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COPING STRATEGIES IN LEARNING MATHEMATICS

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Abstract: **Coping strategies grow gradually. The generations also change especially the students and their way of coping strategies in learning mathematics. Strategies becoming more and more popular among students. The study was conducted at Jagobiao National High School with a total of 102 chosen students in Grade-10 Junior High School. A survey questioner was used to gather and collect data from the different participant. Chi-square was used in testing the research. The purpose of this research is to examine the coping strategies and the students towards mathematics subject. However, the study also revealed that there is an significant correlation between the coping strategies in Content, Skills and Attitude and most of have a low level of performance in mathematics to this end, the researcher recommended that the students continuously monitored by teachers and parents on how to properly used the coping strategies. To maintained the balance of coping strategies always used the proper strategies for solving problems.**

Keywords: **Coping strategies of students, physical, emotional, mental, stress, anxiety.**

1. INTRODUCTION

Some students used strategies aimed at achieving in learning mathematics by doing work, help seeking, trying to understand the study material and finding solutions to the problems and they are working with others. Students turn to self-protective strategies such as self-handicapping, avoiding exposing themselves, and concealing their grades and their academic work. The former strategies may be conceptualized as adaptive because they may result in better learning and increased understanding (Khiat, 2013).

They use strategies to solve immediately, the problems that they are facing on their different kind of challenges in the mathematics subject. Students may also encounter failures for the reason that even if they study hard, listen to the teacher and cooperate with the class they still not get how to solve the other problems (Skaalvik, 2018).

More students think negatively of how they cope to their problems because most of them are getting struggles in solving problems in mathematics. However, student may not study, listen to the teacher and cooperate to the class, will probably failed (Nelson, 2016).

The students can answer more of the math problems they can say to their self they enjoyed in solving math and they will have confidence to answer more of it and also if a student strives they can prevent, treat math anxiety to their self (Lossi, n.d).

One of the most important in solving mathematical problem is to enhance your knowledge in solving and boost your confidence that you can answer all mathematical problems you just study hard and also your skill in solving the different kind of problems will expand (Bayat & Tarmizi, 2010)

The learning strategies are very important in terms of having power or right and self-regulated learning. The objective of the strategies is to learn easily and have a short five in answering an activity in mathematics. In having lots of strategies

this may help us to answer more activities by answering immediately the activities that given (Gasco, Domingo & Goni, 2014).

2. STATEMENT OF PURPOSE

This study aims to know the coping strategies in learning mathematics and its relationship among the junior high school students in Jagobiao National High School for the school year 2018 – 2019.

Specifically this study attempts to answer the following questions:

1. To what extent students cope with stress in Learning Mathematics in terms:

1.1 Content

1.2 Skills

1.3 Attitude

2. What is your first grading grade?

3. Is there a significant relationship between the Coping Strategies and student performance in mathematics?

3. SIGNIFICANCE OF STUDY

In understanding of the specific issues related to the students in their coping strategies in learning mathematics, this study would help with the following:

Students – It is beneficial for the students especially when they have a problem in math. A side from getting the positive on how they cope and make strategies in learning math.

Parents – Must be asking if the students does not have a problem regarding coping strategies in learning mathematics, then the parents can had a less stress thinking by their children's.

Teachers – help a students on how to cope with their problem in terms of mathematics and manage very students to be responsible especially in coping strategies in learning mathematics.

4. DEFINITION OF TERMS

The key terms in the study are given the following operational definitions.

Stress may cause for the students to become weak and tired, think negatively and become depressed.

Focused is the most important way to students must do in order to take math easily and to have focus in solving problem.

5. REVIEW OF RELATED LITERATURE

This section highlights review articles about coping strategies in learning mathematics that were published in different international journals. This report also compares the findings of the articles since these studies were conducted in disparate situations according to the environment.

Coping strategies in learning Mathematics can be stressful in terms of; numbers, solutions theories, shapes and understanding the words. However, that there are people know how to solve real life problems with such case help practitioners (Chinaveh, 2013). Previous studies show that if a mastery goal aspect is join together with adaptive learning strategies, for example seeking behavior and deep processing how far they can do in order to learn by their own way of strategy of learning in coping difficulties on mathematics. Performance avoidance goal exposure is joining with less more adaptive learning strategies (Skaalvik, 2018). Students say that mathematics is the capacity to recover and term as there positive stand, to overcome the challenges in learning, motivated and achieved with math and acknowledge that mistake is part of their learning process (wilder et. al, 2014).

The focus of this study is to indicate how they plan to overcome difficulties in understanding the subject and join the strategies in order solve easily the problems and to get the correct answers (Glogger, et. al, 2009). If a person wants to learn math subject he/she has the condition in thinking and knowing about the theories, solutions and lessons, to become

aware of one's awareness and have a higher thinking skills and have a self-regulated learning in math subject all the way her/himself. However, there were too many tasks to be accomplished, so the problem solver had to balanced and prioritize the lessons, performance task, quizzes and exams to find reasonably efficient ways of sequencing and achieving them successively (Kampala, 2009).

Motivation refers to a person's behavior towards they want to achieve their goals were they are engaging activities and increasing their efforts and energy towards the strategy they use to cope the mathematical problems. (Liu & Lin, 2010). A student has to motivate their individual learnings through control process as goal and self-monitoring, self-evaluation and strategy use to cope math anxiety (Zimmerman, 2000). The positive correlation of students and teachers of mathematics subject and on their performance can be further and prove that attitude dalliance is one of the roles of student learning's (Mensah, Kuranchie & Okyere, 2013).

There are lots of task that to be accomplished, so that the problem solver will not be confused of what he/she solving and to have reasonable ways in teaching for them to learn (Schoenfeld, 1992). However, the biggest problem in this statement is high math anxiety because it is near to depression and instead of flow math anxiety they are not easily affected of problems (Peskoff, 2000). More students thinking that they cannot do well in mathematics because of their attitude which is laziness that can lead them in failure (Lossi, 2007). There is constructionist that has a model way of copied as they have more chances to learn more and enhance their skills in solving math problems by their own way of strategy (Anghileri, 2006).

In daily life math is a subject that step aside on us and it has same in our daily life disciple (Achor, Imoko & Uloko, 2009). Through fantasy students is used to cope with their denial, suppression and repression because they create impression through fantasy so that they enable to think that math is easy and this strategy helps the student in coping mathematics learning (Khiat, 2013).The middle grade students can achieve a higher grade in mathematics by using the multiple intelligence strategies. Instead, of using the traditional direct instructional method (Durham, Douglas & Burton, 2008).

Student's management of their time for learning is not cognitive or meta-cognitive strategies it may be the strategies or efforts for completing their task and performances in mathematics (Garcia, 1994). For those students who are weak in mathematics may feel less confident and they will choose science instead of math as an option (Zakaria, Chin & Daud, 2010). Therefore, through these factors, the attitude of students towards in mathematics is also important that has been comfortable studied in lessons and listen to the teacher (Mohamed & Waheed, 2011).

Conventional teaching method or the traditional method is what schools commonly used, it made students improved their attitude towards mathematics so that the students avoid to think that they can't do well in mathematics (Akinsola & Olowojaiye, 2008). Mathematics disciplines the mind in order to arrange one's studies, learnings, performances and reasons in supportive way of thinking (Mahanta & Islam, n.d).

Teaching method is important by which encourage conjoin, and putting the student in the posture of explaining his/her solution and challenge their creativeness from taking over the anxiety of the students (Marchis, 2013). Moreover, some characteristics may be learned inside the classroom by which student develop their mathematical skills and the availability if expedient materials and the continuance of mathematics lesson (Mistima & Zakaria, 2010). These activities or teaching strategies can improve and enhance the skills of students if he/she temper toward mathematics (Pittsburgh, n.d). The finding says that more attitude of high school students in learning mathematics at the middle level is they are more comfortable by taking the math easily and solving the problems, that the particular needed in order to increase the confidence of high school students by taking the math simply (Yasar, 2016)

Math anxiety can cause to the students negative effect and academic performance in their school and also they can't focus in answering problems due to getting pressure (Ramirez, Chang, Maloney, Levine, & Beilock, 2016).

The beginning of math anxiety also set apart light on how to get the deep link of math anxiety and poor math performance for those people who has math nervous (Maloney & Beilock, 2012).

There are many adaptable that can impact students on their learnings when they are dealing with their stress (Dwyer & Cummings, 2001). .

More students in 9th grade have high scores because of strategies which is meta-cognition and seeking help and also time management as well as on the 8th grade students. However, 9th grade students is more on their own way of strategies in solving math problems (Gasco, Villanoel & Goni, 2014). Therefore, there positive way that exist between in approaching the performance goals with students use outside cognition strategies (Bayat & Tarmizi, 2010).We use more informal and formal strategies because it is effective on learning the lessons, performances and solving solutions rather than single strategies (Tabachneck, Kocdinger & Nathan, 1994). If the students take a high quality of math achievement test, their anxiety of math subject will work effectively and have a bigger chance that they can break through over their performance and have a bigger points than their expectation (Ashcraf & Krause, 2007). However, a students getting nervous if it talks about math because of anxiety in numbers and problem solution that's why they get poorer grades in math classes (Blazer, 2001).

Generalization-It stated that these related literature are supporting our studies and it is all about coping strategies in learning mathematics and what are the strategies that the students used during solving different kind of problems.

6. RESEARCH METHODOLOGY

This chapter discusses the methods utilized by the researcher, the environment of the research, the respondents of the study, the instrument of the survey, the collection of data, and the type of data analysis.

Method

This study applied a quantitative-descriptive survey. This is a most common process in collecting a data which includes the use of questionnaire. The researchers used the statistical information, where the sampling designed that utilized was completes enumeration.

Locale

The researchers will conduct this research in Jagobiao National High School located in North Road, Jagobiao, Mandaue City. In the building of Junior High School Department which located at Jagobiao National High School campus. There are 4 stories building and each stories building used by Grade 10 & 9 Students.

Respondents

The respondents of the study are the grade 10 junior high students of Jagobiao National High School which is consist of 102 students. These 102 respondent are randomly selected. The student answered the survey questionnaire to identify the coping strategies of students in learning mathematics subject and to find out the reason and the outcome of students about their subject. The students answered the questinnaire together at their respective classroom, in their vacant time.

Instrument

The researchers made a survey questionnaire that consists of four part (1) is content, (2) skills and (3) is attitude also the (4) first grading grade of students and of the students coping strategies in learning mathematics. The survey questionnaire was based on the researcher's perception and statement of the problem on this study.

Gathering Data

The researchers submitted a transmittal letter to the head of the school to ask for an approval for the survey to be conducted in Jagobiao National High School – Senior High School Department. The survey was done last October 9, 2018. The researcher distributed the survey sheet to the respondents and allowed them to answer freely. After answering, the questionnaires were collected and analyzed by the researchers. There are 102 respondents who answered the questionnaires.

Statistical Treatment

Weighted Mean

The weighted mean is use for computing the mean of the level influence of students and able to identify what is the level of conten, skills, and attitude perceived by the students and also the most significant influence of content, skills, and attitude.

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Chi-square

The Chi-Square (x^2) is any statistical hypothesis test where in the sampling distribution of the test statistics is a chi-square distribution when the null hypothesis is true. The chi-squared test is used to determine whether there is a significant difference between the expected frequencies in one more categories.The weighted mean is used for computing the mean of the level of influence of students and able to identify what level of influence is most significant influence to students in terms of content, skills and attitude.

7. PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter presents the data analysis and interpretation of the findings on the study entitled intimidating factors on coping strategies in learning mathematics of Jagobiao National High School.

Table 1: LEVEL OF CONTENT PERCEIVED BY STUDENTS

Indicators	Weighted mean	Interpretation
1. Review the given examples	3.81	Agree
2. Scanning and skimming mathematical problems on book	3.31	Neutral
3. Taking down notes on discussed problems and examples.	4.04	Agree
4. Ask a clarification from classmates	3.75	Agree
5. Studying math problems with formulas and solutions found in the book	3.43	Neutral
Overall-Weighted mean	3.67	Agree

N=102 Legend 1.00-1.80(Strongly Disagree) 1.81-2.60(Disagree) 2.61-3.40(Neutral) 3.41-4.20(Agree) 4.21-5.00(Strongly Disagree)

In this table it shows that the general result is agree. Its shows the weighted mean of third statement has the highest weighted mean of 4.04 with the interpretation of agree "Taking down notes on discussed problems and examples" followed by the first statement "Review the given examples" with the highest weighted mean of 3.81 with the interpretation of agree and the fourth statement "Ask a clarification from classmates" has the highest weighted mean of 3.75 with the interpretation of agree andlastly the second and fifth has the highest weighted mean of 3.31 and 3.43 which is neutral. The overall weighted mean of content is 3.67 which has the interpretation of agree, this implies that the Content can either one of the factors why students cope math anxiety. Student's management of their time for learning is not cognitive or meta-cognitive strategies it may be the strategies or efforts for completing their task (Garcia, 1994).

Table 2: LEVEL OF SKILLS PERCEIVED BY STUDENTS

Skills Indicators	Weighted mean	Interpretation
1. Practice solving exercise in the book	3.47	Neutral
2. Use sketching or figures to analyze the problems in mathematics	3.52	Agree
3. Drills the four basic operations in mathematics	3.59	Agree
4. Use calculator effectively and efficiently	3.39	Neutral
5. Develop logical analysis of the mathematical problems and exercise	3.37	Neutral
Overall-Weighted mean	3.47	Neutral

N=102 Legend 1.00-1.80(Strongly Disagree) 1.81-2.60(Disagree) 2.61-3.40(Neutral) 3.41-4.20(Agree) 4.21-5.00(Strongly Disagree)

In terms of Skills, the table above present the overall computed weighted mean of skills, the Third statement "Drills the four basic operations in mathematics" has the highest weighted mean of 3.59 with the interpretation of agree, followed by the second statement which is "Uses sketching or figures to analyze the problems in mathematics" has the weighted mean of 3.52 with the interpretation of agree and the three indicators which is the first, fourth and fifth is neutral with the highest weighted mean of 3.47, 3.39 and 3.37 and the overall weighted mean of skills is 3.47 with the interpretation of neutral. There is constructionist that has a model way of copied as they have more chances to learn more and enhance their skills in solving math problems (Anghileri, 2006).

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Table 3: LEVEL OF ATTITUDE PERCEIVED BY STUDENTS

Attitude Indicators	Weighted mean	Interpretation
1. Seek help from classmates	3.79	Agree
2. Self-conditioning for positive thoughts	3.73	Agree
3. Participate in the class to learn better	3.77	Agree
4. Display diligence towards studies	3.42	Agree
5. Follow the teachers instructions on given examples	4.15	Agree
6. Clarify for difficult concepts from the leader	3.72	Agree
Overall-Weighted mean	3.77	Agree

N=102 Legend 1.00-1.80(Strongly Disagree) 1.81-2.60(Disagree) 2.61-3.40(Neutral) 3.41-4.20(Agree) 4.21-5.00(Strongly Disagree)

The table above shows the general result and interpretation of agree, the highest weighted mean of attitude indicators is the fifth which has a 4.15 with the interpretation of agree, followed by the first statement which has a 3.79 weighted mean with the interpretation of agree and lastly the four indicators has the same interpretation which is agree but different weighted mean. The second, third and sixth with the highest weighted mean of 3.73, 3.77 and 3.72. The overall weighted mean of 3.77 with the interpretation of agree. Through these factors, the attitude of students towards in mathematics is also important that has been comfortable studied (Zakaria, Chin,&Daud, 2010).

Table 5. Level of student stress coping mechanism & level performance in academic content.

X^2	$X^2_{(.05,6)}$	Decision	Interpretation
28.767	12.6	Rejected	Significant

This table shows that the computed value (28.767) of the academic content is greater than the critical value $X^2_{(.05,6)}$ is (12.6) thus, it is rejected . There is a significant correlation between students coping strategies and their content in mathematics subject. Dauglas, Burton and Durham (n.d) stated that the classroom, task is being accomplished if the content lesson plans is catch by the learners in one population. It means that student must catch the content of the lesson in order to learn.

Table 6. Level of student stress coping mechanism & level performance in academic skills.

X^2	$X^2_{(.05,6)}$	Decision	Interpretation
14.115	12.6	Rejected	Significant

This table shows that the computed value (14.115) of the academic skills is greater than the critical value $x^2_{(.05,6)}$ is (12.6) thus, it is rejected. There is a significant correlation between students coping strategies and their academic skills in mathematics subject. Anghilire (2006) stated that there are constructionist that has a model way of coped as they have more chances to learn more enhance their skills in solving problems. In other hand there is enhancement of their solving skills in math if they cope the problems.

Table 7. Level of student stress coping mechanism & level performance in academic attitude.

X^2	$X^2_{(.05,6)}$	Decision	Interpretation
16.789	12.6	Rejected	Significant

This table shows that the computed value (16.789) of the academic attitude is greater than the critical value $X^2_{(.05,6)}$ is (12.6) thus, it is rejected. There is a significant correlation between students coping strategies and their academic attitude in mathematics subject. Mahanta and Islam (n.d) stated that the mathematics discipline the mind in order to arrange one's study and reason. Discipline the mind in order to arrange the problems in mathematics.

Table 4. Level of performance in academic

Level of performance	Frequency	%
79 & below	30	29.41
80-85	28	27.45
85-89	31	30.39
90 above	13	12.74
Total	102	100

The table above shows that 30 students out of 102 have an average of 79 below which is 29.41% of the total population of the study on the other hand 28 of the students have an average of that lies from 80-85 which is 27.45% of the respondent. On the other side 31 students whose average lies between 86-89 which is 30.39% while 13 students who has 90 above average which has the lower percentage of 12.74%.

8. CONCLUSION

In the process of coping strategies, there are different kind of decision that can affect their academic performance and might lead to failure of a student. There are various kinds of strategy in learning math. Conventional teaching method on the traditional method is what schools commonly used, it made student improve their attitude towards mathematics Akinsola & Olowojaiye (2018). Choosing a various strategies is a big decision due to different topics must be given. It may be a challenging one until he/she go to entire collage course and for the future life and achievements for the new journey on life. As a result to this study, it was a great challenge for students in choosing strategies and making decision in relation to the factors of the strategies in solving math problems. It resulted that content, skills and attitude is the most influential factor that affects and there is a significant correlation and strong influencing students to cope with stress in mathematics. In the study of Chinaveh (2013) stated that mathematics can be stressful. However, that there are people know how to solve real life problems with such case help practitioners. As an addition, there can support students another opportunity that will properly implemented the various strategies. Previous studies show that if a mastery goal aspect is join together with adoptive learning strategies, for example seeking behavior and deep processing how far they can do. Performance avoidance goal exposure is joining with less more adoptive learning strategies Skaalvik (2018). It can create strong mind set of a student if he/she cope strategies in solving problems. Durham (n.d) stated that in the classroom, task is being accomplished id the content lesson plans is catch by the strategies might be a major helps to explain in decision and identities ways in which students might structure the decision making process.

REFERENCES

[1] A.L. Dweyer, and A.L.Cummings, “Stress, Self-efficacy, social support, and coping strategies in university students,” Canadian Journal of Counselling, Vol.35, No. 3, 2001.

[2] A. H. Schoenfeld, “Learning to think mathematically: Problem Solving, Meta- cognation, and Sense Making in Mathematics,” The University of California- Berkeley, pp. 335-351, n.d.

[3] B.J Zimmerman, “Self-efficacy: An essential motive to learn” Contemporary Education Psychology, pp. 82-91, 2000.

[4] C.S. Nelson, “Consent to Participant in a Research Study,” A Mater Thesis to Misouri State University: College of Natural and Applied Sciences, pp.11-62, July 2016.

[5] C. Blazer, “Strategies for reducing math anxiety” Information Capsule Research Services, Vol.1102, pp.2-8, Sept. 2011.

[6] D. Sekwi, “ Strategies of coping with effective teaching and learning in large classes in Secondary Schools in Kampala District,” April 2009.

[7] E.A. Silver, “Fostering Creativity through Instruction Rich in Mathematical Problem Solving and Problem Posing,” Pittsburgh (USA), n.d.

[8] E.E. Achor, B. I. Imoko, E. and S. Uloko, “Effect of Ethno mathematics teaching approach on senior secondary student’s achievement and retention in focus,” Educational Research and Review, Vol. 4 No. 8, pp. 385-390, Aug. 2009.

[9] E. Maloney and S.L. Beilock, “Math anxiety: who has it, why it develops, and how to guard against it,” Forum:Science & Society, Vol.16, No.8, Aug.2012.

[10] E. Skaalvik, “Mathematics anxiety and coping strategies among middle school students:relations with student’s achievement goal orientations and level of performance,” Soc Phychol Educ, pp. 709-723, 2018.

[11] E. Zakaria, L.C. Chin, and Y. Daud, "The Effects of Cooperative Learning on Student's Mathematics Achievement and Attitude towards Mathematics," Journal of Social Sciences, Vol 6, No. 2, pp. 272-275, 2010.

[12] E. Z. Liu, and C. H. Lin, "The survey study of mathematics motivated strategies for Learning Questionnaire (MM SLQ) For Grade 10-12 Taiwanese students," Tojet:The Turkish Online Journal of Educational Technology, Vol. 9, Issue 2, April 2010.

[13] F. Peskoff, "Mathematics anxiety and the adult student: An analysis of successful Coping Strategies," Proceedings of the International Conference on Adults Learning Mathematics, 2000.

[14] G. Ramirez, H.Chang, E.A. Maloney, and S. Levine, "On the relationship math anxiety and math achievement in early elementary school: The role of problem solving strategies," Journal of Experimental Child Psychology, pp. 83-100, 2016.

[15] H. Khiat, "A Qualitative Study of Strategies in Secondary Level Mathematics Learning: A Psycho Analytic Perspective," Turkish Online Journal of Qualitative Inquiry, Vol. 4, No. 4, pp. 1-4, 2013.

[16] H.J.M. Tabachneck, K.R. Koedinger, and M.J. Nathan, "Toward a theoretical account of strategy use and sense – making in mathematics problem solving," Annual Meeting of the Cognitive Science Society, Atlanta GA, 1994.

[17] I. Glogger, M. Nuckles, L. Holzapfel, and A. Enkl, "Learning Strategies Assessed By Journal Writing: Prediction of Learning Outcomes by Quantity, Quality and Combinations of Learning Strategies,"Journal of Educational Psychology, 2012.

[18] I. Marchis, "Relation between students Attitude towards Mathematics and their Problem Solving Skills," PEDATA, Vol. 3, No.2, Dec. 2013.

[19] J. Anghileri, "Scaffolding practices that Enhance Mathematics Learning," Journal of Mathematics Teacher Education, Vol. 9, pp.33-52, 2006.

[20] J. Gasco, J.D. Villaroel, A. Goni, "Differences in the use of learning strategies in mathematics in 8th and 9th grade," Procedia Social and Behavioral Sciences, pp. 1040-1043, 2013.

[21] J. K. Mensah, M. Okyere, and A. Kuranchi, "Students attitude towards Mathematics and Perfromance: Does the teacher attitude matter?," Journal of Education and Practice, Journal Education Practice, Vol. 4, No.3, 2013.

[22] L. Mohamed, and H. Waheed, "Secondary Students Attitude towards Mathematics in a Selected School of Maldives," International Journal of Humanities and Social Science , Vol.1, No.15, Oct. 2011.

[23] L. Lossi, "Strategies for reducing math anxiety in post-secondary students," Florida International University, pp.30-35.

[24] M. Chinaveh, "The effectiveness of problem solving on coping skills and Psychological adjustments," Procedia – Social and Behavioral Sciences Journal 84, pp.4-9, 2013.

[25] M.H. Ashcraft and J.A. Kraus, "Working memory, math performance, and math anxiety," Psychomic Bullen & Review, Vol. 14, No. 2, 2007.

[26] M.K. Akinsola and F.B Olowajaiye, " Teacher Instructional Method and Student Attitudes Towards Mathematics," Vol. 3, No. 1, pp. 61-70, Feb. 2008.

[27] O. Douglas, K.S, Burton, and N. R. Durham, "The effects of the Multiple Intelligence Teaching Strategy on the Academic Achievement of Eight Grad Math Students," Fayetteville State University, pp. 1-14, 2008.

[28] R. S. Kitchen, J. Depree, S. C. Pattichis, and J. Brinkerhoff, "Mathematics Education of Highly Effective Schools that Serve the Poor: Strategies for Change," Lawrence Erlbaum Associates, Inc., 2013.

[29] S. Bayat, and R.A. Tarmizi, "Assesing cognitive and metacognitive strategies during algebra problm solving among university students," Procedia Social and Behavioral Sciences, pp. 403-410, 2010.

[30] S. Mahanta, and M. Islam, "Attitude Students towards Mathematics and its Relationship to Achievement in Mathematics," Sabita Mahanta et at, Int. J. Computer Technology & Application, Vol. 3, No. 2, pp. 713-715, n.d.

[31] S.M.B. Maat and E. Zakaria, "The Learning Environment, Teacher's Factor and Students Attitude Towards Mathemetics Amongst Engineering Technology Students," International Journal of Academic Research, Vol.2, No.2, pp.16-20, March 2010.

[32] T. Garcia, and P. R. Dintrich, "Regulating motivation and cognition in the classroom:The Role of self-regulatory strategies," pp. 127-153.