

# Investigating the Attitudes and Performance of Retained Students in Mathematics: A Case of Cebu, Philippines

Emerson D. Peteros<sup>1</sup>, Gemma N. Benemerito<sup>2</sup>, Larry B. Peconcillo, Jr.<sup>3</sup>, John V. de Vera<sup>4</sup>,  
Gerly A. Alcantara<sup>5</sup>, Janine Joy L. Tenerife<sup>6</sup>

<sup>1,6</sup> *Faculty, Cebu Technological University-Main Campus, Cebu City, Philippines.*

<sup>2</sup> *Faculty, Buanoy National High School, Balamban, Cebu, Philippines.*

<sup>3,4</sup> *Faculty, Cebu Technological University-Naga Campus, Cebu, Philippines.*

<sup>5</sup> *Faculty, Cebu Technological University-Danao Campus, Cebu, Philippines.*

## Abstract

Mathematics is one of the subjects that students struggle to learn that could result to their failure in the subject. This study determined the attitudes and performance in Mathematics of the 30 junior high school retained students in a public national high school in Balamban, Cebu, Philippines for school year 2018 – 2019. The respondents were all the retained students from the said school. They were asked to answer a survey questionnaire in order to assess their attitudes towards Mathematics while their performance was determined using their First Quarter Grades. The data gathered undergone statistical treatment using frequency count, percentage, weighted mean, standard deviation and Pearson Product Moment Correlation Coefficient (PPMC). Results showed that most of the respondents have fairly satisfactory math performance. Furthermore, no significant relationships were found between the attitudes of the respondents in math as to their confidence, importance of math and their engagement and their academic performance. Thus, teachers were encouraged to develop programs that will address concerns of the students having difficulties in Math.

**Keywords**— retained students, attitudes, confidence in math, importance of math, engagement in math, math performance

## I. INTRODUCTION

A good quality of graduates is always the goal of every school or nation since these individuals build the future of any country. That is why standards are always set to ensure that students meet the necessary requirements set by the school in order to be promoted to the next grade level. Failure of the students to meet the standards on the grade level to which they are enrolled in would result to grade retention. Grade retention is “requiring a student who has been in a given grade level for a full school year to remain in that level for a subsequent school year”(Jimerson, 2001, p. 420). This practice of retaining the students has been a traditional practice in schools which aims to allow students to undergo the same trainings on the level to which they are retained in order to give the

students the chance to meet the requirements of that level before being promoted. However, retention policy has received feedbacks on its efficacy based on its goal because many researchers have claimed that instead of benefiting the student, it gives a social stigma to the student retained. Doing so, gives a negative psychological effect on the child especially if retention is done in high school. Hence, it would lead to the development of negative attitudes of the students particularly on the subjects to which they failed.

Mathematics is one of those subjects in which students fail because it is not every student's best subject. Many students think Mathematics is a difficult subject which results to mass failure of the subject especially in the national examinations. Such failure is attributed to their

attitudes towards the subject (Iren, 2015). When students fail in math, this could imply that they encounter difficulties in learning the subject and they are not able to cope up with the standards required by the subject. Through the students' failure in Mathematics, they will have the tendency to develop a negative attitude towards the subject because they will think that they cannot meet the demands of the subject. If this is left unsolved, it will have a long term effect on the behavior of the student especially if this causes the student to be retained. However, grade retention or social promotion are not enough strategies for addressing the needs of students who are more likely to fail in the subject (Jimerson & Renshaw, 2012).

In so many cases, there are students who enrolled in high schools who are retained when they were in the elementary and in high school. There may be different reasons why they were retained but one of these is due to their failure in mathematics. Students in a public national high school in Balamban, Cebu, Philippines are not the exemptions to this case. It has been accounted that for three consecutive years the percentage of retained students had been on the rise from 1.2% in school year 2015 – 2016 to 1.62% in 2017 – 2018. Hence, it is a cause of concerns to educators on the effects of retention towards the attitudes of the repeaters to this subject. Grade retention may be explained that it serves as an option to help students to perform better in some specific situations but it is not the best way available for general learning and educational difficulties in schools today (Brophy, 2006).

With these, this study is crafted to determine the relationship of the attitudes and the academic performance in math of the junior high school retained students of the identified public national high school. Exploring the relationship of these variables will provide the researchers relevant information towards the conceptualization of an intervention plan to enhance students' performance in math by addressing the issues related to the retained students. Thus, the goal of producing graduates

who will help in nation building will be realized.

## II. LITERATURE REVIEW

This study is anchored on the Attribution Theory which was proposed by Fritz Heider (1958) and developed by Bernard Weiner (1979) (as cited in Demetriou, 2011) which “describes how individuals interpret events and how that interpretation influences motivation for learning as well as future learning behaviors” (Demetriou, 2011, p. 16). Students' experiences in school are vital in the development of their attitudes towards learning. Good experiences in school would result to well-motivated students. These experiences form their positive attitudes towards learning especially in subjects which they perform better. However, bad experiences of the students will contribute to their negative feelings towards learning. They will perceive that these experiences are the contributing factors towards their status in school whether it is external or internal. So, when students fail, they will attribute their failures to themselves and to the circumstances around them. Sometimes these failures will result to students' retention when they cannot cope up with the standards set by the school for them to be promoted. In this case, there is a greater possibility that students who are retained will develop negative attitudes towards learning.

Moreover, this study is based on the Functional Attitudes Theory by Daniel Katz (1960) which states that “people use defense mechanisms such as denial, repression, and projection to protect their self-concepts against internal and external threats” (Association for Educational Communications and Technology (AECT), 2001). Students who failed in a given subject will have the possibility of developing a defense mechanism. They will try to avoid the subject because they will think that they are not capable of accomplishing the task required from them. In this sense, when these students are exposed to activities related to the subjects which they have low performance, they will try to avoid performing these tasks since it is already instilled in their minds that whatever

efforts they exert in each task, they would likely fail. Moreover, students try to get rid of occasions that will involve them in tasks related to the subject which they fail. If they are in a situation which they cannot avoid to be involved in the given task, they will find ways to be convenient in doing the task. Lastly, an example of this situation is a student might defend himself from humiliation he has experienced in Math by adopting a negative attitude towards Math.

The basis of retention is that it gives low performing students the chance to catch up with the standards of the grade level by allowing them to have an extra year in the same year level. It is a common practice of teachers to retain students when they are not achieving the academic standards or portraying immaturity compared to their peers. Teachers consider that retaining students helps in preventing failure in the future and maintain the school's standards by preventing the low achieving students of being promoted (Range, Holt, Pijanowski, & Young, 2012). However, those who are against grade retention argued that this strategy is not beneficial to students in the long term, has a negative effect to students' self – esteem, can cause behavior problems which are associated with being older than their peers, is related with dropping out in schools and a significant increase of financial costs for children repeating the grade (Anderson, Jimerson, and Whipple, 2005). Martin (2011) stressed that the most common misconceptions of teachers on retention is that it helps improve the students' self – concept and motivation which are found to be inaccurate. On the contrary, there is evidence that these actually diminish for students who are retained based on the socioemotional outcomes.

Pierson and Connell (as cited in Tweed, 2001) studied the effects of retention on Grades three to six in the state of New York which focused on the correlation between retention and academic performance, student engagement, and student perceptions concerning their self-efficacy, autonomy, and degree of social acceptance. It was found that performance and

the perceived cognitive abilities of the retained students was significantly lower than those non – repeaters. However, no significant difference was found between these groups in terms of peer relatedness or perceptions of self-worth.

Valijarvi and Sahlberg (2008) pointed out that main justification for retention was that the level of maturity and development of young children differ in their pace which is related to their mathematical thinking. The reason for retention is that it provides time for children to become equal with their peers and help teachers in dealing with the different learning abilities and personalities of their children. Notably, some teachers used retention as an extrinsic motivation especially for boys because they thought that retaining them would help these students focus and exert more effort due to the fear of failing. Moreover, it was found out that students who have higher socioeconomic background are less likely to be retained. Brophy (2006) cited that the schools imposing grade retention that is based on their teachers' authority to fail students have negative impacts to students and does not benefit students who do not repeat in school. Aside from the scores as the basis for students' retention, teachers are also influenced by other factors such as their attitudes towards retaining students and their perception about their students. These factors could result to a subjective teachers' evaluation of students (Allensworth, 2005; Greene and Winters, 2007).

A recent study conducted by Hughes, Kwok and Heelm (2013) on the first grade repeaters found that when students are retained in the first grade, parents' expectations on the performance of their child lower down in subsequent years and gives an impact on their math and reading achievement. Jimerson et al. (2006) noted that even though retention usually happens in early grade levels, retention can occur in any level however it is less recommended as students enter in the higher levels especially in upper elementary and high school. In upper elementary, academic performance is most likely the reason why students are retained especially if the students have not meet the

academic standards of the grade level and have not progressed at a pace with their peers. In high school, this issue is more crucial because students are earning units required for graduation. Deficiency in their credit units would disqualify them from graduation.

Moreover, there is a high risk in testing under the program on No Child Left Behind Policy which put pressure to schools on retaining students who cannot meet the standards (Neill, 2006; Range, et al., 2012). With this policy, decisions are made based on their performance on test results in which when students do not meet the standards set by the school, the school will have an option to retain the student for one year to avoid social promotion and develop the skills needed for promotion. Due to the harmful effects of retention, it is important to find options for students who are left behind their peers in terms of their performance and maturity (Hoff, Peterson & Strawhun, 2014). Jimerson and Renshaw (2012) stated that grade retention is a preferable alternative to social promotion. However, these two approaches revealed that neither grade retention nor social promotion alone is an effective way of improving students' performance in school (Algozzine, Ysseldyke, & Elliot, 2002; Shinn & Walker, 2012).

A study by Moser, West, and Hughes (2012) found that by the time students who retained in early elementary reached the 5th grade, the benefits of retention are decreased. Similarly, in the study of Jacob and Lefgren( as cited in Greene and Winters, 2007) found that the effects of early grade retention decrease in 2 years. Wu, West and Hughes (2010) concluded that retention may give short term advantages but would have negative impact in the long run in terms of social acceptance because students who are retained will be perceived to perform low in the subsequent years in school. In addition, McCoy and Reynolds (1998) found that retention is strongly correlated with early grade performance, gender, parental involvement and school mobility. Thus, they suggested that intervention approaches aside

from retention are needed to promote better school performance and adjustment.

In the study of Guevremont, Roos, and Brownell (2007) on the retained students' demographics, they found that the male students, minority, lower socioeconomic status and younger than their peers are more likely to be retained. Moreover, over 40 percent of students who are in the lowest-income quartile were more likely to be retained than those in the highest quartile (Hauser, Frederick, and Andrew, 2007) and among high school graduates, these were twice as likely to be retained during graduation (Fine and Davis, 2003).

One of the significant aspects that could possibly contribute to students' retention is their attitude towards school particularly in studying mathematics. Mathematics is one of those subjects to which students fail because it is not every student's best subject. Many students think Mathematics as a difficult subject which result to mass failure of the subject especially in national examinations. Such failure is attributed to their attitudes towards the subject (Iren, 2015).

Bayaga and Wadesango (2014) noted that attitudes towards mathematics has a significant role in the teaching and learning process of mathematics. Factors such as teaching strategies, support from the school, the family and the students' attitudes towards school might affect their attitudes towards mathematics. Most of the time, the math is introduced inside the classroom and the students' perception of the subject even when teachers consider in presenting the subject in an authentic and contextual approach may isolate most of the students from learning mathematics (Barton, 2000; Furinghetti and Pekkonen, 2002). However, Ma and Xu (2004) posited that positive attitude of the students towards mathematics would lead to their success in learning mathematics. The positive attitude towards mathematics that is developed at a lower level will provide as the foundation of their attitudes in the higher level. Thus, this

attitude would be related to their success in the secondary level.

Similarly, research showed that students who have positive attitudes towards this subject exhibit better performance in math (Goe & Croft, 2009; Khatoon & Mahmood, 2010). In this situation, a student's perception towards oneself is crucial in learning the subject whether he looks at himself as capable or not is very important which is developed through their ideas, feelings and attitudes based on their experiences and from different factors. On the contrary, findings of Boyd et al. (2008) suggested there was no significant relationship between the third grade students' attitudes towards mathematics and their performance. Yet, they mentioned that individuals favor the things that are good and helpful for them but be in conflict with things that are not good for them.

According to Moenikia and Zahed-Babelen (2010) that the attitudes of students maybe positive or negative which are permanent because these are acquired on their experiences. Attitude towards mathematics is one of the predictors of the students' performance in math. One of the significant factors of attitude formation is the response of the students emotionally to a given situation (Len & Chris, 2010).

Simegn and Asfaw (2017) discussed that students' negative attitudes towards mathematics is one of the significant constraints that affect the students' achievement in math which become a serious problem in teaching and learning mathematics. Hence, attitudes toward mathematics are very significant in the academic achievement and participation of students in mathematics learning. However, poor performance and negative attitudes of secondary students towards the subject has become a problem in schools (Amunga & Musasia, 2011 ;Kaster& Judy, 2016).

Different literatures have discussed about the effects of grade retention towards the students and attitudes of students towards mathematics and how these attitudes affect their performance. No study has been conducted on

the effects of retention towards the attitudes of repeaters in learning mathematics. It is in this context that the researchers would like to explore the effect of retention towards the attitudes of students in math and how it relates to their performance on the said subject.

### III. METHODOLOGY

Descriptive correlational method was utilized in this study in order to test the significance of the relationship between the attitudes and academic performance of the respondents. A descriptive correlational study describes the variables and the relationship that occurs between them (Sousa, Driessnack & Mendes, 2007). A survey questionnaire was used to gather the needed data. Respondents were all the retained students of a public national high school in Balamban, Cebu, Philippines. It was noted that most of the retained students were from the Grade 7 level. A survey questionnaire describing their attitudes in math which is measured using three variables such as their confidence in math, importance of math and engagement in math entitled "Attitudes towards Learning Mathematics Survey" by Sanchal and Sharma (2017) was used. Confidence in math has 18 indicators while the importance of math has 10 indicators. Engagement in math has 13 indicators. The respondents were asked to rate these statements as to the degree of their agreement on these statements using a five-point Likert scale, namely: 5 – Very Positive, 4 – Positive, 3 – Neutral, 2 – Negative, and 1 – Very Negative. The researchers asked assistance from the respondents' class adviser to retrieve their grades in Math.

### IV. RESULTS AND DISCUSSION

This section illustrates the academic performance and attitudes of the respondents in math. Furthermore, the results on the test of the significance of the relationship of these variables are also presented. Table 1 presents the data gathered from the report cards of their advisers. The performance level of the respondents was classified in accordance to the Department of Education Order no.58 series 2017.

**Table 1.** *Performance Level of the Respondents*

Level	Numerical Range	f	%
Outstanding	90 – 100	1	3.33
Very Satisfactory	85 – 89	2	6.67
Satisfactory	80 – 84	3	10.00
Fair Satisfactory	75 – 79	15	50.00
Did not meet the Expectations	Below 75	9	30.00
<b>Total</b>		<b>30</b>	<b>100.00</b>
<b>Average</b>		<b>77.43</b>	

It can be observed in Table 1 that 15 or 50.00 percent of the respondents have a grade ranging from 75 – 79 which means that they only have fairly satisfactory performance. It can also be noted that there were 9 or 30.00 percent of the respondents who failed in math in the first quarter. Moreover, there were three or 10.00 percent of them whose grades are from 80 – 84 and two or 6.67 percent who had a grade from 85 – 89. Notably, the average grade of the respondents is 77.43 which reflects a significantly low performance of the respondents. With these data wherein most of the respondents have the tendency of failing again in the subject, it is important that an intervention maybe implemented to prevent these students from failing. On the other hand,

students who failed must be given attention so that whatever assistance will be applicable for them will be provided. Holmes (as cited in Jimmerson, 2001) noted that retention have negative effects on students achievement when these students are moved to the next grade level. Students who experience retention will have the tendency to be contented with having low grades in the subject. Thus, there will be a very low motivation for them to perform better because they are already used to that kind of situation.

One of the variables that defines the attitudes of the respondents towards mathematics that is considered in this study is their confidence in math. The confidence level of the respondents in math is presented in Table 2.

**Table 2.** *Attitudes of the Respondents in terms of their Confidence in Learning Math*

S/ N	Indicators	$\bar{x}$	sd	Verbal Description
1	I want to develop my mathematical skills.	4.17	1.020	Positive
2	I get a great deal of satisfaction out of solving a mathematics problem.	3.57	1.135	Positive
3	Mathematics helps develop the mind and teaches a person to think.	4.00	1.313	Positive
4	Mathematics is one of my most hated subjects.	3.13	1.224	Neutral
5	My mind goes blank and I am unable to think	2.83	1.289	

	clearly when working with mathematics.			Neutral
6	Studying mathematics makes me feel nervous.	2.70	1.368	Neutral
7	Mathematics makes me feel uncomfortable.	2.97	1.245	Neutral
8	I am always under a terrible strain in a math class.	2.70	1.208	Neutral
9	It makes me nervous to even think about having to do a mathematics problem.	2.93	1.363	Neutral
10	I am able to solve mathematics problems without too much difficulty.	3.20	0.997	Neutral
11	I expect to do fairly well in any math class I take.	2.97	1.402	Neutral
12	I feel a sense of insecurity when attempting mathematics.	3.07	1.143	Neutral
13	I learn mathematics easily.	3.00	1.145	Neutral
14	I am confident that I could learn advanced mathematics.	3.37	1.299	Neutral
15	I would like to avoid using mathematics in college.	2.73	1.363	Neutral
16	I am comfortable expressing my own ideas on how to look for solutions to a difficult problem in math.	3.17	1.315	Neutral
17	I am comfortable answering questions in math class.	2.97	1.098	Neutral
18	I believe I am good at solving math problems.	4.03	1.189	Positive

**Overall Weighted Mean**

**3.1  
9**

**Neutral**

**Overall Standard Deviation**

**1.229**

---

**Legend:** 4.21 – 5.00 Very Positive 3.41 – 4.20 Positive 2.61 – 3.40 Neutral 1.81 – 2.60 Negative 1.00 – 1.80 Very Negative

---

In general, the overall weighted mean of the confidence in math was 3.19 with a standard deviation of 1.229 which means that generally the respondents have neutral attitudes in their confidence in math. When students experience failure in a subject, their confidence towards the subject will consequently be lower because of the bad experience. They will be thinking that it is hard for them to be successful in the subject. Other than that, they will have the feeling of not belonging in the group because they are older than their classmates.

With the informal interview of the researchers to some randomly selected respondents, they claimed that they are interested to learn math however their mental capability hinders them to perform well in the subject. One of the respondents said that he feels inferior over his classmates because he is older than them yet he cannot understand the lessons easily. Another respondent had mentioned that being a repeater

makes him feel so weak in Math because had already failed in the subject and this incident could happen again but he tried his best to catch up with his classmates with their lessons. As per account on the students' experience in leaning math, it cannot be disregarded that retaining them on the same grade level brought negative impact on their confidence. According to Anderson et al. (2005), grade retention is not beneficial to students in the long term, has a negative effect to students' self – esteem, can cause behavior problems which are associated with being older than their peers.

Another variable that would describe the attitudes of the respondents in math that is given consideration in this study is their perceptions towards the importance of math in their life. The level of the perception of the respondents towards the importance in math is indicated in Table 3.

**Table 3.** *Attitudes of the Respondents in terms of the Importance of Math*

S/ N	Indicators	$\bar{x}$	sd	Verbal Description
1	Mathematics is a very worthwhile and necessary subject.	3.77	1.278	Positive
2	Mathematics is important in everyday life.	4.13	1.137	Positive
3	Mathematics is one of the most important subjects for people to study.	4.30	0.877	Very Positive
4	High school math courses would be very helpful no matter what I decide to study.	3.77	1.223	Positive
5	I can think of many ways that I use math outside of school.	3.50	1.225	Positive
6	I plan to take as much mathematics as I can during my education.	3.53	1.167	Positive
7	I think studying advanced mathematics is useful.	4.10	1.125	Positive
8	I believe studying math helps me with problem solving in other areas.	4.23	1.040	Very Positive
9	A strong math background could help me in my professional life.	3.97	1.189	Positive
10	I know the application of Circumference of a circle in real life.	3.33	1.155	Neutral
<b>Overall Weighted Mean</b>		<b>3.86</b>		
<b>Overall Standard Deviation</b>			<b>1.141</b>	<b>Positive</b>

As a whole, the attitudes of the respondents towards the importance of math in their life had a weighted mean of 3.86 with a standard deviation of 1.141 which implies that the respondents had positive attitudes towards the importance of math in their life. Though students have difficulty in learning the subject, they still feel that math is an important subject to learn. According to Sullivan and McDonough (2007), students who are aware of the relevance of the task in math to their daily

lives tend to give more importance on the concepts they learn. They also found that students who believe that math helps them in problem solving in other fields are those who also agree that math is a very important subject to learn.

Determining the level of engagement that the respondents have in math would help in understanding their attitudes towards mathematics. The level of the respondents' engagement in math is illustrated in Table 4.

**Table 4.** *Attitudes of the Respondents in terms of their Engagement in Math*

S/N	Indicators	$\bar{x}$	sd	Verbal Description
1	When I hear the word mathematics, I have a feeling of dislike.	2.90	1.213	Neutral
2	I am always confused in my mathematics class.	2.70	1.291	Neutral
3	I have usually enjoyed studying mathematics in school.	3.83	1.085	Positive
4	Mathematics is dull and boring.	3.23	1.382	Neutral



5	I like to solve new problems in mathematics.	3.57	1.104	Positive
6	I really like mathematics.	3.57	1.278	Positive
7	I would prefer to do an assignment in math than to write an essay.	3.63	1.033	Positive
8	I am happier in a math class than in any other class.	3.37	1.189	Neutral
9	Mathematics is an interesting subject.	3.87	0.937	Positive
10	I am willing to take more than the required amount of mathematics.	3.33	1.028	Neutral
11	The challenge of math appeals to me.	3.50	1.167	Positive
12	I like the topic of Measurement.	3.93	1.285	Positive
13	I like working on the topic of Circles.	3.53	0.937	Positive
<b>Overall Weighted Mean</b>		<b>3.46</b>		
<b>Overall Standard Deviation</b>			<b>1.148</b>	<b>Positive</b>

As reflected in the table, the overall weighted mean of 3.46 and a standard deviation of 1.148 signify that the respondents had positive attitudes towards their engagement in math. Though, students have positive attitudes towards math, they will have the tendency to disengage in the lessons when they can no longer understand what the teacher is discussing especially in topics where in students have inadequate pre-requisite skills. They may try to get themselves involve in the discussions but when lessons will be hard for the students to understand, they will have hard time in catching

up. Most of the time, the math is introduced inside the classroom and the students' perception of the subject even when teachers consider in presenting the subject in an authentic and contextual approach may isolate most of the students from learning mathematics (Barton, 2000; Furinghetti and Pekhonen, 2002).

This section discusses the test on the significant relationship between the attitudes and the performance of the respondents in math which is illustrated in Table 5.

**Table 5. Relationship between Attitudes and Academic Performance of the Respondents in Math**

Variables	r-value	p - value	Decision	Remarks
Confidence and Performance in Math	0.229	0.109	Do not Reject Ho	Not Significant
Importance and Performance in Math	-0.089	0.641	Do not Reject Ho	Not Significant
Engagement and Performance in Math	0.226	0.229	Do not Reject Ho	Not Significant

As seen in Table 5, the relationship of the variables was tested at 0.05 level of significance using Pearson Product Moment Correlation Coefficient for the 30 respondents. As to the confidence and the performance in math, the computed r-value of 0.229 indicates that there is a negligible positive correlation between the

respondents' confidence and performance in math. The p – value of 0.109 which is greater than the significance value of 0.05 ( $0.109 > 0.05$ ) indicates that the null hypothesis is not rejected. The result suggests that the respondents' confidence in math is not significantly related to their performance in

math. With the computed  $r$  value of  $-0.089$ , there is negligible negative correlation between the perceived importance of math and the respondents' performance. The test gave a  $p$  – value of  $0.641$  which is greater than the  $0.05$  level of significance ( $0.641 > 0.05$ ) indicates that the null hypothesis is not rejected. Thus, there is no significant relationship between the importance of math and the academic performance of the respondents. This suggests that the perceived importance of math does not affect the performance of the respondents in the subject.

Lastly, the computed  $r$  value of  $0.226$  for the math engagement and performance of the respondents indicates that there is a negligible positive correlation between these variables. However, the  $p$  – value of  $0.229$  is greater than the  $0.05$  level of significance ( $0.229 > 0.05$ ) which means that the null hypothesis is not rejected. This suggests that the attitude of the respondents on their engagement in math is not related to their performance. The findings of this study contradicts to that of Moenikia and Zahed-Babelen (2010) which posited that attitudes towards mathematics is one of the predictors of the students' performance in math. However, this findings is consistent with that of Boyd et al. (2008) which suggested there was no significant relationship between the students' attitudes towards mathematics and their performance.

## V. CONCLUSION

Based on the findings of the study, it can be concluded that the respondents' attitudes towards mathematics have no bearing on their performance in math. Thus, their attitudes are not the reasons for failing the subject yet this cannot be neglected because if students develop a negative attitude towards the subject, this could already have an impact on their performance. Other variables could have been the reasons for their failures in the subject. However, since most of the repeaters were Grade 7 students, it can be looked into if they find it difficult to adjust to the nature of math in high school. This level is the transition period on the lessons to be introduced in Math such as

the elementary algebra which can be a reason why these students struggle in the subject. These students have difficulty in adjusting to the academic environment in secondary when experiencing the transition from elementary to secondary (Kirkpatrick, as cited in Cattard, 2017). Some of the demographic profile of the respondents could also be considered as the possible factors that could affect their performance in school.

## REFERENCES

1. Algozzine, B., Ysseldyke, J. E., & Elliot, J. (2002). *Strategies and Tactics for Effective Instruction*. Longmont, CO: Sopris West.
2. Allensworth, E. M. (2005). "Dropout Rates After High-Stakes Testing in Elementary School: A Study of the Contradictory Effects of Chicago's Efforts to End Social Promotion." *Educational Evaluation and Policy Analysis*, 27(4), 341–364.
3. Amunga, J. K. & Musasia, A. M. (2011). "Disparities in Mathematics Achievement among Secondary Schools: The Case of Kenya," *Problems of Education in the 21st Century*, Volume 28
4. Anderson, G. E., Jimerson, S. R. & Whipple, A. D.. (2005). "Student Ratings of Stressful Experiences at Home and School: Loss of a Parent and Grade Retention as Superlative Stressors." *Journal of Applied School Psychology*, 21(1), 1
5. Barton, A. C. (2000), *Crafting Multicultural Science Education with Preservice Teachers through Service-learning*. *Journal of Curriculum Studies*, Volume 32(6), pp. 797-820.
6. Bayaga, A. & Wadesango, N. (2014). *Analysis of Students' Attitudes on Mathematics Achievement Factor Structure Approach*. *Int J Edu Sci*, 6(1): 45-50.
7. Boyd, D., Lankford, H., Loeb, S., Rockoff, J., & Wyckoff, J. (2008). *The Narrowing Gap in New York City*

- Teacher Qualifications and its Implications for Student Achievement in High Poverty Schools. Working Paper 14021. Cambridge, MA: National Bureau of Economic Research.
8. Brophy, J. (2006). Grade Repetition. Education Policy Series 6. Paris: International Institute for Educational Planning.
  9. Cattard, C. (2017). Mathematics and the Transition from Primary to Secondary Schooling. Retrieved October 1, 2018 from <https://engagingmaths.com/2017/10/18/mathematics-and-the-transition-from-primary-to-secondary-schooling-2/>
  10. Demetriou, C. (2011). The Attribution Theory of Learning and Advising Students on Academic Probation. *NACADA Journal*, 31(2), 16 – 21.
  11. Furinghetti, F. & E. Pehkonen (2002), Rethinking Characterizations of Beliefs. In: G. Leder, E. Pehkonen, and G. Toerner (eds.), *Beliefs: A Hidden Variable in Mathematics Education?* Kluwer Academic Publishers, pp. 39-58.
  12. Goe, L. & Croft, A. (2009). *Methods of Evaluating Teacher Effectiveness*. Washington. DC: National Comprehensive Center for Teacher Quality. Retrieved from <http://tqcenter.learningpt.org/publications/Resto Practice Evaluating TeacherEffectiveness>
  13. Greene, J. P., & Winters, M. A. (2007). Revisiting Grade Retention: An Evaluation of Florida's Test-Based Promotion Policy. *Education Finance and Policy*, 2, 319-340. doi: 10.1162/edfp.2007.2.4.319
  14. Guevremont, A., Roos, N. P. & Brownell, M. (2007). "Predictors and Consequences of Grade Retention: Examining Data from Manitoba, Canada." *Canadian Journal of School Psychology*, 22(1), 50–67.
  15. Fine, J. D. & Davis J. M. (2003). "Grade Retention and Enrollment in PostSecondary Education." *Journal of School Psychology*, 41(6), 401–411.
  16. Hauser, R. M., Frederick, C. B. & Andrew, M. (2007). "Grade Retention in the Age of Standards-Based Reform." In Adam Gamoran (Ed.) *Standards-Based Reform and the Poverty Gap: Lessons for No Child Left Behind* (pp. 120– 153). Washington, DC: Brookings Institution Press
  17. Hoff, N., Peterson, R. & Strawhun, J. (2014). *Grade Retention and Demotion: A Traditional Discipline and Consequence*. Retrieved July 16, 2018 from [https://k12engagement.unl.edu/strategy-briefs/Grade%20Retention%20&%20Demotion%2011-30-15%20\\_0.pdf](https://k12engagement.unl.edu/strategy-briefs/Grade%20Retention%20&%20Demotion%2011-30-15%20_0.pdf)
  18. Hughes, J. N., Kwok, O., & Hee Im, M. (2013). Effect of Retention in First Grade on Parents' Educational Expectations and Children's Academic Outcomes. *American Educational Research Journal*, 50, 1336-1359. doi: 10.3102/0002831213490784
  19. Iren, L. (2015). Why Students Fail Mathematics. Retrieved July 24, 2018 from <https://www.vanguardngr.com/2015/04/why-students-fail-mathematics/>
  20. Jimerson, S. (2001). Meta-analysis of Grade Retention Research: Implications for Practice in the 21st century. *School Psychology Review*, 30, 420–437.
  21. Jimerson, S. R., Pletcher, S. M., Graydon, K., Schnurr, B. L., Nickerson, A. B., & Kundert, D. K. (2006). Beyond Grade and Social Promotion: Promoting the Social and Academic Competence of Students. *Psychology in the Schools*, 43, 85-97. doi: 10.1002/pits.20132
  22. Jimerson, S. & Renshaw, T., (2012). *Retention and Social Promotion*. Retrieved July 24, 2018 from

- [https://www.nasponline.org/Documents/.../NASSP\\_Grade\\_Retention\\_Sept\\_2012.pdf](https://www.nasponline.org/Documents/.../NASSP_Grade_Retention_Sept_2012.pdf)
23. Kaster, L. & Judy, A. (2016). "Gender Differences in Mathematics Attitudes in Co-Educational and Single Sex Secondary Education," University of Sydney
  24. Khatoon, T. & Mahmood, S. (2010). Mathematics Anxiety among Secondary School Students in India and its Relationship to Achievement in Mathematics. *European Journal of Social Science*, 16: 75-86.
  25. Len, S. & H., Chris, H. (2010). Effecting affect: Developing a Positive Attitude to Primary Mathematics Learning. *Australian Primary Mathematics Classroom*, 15, 18-24.
  26. Ma, X. and J. Xu (2004), Assessing the Relationship between Attitude towards Mathematics and Achievement in Mathematics: A meta-analysis. *Journal for Research in Mathematics Education*, Volume 28(1), pp. 26-47.
  27. Martin, A. J. (2011). Holding Back and Holding Behind: Grade Retention and Student's Non-academic and Academic Outcomes. *British Educational Research Journal*, 37, 739-763. doi: 10.1080/01411926.2010.490874
  28. McCoy, A. R. & Reynolds, A. J. (1998). Grade Retention and School Performance: An Extended Investigation. Institute for Research on Poverty Discussion Paper no. 1167-98
  29. Moenikia, M. & Zahed-Babelan. (2010). A Study of Simple and Multiple Relations between Mathematics Attitude, Academic Motivation and Intelligence Quotient with Mathematics Achievement. *Procedia-Social and Behavioral Sciences*, 2, 1537-1542.
  30. Moser, S. E., West, S. G., & Hughes, J. N. (2012). Trajectories of math and reading achievement in low-achieving children in elementary school: Effects of early and later retention in grade. *Journal of Education and Psychology*, 104, 603-621.
  31. Neill, M. (2006). Preparing Teachers to Beat the Agonies of NCLB. *The Education Digest*, 71, 8-12. Retrieved July 19, 2018 from <http://0-web.ebscohost.com.library.unl.edu/ehost/detail?vid=4&sid=52886b19-6e10-404b-9418-569bbaa2d3bc%40sessionmgr4002&hid=4109&bdata=JnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#db=aph&AN=20472841>
  32. Range, B. G., Holt, C. R., Pijanowski, J., & Young, S. (2012). The Perceptions of Primary Grade Teachers and Elementary Principals about the Effectiveness of Grade-level Retention. *The Professional Educator*, 36, 8-24. Retrieved 52886b196e10-404b9418569bbaa2d3bc%40sessionmgr4002&vid=7&hid=4109
  33. Sanchal, A. & Sharma, S. (2017). Students' Attitudes Towards Learning Mathematics: Impact of Teaching in a Sporting Context. *Teachers and Curriculum*, 17(1), 89 – 99.
  34. Simegn, E. M. & Asfaw, Z. G. (2017). Assessing the Influence of Attitude Towards Mathematics on Achievement of Grade 10 and 12 Female Students in Comparison with their Male Counterparts: Wolkite, Ethiopia. *International Journal of Secondary Education*. Vol. 5, No. 5, pp. 56-69. doi: 10.11648/j.ijssedu.20170505.11
  35. Shinn, M. R., & Walker, H. M. (Eds.). (2012). *Interventions for Achievement and Behavior Problems in a Three-tiered Model Including RTI*. Bethesda, MD: National Association of School Psychologists.
  36. Simegn, E. M. & Asfaw, Z. G. (2017). Assessing the Influence of Attitude Towards Mathematics on

- Achievement of Grade 10 and 12 Female Students in Comparison with their Male Counterparts: Wolkite, Ethiopia. *International Journal of Secondary Education*, 5(5), 56-69. doi: 10.11648/j.ijsedu.20170505.11
37. Sousa, V.D., Driessnack, M. & Mendes, A. C. (2007). An overview of research designs relevant to nursing: Part 1:quantitative research designs. Retrieved from <https://www.scielo.br/j/rlae/a/7zMf8XypC67vGPrXVrVFGdx/?lang=en>.
  38. Sullivan, P., & McDonough, A. (2007). Eliciting Positive Student Motivation for Mathematics. In J. Watson & K. Beswick (Eds.), *Proceedings of the 30th Annual Conference of the Mathematics Education Research Group of Australasia* (pp. 698–707). Australia: MERGA.
  39. Tweed, B. S. (2001), "How is a Child's Perception of Self Affected by Retention?"*Electronic Theses and Dissertations*.Paper 81. <http://dc.etsu.edu/etd/81>
  40. Valijarvi, J. & Sahlberg, P. (2008). Should 'Failing' Students Repeat a Grade? Retrospective Response from Finland. *J Educ Change* (2008) 9:385–389, DOI 10.1007/s10833-008-9089-3
  41. Wu, W., West, S.G., & Hughes, J.N.(2010). Effect of Retention in First Grade on Children's Achievement Trajectories over 4 years: A Piecewise Growth Analysis Using Propensity score Matching. *Journal of Educational Psychology*, Vol. 100, 727–740. [PubMed: 19337582]