Mathematics Anxiety and Self-Efficacy: A Phenomenological Dimension

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Abstract—A descriptive phenomenological research approach enabled the researchers to explore students’ views about their ways of learning Mathematics. This method also helped to answer what was going on in particular learning that participants’ experience with regards to their anxiety and self-efficacy. This particular study included narratives of nine students who not only provide a deeper understanding about the important role of emotions in Mathematics, but also provide teachers with a resource to help motivate students to improve academic achievements. Using self-efficacy and anxiety, and subthemes: students’ effort, teachers’ coping techniques, physical and emotional feelings, and learning environment and past academic performance, the researcher postulated a general theory in the phenomenological study on anxiety and self-efficacy that: “Mathematics self-efficacy is connected to students’ effort and teachers’ coping techniques while anxiety is connected physical and emotional feelings and learning environment and past academic performance among the participants.”

Keywords—Phenomenological, anxiety, self-efficacy, performance, mathematics.

I. INTRODUCTION

There are so many factors that influence students’ performance aside from teachers’ factors, and psychological factors within motivation and ability. Mathematics anxiety is seen to be as factor affecting low students academic performance (Kumar & Karimi, 2010).

At the same time, Xu (2004) defined mathematics anxiety as a feeling of tension, dislikes, frustration and fear. It is a disabling condition on students’ struggles in Mathematics. This is an evident as the state of discomfort that urged students to avoid mathematics completely (Oxford & Vordick, 2006).

On the other hand, as related to Mathematics anxiety, Mathematics self-efficacy is commonly defined as individual’s beliefs or perceptions regarding his abilities in Mathematics on how he likes to learn and the pace at which he learns.

Also, according to Higbee and Thomas (1999), mathematics self-efficacy influenced the performance of the students. It is suggested that mathematics content is insufficient for some students to learn mathematics.

With this, the researcher was inspired to learn about the way in which students learn Mathematics. Based on his personal experience, the decline in student’s Mathematics performance or failure to learn Mathematics may be related to inferior teaching methods. As a result, there might be a need to understand the source of students’ poor perceptions of the study of Mathematics before creating any action in order to alleviate the said source of difficulties.

Therefore, this study offered a group of nine students the opportunity to share their experiences and feelings in their Mathematics subject. According to Kaasila (2007), when personal experiences are told and shared with others, awareness about your relationship to the subject is gained. Moreover, engaging in other peoples’ experiences can further support your own process in understanding your feelings towards Mathematics (Kaasila, 2007; Lutovac & Kaasila, 2009).

Therefore, this particular study included narratives of nine students who would not only provide a deeper understanding about the important role of emotions in Mathematics, but also would provide teachers with a resource to help motivate students to improve academic achievements.

Mathematics Performance, Anxiety, and Self-efficacy

Mathematics literacy is the ability to understand and solve problems, communicate, reason out and apply mathematical problems (NCTM, 1989). Mathematics is one of the core subjects in the Philippine education in which pupils find difficulty (Chua, 2006).

As an evident, the students have poor performance in their national examinations. The National Achievement
Test (NAT) results for secondary level is as low as 46.38% while the Trends in International Mathematics and Science Study (TIMSS) results have shown that the country ranked 39th in Mathematics out of 42 participating countries in 1995, ranked third to the last in 1999 and placed 41st in among 42 participants in 2003. With this poor performance, it is important to study the achievement of the students in secondary education, particularly in the subject of Mathematics, which is considered to be a key factor for the development of science and technology as well as for the growth of a nation (Pangan, 2010).

According to research, there are many factors that affect students’ performance (Mahanta, 2012). Although, solution to anxiety is not an easy way, as a teacher, you may incorporate strategies to your lesson that will lessen the burden of the students. At that point, students will feel comfortable (Oxford & Vordick, 2006).

Canonizado (2009) states that if teachers provide experiences in Mathematics, they will likely to learn the subject. While, Medina (2005) showed that mathematical skills are related to sex with females scoring consistently higher; to types of high school graduated from, with those educated from private high school scoring slightly higher than those from public schools; to attitude towards Math, with scores significantly getting better with more positive attitude towards the subject.

On the other hand, the most widely accepted definition of anxiety is the fear to communicate with either real or anticipated communication with another person or persons (Opt & Loffredo, 2000; Pitt, Berthon, & Robson, 2000; Ayres, Hopf & Will, 2000).

Mathematics anxiety is a result of low self-esteem (Daane, Judy, and Tina, 1986). This is also the idea of fear, or negative reactions toward interacting with others (Smith, Nelson, & Smeltzer 1994; McGuire, Stauble, Abbott, & Fisher, 1995; Beatty & Beatty, 1976). Mathematics anxiety is related to students feeling tense when working with numbers or solving mathematical problems (Richardson & Suinn, 1972).

Feelings of learners towards Mathematics will depend on the way it is presented, taught, and learnt individuals (Yenilmez, Girkinger, &Uzun, 2007). Thus, it is very important that motivation will starts at home by giving students their support, democratic attitude, and a role model in order to foster confidence in mathematics.

Speaking of motivation, mathematics self-efficacy is defined as the uniqueness and abilities of an individual to do organized, detailed and specific work (Pastomno & Doyle-Portillo, 2013). Also, self-efficacy can be defined as the judgment of one’s capabilities to successfully perform a particular given task (Zimmerman, 2000).

Self-efficacy beliefs are main factors in someone's decision-making process (May & Glynn, 2008). According to Margolis and McCabe (2006), self-efficacy is a belief of one’s individual capacity to achieve his goal. Self-efficacious students can do difficult task and be intrinsically motivated. Also, they pointed how students gain self-efficacy through mastery experiences, verbal persuasion and emotional state.

At the same time, Fenci and Scheel (2005) revealed that teachers should engaged different kinds of strategies in teaching in order to develop students’ self-efficacy. Research shows that the type of learning environment and teaching method can improve self-efficacy in the classroom (Bandura, 1991). A similar result has been reported by Franci and Scheel (2005) in which teaching methods can be measured through classroom climate. In their study, it showed that collaborative learning and inquiry-based activities have a great contribution to the students’ self-efficacy development. Bandura also concluded in his work that cooperative learning strategy could improve students’ self-efficacy and academic achievement.

As revealed by Schunk and Pajares (2002), there are other pedagogies that can help students to improve their self-efficacy including the teachers’ specific goal in teaching their lessons, by writing a journal and reflection paper through portfolio and lastly, by comparing students’ performance to the set goal of the teacher and not by comparing students to the rest of the class.

Little confidence to do mathematics is the result for many students who suffer from mathematical anxiety (Scarpello, 2005). Unwanted past experiences of students in mathematics classroom, a boring and useless subject as conveyed by the parents, or even the attitudes of the teachers may serve as factors that might affect students’ mathematical anxiety (Barnes, 2006).

According to Ashcraft and Krause (2007) that if a students have difficulty in working memory and a math anxious person. By looking at these results, one can conclude that stressful situations undoubtedly have an impact on math performance. Also, studies do show that low self-esteem, confidence and efficacy are closely related to mathematics anxiety (Uusimaki & Nason, 2004; Woodard, 2004).
Poor performance in Mathematics has been linked to an increase in Mathematics anxiety (Furner & Duffy, 2002; Hopko et al. 2003). The higher math anxiety will be the lower math learning, mastery, and motivation. Thus, it is also of importance that teachers try to focus on increasing student’s self-confidence in Math. If one is constantly faced with statements such as ‘Math is not important in the world’ or 'you are not a Math person,' these statements could eventually turn into one’s beliefs about their own competency in Math (Chinn, 2008).

According to study by Iossi (2007), strategies for minimizing anxiety include curricular strategies, such as re-testing, self-paced learning, distance education, single-sex classes, and Mathematics anxiety courses.

Regression analyses revealed that Math anxiety was a significant predictor of performance for girls but not for boys while, showed that no gender differences emerged for Mathematics performance but levels of Math anxiety and Test anxiety were higher for girls than for boys a negative correlation between Math anxiety and Mathematics performance has been proven (Devine, Fawcett, Scuza, and Doisner, 2012).

Alsup (2004) concluded that Math anxiety decreased dramatically for all participants in the study, when they viewed collectively. Through implementing interactive and collaborative teaching strategies, he also found that students became less anxious about Math, more confident in their ability to teach it, and more empowered as regards to their own learning.

There are so many studies about anxiety and most of them are related in the field of educational psychology (Schwarzer, 1997).

There are studies shows that self-efficacy and mathematics performance are related. It is in the sense that if the students have mathematics self-efficacy then there is a possibility that they have competence to solve mathematics problems successfully (Kabiri & Kiamanesh, 2004; Liu & Koirala, 2009).

Similarly, Bong (1998) and Pajares and Miller (1995) demonstrated academic self-efficacy could be good predictor of more general or aggregated academic achievement. And Hall and Ponton (2002) hypothesized that this finding supported Bandura’s beliefs that Mathematics achievement is the greatest source of self-efficacy.

According to May (2008), mathematics anxiety and low self-efficacy impact mathematics education. Based from the previous studies, these factors influenced students’ mathematics achievement. Thus, it is very important how self-efficacy and anxiety are related to each other.

In the study of Pintrich (2004), if the students would not likely to see the value of the task in his life then, he may not be able to do the task in the first place or might not be able to appreciate the importance of the topic. Also, if the tasks are not worthy as compare to the exerted effort then, students will not do the task even if this is challenging.

According to study, those students feel low self-efficacy and poor concentration has a tendency experiencing cognitive math anxiety (Fennema and Peterson, 1983).

According to the study of May (2009), those students who passed their examination were found to have a higher self-efficacy and lower anxiety that those students who failed. Thus, it was found that mathematics anxiety is correlated to self-efficacy.

To sum up, the bottom line behind the concept of this study was to determine the concepts that contribute to the respondents’ Mathematics anxiety and self-efficacy. The respondents of this study were the Grade 9 students of Telesforo and Natividad Alfonso High School for the school year 2017-2018.

The first part included their Mathematics anxiety and self-efficacy, which would be determined through an interview and analysis to see the connection of the variables.

At the end of the study, the researcher expected to determine the specific situation that triggered intense feelings of students’ math anxiety and the factors that contributed to the students’ self-efficacy thru the researcher’s own formulated theory.

**Statement of the Problem**

This study was a descriptive phenomenological research for it focused upon the interpretation and description of the experiences of respondents with regards to different factors in their mathematics subject.

The overall aim of this study was to gain a deeper understanding of how and why negative feelings towards Mathematics emerge and what impact they have on individuals, particularly in the case of the respondents.
This study was conducted to give students with anxiety levels, a voice by attempting to understand what it is like for them to learn Math and what they believe are the factors that contribute to and reduce their anxiety as well as to increase their self-efficacy. Hence, this paper is an attempt to explore students’ learning with anxiety and self-efficacy issues in the broader context of Mathematics. The data collected were analyzed to answer the following questions:

1. How may the Self-efficacy towards Mathematics of the respondents be described?
2. How may the Anxiety towards Mathematics of the respondents be described?
3. How may the connection between Anxiety and Self-efficacy be described?
4. What theory can be formulated out of the results of the study?

Scope and Delimitation of the Study

A complete objective stance cannot claim in this study considering that an interpretation was undeniable due to the fundamental role of the descriptive phenomenological research. Although an attempt to be as bias-free as possible was made, the selection of data was, nevertheless, influenced by previous experiences and personal opinions. While every step of the study was carefully planned, where both research methodological and theoretical considerations set the base for the understanding of emotional aspects, defining and gaining an insight in other peoples’ feelings was difficult and evidently based on interpretations.

Finally, while several methods have been used in order to verify the findings and reach the purpose of this study, the limited time frame for finishing the research needs to be considered. The issue of time was hereby raised as it restricted the possibility to engage in the lives of the participants and create the necessary connection in order for them to feel completely safe and open in sharing personal experiences and feelings.

A potential weakness of the study was that the data collection and analysis relied solely upon the actual feelings of individuals. Also, this study was limited to nine grade nine students who had been chosen discreetly based on their grades in Mathematics for the school year 2017-2018. Another limitation was the researcher familiarity with participants, each of whom was a former student and observation doing mathematical explanation during class sessions. To reach an unbiased perspective of the phenomenon under study setting aside personal feelings was critical.

II. RESEARCH METHODOLOGY

Research Method

An appropriate method for addressing the aim of the study was a descriptive phenomenological method of research. Descriptive Phenomenology aims to describe a person’s actual experiences in an attempt to enrich lived experience by drawing out its meaning (Holloway 2005). This research was a pure qualitative data.

On the other hand, a descriptive phenomenological research approach enables the researcher to explore students’ views about their ways of learning mathematics. This method also helped to answer what particular learning that respondents experience with regards to their anxiety, and self-efficacy.

The method provided more accurate formulation of the problem and led the researcher to determine the factors that contribute to the mathematics anxiety, and self-efficacy of the respondents. This study was field focused in Mathematics classroom and appropriately relied on student documents, interviews, and observations as sources of data.

Respondents of the Study

This study focused on a group of respondents in connection to their anxiety, and self-efficacy. An interview was made and later asked to the respondents after the discussion of the lesson and giving of evaluation.

The respondents of this study were the nine ninth graders of Telesforo and Natividad Alfonso High School, Sta. Maria, Sta. Ana, Pampanga, Philippines for the school year 2017-2018.

The respondents were chosen based on their performances/grades in the school year 2016-2017. The researcher chose three respondents who had the lowest grades, three respondents who got the average grades, and three respondents who received the highest grades in Mathematics categorizing them as low, average, and high performers focusing in a one group of heterogeneous section.

Names of the subjects were withheld and instead represented by respondents letters (pseudonyms) arranged in an order for reason of confidentiality.

Research Instrument

The primary instrument that was used for the gathering of data was an interview guide composed of two
questions provided by the researcher with regards to their anxiety and self-efficacy and had validated to make the questions reliable.

The interview guide was comprising with two questions to get the views about specifically how respondents feels about Math subject, and how do they perform well in this subject. Respondents were requested to answer each interview questions and they were allowed to use on their preferred language for them to explicit well their thoughts about Mathematics with example. Moreover, the structure of the interview questions were inspired by the narrative research approach, and the overall aim of the study, regarding the understanding of how respondents have felt about and experienced Mathematics during the classroom discussion and participation. The respondents were given sufficient time to answer the questions and had the chance to reply it on their own; therefore, they had the opportunity to answer within the context of their own experience and interpretation. Thus, administering an interview questions enabled to get detail responses relevant to research questions.

Data Collection and Organization

This study focused on a group of respondents in connection to their anxiety, and self-efficacy. An interview was also conducted among the respondents after the discussion of the lesson. Data were collected through nine individual interview, observation, videos, and with the help of some related literature and studies.

Procedures for the processing of data were detailed as follow: notes and all the data from the video were transcribed immediately following the purpose of the study. Transcriptions were made while watching the videos.

All the themes and subthemes were actually taken from the words of the respondents. These were their exact words and from those it was condensed in order to form bigger concepts and ideas. Based from the observations, respondents’ statements, and related literature and study, findings diverge almost homogeneous results.

Confidentiality was maintained throughout the transcriptions procedures by utilizing pseudonyms (e.g. Student 1, Student 2 ... Student 9) to de-identify the data. This was done after the interview to minimize the risk disclosure of personal information.

III. RESULTS AND DISCUSSION

1. Respondents’ Descriptions on Self – efficacy towards Mathematics

Mathematics self-efficacy is defined as the uniqueness and abilities of an individual to do organized, detailed and specific work. (Pastorno & Doyle-Portillo, 2013). Also, Self-efficacy can be defined as the judgment of one’s capabilities to successfully perform a particular given task (Bandura 1997; Zimmerman, 2000). These expectations and beliefs influence whether somebody starts working on a task and the intensity of the performance (Pajares & Kranzler, 1995).

Within the self-efficacy, a student effort and teachers’ coping techniques were revealed. The expectancy-value theory claimed that the amount of effort expanded by an individual is directly correlated to the amount of interest in the task, the perceived likelihood of the success, and the meaning association with its completion (Wigfield & Eccles, 2000). The following statements, excerpts from the individual output of the respondents, support the self-efficacy.

Respondents were asked about their positive experiences or feelings in mathematics.

Table 1.1: Students’ Effort

<table>
<thead>
<tr>
<th>Students’ Effort</th>
<th>Number of Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling Proud</td>
<td>2</td>
</tr>
<tr>
<td>Enjoy the subject</td>
<td>1</td>
</tr>
<tr>
<td>Self-confidence</td>
<td>2</td>
</tr>
<tr>
<td>Praises from classmates</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

Table 1.1 shows the students’ effort of the respondents. From the result of the study, two said they feel proud when they answer math correctly, one said they feel good and enjoy the subject, two said they have self-confidence when they understand the lesson, and lastly, one said they feel good when they receive praises.

The respondents feel good in math if they received praises and good comments from their classmates and teachers. The findings on gaining knowledge suggested they all felt good when they learned the materials.
Table 1.2: Teachers’ Coping Techniques

<table>
<thead>
<tr>
<th>Teachers’ Coping Techniques</th>
<th>Number of Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers’ Effort</td>
<td>3</td>
</tr>
<tr>
<td>Praises from Teachers</td>
<td>1</td>
</tr>
<tr>
<td>Easy Lesson</td>
<td>1</td>
</tr>
<tr>
<td>Peer tutoring/sharing of knowledge</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 1.2 shows the teachers’ coping techniques subtheme of the respondents as regards to their self-efficacy. From the result of the study, three said they understand the lesson through teachers’ effort, one said he felt good when he receives praises from his teacher, one said he really understand the lesson when it is easy, and the other two said that the positive experience they felt in math is that when they share what they learned from their classmates or peers.

The respondents made comments about teacher’s coping techniques. All the respondents appreciated any and all the efforts from their teacher especially when the teacher explains the lesson clearly. Also, one says that he appreciated the lesson if the teacher connects the lesson to his real life situation.

II. Respondents’ Descriptions on Anxiety towards Mathematics

Mathematics anxiety is related to students feeling tense when working with numbers or solving mathematical problems (Richardson & Suinn, 1972). Negative feelings towards learning mathematics arise as a consequence of a range of encounters relating to the way mathematics is presented, taught, and learnt by individuals. Some negative experiences are in working with teachers, tutors, classmates, parents or siblings (Yenilmez, Girciner, & Uzun, 2007).

For instance, no one can solve every mathematics problem and it is quite normal that children would at times make mistakes while dealing with mathematics. However, children with such sensitivities might have more extreme reactions to such errors such believing that they can’t do mathematics and thus they hate mathematics (Yenilmez, Girciner, & Uzun, 2007).

In this study, respondents answered the questions about their negative feelings or experiences in mathematics.

Table 2.1: Physical and Emotional Feelings

<table>
<thead>
<tr>
<th>Physical and Emotional Feelings</th>
<th>Number of Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage Fright/Nervousness</td>
<td>2</td>
</tr>
<tr>
<td>Feels Tense</td>
<td>2</td>
</tr>
<tr>
<td>Lack of Self-confidence</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 2.1 shows the physical and emotional feelings of the respondents as regards to their anxiety. From the result of the study, two said they have a stage fright and feel nervous when they answer Math, two said they feel tense when they answer concepts about Math, and lastly, two said they lost their self-confidence when solving Math.

All respondents recognized the impact of lack of self-confidence and nervousness. Respondents said that they felt nervous when doing math calculation in front of the class and they have stage fright when explaining the solution of the lesson in Math.

Table 2.2: Learning Environment and Past Academic Performance

<table>
<thead>
<tr>
<th>Learning Environment and Past Academic Performance</th>
<th>Number of Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embarrassment</td>
<td>3</td>
</tr>
<tr>
<td>Feels shy and nervous</td>
<td>1</td>
</tr>
<tr>
<td>Teaching</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 2.2 shows the learning environment and past academic performance of the respondents in Math anxiety. From the result of the study, three said they were afraid from embarrassment, one said he feels shy and nervous to solve Math, and lastly, two said sometimes they don’t understand the lesson.

All the respondents recognized the impact of their former Math teachers had upon their experiences towards the study of Mathematics. Respondents said that they can’t understand the lesson presented by their former teachers and they were afraid to be embarrassed. One respondent said that he had been influenced by his teacher resulting to a negative past experience in Math.

III. Connections between the Respondents Anxiety and Self-efficacy

This study explored the experiences that students have about themselves in connection to the study of Mathematics. From the interview, lists of respondents’ statements were compiled to create a coding system guide. The statements were grouped together based upon commonalities. This led to the creation of subthemes that
were identified throughout the data collection and analysis process. Table 3 presents the themes and subthemes that emerge from the data.

**Table 3: Subthemes of the Data**

<table>
<thead>
<tr>
<th>Subthemes</th>
<th>Number of Answers per Subthemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Self-efficacy</td>
<td></td>
</tr>
<tr>
<td>1.1 Students’ Effort</td>
<td>6</td>
</tr>
<tr>
<td>1.2 Teachers’ Coping</td>
<td>7</td>
</tr>
<tr>
<td>Techniques</td>
<td></td>
</tr>
<tr>
<td>2. Anxiety</td>
<td></td>
</tr>
<tr>
<td>2.1 Physical and</td>
<td>6</td>
</tr>
<tr>
<td>Emotional Feelings</td>
<td></td>
</tr>
<tr>
<td>2.2 Learning Environment</td>
<td>6</td>
</tr>
<tr>
<td>and Past Academic</td>
<td></td>
</tr>
<tr>
<td>Performance</td>
<td></td>
</tr>
</tbody>
</table>

All the subthemes were actually taken from the words of the respondents. Based from the respondents’ statements, and related literature and study, findings diverge almost homogeneous results.

**IV. Theory Formulated out of the Results**

**Evidence of Quality**

Validation of the data collected in the study was maintained by spending time with the respondents; the used of thick, rich, detailed descriptions of the collected data; and the connection established between the researcher and the respondents (Creswell, 2007; Creswell & Miller, 2000).

To make sure that the research was designed in ways that protected respondents from harm, access to the participants was only gained after receiving approval from the school to conduct a research was given a serious attention when solving respondents, particularly grade nine students (Creswell, 2007; Glatthon & Joyner, 2005; Hatch, 2000).

This phenomenological study allowed respondents to share their experiences on the study of mathematics. Therefore, this particular study that includes the narratives of nine students will not only provide a deeper understanding about the important role of emotions in Mathematics, not just to provide teachers with a resource to help motivate students to improve academic achievement but hopefully also support those readers that might identify themselves with some of the experiences.

**Interpretation**

“A descriptive phenomenology aims to describe persons’ lived experiences in an attempt to enrich live experiences by drawing out its meaning” (Holloway, 2005).

And to better explicate the phenomenon, “Anxiety, and Self-efficacy” certain processes such as selective coding, and categorizing is essential to immerge into certain subthemes.

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All the subthemes were actually taken from the words of the respondents. Based from the respondents’ statements, and related literature and study, findings diverge almost homogeneous results.

**Students’ Effort:** The respondents feel good in math if they received praises and good comments from their classmates. The findings on gaining knowledge suggested they all felt success when they learned the materials.

**Teachers’ Coping Techniques:** the respondents made comments about teachers’ coping techniques. All the respondents appreciated any and all the efforts from their teacher especially when the teacher explains the lesson clearly.

**Physical and Emotional Feelings:** this factor has a great influence to the respondents’ performance in Mathematics. Six respondents said that they have fear in Math showing that they feel nervous, shiver, and emotionally upset when solving mathematics problem. Lacking of self-confidence has also have the connection to their past embarrassment as experienced from their teachers.

**Learning Environment and Past Academic Performance:** All the respondents recognized the impact of their past performance had upon their experiences towards the study of Mathematics. Respondents said that sometimes they can’t understand the lesson presented by their teachers and they were afraid to be embarrassed.

The researcher thought that respondents’ past academic performance and the learning environment had an effect to their physical and emotional feelings as well as the teachers’ coping techniques to exert effort in learning Mathematics.

With this, the researcher postulated a general theory in the phenomenological study on anxiety and self-efficacy that: “self-efficacy is connected to students’ effort and teachers’ coping techniques while anxiety is connected to physical and emotional feelings and learning environment and past academic performance” through the limitation focusing on the experiences and feelings of the nine grade 9 students.

This theory supports by the study of Canonizado (2009) that, according to him, students learn and enjoy Mathematics through the experiences that teachers provide. And Scarpello (2007) also mentioned the positive influence an instructor can have on students.

IV. CONCLUSIONS
In the light of the findings of the study, the following conclusions were drawn:

1. The respondents are more positive about their abilities when they understand the material. They are more positive when they received better grades, passed a test, or were able to work problems.
2. The respondents have noticeable difficulties in Mathematics. Learning environment and past academic experience as well as physical and emotional feelings reflected on having Mathematics struggles.
3. All performers have demonstrated self-efficacy and anxiety in studying Mathematics.
4. Self-efficacy is connected to students’ effort and teachers’ coping techniques while anxiety is connected to physical and emotional feelings and learning environment and past academic performance.

V. RECOMMENDATIONS
The results of this phenomenological study provided information that could be practically applied in the Mathematics education setting. Based on the findings and conclusions of the study, the obvious recommendations are hereby provided:

1. Mathematics teacher should continuously propose instructional strategies and techniques that will be effective in helping more students learn and develop their performance and achievement on mathematical analysis.
2. Teachers of Mathematics are encouraged to make their students get involved in various activities. Teachers could provide more encouragement to students to help expand their confidence.
3. Teachers can provide lower-level students with hands-on activities and immediate feedback on classwork, so student sees success from their effort. Classroom teachers could provide opportunities for students to build confidence through small steps of success.
4. Teachers can create professional development programs that emphasize increased awareness and understanding of poor perceptions that students have about the study of Mathematics, particularly at the elementary school level. Also, teachers may use different kinds of materials in the teaching and learning process to boost students’ interest in Math success through teacher’s support.

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Unpublished Materials


Internet Resources


