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Level of Mathematics Anxiety of the First year Bachelor of Elementary Education students of Cagayan State University Andrews

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This study assumes that mathematics is one of the most challenging courses in high school and college, thus a teacher should determine the challenges students are having. Teachers should acknowledge their mistakes, talents, and limitations to produce stronger programs. Many say students avoid math. Some students don't enjoy arithmetic and are pleased to pass. With this belief, the researcher is inspired to expand and enrich the mathematics curriculum by conducting a study of first-year Bachelor of Elementary Education students' arithmetic fear. Descriptive-correlational technique was used. The descriptive method is used to determine if there is a significant difference in the level of Mathematics Anxiety among First Year Bachelor of Elementary Education students. This study uses data from Cagayan State University Andrews' first-year Bachelor of Elementary Education. 145 B.Ed. first-year students. The sample population is 107, determined using Slovin's Formula and systematic random sampling. Researchers used questionnaires to collect data for this investigation. Written version of Kevin Robert's (2013) online Mathematics Anxiety Survey. The poll included two parts. First, responder information. Second is the Mathematics Anxiety Scale. The Mathematics Nervousness rating scale has three elements, each with ten statements that measure respondents' anxiety. The researcher hand-delivers the questionnaire. The researcher described how responders should answer the questionnaire. Frequency and percentage were utilized to profile respondents. Mean is used to determine respondents' Physical and Emotional, Assessment, and Social Mathematics Anxiety. T-Test is used to determine if there is a difference in respondents' Mathematics Anxiety based on sex, school graduated from, and high school honor. ANOVA (analysis of Variance) is used to compare respondents' Math Anxiety levels by age and ethnicity. Based on the above findings, we concluded: Age and school graduated do not significantly affect the level of Mathematics Anxiety among respondents. Females are more worried than males, non-academic performers are more anxious than academic performers, and Ybanag has the most mathematics anxiety. Students are slightly apprehensive about the three criteria, but they rarely feel math anxiety.

Keyword: mathematics anxiety, age, ethnicity,

International Journal of Arts, Sciences and Education
Volume 3 Issue | June 2022
ISSN: 2799 - 1091
Page No. 10-21

Introduction

The word mathematics is scary for some people. Although both mathematical literacy and language literacy are of high value in our education system, many people openly proclaim their difficulties in math but would never announce that they could not read or write. For some reason, in both the school setting and in large-scale society, there seems to exist a general acceptance of the inability to succeed in mathematics. A lack of confidence in math can result in a feeling of anxiousness when performing in mathematical situations (Stuart, 2000). Although this phenomenon has been given many names, it will be referred to in this study as "math anxiety".

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. According to Lynne McClure (2013), a high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics and a sense of enjoyment and curiosity about the subject.

Mathematics certainly means many things to many people (Marzita binti Puteh, 2002). Many aspects of daily life require some knowledge of mathematics. Knowledge of mathematics and the ability to use this knowledge is critical to the pursuit of many existing and newly emerging occupational fields. Moreover, all undergraduate students are required to take some level of mathematics. If students suffer from mathematics anxiety, their willingness to enroll and succeed in mathematics courses diminished (Stubblefield, 2006).

Mathematics anxiety is a problem for many people. It can have detrimental effects for college students including feelings of nervous tension, fear of rejection, and stress (Truttschel, 2002). According to Perry (2004), much like a novice golfer on the first tee, the mathematics student can seriously hamper her or his performance by being nervous and insecure toward mathematics. At the college level, this anxiety is most often seen in mathematics courses required for nontechnical majors. Most ***mathematics*** teachers would agree that mathematics ***anxiety*** stems primarily from students' fears of failure and feeling of inadequacy. In most cases, mathematics ***anxiety*** is not extreme or overwhelming, yet it continues to haunt most students throughout their encounter with mathematics.

Many adults are blocked from professional and technical job opportunities because they fear or perform poorly in mathematics. Most of these adults are brain-capable of learning more mathematics. Theirs is not a failure of intellect, but of nerve. All people have some mathematics anxiety, but it disables women and minorities more than others. There is a cure, but it involves changing learners and teachers attitudes at the same time.

Mathematics anxiety also could develop as a result of a student's prior negative experiences learning mathematics in the classroom or at home (Rossnan, 2006). Mathematics anxiety has been a prevalent concern among educators and others in the society for decades. Now, with the advent of computer technology, the need for understanding of mathematics is becoming critical. Teachers

ISSN: 2799 - 1091
Page No. 10-21

can play an important role in reducing the level of mathematics anxiety among their students (Furner & Berman, 2003). Students tend to have high level of nervousness, fear, or discomfort toward mathematics, due to their prior experiences with mathematics teachers and other influential persons (Baylor, Shen, & Warren, 2000).

Mathematics anxiety in children is a learned response from the attitudes of parents and educators alike. Alleviating this problem involves many issues ranging from cognitive development to changes in environmental viewpoints. Changing these external biases seems to be the most basic solution. Parents and educators must change their perspectives of mathematical skills in a positive way. Students model the expectations and attitudes of their parents and educators. By embracing mathematics as an essential tool for success in our society, these adults can help create a new viewpoint among students toward skills that are so fundamental to so many aspects of life.

Mathematics educators need to recognize the causes of mathematics anxiety. Educators can become more informed about the effects of mathematics anxiety by reading related literature and attending workshops and conferences on the topic. Students should be made to realize that myths such as mathematics aptitude are genetic and mathematics being a male domain is simply not true (Woodard, 2004). Changing attitudes about mathematics will require support from parents, teachers and society. If negative attitudes are not changed, students' performance, college and career choices will be limited (Shields, 2006). Mathematics anxiety is a reality for many students. Educators should be knowledgeable about its causes and provide supportive learning communities that assist students in overcoming it (Barnes, 2006).

Conceptual Framework

This study sets on the belief that mathematics is one of the most difficult subjects in high school even in college and for this reason a teacher should determine the problems that the students are encountering while learning the mathematics subject. Teachers should accept their errors, strengths and weaknesses in order for them to formulate goals and objectives that they want to attain for the development of better programs. Many have claimed that mathematics is something which majority of learners avoid. Some learners are not motivated to study mathematics and they are just contented passing it.

With this belief, the researcher is motivated to develop and enrich the mathematics curriculum through constructing a study about mathematics anxiety of the first year students of Bachelor of Elementary Education guided by the research paradigm.

The result of the study will give feedback to the first year Bachelor of Elementary Education of Cagayan State University Andrews as to what Level of Mathematics Anxiety they have.

Statement of the Problem

Generally, the main concern of the study is to determine the Level of Mathematics Anxiety of the first year Bachelor of Elementary Education students of Cagayan State University Andrews.

Specifically, it aims to answer the following question:

1. What is the profile of the respondents in terms of
   a. Sex
   b. Age

ISSN: 2799 - 1091
Page No. 10-21

c. High School graduated from
d. Academic Performance in high school
e. Ethnicity

2. What is the level of mathematic anxiety of the respondent along:
   a. Physical and emotional factors
   b. Assessment factors
   c. Social factors
3. Is there significant difference in the level of mathematics anxiety of the respondents when grouped according to their profile?

Hypothesis

1. There is no significant difference in the level of mathematics anxiety of the respondents when grouped according to their profile.

RESEARCH METHODOLOGY

Research Design

The study made use of descriptive-correlational method. The descriptive method was used to investigate if there is significant difference in the level of Mathematics Anxiety of the First Year Bachelor of Elementary Education when grouped according to their profile. The correlational method was used to determine the possible relationship between the physical and emotional factor, assessment factor and social factor that affect the level of mathematics anxiety of the First Year Bachelor of Elementary Education of Cagayan State University Andrews.

Locale of the Study

The study was conducted in Cagayan State University, Andrews Campus particularly in the College of Teacher Education. The College of Teacher Education has three programs namely Bachelor of Elementary Education, Bachelor of Secondary Education and Bachelor of Technical Teacher Education.

Respondents and Sampling Procedures

The data used from this study was collected from the first Year Bachelor of Elementary Education of Cagayan State University Andrews. There were 145 first year students of Bachelor of Elementary Education. Slovin's Formula and systematic random sampling technique were used to determine the sample population which is 107.

Table 1: Distribution of Respondents

Section	Population	Population Distribution	Sample Population
BEED I-A	55	37.93%	41
BEED I-B	55	37.93%	41
BEED I-C	35	24.14%	25
Total	145	100%	107

Research Instruments

ISSN: 2799 - 1091
Page No. 10-21

In gathering pertinent data in this study, survey questionnaires were used by the researchers. The questionnaire is adopted from an online Mathematics Anxiety Survey created by Kevin Robert (2013) and was used in a written form. The survey question was divided into two parts. The first part is the personal information about the respondents. The second part is the Mathematics Anxiety rating scale. The Mathematics Anxiety rating scale consists of three (3) factors and each factor consist of ten statements that can measure the level of Mathematics anxiety of the respondents.

The students' level of Mathematics anxiety was measured using the following five-point scale.

5	Always	The item/ events happens all the times
4	Very often	The item/events happen frequently
3	Sometimes	The item/events happen every so often
2	Rarely	The item/even happen seldom
1	Never	The item/even does not happens

Data Gathering Procedure

The researcher personally floats the questionnaire to the respondents. The researcher also explained and discussed well how the respondents will answer the questionnaire. Questions regarding what the respondents can't understand in the questionnaire are being answered by the researcher.

Statistical Treatment of Data

The researcher used the frequency and percentage to determine the profile of the respondents. Mean is used to determine the level of Mathematics Anxiety of the respondents in terms of the physical and emotional factor, assessment factor, and social factor. T-Test is used to determine if there's a difference in the level of Mathematics Anxiety of the respondents when grouped according to sex, school graduated from, honor garnered in high school. ANOVA (analysis of Variance) is used to determine if there's difference in the level of Mathematics Anxiety of the respondents when grouped according to age and ethnicity.

Analysis of Data

The data gathered from the respondents is analyzed through this scale.

Range	Scale	Descriptive Value	Interpretation
4.20-5.00	5	Always	Extremely anxious
3.40-4.19	4	Very often	Very anxious
2.60-3.39	3	Sometimes	Moderately anxious
1.80-2.59	2	Rarely	Slightly anxious
1.00-1.79	1	Never	Not anxious

RESULTS AND DISCUSSIONS OF FINDINGS

Profile of the Respondents

Table 2 shows the frequency and percentage distribution of the respondents according to sex, age, school graduated from, academic performance in high school and ethnicity.

ISSN: 2799 - 1091
Page No. 10-21

It shows that majority of the respondents are female. Meaning female are more likely to enter the teaching profession than that of males.

On age, most of the respondents are 16 1nd 17 years old. This indicates that majority of the freshmen students are fresh graduates.

The table also shows that majority of the respondents graduated in public high school. This really implies that public schools outnumbered private schools here in the Philippines.

Majority of the respondents are not honor students when they graduated in high school. This indicates that majority of the respondents did not outdo in their academic subject.

The last part of Table 2 shows the ethnicity of the respondents. Majority of the respondents are Ilocano and Itawes. Aside from this ethnicities there are still other respondents who belong to other ethnicities.

Table 2: Distribution of Respondents According to Profile

Profile	**Frequency n=107**	**Percentage**
Sex		
Male	11	10.28%
Female	96	89.72%
Age		
15 years old and below	3	2.80%
16- 17 years old	83	77.57%
18 years old and above	21	19.63%
School Graduated From		
Public	88	82.24%
Private	19	17.76%
Academic Performance in High School		
Honor graduate	22	20.56%
Not an Honor graduate	85	79.44%
Ethnicity		
Ilocano	40	37.38%
Ybanag	6	5.61%
Tagalog	10	9.35%
Itawes	39	36.45%
Others	12	11.21%

International Journal of Arts, Sciences and Education
Volume 3 Issue | June 2022
ISSN: 2799 - 1091
Page No. 10-21

Level of Mathematics Anxiety of the Respondents

Table 3 shows the level of Mathematic Anxiety of the respondents along physical and emotional factor. The overall mean score along this factor is 2.16 with standard deviation of 0.54 would show that the students are slightly anxious. However, along this factor a mean score of 1.37 with a standard deviation of 0.68 shows that students' stomachs don't get physically upset when thinking or doing about mathematics. But on the other side, a mean score of 2.64 with standard deviation of 0.88 shows the students get emotionally upset when thinking or doing about Math. Along the other statements of this factor, it shows that students are slightly anxious.

Table 3: Level of Mathematics Anxiety of the Students along Physical and Emotional Factor.

Statements	Mean	Standard Deviation	Interpretation
1. I get emotionally upset when doing or thinking about math (anger, crying, extreme frustration)	2.64	0.88	Moderately Anxious
2. I get sweaty or clammy hands when doing or thinking about math.	2.40	0.87	Slightly Anxious
3. I feel butterflies in my stomach when doing or thinking about math.	2.13	0.95	Slightly
4. My stomach gets physically upset (diarrhoea, vomiting, constipation, nausea, etc.)	1.37	0.68	Not Anxious
5. My muscles feel tense and I feel stiff when doing or thinking about math.	2.20	0.92	Slightly Anxious
6. I have a trouble sleeping after working in math or the night before math.	1.99	0.90	Slightly Anxious
7. I feel like I have to urinate more frequently when in math class or working on math assignment or test.	1.83	0.94	Slightly Anxious
8. I feel like I have no control over my grades in math.	2.49	0.94	Slightly Anxious
9. I get headaches or neck stiffness when doing or thinking about math.	2.16	0.96	Slightly Anxious
10. I feel my heart race when doing or thinking about math.	2.35	1.00	Slightly Anxious
Overall Mean	**2.16**	**0.54**	**Slightly Anxious**

Table 4 shows the level of Mathematics Anxiety of the students along assessment factor. The overall mean score along this factor would show that students are moderately anxious. However, along this factor, three statements have mean scores of 2.49, 2.54, and 2.58 respectively and standard deviations of 0.94, 0.86 and 0.98 would show that students are slightly anxious and this indicates that students are confident when taking math tests, they can trust their intuition during math test and they don't find themselves comparing to the people around them during math test. There is also one statement along this factor that has a mean score of 1.66 with standard deviation

ISSN: 2799 - 1091
Page No. 10-21

of 0.80 indicating that students are not anxious at all when studying for math test. But along other statements, students are moderately anxious.

Table 4: Level of Mathematics Anxiety of the Students along Assessment Factor.

Statements	Mean	Standard Deviation	Interpretation
1. I tend to do very poorly on math tests than other subjects	2.62	0.94	Moderately Anxious
2. I feel like I need to prepare much more for math tests than other subjects.	3.13	0.93	Moderately Anxious
3. Math tests are much more stressful to me than other tests.	2.91	1.09	Moderately Anxious
4. I feel I understand certain math concepts in class but do poorly on tests.	2.71	0.79	Moderately Anxious
5. I have trouble concentrating during math tests (racing thoughts can't focus, "blanking out", etc.)	2.63	0.85	Moderately Anxious
6. I do not feel confident when taking math tests no matter how much I study.	2.49	0.94	Slightly Anxious
7. I feel that I can't trust my intuition and often second guess myself during math tests.	2.54	0.86	Slightly Anxious
8. I generally feel that tests in math are reflection of my worth as a person.	2.89	0.99	Moderately Anxious
9. When studying for math test, I find myself showing anxious behaviour (fidgeting, pacing, making excuses, avoiding the situations, etc.)	1.66	0.80	Not Anxious
10. During math test, I find myself comparing my process to those around me.	2.58	0.98	Moderately Anxious
Overall Mean	**2.33**	**0.66**	**Slightly Anxious**

Table 5 shows the level of Mathematics Anxiety of respondents along social factor. The overall mean score along this factor is 2.33 with standard deviation of 0.66 would show that students are slightly anxious. However along this factor, three statements have mean scores of 2.77, 2.73 and 2.60 with standard deviations of 1.03, 1.05 and 1.08 would show that students are moderately anxious and this indicates that students sometimes feel that others have more mathematical mind than they do, sometimes affected when their parents and friends tell their frustration and struggles in Mathematics and sometimes worried about their mathematical abilities and rely on other people's help on day to day. But along the other statements of this factor, students are slightly anxious.

Table 5: Level of Mathematics Anxiety of the Students along Social Factor.

International Journal of Arts, Sciences and Education
Volume 3 Issue | June 2022
ISSN: 2799 - 1091
Page No. 10-21

Statements	Mean	Standard Deviation	Interpretation
1. I feel that I will never be able to learn math no matter how I try.	1.89	1.10	Slightly Anxious
2. I feel that others have more mathematical or logical mind than I do.	2.77	1.03	Moderately Anxious
3. My parents and friends tell me about their struggles and frustration in math.	2.73	1.05	Moderately Anxious
4. I feel that in math, an answer are either right or wrong and is a little room for anything in between.	2.57	0.85	Slightly Anxious
5. I have had math teachers that I really disliked for one reason or another.	2.10	1.00	Slightly Anxious
6. I find myself worrying about other people's math abilities and comparing them to my own	2.60	1.08	Moderately Anxious
7. I feel that although I am quite talented at some things, none of them help me with math.	2.36	1.08	Slightly Anxious
8. I rely on other people to help me with day to day math situations (calculating tips, balancing check books, estimation, etc.)	2.53	0.97	Slightly Anxious
9. I have been punished or embarrassed in math class for not understanding something.	1.83	1.00	Slightly Anxious
10. I feel like I have never really understood math and I am faking my way through it.	1.93	0.89	Slightly Anxious
Overall Mean	**2.33**	**0.66**	**Slightly Anxious**

Comparison on the level of Mathematics anxiety of the respondents when grouped according to Profile Variables

Table 6 shows the difference in the level of Mathematics Anxiety of students when grouped according to sex. The study revealed that there is significant difference in the mathematics anxiety of the respondents when grouped according to sex along physical and emotional factor. However, it also revealed that there is no significant difference in the mathematics anxiety of the respondents when grouped according to sex along assessment and social factor. Results of the t-test for independent groups along physical and emotional factor yielded a computed t-value of -2.69 with an associated probability of 0.02 which is lower than the level of significance set at 0.05, thus the null hypothesis is rejected. But along the other factors, null hypothesis is failed to reject because the t-computed is less than t-critical associated with probability which is greater than the level of significance set at 0.05.

ISSN: 2799 - 1091
Page No. 10-21

Findings revealed that female respondents have higher mathematics anxiety than that of males. This is similar to some study reports that women have higher mathematics anxiety than men (Baloglu & Koçak, 2006).

Table 6: Comparison on the level of mathematics anxiety of the respondents when grouped according to sex.

Factors	Sex	Mean	Standard Deviation	t-stat	p-value	Decision
Physical and Emotional Factors	Male	1.81	0.44	-2.69	0.02	Reject Ho
	Female	2.20	0.54			
Assessment Factor	Male	2.34	0.48	-2.01	0.07	Accept Ho
	Female	2.65	0.55			
Social Factor	Male	1.98	0.57	-2.10	0.06	Accept Ho
	Female	2.37	0.66			

*Significant at $\alpha = 0.05$

Table 7 shows the difference in the level of mathematics anxiety when grouped according to age. The study revealed that there is no significant difference in the mathematics anxiety among respondents who are 15 and below, 16-17 and 18 and above years old along the three factors.

Table 7: Comparison on the level of Mathematics anxiety of the respondents when grouped according to age.

	Age Bracket					
Factors	15 and below		16-17		18 and above	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Physical and Emotional Factor	1.90	0.53	2.16	0.51	2.20	0.69
Assessment Factor	2.17	0.25	2.60	0.52	2.76	0.67
Social Factor	2.07	0.72	2.30	0.58	2.54	0.43

Factor	F-computed	p-value	Decision
Physical and Emotional Factor	0.38	0.68	Accept Ho
Assessment Factor	1.79	0.17	Accept Ho
Social Factor	1.81	0.17	Accept Ho

*Significant at $\alpha = 0.05$

Table 8 shows the difference in the level of mathematics anxiety of students when grouped according to school graduated from. The study revealed that there is no significant difference in the mathematics anxiety among respondents when grouped according to school graduated from along the three factors. Results of the t-test for independent groups yielded a computed t value of

ISSN: 2799 - 1091
Page No. 10-21

-1.44, -1.62, and -0.58 respectively where the associated probabilities are 0.16, 0.12 and 0.57 which are greater than the level of significance set at 0.05, thus the null hypothesis is not rejected.

Table 8: Comparison on the level of Mathematics anxiety of the respondents when grouped according to school graduated from.

Factors	School Graduated From	Mean	Standard Deviation	t-stat	p-value	Decision
Physical and Emotional Factor	Public	2.11	0.51	-1.44	0.16	Accept Ho
	Private	2.33	0.64			
Assessment Factor	Public	2.57	0.52	-1.62	0.12	Accept Ho
	Private	2.82	0.63			
Social Factor	Public	2.31	0.61	-0.58	0.57	Accept Ho
	Private	2.43	0.84			

*Significant at $\alpha = 0.05$

Table 9 shows that the difference in the level of mathematics anxiety of students when grouped according to academic performance in high school. The study revealed that there is significant difference in the mathematics anxiety of the respondents when grouped according to academic performance in high school along physical and emotional factor and assessment factor. However, the study also revealed that there is no significant difference in the mathematics anxiety of the respondents when grouped according to academic performance in high school along social factor.

Findings revealed that those none honor graduates in high school have higher mathematics anxiety than that of honor graduates along the two factors. This is similar to the study conducted by Ma and Jiangming Xub (2004) that the relationship between Mathematics anxiety and mathematics achievement was found that students with a higher level of mathematics anxiety perform at a lower level of mathematics achievement.

Table 9: Comparison on the level of Mathematics anxiety of the respondents when grouped according to academic performance in high school.

Factors	Academic Performance	Mean	Standard Deviation	t-stat	p-value	Decision
Physical and Emotional Factor	Honor Graduate	1.94	0.53	-2.18	0.04	Reject Ho
	Not an Honor Graduate	2.21	0.54			
Assessment Factor	Honor Graduate	2.39	0.50	-2.37	0.02	Reject Ho
	Not an Honor Graduate	2.67	0.55			
Social Factor	Honor Graduate	2.06	0.76	-1.96	0.06	Accept Ho

International Journal of Arts, Sciences and Education
Volume 3 Issue | June 2022
ISSN: 2799 - 1091
Page No. 10-21

Not an Honor Graduate	2.40	0.61

*Significant at $\alpha = 0.05$

Table 10 shows the difference in the level of mathematics anxiety of students when grouped according to ethnicity. The study revealed that there is significant difference in mathematics anxiety of the respondents when grouped according to ethnicity along physical and emotional factor. However, the study also revealed that there is no significant difference in the mathematics anxiety among respondents when grouped according to ethnicity along assessment and social factors. Results of the f- test along physical and emotional factors yielded a computed f-value of 2.77 with an associated probability of 0.33 which is lower than the level of significance set at 0.05, thus the null hypothesis is rejected. But along assessment factor and social factor the computed t-values are 2.13 and 0.90 with an associated probabilities of 0.08 and 0.07 which are greater than the level of significance set at 0.05, thus the null hypotheses are rejected.

Table 10: Comparison on the level of Mathematics anxiety of the respondents when grouped according to ethnicity.

	Ethnicity									
Factors	Ilocano		Ybanag		Tagalog		Itawes		Others	
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
Physical and Emotional Factors	2.06	0.50	2.68	0.15	1.94	0.45	2.26	0.59	2.05	0.55
Assessment Factors	2.54	0.54	2.50	0.41	2.29	0.51	2.76	0.55	2.73	0.56
Social Factors	2.20	0.57	2.83	0.37	2.34	0.82	2.47	0.71	2.28	0.71

Factor	F-computed	p-value	Decision
Physical and Emotional Factors	2.77	0.03	Reject Ho
Assessment Factor	2.13	0.08	Accept Ho
Social Factor	0.90	0.47	Accept Ho

*Significant at $\alpha = 0.05$

Summary of Findings

ISSN: 2799 - 1091
Page No. 10-21

The study designed to determine the level of Mathematics anxiety of Bachelor of Elementary Education Freshmen Students. Specifically, it sought after to determine the level of Mathematics Anxiety along the physical and emotional factor, assessment factor, and social factor. The difference in the level of mathematics anxiety of the respondents along the three factors when grouped according to their profile was also determined.

There were 107 Bachelor of Elementary Education freshmen students' respondents. The study made use of descriptive correlational design with a questionnaire as the major instrument in gathering the needed data. The questionnaire was adopted in the online Mathematics Anxiety Survey created by Kevin Robert. The data were tallied, analyzed and interpreted with the use of Slovin's formula, percentage and mean. T- Test and ANOVA were used to test the difference between the Level of Mathematic Anxiety of the respondents when grouped according to their profile.

The study came out with the following significant findings:

Majority of the respondents are female 16-17 years old, public high school graduates, not honor graduates and Ilocano.

The respondents are slightly anxious along the physical and emotional factor, social factor and assessment factor.

On the test of difference when grouped according to sex, there is significant difference along the physical and emotional factor while along assessment and social factor there is no significant difference. However when the respondents were grouped according to age and school graduated from, there is no significant difference along the three factors. There is significant difference along physical and emotional factor and assessment factor and there is no significant difference along social factor when the respondents are grouped according to their academic performance in high school. As regards to ethnicity, there is significant difference on the level of Mathematics anxiety along physical and emotional factor but there is no significant difference along assessment factor and social factor.

Conclusion

Based on the foregoing findings, the following conclusions were drawn:

Most of the respondents are female 16-17 years old, public high school graduates, not honor graduates and Ilocano.

There is no significant difference on the level of Mathematics Anxiety of the respondents along the three factors when grouped according to age and school graduated from. But when sex, academic performance and ethnicity are concerned, females are more anxious than that of males, non-academic performer respondents are more anxious than academic performer respondents and Ybanag has the highest Mathematics Anxiety among them.

The level of Mathematics Anxiety of freshmen students is slightly anxious.

Recommendation

Based on the above conclusion, the following recommendation are surfaced:

1. Teachers should improve their teaching techniques in such way that they could encourage active learning in Mathematics for the non-academic performer students. Teachers must place less emphasis on correct answers and computational speed but rather give emphasis on the process on how such answers such acquired. Teachers

ISSN: 2799 - 1091
Page No. 10-21

must use variety of assessment. And lastly, teachers must relate the topics in Mathematics to real life situation so that student can see importance of Mathematics in their life.

2. Parents should support and encourage their children to love and learn Mathematics. They should not express negative attitudes about Mathematics, rather they need to demonstrate positive uses of Mathematics in real life and they also need to monitor their children's Mathematics progress.
3. Schools administrators should help the teacher's in maintaining the positive view of the students in Mathematics subjects. They should provide instructional materials that the teachers can used in encouraging active learning in Mathematics teaching training to improve pedagogies of the teacher's.
4. Curriculum writers should improve the Mathematics courses in such way that it could lessen the Mathematics anxiety of the students.
5. Future researchers should conduct study to determine other factor of Mathematics anxiety.

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ISSN: 2799 - 1091
Page No. 10-21