not practice it as much, which makes them more worried and mathematically unprepared for success. To put it more simply, the researchers said some children with severe anxiety might develop a mathematics phobia. In the same way, Hamza (as cited in Segumpan & Tan, 2018, p. 5) stated that it occurs when students become more frustrated because the sub-stages of mathematical procedures were not well explained. This frustration was made worse by the fact that mathematics instruction was sequential as the subject becomes more challenging.

Likewise, some children were consistently given bad performances, which diminished their confidence and raised their anxiety levels (Ng, 2012). Others felt their poor performance in mathematics reflected their lack of intelligence and were ashamed of it (Puteh, as cited in Ng, 2012, p. 572). Nevertheless, many research studies about mathematics anxiety have been correlated with the mathematics performance of students.

On the other hand, Essuman et al. (2021) administered a study to determine the level of mathematics anxiety among junior high school students in the Bongo District of Ghana with a sample of 492 students. As a result of this, the study found that the level of mathematics anxiety among junior high school students in the Bongo district was high, and this can be proved by the findings of their study in the fact that it correlated to the performance of the students. In the study by Ferdous (as cited in Essuman et al., 2021, p. 6567), the researcher discovered that students who experienced high levels of mathematics anxiety when being taught could influence their performance.

Wherein Dodongan (2022) did a study to explore the relationship between mathematics anxiety and students' mathematics performance by using Pearson Moment Correlation. The study's findings supported the conclusion that there was a significant, statistically direct link between students' mathematics performance and their level of mathematics anxiety. The findings implied that the higher the level of mathematics anxiety, the lower the mathematics performance, and the lower the mathematics anxiety, the higher the mathematics performance.

Another study by Estonato (2018) tackled the impact of mathematics anxiety on students' performance. Accordingly, the respondents reported low academic performance in pre-calculus and significant levels of mathematics anxiety. The study's findings unequivocally demonstrate that respondents' pre-calculus academic performance was positively impacted by their anxiety regarding mathematics.

As regards the study by Delgado and Kassim (2019), the researchers conducted and discovered that the level of mathematics anxiety of their respondents was moderate anxiety. This can be seen in the interpretation of their survey with a sample of 516 students who identified themselves as moderate anxiety level. Among these, the researchers also found out that there was a difference between males and females in terms of mathematics anxiety levels.

Turning to the study by Al Mutawah (2015) the study found that there was a relationship between mathematics anxiety and students' performance in mathematics by the use of Revised Mathematics Anxiety (RMANX) survey with a sample of 1352 students in middle schools and high schools of Bahrain. The study revealed that as students move through the grade levels, their anxiety level rises. The researcher added that it might also result from the mathematics curriculum's complexity, which introduces more complicated ideas at higher levels.

Moving on to the study by Sule (2017), the researcher rooted out that compared to regular classroom instruction; mathematics was not taught in classrooms very well. Students may perform poorly in mathematics as a result of this, and some students lack of courage to turn in their assignments to teachers for grading. These findings resemble the study by Ng (2012) that mathematics performance was likely to be poor for highly anxious students.

Consequently, Ng (2012) stated that according to the respondents, society does not adequately encourage children in school, and as a result, they are not motivated to learn mathematics. In addition, one of the main factors contributing to the low accomplishment in mathematics was a lack of instructional resources. Thus, the absence of instructional resources discouraged instructors' efforts across the board in the educational field.

Hlalele (2012) stated that all facets of instruction and learning were impacted by mathematics anxiety. This remark was supported by the study's findings, which showed that none of the respondents said they never get anxious about mathematics in a classroom. The researcher suggested that teachers need to understand not only how common mathematics anxiety is among students but also how it affects their achievement and motivation.

Since a student's ability to learn and succeed in school depends on various factors, educators pay closer attention to all aspects of the teaching and learning process. Al Mutawah (2015) said that this includes non-cognitive factors like beliefs, tenacity, goal orientation, and self-esteem, the impact of which had been studied concerning students' academic success. The researcher anticipated that the study's findings help educators create conducive learning environments so that students enjoy their education and achieve higher levels of success.

The study by Essuman et al. (2021), the study found sufficient data to conclude that gender also played a significant role in mathematics anxiety. To better prepare the students for the topic, it was advised that mathematics teachers incorporate the psychology of teaching and learning into their lessons. The researcher also said that before moving to the abstract stage, teachers should start with the concrete stage.

The study encouraged those with a stake in their students' success to consider mathematics anxiety levels before deciding on effective and appropriate strategies when teaching and learning were conducted, which had implications for teachers, students, parents, and society as a whole. As a result, it was thought that it was possible to lessen the factors contributing to anxiety and subpar mathematics performance. The main takeaway was that educators should foster a culture of safety in the classroom and support the growth of positive attitudes in their students because less anxious students have a higher chance of succeeding in mathematics (Ng, 2012; Sule, 2017)

Concerning the study by Estonanto (2018), the study recommended that many mathematics anxiety awareness programs, seminars, and symposiums should be conducted to promote the importance of mathematics in society. A positive approach to reducing mathematics anxiety should be maximized in all mathematics classes to achieve more meaningful results in mathematics students' performance levels. To develop the study further, the study strongly recommended conducting more extensive parallel studies on the same variables in both primary and secondary schools.

IV. METHODOLOGY

➢ *Research Design*
This research study utilized the descriptive-correlational method of research. It was a descriptive-correlational study since it was primarily designed to determine the mathematics anxiety of junior high school students and to correlate it to the student's performance in

mathematics. The descriptive-correlational design was used to explain a specific phenomenon by observing it in the natural world and establishing the relationship between variables (Estonanto, 2018).

➤ *Research Locale*

The research was conducted at Muertegui National High School, a public secondary school located at Brgy. Daja Diot, San Isidro, Leyte.

➤ *Respondents and Sampling Procedures*

The study involved junior high school students in Muertegui National High School. The respondents were identified using stratified random sampling, and Slovin's formula was utilized to determine the appropriate number of respondents needed in this study. Using Slovin's formula, the target population was 250 junior high school students, which included 55 students from grade 7, 65 students from grade 8, 64 students from grade 9, and 66 students from grade 10, respectively.

➤ *Research Instrument*

The study used an adopted, and modified survey questionnaire by Peters et al. (2020) entitled Performance Level of the Respondents, and Al Mutawah (2015) entitled Revised Mathematics Anxiety (RMANX). Part I of the survey was the demographic profile of the respondents, such as age, sex, and grade level. Part II was composed of five levels to determine the performance level of the respondents during their first quarter grade in Mathematics; meanwhile, part III was composed of 20 items to determine the different experienced mathematics anxiety among junior high school students.

The researchers used a 5-point Likert scale for scoring purposes. For part II, the respondents were asked to respond according to their performance level in mathematics according to the scale provided, which are: outstanding, very satisfactory, satisfactory, reasonably satisfactory, and did not meet the expectations. Whereas, for part III, the respondents were asked to rate or rank the statements according to the scale provided, which are: 5 – always, 4 – frequently, 3 – sometimes, 2 – rarely, and 1 – never.

➤ *Data Collection Procedure*

Prior to collecting the data, the researchers obtained authorization from the students to conduct the survey through a letter outlining their purpose for doing the survey. In gathering the data, the researchers distributed the printed survey questionnaire to the target respondents. The researchers instructed them on how to answer the survey questionnaire, which was retrieved immediately after answering. The collection of the data happened on February 3, 2023.

➤ *Data Scoring and Interpretation*

The interpretations of means are based on the following:

Table 1 Data Scoring and Interpretation

Score	Numerical Rating	Response Choice
5	90-95	Outstanding
4	85-89	Very Satisfactory
3	80-84	Satisfactory
2	75-79	Fairly Satisfactory
1	70 - 74	Did not meet the Expectations

Table 2 Data Scoring and Interpretation

Score	Range	Response Choice
5	4.21 – 5.00	Always
4	3.41 – 4.20	Frequently
3	2.61 – 3.40	Sometimes
2	1.81 – 2.60	Rarely
1	1.00 – 1.80	Never

V. DATA ANALYSIS

The data gathered from research questions number one, two, and three were statistically analyzed using descriptive statistics such as frequency, percentage, standard deviation, mean, and average weighted mean. Meanwhile, the data gathered from research question number 4 were analyzed using Pearson Correlation to determine the significant relationship between mathematics anxiety and mathematics performance of the students at 0.05 level of significance. The data gathered will be processed using MS Excel Analysis ToolPak.

➤ *Ethical Considerations*

The anonymity and confidentiality of the respondents were preserved by not revealing their names and identity in the data collection, analysis, and reporting of the study's findings. These aforementioned ethical considerations shall be strictly followed and implemented in order to protect the personal identities of the respondents.

VI. RESULTS AND DISCUSSION

The results of the survey are shown in Table 3 below, which indicates the demographic characteristics of the respondents used for the study.

Table 3 Demographic Profile of the Respondents in terms of Age, Sex, and Grade Level

		f	%
Age	12-13	91	36%
	14-15	126	50%
	16-17	30	12%
	18 above	3	1%
	Total	**250**	**100%**
Sex	Male	88	35%
	Female	162	65%
	Total	**250**	**100%**
Grade Level	Grade 7	55	22%
	Grade 8	65	26%
	Grade 9	64	26%
	Grade 10	66	26%
	Total	**250**	**100%**

The respondents were junior high school students the results from Table 3 indicated that most of the respondents of the study were ages 14 and 15 years old (n=126, 50%) as compared to those who were 12 and 13 years old (n=91, 36%) which followed by 16 and 17 years old (n=30, 12%), and last group of the age of the respondents were 18 years old above (n=3, 1%). The results from Table 1 further indicated that the majority of the respondents were females (n=162, 65%), and males (n=88, 35%) were involved in the study. Concerning the grade level of the respondents, the table indicated that a more significant proportion of the respondents were grade 10 students (n=66, 26%). In contrast, grade 8 students were the second highest group (n=65, 26%) followed by grade 9 students as the third highest group (n=65, 26%) and lastly, the grade 7 students (n=55, 22%).

In terms of the performance level of the junior high school students, Table 4 revealed that most of the junior high school students have a Very Satisfactory performance in mathematics (n =94, 38%), which is followed by junior high school students who have Satisfactory performance in the subject (n = 80, 32%). Subsequently, junior high school students who had an Outstanding performance in mathematics was the third most (n = 39, 16%) followed by junior high school students who has Fairly Satisfactory performance in the subject (n = 33, 13%). Lastly, the fewest of the junior high school students were in Did not meet any Expectations level in the subject (n = 4, 2%).

This implies that the mathematics performance of the majority of junior high school students in Muertegui National High School was at a good level, which also means that mathematics teachers taught well to their students. However, there were still students whose performance in the said subject was at a low level. Thus, the researchers believed that mathematics anxiety might contribute to the student's poor performance. In order to increase students' performance, issues with mathematics learning must be resolved, particularly since their performance was already graded for the first grading.

Table 4 First Grading Mathematics Performance of the Respondents

Level	Numerical Rating	f	%
Outstanding	90-95	39	16
Very Satisfactory	85-89	94	38
Satisfactory	80-84	80	32
Fairly Satisfactory	75-79	33	13
Did not meet any Expectations	70-74	4	2

Table 5 Mathematics Anxiety Experienced by the Respondents who were Outstanding in their Mathematics Performance

Statements	M	SD	Verbal Interpretation
1. I panic when I start the mathematical part of a standardized achievement test.	3.00	0.513	Sometimes
2. I cannot ask any questions about what I did not understand in math classes.	2.67	0.527	Sometimes
3. I panic when I get math homework consisting of many problems.	2.38	0.559	Rarely
4. When I hold a math textbook to study, I start feeling stomach ache.	1.82	0.668	Rarely
5. I cannot concentrate on anything before a math exam.	2.38	0.559	Rarely
6. I am afraid of learning my math grade.	2.18	0.593	Rarely
7. I am afraid of presenting problems to the teacher, which I can solve.	2.72	0.523	Sometimes
8. I can reject helping a child with his homework, because I am afraid of facing a question which I cannot solve.	2.10	0.608	Rarely
9. I am afraid of taking a math pop quiz.	2.36	0.563	Rarely
10. I cannot study well for math exams because I worry about my grade.	2.36	0.563	Rarely
11. When I open my math book and look at the pages, I fear I will fail the course.	2.41	0.556	Rarely
12. I feel anxious and pessimistic while waiting for the result of a math exam.	3.33	0.527	Sometimes
13. When I think about the subjects required for passing a math course, I feel I cannot complete my school requirements.	2.46	0.549	Rarely
14. I do not like dealing with numbers.	2.18	0.593	Rarely
15. I feel nervous when one of my friends notices that I could not understand the solution to a math question.	2.33	0.567	Rarely
16. I have problems listening to my math teachers.	2.05	0.618	Rarely
17. I get nervous when I learn that the next lesson is mathematics.	2.21	0.588	Rarely
18. I do not like making calculations in everyday life.	2.67	0.527	Sometimes
19. I misunderstand concepts in math courses.	2.44	0.552	Rarely
20. I panic when I cannot remember a required equation for a problem.	3.21	0.518	Sometimes
Average Weighted Mean	**2.46**		**Rarely**

Table 5 shows the different mathematics anxiety experienced by junior high school students who were Outstanding in their mathematics performance. Most of the junior high school outstanding students responded that "I feel anxious and pessimistic while waiting for the result of a math exam" (M=3.33, SD=0.527). Therefore, junior high school excellent students occasionally felt anxious and worried while awaiting the results of their mathematics tests. Outstanding students did this out of fear that they would receive a poor grade or a low score on their test while waiting. As a result, outstanding students were anxious because students believed that their poor test results would decline their mathematics performance.

On the other hand, the junior high school outstanding students responded least that "When I hold a math textbook to study, I start feeling stomach ache" (M=1.82, SD=0.668). Thus, outstanding junior high school students rarely complained of stomach aches when carrying a math textbook. Instead of getting queasy when doing so, students

would rather grasp mathematical textbooks to gain more new lessons concerning their upcoming discussions. As students were excellent students, students needed to read books to maintain their grades or even achieve higher grades in mathematics; hence, outstanding students rarely felt anxiety regarding it.

Furthermore, all outstanding junior high school students rarely felt anxious about those different mathematics anxiety statements that they experienced (AWM=2.46). This was because students were excellent or that students received outstanding grades in mathematics and have excellent minds, which students never hesitate to solve or answer a mathematical problem. In contrast to other students, outstanding junior high school students rarely experience fear or anxiety in mathematics. Even though some of the outstanding students occasionally experienced anxiety, students continued to do well because, contrary to poor performers, excellent students believed that mathematics was not difficult enough to learn.

Table 6 Mathematics Anxiety Experienced by the Respondents who were Very Satisfactory in their Mathematics Performance

Statements	M	SD	Verbal Interpretation
1. I panic when I start the mathematical part of a standardized achievement test.	3.18	0.331	Sometimes
2. I cannot ask any questions about what I did not understand in math classes.	2.95	0.328	Sometimes
3. I panic when I get math homework consisting ofmany problems.	2.67	0.337	Sometimes
4. When I hold a math textbook to study, I start feeling stomach ache.	2.15	0.383	Rarely
5. I cannot concentrate on anything before a math exam.	2.80	0.331	Sometimes
6. I am afraid of learning my math grade.	3.16	0.330	Sometimes
7. I am afraid of presenting problems to the teacher, which I can solve.	3.00	0.328	Sometimes
8. I can reject helping a child with his homework, because I am afraid of facing a question that I cannot solve.	2.66	0.337	Sometimes
9. I am afraid of taking a math pop quiz.	3.01	0.328	Sometimes
10. I cannot study well for math exams because I worry about my grade.	2.78	0.332	Sometimes
11. When I open my math book and look at the pages, I fear I will fail the course.	2.83	0.330	Sometimes
12. I feel anxious and pessimistic while waiting for the result of a math exam.	3.32	0.336	Sometimes
13. When I think about the subjects required for passing a math course, I feel I cannot complete my school requirements.	2.89	0.329	Sometimes
14. I do not like dealing with numbers.	2.69	0.336	Sometimes
15. I feel nervous when one of my friends notices that I could not understand the solution to a math question.	2.89	0.329	Sometimes
16. I have problems listening to my math teachers.	2.95	0.328	Sometimes
17. I get nervous when I learn that the next lesson is mathematics.	2.97	0.328	Sometimes
18. I do not like making calculations in everyday life.	2.88	0.329	Sometimes
19. I misunderstand concepts in math courses.	2.80	0.331	Sometimes
20. I panic when I cannot remember a required equation for a problem.	3.10	0.329	Sometimes
Average Weighted Mean	2.28		Sometimes

Table 6 shows the different mathematics anxiety experienced by junior high school students who were Very Satisfactory in their mathematics performance. The majority of the junior high school very satisfactory students answered that "I feel anxious and pessimistic while waiting for a math exam" (M=3.32, SD=0.336). This indicates that junior high school very satisfactory students occasionally had anxiety as students awaited the results of their mathematics exam because students were concerned they might not perform well. In addition, students were anxious when it happened because students also believed their grades might drop or students would fail the subject.

Meanwhile, junior high school very satisfactory students least answered that "When I hold a math textbook to study, I start feeling stomach ache" (M=2.15, SD=0.383). This means that delighted junior high school students infrequently experienced stomach aches when holding a mathematics textbook. Instead, students can appreciate using it to acquire new ideas for the subject's upcoming lesson so students can address or respond to the teacher's question when students are participating in the discussion. Considering that reading textbooks will enable them to achieve better grades and may inspire them to rise to the top of their class.

Moreover, the overall junior high school very satisfactory students felt sometimes anxious about the different mathematics anxiety they experience (AWM=2.88). This means that junior high school very satisfactory students occasionally experienced anxiety when learning mathematics. Despite doing well in the subject, students were still concerned about engaging in mathematics because of the anxieties they experienced. Hence, students were aiming for the top of the performance since those claims regarding mathematics anxiety did not cause them to fear mathematics.

Table 7 Mathematics Anxiety Experienced by the Respondents who were Satisfactory in their Performance Level

Statements	M	SD	Verbal Interpretation
1. I panic when I start the mathematical part of a standardized achievement test.	3.35	0.367	Sometimes
2. I cannot ask any questions about what I did not understand in math classes.	3.00	0.356	Sometimes
3. I panic when I get math homework consisting of many problems.	3.15	0.358	Sometimes
4. When I hold a math textbook to study, I start feeling stomach ache.	2.59	0.371	Rarely
5. I cannot concentrate on anything before a math exam.	3.24	0.361	Sometimes
6. I am afraid of learning my math grade.	3.05	0.356	Sometimes
7. I am afraid of presenting problems to the Teacher, which I can solve.	3.36	0.367	Sometimes
8. I can reject helping a child with his homework, because I am afraid of facing a question that I cannot solve.	2.93	0.356	Sometimes
9. I am afraid of taking a math pop quiz.	2.91	0.356	Sometimes
10. I cannot study well for math exams because I worry about my grade.	3.30	0.364	Sometimes
11. When I open my math book and look at the pages, I fear I will fail the course.	3.00	0.356	Sometimes
12. I feel anxious and pessimistic while waiting for the result of a math exam.	3.53	0.380	Frequently
13. When I think about the subjects required for passing a math course, I feel I cannot complete my school requirements.	3.14	0.357	Sometimes
14. I do not like dealing with numbers.	2.85	0.358	Sometimes
15. I feel nervous when one of my friends notices that I could not understand the solution to a math question.	3.25	0.361	Sometimes
16. I have problems listening to my math teachers.	3.13	0.357	Sometimes
17. I get nervous when I learn that the next lesson is mathematics.	2.98	0.356	Sometimes
18. I do not like making calculations in everyday life.	2.76	0.360	Sometimes
19. I misunderstand concepts in math courses.	2.93	0.356	Sometimes
20. I panic when I cannot remember a required equation for a problem.	3.23	0.360	Sometimes
Average Weighted Mean	3.08		Sometimes

Table 7 shows the mathematics anxiety experienced by junior high school students who were Satisfactory with their mathematics performance. Most of the junior high school satisfactory students responded that "I feel anxious and pessimistic while waiting for the result of a math exam" (M=3.53, SD=0.380). This indicates that junior high school satisfactory students typically experience anxiety and concern while waiting for their exam results. Satisfactory students experienced it because some believed they would fail the test and had flawed notions about how it would turn out. Their performance was at a minimal level, and students needed to do better to get higher performance. Thus, students must study hard and eliminate this type of anxiousness.

On the contrary, junior high school satisfactory students least responded that "When I hold a math textbook to study, I start feeling stomach ache" (M=2.59, SD=0.371). This means that junior high school satisfactory students hardly ever felt anxious or suffered from stomach aches when holding a math textbook. Instead, satisfactory students decide to hold it along since it would help them comprehend new ideas or concepts about the subject. Students who read ahead will respond right away to any questions that the teacher poses.

In addition, all junior high school satisfactory students sometimes experienced anxiety on different mathematics anxiety (AWM= 3.08). This was because although having unsatisfactory grades, satisfactory students nevertheless enjoyed learning mathematics, which caused them to become anxious occasionally. Students who had satisfactory grades expressed anxiety about mathematics because students believed it would be difficult for them to learn and pass the subject. Even after going through this, the students continued to put in much effort to acquire decent or higher remarks and to avoid getting any more anxieties regarding math.

Table 8 Mathematics Anxiety Experienced by the Respondents who were Fairly Satisfactory in their Mathematics Performance

Statements	Mean	SD	Verbal Interpretation
1. I panic when I start the mathematical part of a standardized achievement test.	3.21	0.565	Sometimes
2. I cannot ask any questions about what I did not understand in math classes.	3.12	0.561	Sometimes
3. I panic when I get math homework consisting of many problems.	2.85	0.562	Sometimes
4. When I hold a math textbook to study, I start feeling stomach ache.	3.06	0.560	Sometimes
5. I cannot concentrate on anything before a math exam.	3.27	0.569	Sometimes
6. I am afraid of learning my math grade.	3.12	0.561	Sometimes
7. I am afraid of presenting problems to the teacher, which I can solve.	3.15	0.562	Sometimes
8. I can reject helping a child with his homework, because I am afraid of facing a question that Icannot solve.	2.79	0.565	Sometimes
9. I am afraid of taking a math pop quiz.	2.94	0.560	Sometimes
10. I cannot study well for math exams because I worry about my grade.	3.06	0.560	Sometimes
11. When I open my math book and look at the pages, I fear I will fail the course.	3.33	0.574	Sometimes
12. I feel anxious and pessimistic while waiting for the result of a math exam.	2.91	0.560	Sometimes
13. When I think about the subjects required for passing a math course, I feel I cannot complete my school requirements.	2.73	0.569	Sometimes
14. I do not like dealing with numbers.	2.73	0.569	Sometimes
15. I feel nervous when one of my friends notices that I could not understand the solution to a math question.	3.48	0.591	Frequently
16. I have problems listening to my math teachers.	2.64	0.577	Sometimes
17. I get nervous when I learn that the next lesson is mathematics.	3.42	0.584	Frequently
18. I do not like making calculations in everyday life.	3.06	0.560	Sometimes
19. I misunderstand concepts in math courses.	3.27	0.569	Sometimes
20. I panic when I cannot remember a required equation for a problem.	3.03	0.559	Sometimes
Average Weighted Mean	**3.06**		**Sometimes**

Table 8 reveals the different mathematics anxiety experienced by junior high school students who were Fairly Satisfactory in their mathematics performance. The majority of the junior high school reasonably satisfactory students answered that "I feel nervous when one of my friends notices that I could not understand the solution of a math question" (M=3.48, SD=0.591). This indicates that reasonably satisfactory students frequently experienced anxiety or trepidation when one of their friends pointed out that they could not comprehend a mathematics problem's answer. When this occurred, reasonably satisfactory students considered their knowledge insufficient to understand the subject and felt intimidated by the mathematical problem's solution.

Meanwhile, junior high school reasonably satisfactory students least answered that "I have problems listening to my math teachers" (M=2.64, SD=0.577). In other words, junior high school reasonably satisfactory students occasionally found it difficult to pay attention to their math teachers because students might be afraid to respond to a question that students could not answer or because students might not have any interest in learning mathematics. Due to their poor engagement in the subject matter and failure to pay attention to their teacher, students performed poorly in math. Even though students had low-performance levels, some of them had the benefit of listening to their teacher in order to learn new information and achieve the desired grades.

In addition, junior high school reasonably satisfactory students sometimes felt anxious or worried about the different mathematics anxiety they experienced (AWM=3.06). This indicated that even though students performed poorly in mathematics classes, students did not have a lot of mathematics anxiety. As students' level of mathematical proficiency was low, students needed to reduce their anxiety about mathematics in order to perform better. Reasonably satisfactory students' performance would improve and increase to the anticipated performance level through books, good engagement with the subject, and learning from the teachers' lessons.

Table 9 Mathematics Anxiety Experienced by the Respondents who Did not meet any
Expectations in their Mathematics Performance

Statements	Mean	SD	Verbal Interpretation
1. I panic when I start the mathematical part of a standardized achievement test.	4.25	2.437	Always
2. I cannot ask any questions about what I did not understand in math classes.	3	1.826	Sometimes
3. I panic when I get math homework consisting of many problems.	2	2.236	Rarely
4. When I hold a math textbook to study, I start feeling stomach ache.	3.25	1.854	Sometimes
5. I cannot concentrate on anything before a math exam.	2.75	1.854	Sometimes
6. I am afraid of learning my math grade.	1.75	2.437	Never
7. I am afraid of presenting the problems to the teacher, which I can solve.	4.25	2.437	Always
8. I can reject helping a child with his homework, because I am afraid of facing a	2	2.236	Sometimes

question that I cannot solve.			
9. I am afraid of taking a math pop quiz.	4.25	2.437	Always
10. I cannot study well for math exams because I worry about my grade.	3.5	1.936	Frequently
11. When I open my math book and look at the pages, I fear I will fail the course.	2.5	1.936	Rarely
12. I feel anxious and pessimistic while waiting for the result of a math exam.	3.5	1.936	Frequently
13. When I think about the subjects required for passing a math course, I feel I cannot complete my school requirements.	1.75	2.437	Never
14. I do not like dealing with numbers.	3.50	1.936	Frequently
15. I feel nervous when one of my friends notices that I could not understand the solution to a math question.	2.75	1.854	Sometimes
16. I have problems listening to my math teachers.	2.25	2.067	Rarely
17. I get nervous when I learn that the next lesson ismathematics.	3.25	1.854	Sometimes
18. I do not like making calculations in everyday life.	3.75	2.067	Frequently
19. I misunderstand concepts in math courses.	3.25	1.854	Sometimes
20. I panic when I cannot remember a required equation for a problem.	1.75	2.437	Never
Average Weighted Mean	**3.03**		**Sometimes**

Table 9 shows the different mathematics anxiety experienced by junior high school students who Did not meet any Expectations in their mathematics performance. Most of them answered that "I panic when I start the mathematical part of a standardized achievement test" (M=4.25, SD=2.437), "I am afraid of presenting the problems to the teacher which I can solve" (M=4.25, SD=2.437), and "I am afraid of taking a math pop-quiz" (M=4.25, SD=2.437). This means students who perform poorly in mathematics always feel nervous or anxious before students begin a mathematical section of a typical achievement test since students could be doubtful to answer. Deficient student performance was also hesitant to disclose difficulties to their teacher because students fear the teacher would judge or criticize them even though students were capable of doing so. Students also felt apprehensive and were afraid to take a math quiz because students believed it would be difficult for them.

On the other hand, the junior high school students who at deficient performance levels least responded that "I am afraid of learning my math grade" (M=1.75 SD=2.437), "When I think about the subjects required for passing a math course, I feel I cannot complete my school requirements" (m=1.75, SD=2.437), and "I panic when I cannot remember a required equation for a problem" (M=1.75, SD=2.437). This indicates that even though students score poorly in mathematics, students with awful mathematics performance never experienced anxiety while learning their mathematics subject. When students consider the subjects needed to pass a math course, students also never doubt their ability to meet their academic needs. Students also never experienced any fear or panic when students forgot to use an equation necessary to solve a mathematical question. Interestingly, even though they have deficient performance in the said subject, students still never build anxiousness and fear regarding the subject.

Consequently, students with deficient mathematics performance sometimes experienced various forms of mathematics anxiety (AWM=3.03). This indicates that even when their performance was inferior, students never experienced the typical levels of mathematics anxiety. In order to keep up with high-achieving students, their performance must be improved as their fear of mathematics needs to be lessened so students would become proficient in it.

Table 10 Summary of Average Weighted Mean Score of the Mathematics Anxiety Experienced by the Respondents by Performance Level.

Level	AWM	Interpretation
Outstanding (90-95)	2.46	Rarely
Very Satisfactory (85-89)	2.88	Sometimes
Satisfactory (80-84)	3.08	Sometimes
Reasonably Satisfactory (75-79)	3.06	Sometimes
Did not meet any Expectations (70-74)	3.03	Sometimes

In summary, it can be observed, as shown in Table 10, that most of the respondents sometimes felt anxious as the verbal interpretation of their average weighted mean scores of the mathematics anxiety which junior high school students experienced inside the classroom aside from outstanding students who rarely felt anxious. Outstanding junior high school students felt rarely anxious since students do well in the subject and rarely experience any anxiety while learning it in a classroom. However, junior high school students whose performance level was at Very Satisfactory, Satisfactory, Fairly Satisfactory, and Did not meet any Expectations sometimes felt anxious in mathematics.

Even if some of the junior high school students had inferior mathematics performance, students occasionally felt anxious since students were sometimes frightened to learn mathematics. Most of these junior high school students may have been reluctant to participate in class discussions about their mathematical subject. The researchers believed that when the teacher calls on them, students could lose confidence in their ability to answer mathematical problems.

This part below shows the correlation between mathematics anxiety and mathematics performance of junior high school students.

Table 11 Correlation Between Mathematics Anxiety and Mathematics Performance of the Respondents

Average Weighted Mean	Performance Level	r value	p-value	Remarks	Decision
2.46	Outstanding (90-95)	-0.108	0.51283	Very low negative correlation	Accept H_o
2.88	Very Satisfactory (85-89)	-0.398	0.00071	Low negative correlation	Reject H_o
3.08	Satisfactory (80-84)	-0.098	0.38713	Very low negative correlation	Accept H_o
3.06	Reasonably Satisfactory (75-79)	0.074	0.68234	Very low positive correlation	Accept H_o
3.03	Did not meet any Expectations (70-74)	-0.065	0.935	Very low negative correlation	Accept H_o

Significance level at 0.05

The individual mathematics anxiety average weighted mean score and first-grade performance level were calculated by the researchers using Pearson Product Moment Correlation, which revealed a relationship between the two variables at 0.05 level of significance. The computed value of Pearson r in Outstanding performance level was -0.108, which has a very low negative correlation. Meanwhile, the Very Satisfactory performance level had a computed r value of -0.398 with a remarked of low negative correlation, and the Satisfactory performance level had a -0.098 computed r-value which has a remark of very low negative correlation. However Fairly Satisfactory performance level have a computed value of 0.074 which had a remarked of a very low positive correlation. Students who were in Did not meet any Expectation performance level has the computed r-value of -0.065 which means the remark was very low negative correlation.

After that, the p value was computed using Correlation Calculator Website, wherein the r value and the number of respondents on each performance level were computed. The result of the calculations shows that the Outstanding performance level has a p-value of 0.51283, while the satisfactory and reasonably satisfactory performance level has 0.38713 and 0.68234 computed p value. The calculation result on the students who were in Did not meet any Expectations level shows a p-value of 0.935. On the other hand, the Very Satisfactory performance level had a computed p-value of 0.00071.

Since the p-value is not significant in outstanding students, satisfactory students, reasonably satisfactory students, and students who did not meet expectations, then the null hypothesis is accepted wherein there is no significant relationship between mathematics anxiety and mathematics performance among junior high school students in Muertegui National High School. The findings of this study were congruent with the study by Essuman et al. (2021), which the study revealed that there was no significant relationship between mathematics anxiety and students' academic performance. Similarly, Puteh and Khalin (2016) found a bad inverse link between mathematics achievement and mathematics anxiety, where students with high mathematics anxiety perform poorly in mathematics. Despite the low connection, the is a substantial association.

Meanwhile, the p-value is significant for very satisfactory students, which means that the null hypothesis was rejected, wherein there is a significant relationship between mathematics anxiety and very satisfactory students. This means that the performance of very satisfactory students was influenced by mathematics anxiety. This finding was supported by Al Mutawah (2015), wherein study found a significant correlation between mathematics anxiety levels and the students' mathematics performance. In addition, the study by Estonanto (2018) found that mathematics anxiety had an impact on the performance of the respondents.

VII. CONCLUSION

The study has produced empirical evidence to conclude that there was a very low negative and positive correlation between mathematics anxiety experienced and the five levels of mathematics performance of the students in Muertegui National High School. It is crucial to the school since it would let the school realize that by identifying the prevalence of mathematics anxiety with specific students, the school might be able to help those students to improve their mathematics proficiency and find a productive way to lessen and alleviate mathematics anxiety of the students. Hence, more focus must be given to students, especially those who had poor mathematics results in secondary school, in order to improve their performance in mathematics at the higher education level. Furthermore, the researchers believed that if mathematics anxiety can be decreased, junior high school student performance in mathematics can be enhanced. So, it is hoped that the discovery will offer some vital information to individuals who enhance mathematical performance.

Creating learning environments that will allow students to experience success in mathematics, enhance their self-confidence, and build positive attitudes towards mathematics is required first to increase students' desire for mathematics and internalize achievement. By creating a teaching and learning environment that can elicit a sense of excitement and fun for students to learn, in addition to an interactive teaching and learning environment that is conducive, they have used their knowledge and skills to reduce and control the level of their students' anxieties. Students will benefit significantly from teachers' strategies in mathematics class that will increase junior high school student's understanding, connect mathematics concepts to real-world situations, and make the lesson more engaging by utilizing a variety of visuals.

RECOMMENDATIONS

➢ *Based on the initial findings and conclusions, the researchers recommended the following:*

- Teachers may work to comprehend mathematics and adapt teaching and learning strategies and as well as to form good attitudes toward discussions to lessen mathematics anxiety in students.
- Parents may be helpful to their children in learning the fundamentals of mathematics and encourage them to do well in the subject.
- Students may strive to learn mathematics and should have the vision to get higher performance in the subject and avoid being anxious while learning the subject
- The school may be necessarily establish safe learning environments, assist students in raising their mathematics performance, and run initiatives to raise awareness programs regarding mathematics anxiety.
- Future researchers may examine how additional factors might influence the students academic performance and highly suggest that a similar study will be carried out with a more significant scope to develop the field.

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APPENDIX A

Survey Questionnaire
Influence of Mathematics Anxiety Towards Junior High School Students' Performance in Mathematics

We are senior high school students of Muertegui National High School, currently undertaking the above research work. You have been selected as one of the respondents to supply the required information for the study. We, the researchers, ask for your cooperation in responding sto the questions below.

The Researchers

➢ *Part I: Demographic Profile*

● Sex: Male _____   Female _____Age: _____   Grade Level: _____   Section: _____

➢ *Part II: 1st Quarter Mathematics Performance*

Direction: Put a checkmark based on your first quarter grade in Mathematics 10.

Level	Numerical Rating	Response
Outstanding	90 – 100	
Very Satisfactory	85 – 89	
Satisfactory	80 – 84	
Fairly Satisfactory	75 – 79	
Did not meet the Expectations	Below 75	

➢ *Part III. Revised Mathematics Anxiety (RMANX) (Al Mutawah, 2015)*
Direction: Put a checkmark on the number of your chosen answer.

● 5 – Always   4 – Frequently   3 – Sometimes   2 – Rarely   1 – Never

Item	5	4	3	2	1
1. I panic when I start the mathematical part of a standardized achievement test.					
2. I cannot ask any questions about what I did not understand in math class.					
3. I panic when I get math homework consisting of many problems.					
4. When I hold a math textbook to study, I start feeling stomach ache.					
5. I cannot concentrate on anything before a math exam.					
6. I am afraid of learning my math grade.					
7. I am afraid of presenting problems to the teacher, which I can solve.					
8. I can reject helping a child with his homework, because I am afraid of facing a question which I cannot solve.					
9. I am afraid of taking a math pop quiz.					
10. I cannot study well for math exams because I worry about my grade.					
11. When I open my math book and look at the pages, I fear I will fail the course.					
12. I felt anxious and pessimistic while waiting for the result of a math exam.					
13. When I think about the subjects required for passing a math course, I feel I cannot complete my school requirements.					
14. I do not like dealing with numbers.					
15. I feel nervous when one of my friends noticed that I could not understand the solution to a math question.					
16. I have problems listening to my math teachers.					
17. I get nervous when I learn that the next lesson is mathematics.					
18. I do not like making calculations in everyday life.					
19. I misunderstand concepts in math courses.					
20. I panic when I cannot remember a required equation for a problem.					

APPENDIX B

Permission Letter to Gather Data

Republic of the Philippines
Department of Education
Region VIII- Eastern Visayas
MUERTEGUI NATIONAL HIGH SCHOOL
Daja Diot, San Isidro, Leyte, 6535

February 02, 2023

To:

Class Section Adviser
Subject Teacher

Ma'am/Sir:

Appendix C
Raw Data Greetings!

The undersigned below would like to ask permission to allow the following grade 12 student-researchers to use an ample time on your class to conduct a survey from your students as they were selected as the respondents for the research entitled **"Influence of Mathematics Anxiety towards Junior High School Students' Performance in Mathematics"**.

Rest assured that anonymity and confidentiality of the student's identity will be outmost cared and observed during the gathering of the data.

Thank you for your cooperation. God Bless!

Very truly yours,

TEOMAR JAMES A. ROSAS
Research Adviser

JERWEN B. ABAYON, MAT
MT – II, SHS Coordinator

Noted by:

ALLAN R. VALIENTE, MPM
School Head, Head Teacher III

APPENDIX C

- *Raw Data*

AGE	f	%
12 - 13	91	36
14 - 15	126	50
16 - 17	30	12
18 Above	3	1
TOTAL	250	100
SEX		
Male	88	35
Female	162	65
TOTAL	250	100
GRADE LEVEL		
G7	55	22
G8	65	26
G9	64	26
G10	66	26
TOTAL	250	100

	f	%
Outstanding (90-95)	39	16
Very Satisfactory (85-89)	94	38
Satisfactory (80-84)	80	32
Fairly Satisfactory (75-79)	33	13
Did not meet any Expectations (70-74)	4	2
Total	250	100

Outstanding

90-95	A	5	F	4	S	3	R	2	N	1	Total	Mean	Grades	SD	Verbal Interpretation
1	4	20	9	36	15	45	5	10	6	6	39	3.00	90	0.513	Sometimes
2	4	20	5	20	13	39	8	16	9	9	39	2.67	91	0.527	Sometimes
3	2	10	5	20	13	39	5	10	14	14	39	2.38	92	0.559	Rarely
4	2	10	4	16	2	6	8	16	23	23	39	1.82	93	0.668	Rarely
5	0	0	5	20	16	48	7	14	11	11	39	2.38	94	0.559	Rarely
6	2	10	5	20	8	24	7	14	17	17	39	2.18	95	0.593	Rarely
7	6	30	6	24	10	30	5	10	12	12	39	2.72	90	0.523	Sometimes
8	1	5	3	12	11	33	8	16	16	16	39	2.10	91	0.608	Rarely
9	3	15	4	16	9	27	11	22	12	12	39	2.36	92	0.563	Rarely
10	2	10	4	16	11	33	11	22	11	11	39	2.36	93	0.563	Rarely
11	3	15	4	16	11	33	9	18	12	12	39	2.41	94	0.556	Rarely
12	5	25	11	44	16	48	6	12	1	1	39	3.33	95	0.527	Sometimes
13	3	15	6	24	10	30	7	14	13	13	39	2.46	90	0.549	Rarely
14	1	5	6	24	7	21	10	20	15	15	39	2.18	91	0.593	Rarely
15	2	10	7	28	8	24	7	14	15	15	39	2.33	92	0.567	Rarely
16	1	5	2	8	9	27	13	26	14	14	39	2.05	93	0.618	Rarely
17	1	5	4	16	11	33	9	18	14	14	39	2.21	94	0.588	Rarely
18	4	20	7	28	9	27	10	20	9	9	39	2.67	95	0.527	Sometimes
19	1	5	4	16	15	45	10	20	9	9	39	2.44	90	0.552	Rarely
20	8	40	8	32	13	39	4	8	6	6	39	3.21	91	0.518	Sometimes
										AWM		2.46			Rarely

Very Satisfactory

85-89	A	5	F	4	S	3	R	2	N	1	Total	Mean	Grades	SD	Verbal Interpretation
1	16	80	20	80	33	99	15	30	10	10	94	3.18	85	0.331	Sometimes
2	9	45	16	64	42	126	15	30	12	12	94	2.95	86	0.328	Sometimes
3	10	50	10	40	35	105	17	34	22	22	94	2.67	87	0.337	Sometimes
4	8	40	6	24	19	57	20	40	41	41	94	2.15	88	0.383	Rarely
5	10	50	15	60	31	93	22	44	16	16	94	2.80	89	0.331	Sometimes
6	16	80	23	92	28	84	14	28	13	13	94	3.16	85	0.330	Sometimes
7	10	50	12	48	47	141	18	36	7	7	94	3.00	86	0.328	Sometimes
8	13	65	9	36	28	84	21	42	23	23	94	2.66	87	0.337	Sometimes
9	14	70	12	48	37	111	23	46	8	8	94	3.01	88	0.328	Sometimes
10	10	50	13	52	38	114	12	24	21	21	94	2.78	89	0.332	Sometimes
11	9	45	20	80	30	90	16	32	19	19	94	2.83	85	0.330	Sometimes
12	14	70	27	108	35	105	11	22	7	7	94	3.32	86	0.336	Sometimes
13	12	60	17	68	31	93	17	34	17	17	94	2.89	87	0.329	Sometimes
14	9	45	13	52	33	99	18	36	21	21	94	2.69	88	0.336	Sometimes
15	7	35	18	72	38	114	20	40	11	11	94	2.89	89	0.329	Sometimes
16	12	60	22	88	24	72	21	42	15	15	94	2.95	85	0.328	Sometimes
17	14	70	19	76	27	81	18	36	16	16	94	2.97	86	0.328	Sometimes
18	11	55	13	52	39	117	16	32	15	15	94	2.88	87	0.329	Sometimes
19	10	50	12	48	35	105	23	46	14	14	94	2.80	88	0.331	Sometimes
20	19	95	15	60	26	78	24	48	10	10	94	3.10	89	0.329	Sometimes
										AWM		2.88			Sometimes

Satisfactory

80-84	A	5	F	4	S	3	R	2	N	1	Total	Mean	Grades	SD	Verbal Interpretation
1	15	75	18	72	31	93	12	24	4	4	80	3.35	80	0.367	Sometimes
2	16	80	9	36	24	72	21	42	10	10	80	3.00	81	0.356	Sometimes
3	17	85	13	52	27	81	11	22	12	12	80	3.15	82	0.358	Sometimes
4	11	55	10	40	18	54	17	34	24	24	80	2.59	83	0.371	Rarely
5	19	95	12	48	30	90	7	14	12	12	80	3.24	84	0.361	Sometimes
6	14	70	16	64	25	75	10	20	15	15	80	3.05	80	0.356	Sometimes
7	22	110	9	36	32	96	10	20	7	7	80	3.36	81	0.367	Sometimes
8	11	55	12	48	27	81	20	40	10	10	80	2.93	82	0.356	Sometimes
9	7	35	18	72	29	87	13	26	13	13	80	2.91	83	0.356	Sometimes
10	23	115	17	68	17	51	7	14	16	16	80	3.30	84	0.364	Sometimes
11	14	70	10	40	32	96	10	20	14	14	80	3.00	80	0.356	Sometimes
12	20	100	23	92	23	69	7	14	7	7	80	3.53	81	0.380	Frequently
13	14	70	13	52	34	102	8	16	11	11	80	3.14	82	0.357	Sometimes
14	12	60	16	64	19	57	14	28	19	19	80	2.85	83	0.358	Sometimes
15	19	95	12	48	27	81	14	28	8	8	80	3.25	84	0.361	Sometimes
16	15	75	11	44	33	99	11	22	10	10	80	3.13	80	0.357	Sometimes
17	16	80	14	56	21	63	10	20	19	19	80	2.98	81	0.356	Sometimes
18	11	55	13	52	22	66	14	28	20	20	80	2.76	82	0.361	Sometimes
19	6	30	20	80	26	78	18	36	10	10	80	2.93	83	0.356	Sometimes
20	18	90	17	68	21	63	13	26	11	11	80	3.23	84	0.360	Sometimes
										AWM		3.08			**Sometimes**

Fairly Satisfactory

75-79	A	5	F	4	S	3	R	2	N	1	Total	Mean	Grades	SD	Verbal Interpretation
1	6	30	5	20	14	42	6	12	2	2	33	3.21	75	0.565	Sometimes
2	5	25	9	36	9	27	5	10	5	5	33	3.12	76	0.561	Sometimes
3	5	25	5	20	11	33	4	8	8	8	33	2.85	77	0.562	Sometimes
4	8	40	6	24	6	18	6	12	7	7	33	3.06	78	0.560	Sometimes
5	6	30	8	32	11	33	5	10	3	3	33	3.27	79	0.569	Sometimes
6	9	45	5	20	8	24	3	6	8	8	33	3.12	75	0.561	Sometimes
7	7	35	7	28	9	27	4	8	6	6	33	3.15	76	0.562	Sometimes
8	2	10	5	20	15	45	6	12	5	5	33	2.79	77	0.565	Sometimes
9	4	20	8	32	8	24	8	16	5	5	33	2.94	78	0.560	Sometimes
10	5	25	6	24	13	39	4	8	5	5	33	3.06	79	0.560	Sometimes
11	8	40	6	24	12	36	3	6	4	4	33	3.33	75	0.574	Sometimes
12	4	20	7	28	8	24	10	20	4	4	33	2.91	76	0.560	Rarely
13	3	15	8	32	7	21	7	14	8	8	33	2.73	77	0.569	Sometimes
14	4	20	5	20	11	33	4	8	9	9	33	2.73	78	0.569	Sometimes
15	9	45	8	32	7	21	8	16	1	1	33	3.48	79	0.591	Frequently
16	4	20	1	4	10	30	15	30	3	3	33	2.64	75	0.577	Sometimes
17	8	40	10	40	5	15	8	16	2	2	33	3.42	76	0.584	Frequently
18	5	25	7	28	11	33	5	10	5	5	33	3.06	77	0.560	Sometimes
19	4	20	9	36	14	42	4	8	2	2	33	3.27	78	0.569	Sometimes
20	6	30	4	16	13	39	5	10	5	5	33	3.03	79	0.559	Sometimes
										AWM		3.06			**Sometimes**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
96																
97	Did not meet															
98	70-74	A	5	F	4	S	3	R	2	N	1	Total	Mean	Grades	SD	Verbal Interpretation
99	1	2	10	1	4	1	3	0	0	0	0	4	4.25	70	2.437	Always
100	2	0	0	2	8	0	0	2	4	0	0	4	3.00	71	1.826	Sometimes
101	3	0	0	0	0	1	3	2	4	1	1	4	2.00	72	2.236	Rarely
102	4	1	5	1	4	1	3	0	0	1	1	4	3.25	73	1.854	Sometimes
103	5	0	0	1	4	2	6	0	0	1	1	4	2.75	74	1.854	Sometimes
104	6	0	0	0	0	0	0	3	6	1	1	4	1.75	70	2.437	Never
105	7	1	5	3	12	0	0	0	0	0	0	4	4.25	71	2.437	Always
106	8	0	0	1	4	0	0	2	4	1	1	4	2.25	72	2.067	Rarely
107	9	2	10	1	4	1	3	0	0	0	0	4	4.25	73	2.437	Always
108	10	0	0	2	8	2	6	0	0	0	0	4	3.50	74	1.936	Frequently
109	11	1	5	1	4	1	3	0	0	1	1	4	3.25	70	1.854	Sometimes
110	12	1	5	2	8	0	0	1	2	0	0	4	3.75	71	2.067	Frequently
111	13	0	0	0	0	1	3	1	2	2	2	4	1.75	72	2.437	Never
112	14	1	5	2	8	0	0	0	0	1	1	4	3.50	73	1.936	Frequently
113	15	1	5	0	0	1	3	1	2	1	1	4	2.75	74	1.854	Sometimes
114	16	0	0	0	0	2	6	1	2	1	1	4	2.25	70	2.067	Rarely
115	17	1	5	0	0	2	6	1	2	0	0	4	3.25	71	1.854	Sometimes
116	18	1	5	2	8	0	0	1	2	0	0	4	3.75	72	2.067	Frequently
117	19	0	0	2	8	1	3	1	2	0	0	4	3.25	73	1.854	Sometimes
118	20	0	0	1	4	0	0	0	0	3	3	4	1.75	74	2.437	Never
119											AWM		3.03			Sometimes
120																