

THE RELATIONSHIP OF INTEREST AND CLASSROOM SATISFACTION TO THE MATHEMATICS PERFORMANCE OF THE SENIOR HIGH SCHOOL STUDENTS IN THE PHILIPPINES

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ABSTRACT

This research paper aims to recommend to teachers to help them for the students to attain better performances in mathematics. Senior High school students from various public schools in the Philippines have been assessed based on the following: interest; classroom satisfaction; mathematics performance and their relationship.

Findings revealed that: The respondents generally does not personally hate mathematics subject and is not perceived to be boring. Teachers have successfully made their lessons meaningful and successfully involved their students in classroom activities, however, it is not assessed properly since the assessment tools does not measure meaningfulness of task. Also, the teachers were successful in involving students in the activities but such activities were inappropriate and mismatch. The students have high level of classroom satisfaction which means that students' expectations to their mathematics teachers were met. It has been found that students who are personally interested in the subject and those who are satisfied in the class perform better in math class than those that are not.

It is suggested that: teachers should not introduce the subject as very difficult and boring to students; teachers may pursue making lessons meaningful to students and avoid teaching without understanding; and involving the students in the different activities which also make them well rounded individuals; use instructional materials which are rich in students' activities; teachers should also include meaningfulness of task as part of assessment; teachers should pursue growth personally and professionally by attending seminars and trainings; teachers should always aim attain students' expectation in class. In so doing, teachers should continue provide more positive reinforcement to the students such

as rewards in a form of grades, incentives or other related privileges as such will increase the likelihood that the students will be encouraged further to study.

KEYWORDS: CLASSROOM SATISFACTION, INTEREST IN MATH, MATHEMATICS PERFORMANCE

INTRODUCTION

One aspect of the teacher's preparation in his/her class, aside from the topics to be discussed, activities to be conducted and objectives to be realized, is the motivational activity which aims to activate individual (Kahayon, 2005 p.96).

It is therefore important that the students in class should be motivated to learn and in order to accomplish this end, there should be many efforts in various fields such as curriculum, instruction, assessment and so on. In addition to these efforts, interest and classroom satisfaction are also important because they are forms of motivation.

The researcher's function is to find some ways to motivate each and every student. This research is designed to find means of reaching those students who are on the verge of giving up. Its purpose is to explore ways by which educators can strengthen the relevance and meaningfulness of what is taught and learned in schools e.g. interest and classroom satisfaction of students. There is a great deal of concern that teachers in schools fail to help children acquire the knowledge, skills and dispositions that are crucial for life outside school and in the workplace. The challenge we face is how to make the learning in schools more authentic, more useful and more contextualized for students so that they are equipped to solve problems that they are confronted in and beyond school, can connect schools to real life context or situations so that all learners are successful once they leave the classroom and can provide students with the skills and motivation to be self-regulated and life-long learners.

Theoretical Framework

The researcher believes that level of interest and classroom satisfaction in mathematics is a significant factor of mathematics performance. As shown in Figure 1, the researcher would like to: view the learner as a main concern and who can be motivated by either intrinsic (personal interest) or extrinsic (situational interest) and should be satisfied in the classroom (law of effect). With appropriate and relevant instruction as indicated by providing meaningfulness of the lesson and appropriately involve student in class would

bring significant positive changes in the mathematics performance; evaluate if students having high level of interest generally have high mathematics performance and having high level of classroom satisfaction will also bring about high level of mathematics performance.

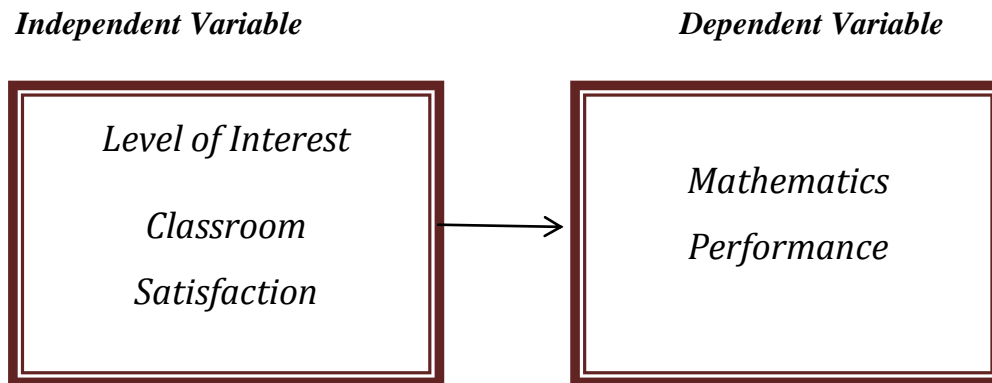


FIGURE 1

CONCEPTUAL MODEL

Interest, as one of the motivations in teaching a subject, is defined in this paper in a motivation theorist view. Thus, interest as a form of motivation will be either intrinsic (personal interest) or extrinsic (situational interest).

Based on the Modern Education for Teachers or MET (2011), intrinsic form of motivation is evident when people engage in an activity for its own sake, without some obvious external incentive present, unlike extrinsic motivation.

The theory of satisfaction is anchored from Edward Lee Thorndike's law of effect (Kahayon and Aquino, 2005) which stated that when the student finds that to do a certain task is satisfying, then the student will more likely to repeat the what has been previously done. The researcher also believes that classroom satisfaction, as defined by the respondents' perception on how well is the method, strategies or techniques of teaching used by the teacher, will also determine students' mathematics performance. The researcher believes in the contention that a satisfied student performs better than those who are not.

The researcher would also like to prove whether a student who is interested in math would also mean good in math and a student who is satisfied in the classroom performs better in math. This is explained by the Interest theory (Holland, 1985 in MET LET Reviewer, 2011) in which it states that if a person has a very strong interest in one of the 6 Holland

areas, then obtaining outcomes in that area will be very strongly reinforcing relative to obtaining outcomes in areas of weak interest. Thus, in the context of this study, interest and classroom satisfaction can be strong reinforcing agent of obtaining desirable mathematics performance.

Statement of the Problem

It is the purpose of this study to determine the relationship of interest and classroom satisfaction level to the mathematics performance of public high school senior students in the division of Mandaluyong City, school year 2013-2014.

Specifically, the study sought to find answers to the following research questions:

1. What is the level of interest and classroom satisfaction of the student in mathematics?
2. What is the Mathematics performance of the students as revealed by their report cards?
3. Is there a significant relationship between students' interest and level of classroom satisfaction to their mathematics performance?

Scope and Limitations of the Study

The study deals with the level of interest and classroom satisfaction of students in the mathematics subject as revealed by a six-point scale questionnaire administered by the researcher and the mathematics performance as reflected by the respondents' average grades from their first three quarters. The respondents of this study were samples of the senior high school students officially enrolled in all the public secondary high schools in the Division City Schools of Mandaluyong during the school year 2013-2014. The researcher randomly selected the samples from each school regardless of sections or sex as such was not considered as variables of the study.

The data obtained from this research is limited on the results obtained from the instrument used. The level of interest and classroom satisfaction were based only on the perception of respondents as indicated by their agreement or disagreement from the statement presented in the questionnaire. It is however very obvious that the verbal interpretation of low to high was not used since students may likely to respond to high level without even reading

the instrument. The indicators however will determine their levels of interest and classroom satisfaction as these indicators were tested for its validity and reliability.

Research Methodology

The descriptive method of research was used in this study. A descriptive study describes and interprets what is. It is concerned with conditions or relationships that exist, opinions that are held, processes that are going on or trends that are developing (Best and Kahn, 2003). Since this study is concerned with determining the levels of interest and classroom satisfaction and its relationship to the mathematics performance of the respondents, the descriptive method of research is the most appropriate method to be used.

Population and Sample Size

The respondents of this study were selected from the study population of senior high school students in all public schools of the Division of Mandaluyong City. This study made use of the Slovin's formula with 5% margin of error in order to determine the minimum number of samples to be taken as respondents of the study. However, the expert suggested to double further the number of samples computed from the Slovin's formula to make more valid and reliable representation of the population.

Table 1 gives the names of schools in the Division of Mandaluyong together with the corresponding number of population and samples taken as part of the study. A proportion of 17.8 has been taken from each school as shown in the table.

From the total population of four thousand one hundred four (4,104), the proportion of 731 or 17.8% was taken as number of samples. Other details are reflected in the next table.

TABLE 1
DISTRIBUTION OF POPULATION AND SAMPLES OF THE STUDY

Public Secondary Schools in Mandaluyong City	Number of 4th Year High School Students	
	Population	Sample
Bonifacio Javier National High School	568	101
City of Mandaluyong Science High School	164	29
Isaac Lopez Integrated School	355	63

Mandaluyong High School	694	124
Andres Bonifacio Integrated School	584	104
Mataas na Paaralang Neptali A. Gonzales	819	146
Highway Hills Integrated School	371	66
Eulogio Rodriguez Integrated School	410	73
Jose Fabella Memorial School (Main)	139	25
TOTAL	4104	731 or 17.8%

Sampling Technique

The researcher has employed the stratified random sampling in order to obtain proportional number of samples in each school. A Stratified random sampling is a process in which certain subgroups or strata, are selected for the sample in the same proportion as they exist in the population (del Rosario, 2011) thus in this study, school is the strata. Age, sex and the likes were not considered as strata because they were not used as variables of the study. The stratified random sampling was employed because samples have to be well representative enough to generate a more valid and reliable conclusions about the population. This is also to make each of the different schools under study well represented. The number of samples taken in each stratum was then obtained by randomly drawing names on the list. For example, in Andres Bonifacio Integrated School, 104 samples are needed from 504 total number of populations, the names of students were randomly chosen from the list of enrolled fourth year students in that school. These students were then the respondents who were given the interest and satisfaction checklist.

Research Instrument

The instrument was the Interest and Classroom Satisfaction Checklist. This was patterned from the checklist used by Sanchez in Garvida (2012). However, some items were modified to suit the present study. The checklist was composed of the following parts:

a. Personal Interest

This is composed of 15 items. The Likert scale was used with a response continuum of strongly disagree to strongly agree.

b. Situational Interest

This area has two specific components: meaningfulness of the task, 6 items and involvement in the activities, 6 items. The response format for the interest and satisfaction checklist are as follows:

Numerical Equivalent	Verbal Interpretation
1	Strongly Disagree
2	Disagree
3	Slightly disagree
4	Slightly agree
5	Agree
6	Strongly Agree

Respondents are expected to indicate their degree of level of agreement or disagreement in the items under the interest and classroom satisfaction checklist based on what they perceived. The weighted mean of the respondents' answers served as their over-all level of interest and level of classroom satisfaction in mathematics subject. The mathematics performance on the other hand was obtained from the records of the different class advisers in the fourth year level.

The research instruments used in this study were validated through a dry run and an expert evaluation to ensure reliability of the data gathered. The reliability of the instrument was determined using the split-half method (Downie, et al, 1984, p.99). The instruments were administered to 40 students who were not part of the sample. The score of these students were split into two: scores for even numbered items and scores for odd numbered items. The scores of these two halves were correlated using Pearson r Product Moment Correlation formula (Anastasi, et al, 1997, p.96) A reliability coefficient of 0.75 was obtained and is interpreted as high reliability.

Results and Discussions

Level of personal interest refers to the respondents' interest that they bring to some environment or context (as in the classroom). As a form of motivation, personal interest is intrinsic, thus a student who manifests a generally high level of personal interest in

mathematics tend to innately love mathematics as manifested by qualities such as inquisitive, curious, inquiring, thinker, problem solver and the likes.

The following table presents the level of personal interest of the fourth year high school students in mathematics.

TABLE 2
LEVEL OF PERSONAL INTEREST OF THE FOURTH YEAR HIGH SCHOOL STUDENTS

Personal Interest	Weighted Mean	Verbal Interpretation
1. Mathematics is interesting and I enjoy studying it	4.46	Slightly Agree
2. Compared to other subjects, I feel tense and pressured in studying mathematics	3.23	Slightly Disagree
3. I like math because I love numbers	4.11	Slightly Agree
4. I am not motivated to learn mathematics	3.97	Slightly Agree
5. I like solving problems in mathematics	4.18	Slightly Agree
6. I avoid math exercises such as seat works and assignments	3.88	Slightly Agree
7. I like math because I find lessons useful to everyday life	4.41	Slightly Agree
8. I hardly understood what we are talking about in math class	3.32	Slightly Disagree
9. Mathematics may be difficult but it is challenging	4.77	Agree
10. I am happier in other class than in math class.	3.57	Slightly Agree
11. It is fun to work with math problems	4.31	Slightly Agree
12. Solving problems in math does not appeal to me	3.37	Slightly Disagree
13. I like to do my homework in math because I am sure I can do it correctly	4.22	Slightly Agree
14. I can't analyze and work the items well in solving math	3.66	Slightly Agree
15. I am always looking forward for having an exam in math	4.17	Slightly Agree
Grand Weighted Mean	4.00	Slightly Agree

Table 2 shows that students may be difficult but it is challenging with a weighted mean of 4.77. Students slightly agree that: mathematics is interesting and they enjoy

studying it; they like math because they find lesson useful to everyday life; they like to do homework in math because they are sure that they can do it correctly; they enjoy working with math problems; they like solving problems in mathematics; they are always looking forward for having an exam in math and they like math because they love numbers; with a weighted mean of 4.46, 4.41, 4.31, 4.22, 4.18, 4.17 and 4.11 respectively. However, students also slightly agree that: they are not motivated to learn mathematics; they avoid math exercises as seat works and assignments; they can't analyze and work the items well in solving math; they are happy in other class than in math class, with the weighted mean of 3.97, 3.88, 3.66 and 3.57, respectively. Students also slightly disagree that: solving math problems does not appeal them; they hardly understood what they are talking about in math class and compared to other subjects, they feel tense and pressured in studying mathematics with the corresponding weighted mean of 3.37, 3.32 and 3.23. The over-all weighted mean is 4.00 and is interpreted as slightly agree which indicates that students generally have high personal level of interest in mathematics.

This finding implies therefore that the fourth year high school students are more or less not so hard to be motivated to study well in mathematics class for they already manifest a more or less high level of personal interest because students manifest knowledge, positive emotions and increased reference value (Krapp, 2002). This further implies that students have natural inclination to love mathematics. This manifestation may be attributed from the respondents' previous experiences towards mathematics e.g. teacher factor, although it is intrinsic in nature which teacher may have no control over students' incoming personal interest as pointed out by Krapp (2002), the teacher may still be capable of having noticeable influence on the students' outgoing personal interest. Also, these findings imply that it is not true that students personally hate the subject.

Level of situational interest refers to students' interest emanating from the influence of the outside factors such as meaningfulness of task (meaningfulness of the lesson) and involvement in the activities (nature of classroom activities). As a motivational point of view, situational interest is an extrinsic form of motivation, thus, when a student manifest a high level of situational interest in terms of these two areas (meaningfulness of task and involvement in the activities), they tend to love and appreciate math as a result.

TABLE 3

LEVEL OF SITUATIONAL INTEREST OF THE FOURTH YEAR HIGH SCHOOL STUDENTS IN TERMS OF MEANINGFULNESS OF TASK

Situational Interest	Weighted Mean	Verbal Interpretation
Meaningfulness of Task		
1. Class would be better if the math problems were more related to life problems	4.09	Slightly Agree
2. The things we learn in class will never be used in real life	3.90	Slightly Agree
3. I will use all what I have learned in this class in my everyday life	4.16	Slightly Agree
4. I see that math we have learned is not as important as life	3.81	Slightly Agree
5. Knowledge of math will help me understand technological advances	4.12	Slightly Agree
6. Math can't help me to become objective and accurate	3.72	Slightly Agree
Grand Weighted Mean	3.97	Slightly Agree

It is shown in Table 3 that students slightly agree that class would be better if the math problems were more related to life, with a weighted mean of 4.09, they also said that they will use what they have learned in class in their everyday life with a weighted mean of 4.16. Respondents also agree that math will help them understand technological advances with a weighted mean of 4.12, the things they learn will never be used in real life with a weighed mean of 3.90, they see that math is not as important as life with a weighted mean of 3.81 and math can't help them become objective and accurate with a weighted mean of 3.72. The grand weighted mean is 3.97 and is interpreted as slightly agree, therefore, the respondents generally have high level of situational interest in terms of the meaningfulness of task.

This implies that teachers should make their lessons in math meaningful for the students as this is one of the first catch or hold facets based on Mitchell in his article in Journal in educational psychology which stated that content that is perceived as being meaningful to students is a direct way to empower students and thus, hold their interest.

The result of this study can be attributed to the implementation of the Understanding by Design (UbD) approach to teaching in the public secondary schools. The understanding by design was started in the Philippines in the year 2010. It has a central mission of "learning for understanding" (Wiggins and McTighe, 2005), thus, it compelled teachers in the secondary

public schools to vary their traditional approach to teaching which only focuses on the content coverage and only to get good grades instead of becoming thoughtful about what they learn; becoming productive with it and active lifelong learners by applying what they have learned to issues and problems they face and will face in the future. This is therefore clearly in contrary to the statement of Mitchell (1999) that the students of today did not see the content of mathematics as important or related to their daily lives for the approach used by the teachers in teaching has already been changed since 2010.

TABLE 4

LEVEL OF SITUATIONAL INTEREST OF THE FOURTH YEAR HIGH SCHOOL STUDENTS IN TERMS OF INVOLVEMENT IN THE ACTIVITIES

Situational Interest	Weighted Mean	Verbal Interpretation
Involvement in the Activities		
1. Our teacher has fun activities to learn the things we need to know	4.14	Slightly Agree
2. We come in, take down notes, do homework and it's the same thing everyday	3.17	Slightly Disagree
3. We often do something instead of the teacher just talking	3.77	Slightly Agree
4. We usually sit and listen to the teachers talk	3.31	Slightly Disagree
5. We learn the materials ourselves instead of being told about it	3.84	Slightly Agree
6. We often hear very long explanations and quickly lose interest.	3.55	Slightly Agree
Grand Weighted Mean	3.63	Slightly Agree

Table 4 shows that students slightly agree that: their teacher in math has fun activities to learn the things they need to know; they learn with the materials themselves instead of being told about it; they often do something in math class instead of just talking and, with the corresponding weighted mean of 4.14, 3.84 and 3.77. Furthermore, they slightly disagree that: they often hear very long explanations and quickly lose interest; they usually sit and listen to the teachers talk and they were only to come in, take down notes, do homework and it's the same thing everyday with a weighted mean of 3.55, 3.31 and 3.17, respectively. The grand weighted mean is 3.63 and is interpreted as slightly agree which implies that the

students manifest a high situational level of interest in terms of the involvement of the activities. This means that teachers generally involve their students in the activities in their lessons.

It is therefore a good indication that teachers nowadays are more students' center than before. This is also attributed to the implementation of the UbD in the public secondary schools in which it is also more on activities which require students to work on a certain activity which they are directly involved in the process (Wiggins and McTighe, 2005) and this result is contrary to the statement of Mitchell in Garvida (2012) who noted that very few teachers seem to be successful in involving their students in class especially in mathematics which is a very abstract subject.

Also, teachers had been successful in involving the students in the different activities since the books and other instructional materials were new and have proven to be rich in various activities which are given for teachers during seminars for their instructional use.

TABLE 5

LEVEL OF CLASSROOM SATISFACTION OF THE FOURTH YEAR HIGH SCHOOL STUDENTS

Classroom Satisfaction	Weighted Mean	Verbal Interpretation
1. Our teacher motivates us well during math class.	4.80	Agree
2. Our teacher explains the lesson thoroughly and we understand well.	4.78	Agree
3. Our teacher's sequence in teaching is in order	4.76	Agree
4. Our teacher helps us in dealing with math.	4.90	Agree
5. Our teacher shows mastery of the subject.	4.93	Agree
6. Our teacher always gives mind tickling exercises and assignments.	4.81	Agree
7. Our teacher answers questions and inquiries willingly and clearly.	4.87	Agree
8. Our teacher lays different teaching techniques for every subject matter.	4.71	Agree
9. Our teacher is always ready in his/her class.	4.89	Agree
10. Our teacher makes use of the different ways to help us understand more about difficult lessons.	4.73	Agree

11. Our teacher uses variety of supplements to enrich our learning e.g. games, puzzles and the likes.	4.64	Agree
12. The teacher always involves us in the teaching – learning process.	4.79	Agree
13. Our teacher manifests proficiency in communication skills.	4.71	Agree
14. Our teacher gives questions in quizzes that are parallel to what he/she teaches.	4.77	Agree
15. The strategy of teaching that our teacher uses is appropriate in our level or understanding.	4.88	Agree
Grand Weighted Mean	4.80	Agree

Table 5 shows the level of classroom satisfaction of the respondents. Students agree that their teacher: shows mastery of the subject with a weighted mean of 4.93; helps them in dealing with math with a weighted mean of 4.90, is always ready in his/her class with a weighted mean of 4.89, makes use of the teaching strategy which is appropriate to the level of students’ understanding with a weighted mean of 4.88, answers questions and inquiries willingly and clearly with a weighted mean of 4.87, always gives mind tickling exercises and assignments with a weighted mean of 4.81, motivates them well during math class with a weighted mean of 4.80, always involves them in the teaching-learning process with a weighted mean of 4.79, explains the lesson thoroughly and understands well with a weighted mean of 4.78, gives questions in quizzes that are parallel to what he/she teaches with a weighted mean of 4.77, is in order in terms of the teaching sequence with a weighted mean of 4.76, makes use of the different ways to help them understand more about difficult lessons with a weighted mean of 4.73, lays different teaching techniques for every subject matter and manifests proficiency in communication skills with a weighted mean of 4.71; uses variety of instruments to enrich their learning such as games, puzzles and the likes with the weighted mean of 4.64. The grand weighted mean of 4.80 and is interpreted as agree.

This implies that the students generally have high classroom satisfaction in mathematics. It means that students are satisfied with their teachers in mathematics for their teachers possess the different areas of classroom satisfaction mentioned in table 4 and are all interpreted as agree. Also, this implies that students perceived that their teachers were able to accomplish all the things they need to accomplish in class, that is, their teachers were able to achieve students’ expectations. This further implies that since the respondents have high level of classroom satisfaction, it can be concluded that the schools generally have high quality

mathematics teachers as pointed out by Niland (2000) and Hameed (2006), that “quality teachers” is the number one characteristics of a world class school because they are the persons who will deliver the knowledge, skills and experiences to the students.

The following table presents the mathematics performance of the respondents. Mathematics performance was obtained from the respondents’ average of the first three quarter-grades in math as reflected from their report card.

TABLE 6

MATHEMATICS PERFORMANCE OF FOURTH YEAR HIGH SCHOOL STUDENTS

Mathematics Performance	Verbal Interpretation	Frequency	Percentage
90 and above	Very High	151	20.66%
85 – 89	High	188	25.72%
80 – 84	Average	344	47.06%
75 – 79	Low	47	6.43%
74 and below	Very Low	1	0.14%
	Total	731	100%

It can be gleaned from Table 6 that most of the respondents have average performance in mathematics with a frequency of 344 or 47.06 percent, followed by high performance with a frequency of 188 or 25.72 percent. 151 or 20.66 percent of the respondents have a very high mathematics performance, 47 or 6.43 percent and 1 or 0.14 percent are low and very low respectively.

This implies that almost half of the respondents have an average performance in mathematics. It further implies that the fourth year students have learned the necessary things that they need to learn in the subject thus, they tend to pass the mathematics subject. The 0.14 percentage of those who failed indicates that still not all students passed the subject.

The reason for the majority of students who pass the subject is because of the existence of the one-day session of teachers called Individual Collaborative Learning or ICL wherein teachers are to attend to students who cannot really at par with their regular classes.

This was very important for students since this will give them the opportunity to learn the things they cannot learn in groups or in a regular classroom. Another reason is the mass promotion which is the outgrowth of the education for all policy of the country.

Table 7

RELATIONSHIP BETWEEN THE MATHEMATICS PERFORMANCE AND THE LEVEL OF INTEREST AND LEVEL OF CLASSROOM SATISFACTION

Mathematics Performance Vs. Level of Interest and Level of Classroom Satisfaction	Pearson's r	Verbal Interpretation	P-Value	Decision	Remarks
Personal Interest	0.54	Moderate relationship	0.041	Reject H ₀	Significant
Situational Interest					
a. Meaningfulness of Task	-0.02	No or negligible relationship	-0.053	Accept H ₀	Not Significant
b. Involvement in the Activities	0.038	No or negligible relationship	0.304	Accept H ₀	Not Significant
Classroom Satisfaction	0.37	Low relationship	0.026	Reject H ₀	Significant

Table 7 shows that the degree of relationship between the mathematics performance and personal interest is 0.54 which means that there is a moderate relationship between the respondents' mathematics performance and the level of personal interest. The p-value of 0.041 is lesser than the assigned significance level of 0.05, thus the null hypothesis which states that there is no significant relationship between the mathematics performance and the level of personal interest is rejected. Therefore there is a significant relationship between the mathematics performance and the level of personal interest.

It implies therefore that although there is a significant relationship between the mathematics performance and level of personal interest, the degree of relationship is moderate. Thus the increase in the level of personal interest does not highly guarantee the increase in the mathematics performance. This is true as in the study of Sabo-o (2006) in

which it was found out that the first year high school students' interest is not a reliable predictor of achievement. Also, Feldman in Garvida (2012) in his study on the effect of interest and achievement in Social Studies in a suburban middle school, found out that the increase in student interest created a change in the achievement of the respondents and Espinoza (2002) revealed that interest in mathematics is related to achievement.

Table 7 shows that the degree of relationship between the mathematics performance and situational interest in terms of meaningfulness of task is -0.02 which means that there is no or negligible relationship between the respondents mathematics performance and the level of situational interest in terms of the meaningfulness of task. The p-value of -0.053 is lesser than the assigned significance level of -0.05, thus the null hypothesis which states that there is no significant relationship between the mathematics performance and the level of situational interest in terms of meaningfulness of task is accepted. Therefore, there is no a significant relationship between the mathematics performance and the level of situational interest in terms of meaningfulness of task. This is contrary to what is expected from a student that when he/she finds the subject meaningful, he/she performs better in that subject. Thus, he/she is expected to have high grades or performance. But in this finding, it was negligible and not significant because there may be some other factors that affect the relationship between these two variables. As an educator, factors may be traced from the objectivity of the teacher in assigning grades which is the basis of this study in determining the mathematics performance of the respondents and also the manner in which the mathematics performance is measured. A student may have a thorough understanding of the meaningfulness of the subject matter but the teacher may not be able to measure it. This is because the teacher probably uses a test that is limited to measure only the content knowledge of the students instead of the meaningfulness or essence of the subject. In this case, the test especially when it is made by the teacher must have validity and reliability.

Table 7 shows that the degree of relationship between the mathematics performance and situational interest in terms of involvement in the activities is 0.038. This means that there is no or negligible relationship between the respondents' mathematics performance and the level of situational interest in terms of involvement in the activities. The p-value of 0.304 is greater than the assigned significance level of 0.05, thus the null hypothesis which states that there is no significant relationship between the mathematics performance and the level of situational interest in terms of involvement in the activities is accepted. Therefore, there is no

a significant relationship between the mathematics performance and the level of situational interest in terms of the involvement in the activities. This finding is also in consonance with the study of Abdon (2008) in which she found out that there is no significant relationship between the related learning experience (RLE) performance and interest of the graduating nursing students. The RLE noted in her study can also be considered in this study as a form of situational interest in terms of the involvement in the activities. This is because the activities of the nursing students in the RLE involves actual practice of the arts of nursing as it is their on the job training. Therefore, increase in the level of situational interest of the respondents in terms of the involvement in the activities does not necessarily mean that there will also be an increase in the respondents' mathematics performance and vice versa. One intervening factor of this phenomenon according to Abdon is the Filipino cultural values in which she said that Filipino students are innately participative in the society (as in the classroom). Another is intellectual factor wherein intelligent students may not have interest in the subject but because of their abilities, they were able to perform well. The researcher's own observation on this phenomenon is also attributed from another factor such as the nature of activities being utilized by the teacher. There is also a concern as to whether the activities executed by a teacher in class are parallel to the objectives set for each lesson. There might be some activities which is truly interesting on the part of the students but is not appropriate or is not connected at all to the lesson that is about to teach. Thus, the respondents may possess high level of situational interest in terms of the involvement in the activities but generally may not have a corresponding high mathematics performance.

Table 7 shows that the degree of relationship between the mathematics performance and the level of classroom satisfaction is 0.37 which means that there is a weak relationship between the respondents mathematics performance and the level of classroom satisfaction. The p-value of 0.026 is lesser than the assigned significance level of 0.05, thus the null hypothesis which states that there is no significant relationship between the mathematics performance and the level of situational interest in terms of involvement in the activities is rejected. Therefore there is a significant relationship between the mathematics performance and the level of classroom satisfaction.

It implies therefore that although there is a significant relationship between the mathematics performance and level of classroom satisfaction, the degree of relationship is weak. Thus the increase in the level of classroom satisfaction does not always highly

guarantee the increase in the mathematics performance. It therefore implies that classroom satisfaction is not the sole area to be considered in the attainment of the desired mathematics performance. Although it is important to be developed and observed, various areas shall also be taken into consideration such as assessment of the learning outcomes, validity and reliability of assigning grades and the likes.

Conclusions

Based on the findings of the study, the following conclusions were made:

1. The fourth year students in the public schools in Mandaluyong generally have high level of interest which may either be brought about by internal or external factors
2. The fourth year high school students in Mandaluyong City generally have high level of classroom satisfaction.
3. The students generally have average mathematics performance.
4. Students who are personally interested can affect their mathematics performance but not those only interested brought about by outside sources such as the teacher
5. Students who are satisfied in the classroom are likely to improve their mathematics performance.

Recommendations

Based on the findings and conclusions of this study, the following measures are recommended:

1. Measures should be made in order to maintain high level of personal and situational interest of the students. Teachers as the major factor of student learning must incorporate the “power principle”. That is, they must empower the learners to perform or act personally because variables that empower students tend to hold interest. Teachers may pursue: making the lessons meaningful to the students and avoid teaching without understanding, example, memorizing the formula; and involving the students in the different activities. Teachers should include meaningfulness of task as part of their assessment.

2. Teachers should continue improving themselves personally and professionally by attending seminars and trainings on how to appropriately involve students in the activities and to appropriately assess students' learning.
3. Use books and other instructional materials that are rich in student activities.
4. The teachers should always gather and attain students' expectation in class.
5. Teachers should incorporate meaningfulness of task and involvement in the activities and assessment as part of the over-all mathematic performance.
6. Level of personal interest must be improved further to bring out the desired mathematics performance. In so doing, teachers may continue provide more positive reinforcement to the students such as rewards in a form of grades, incentives or other related privileges as such will increase the likelihood that the students will be encouraged further to study
7. A study shall also be conducted to determine the relationship between classroom satisfaction and interest.

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