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THE CORRELATION BETWEEN ACHIEVEMENT AND ATTITUDE OF FRESHMEN CRIMINOLOGY STUDENTS TOWARDS COLLEGE ALGEBRA WITH PLANE TRIGONOMETRY

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Abstract: *The study attempted to ascertain the correlation between achievement and attitude of the first year criminology students towards college algebra with plane trigonometry. The researcher made used of the descriptive correlational method of research. The questionnaire and the semi-final grades were the primary tools in obtaining the information and data. This was adopted from Dr. Milagros Ibe of UP-Diliman, Quezon City. The statistical tools that were used in the study were the mathematical attitude score, the item mean, the t-test, the Pearson Product Moment Correlation(r) and the t for r. There were 251 freshmen criminology students involved in the study. The level of performance in Math 123 was mainly fair due to the fact that mathematics is not the concentration of their course. On the attitude towards their subject, findings revealed that the respondents have generally had a positive attitude towards mathematics. The two groups, the male and female criminology students has a mean difference of 2.39, but when the score were subjected to t-test, it was found out that a significant difference does not exist between the attitude of the female and male respondents towards their subject at 0.05 level of significance. In ascertain if there is a correlation between the achievement and attitude of the respondents towards their subject Math 123, the study revealed and indicates a strong significant relationship between achievement and attitude.*

Key Words: *Math 123, Achievement, Mathematical Attitude, Semi-final grades, Attitude Scale and Correlation*

INTRODUCTION

Education is faced with challenges and demands affected by the changing needs and attitude of society and the learner.

Mathematics is one field in education that is face with challenges and demands. Math educators face the challenge of being able to gather essential information's about their

students so that anytime they can determine whether or not each student is progressing according to expectations. Their chief interest lies on the mathematical proficiency of their students. These teachers are happy if their students understand and love mathematics, and their feeling of fulfilment is great if their teaching is assimilate, understood well and contributes to the improvement of mathematics in the community in particular and in the country in general.

In the aspect for quest of quality education nationwide, our government particularly math educators cannot afford to just seat back and stay complacent to these needs and demands of time and society. They should explore other various techniques and strategies in the teaching of all subjects particularly mathematics that would ensure better results for all learners not just for males, or females but for both.

The Third International Mathematics and Sciences Study (TIMSS) revealed that many countries in the whole world, experience the same clamour on the difficulty in the world of mathematics. The study revealed that many countries fall on the list of the top performing countries in which the Philippines is not included. Only few countries excelled in the field of mathematics, Sciences and Technology. It was found out that there was a difference in average performance between the top performing and the bottom performing countries, (Beaton, 1996).

In the study conducted by Cristantiello included a section on attitude towards mathematics. His findings revealed that in the Physical Science group with one year of calculus, there was a significant correlation between the grades in mathematics and the attitude towards the subject. This finding however, was no true for the Business group college although they had one year of business mathematics, neither was it true for the Social Science group which had one year of General Mathematics. He also found no significant difference between the attitudes of the low, median and highly ability groups. In this regards, however, it is conceded that favourable classrooms attitude of the students promote learning and fosters the kind of climate which stimulates better achievement.

Mathematics educators have to be keenly aware of their sublime, sensitive and special role in quenching the student's thirst for math sharpness to enable them to surmount completely every predicament that come their way.

This view is affirmed by Husen (1967) who said "In general education program, mathematics is recognized as an instrument and basic tool to deal with the qualitative and quantitative aspect of environment, making it basically useful in the study of other sciences".

In relation to this Pythagoras, A Greek philosopher and mathematician, was not exaggerating when he claimed that mathematics is the basis of all sciences. The Chemist, Physicist and the astronomer, the Engineers, Doctors and other fields of specialization could not get along without mathematics because it is encountered everyday in our daily undertaking. The banker, insurance man, the accountant, the skilled workers must know certain branches and concepts of math such us linear programming, the graphs, theory, statistics, geometry, etc. Since mathematics is the queen of science, it is therefore a one proficiency which is a pre requisite to mastering scientific and technological pursuit. Therefore, mathematics contributes directly or indirectly to most phase of modern civilization because it is necessary for development.

In the Philippine schools, most students share a common slogan when it comes to mathematics. They share a common idea, attitude and experience regarding the subject that mathematics is difficult and boring, that mathematics is only for male but not for female as stated by Purdy (1976). As the students try to advance towards the horizon of mathematics endeavours, they have experiences sweating alms, dry mouth, clichéd fist, cooled sweat and make them feel as though they are lost in the jungle of numbers and cannot find their way out. Usually mathematics subjects scare most students particularly in college. Their dislike of this subject is one of the reasons why students fail and are frustrated. As a result, they develop a negative feeling and attitude toward the subject. They outrageously hate the subject and the worse is, the teacher.

Observation and survey conducted by many researchers show a common findings that students reveal little love for enrolling in regular math classes like commerce, engineering, and Bachelor of Science in mathematics. It is for this reason why the researcher have chosen the College of Criminology students enrolled in College Algebra with Plane trigonometry as the subject of the study to further verify such observations.

Motivated by a strong desire to ensure better results along her field of specialization, the researcher decided to conduct a study on the correlation between achievement and

attitude of freshmen criminology students towards the subject in order to identify and pinpoint probable causes of unfavourable attitudes towards mathematics and determine the difficulties and problems her students would encounter at Cagayan Colleges Tuguegarao. If result reveals that there is a positive correlation between achievement and attitude of students towards mathematics, the researcher will all the more be convinced that there is really a felt need to remedy this existing problem. Hence, instructional materials, methods and techniques or strategies will be tried out as a step towards the solution of the weakness of her math class.

SIGNIFICANCE OF THE STUDY

This study is of importance to the following sectors:

1. Students. The study will serve as an evaluation of their academic achievement and attitude towards mathematics. Hopefully, efforts will be exerted in studying math which will later on be cherished to areas that need improvement, strengthening and enhancing both achievement and attitude.
2. Teachers. Results of this study can provide mathematics teachers with a definite data on achievement level of students in mathematics for purpose of remedial instructions and making intelligent efforts to adapt instructions to the specific need, the ability and the rate of growth of individual learners and insights into the preparation of course syllabi.
3. School Administrators. Results of this study can provide school administrators with some information of the mathematical achievement of freshmen criminology students for purposes of grouping or classifying them into homogeneous sections, guidelines for developing, improving and enriching their math program and guidelines for academic guidance and follow- programs.
4. Future Researchers. The study will provide them basis to conduct further research or similar studies.
5. Researcher. Result of this study will provide her with a definite data of math achievement level of students and knowledge on the attitude of students displayed in their math classes for purposes of making a wise and concerted efforts to adapt adequate techniques and motivation for the students to love math. She will also be guided on the kind of atmosphere correlated with real life situations which would

enliven boredom, make mathematics interesting, enjoyable and encourage them to value the culture of excellence in the field of mathematics.

STATEMENT OF THE PROBLEM

The study attempted to ascertain "The Correlation Between Achievement and Attitude of the First year Criminology Students Towards College Algebra with Plane trigonometry."

Specifically, the following problems were undertaken.

1. What is the mean achievement of the freshmen criminology students in College algebra with Plane Trigonometry?
2. What is the attitude of the freshmen criminology students towards the study of College Algebra with Plane Trigonometry?
3. Is there a significant difference in the attitude of the freshmen criminology students towards college algebra with Plane Trigonometry when grouped according to sex?
4. Is there a correlation between the achievement and attitude of the freshmen criminology students towards College Algebra with Plane trigonometry?

HYPOTHESIS

This study was guided by the following hypotheses that:

1. There is no significant difference in the attitude of the freshmen criminology male and female students towards the study of College algebra with Plane trigonometry.
2. There is no significant correlation between achievement and attitude of freshmen criminology students towards College Algebra with Plane Trigonometry.

CONCEPTUAL FRAMEWORK

An important educational goal is a positive attitude towards mathematics. The favourability of attitude in mathematics was considered in the study of Reyes, (1984) which emphasizes on goal setting which is also found to be significant in every endeavour as this is the deviation of the activity. Mathematics achievement depends upon the students' goal towards the subject. It is therefore imperative that the youth today should be guided and trained towards the maximum development of their potentials and capabilities in mathematics. Mathematics can be a subject everyone can love when one is taught to understand every detail of it.

In educating and training every individual teacher plays a vital role. A role that is concerned with the kind of experience the students have, as thinking-feeling doing process, in order to

grow up as useful and responsible members of the society. According to Kelly, the efficiency with which learning takes places is influenced by many factors and conditions. The extent to which students excel or perform poorly in the academic is a function or interplay of factors in knowledge and skills, of habits and attitudes and of values and ideas.

Witting generalized that intelligent students attain higher achievement. In many cases, students always achieve according to their capabilities. Likewise, under achievement may also b due to emotional problems of various kinds and to subtle influences of classmates, home and the other factors like attitude towards something. Similarly there are students who are consistent under achievers. Indeed, a great amount of time and energy is expended to make achievement possible.

In the afore-mentioned conceptual accounts on two variables exhibit potential relationship between achievement and attitude may exhibit a positive favourable attitude maximizes a great possibility to achieve higher. As stated earlier, attitude is an influential factor to one's achievement. It is in this ground that a paradigm is presented to explain the relationship of attitude and achievement of the respondents.

RESEARCH PARADIGM

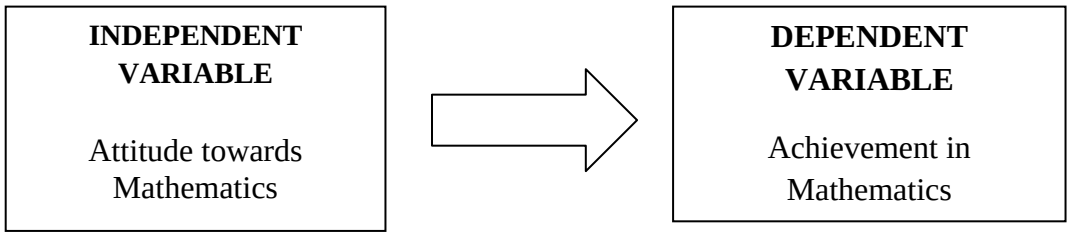

Figure 1. The Research Paradigm on which the study was anchored

The independent variable in the paradigm shows attitude towards mathematics. The independent variable is the presumed cause of the dependent variable which is shown by achievement in mathematics. As stated earlier, positive attitude towards mathematics spells our higher academic achievement in the subject. The dependent variable which is achievement in mathematics is the focus of the investigation which is influence by the independent variable shown by the attitude in mathematics. Achievement in mathematics therefore is dependent upon ones attitude in mathematics.

METHODS

Research Design

The researcher used the descriptive-correlational method.

Data Gathering Tool

The researcher made used of the mathematical Attitude Scale Inventory and the respondents Cumulative grades for Semi-finals to gather pertinent data for study.

1. The Attitude Scale. The construction and validation of the mathematical attitude scale inventory was adopted from the research tool done by Dr. Milagros Ibe of the University of the Philippines, Diliman Quezon City. The inventory is composed of 30 items for which 16 are positive and 14 are negative. The respondents have chosen how truly the statement applied to them. It utilized the following codes, 1-not all true to me, 2-slightly true to me, 3- neutral, 4-generally true to me, and 5- very true to me. The formula used to determine the MAS is the sum of the scores in positive items minus the sum of the scores in the negative items plus 84.
2. The Achievement Grade. The cumulative semi-final grades of the students enrolled in Math 123 were used as the respondents' academic achievement. A cumulative grading system of Cagayan Colleges Tuguegarao was used in grading the performance of the respondents.

Respondents of the Study

The population that was involved in this study was composed of 30 percent that were drawn from 976 freshmen criminology students enrolled in College Algebra with Plane trigonometry at Cagayan Colleges Tuguegarao. The subjects were selected through random sampling procedure. The respondents consisted of 251 males and 42 females taken from 21 sections making a total of 293 respondents.

Statistical Analysis

The following statistical tools were used in analysing and interpreting the data.

1. The mean. This was used to determine the average achievement of the respondents in mathematics and the attitude of male and females towards mathematics.
2. t-test. This was employed to determine the significant difference in the attitude of male and female students towards math.
3. The Pearson Product Moment Correlation (r). This was employed to determine the correlation between the achievement of the students in math and their attitude towards the subject.

4. The t for r. This was employed to determine the significant correlation between achievement in math and attitude towards the subject.

RESULTS AND DISCUSSION

1. Profile of the Respondents

Table 1. Frequency and Percentage Distribution of Respondents According to Sex

Sex	Frequency	Percentage
Male	251	86
Female	42	14
Total	293	100

Table 1 presents the frequency and percentage distribution of the respondents according to sex. As gleaned on the table, it can be seen that the respondents are male dominated. Specifically, 251 or 86 percent of the total respondents are male and 42 or 14 percent are female. Once again, the data imply that the college of criminology are dominated by males due to the nature of job opportunities associated to the course which mostly require males.

Table 2. Mean Achievement of the Respondents in College Algebra with Plane Trigonometry.

Grade Range	Interpretation	Frequency	Percentage
94-100	Outstanding	2	0.68
88-93	Very Satisfactory	21	7.17
82-87	Satisfactory	88	30.03
76-81	Fair	160	54.61
70-75	Poor	22	07.51
Total		293	100

Mean Achievement = 80.83

Table 2 presents the level of performance of the students which was determined by means of their semi-final grades in College Algebra with Plane Trigonometry. Out of the 293 respondents, 2 or 0.68 percent have outstanding performance in their math class. Twenty-one or 7.17 percent performed very satisfactorily; 88 or 30.03 percent has satisfactory performance. Majority or 160 or 54.61 percent have fair achievement and 22 or 7.51 percent have poorly performed. The level of performance of the respondents obtained is 80.83 which indicate that the students' mathematics achievement was mainly fair. This means that the students have merely learn 50 to 60 percent of what they are supposed to learn in College algebra with Plane trigonometry.

The students have fairly achieved in mathematics, due to the fact that mathematics is not the focus of their course, hence the students did not try their best. In an interview conducted with the respondents, they revealed that they did not enrol in engineering or in any math related course due to their limited interest in Mathematics. Although their performance was only rated fair, it is worthy to note that none of them obtained a failing grade.

Table 3. Over-all mean Attitude of Freshmen Criminology Students Towards College Algebra with Plane Trigonometry

Items	Item mean	Interpretation
I am interested to acquire further knowledge in math	4.13	Generally true to me
I consider mathematics my most difficult subject	4.12	Generally true to me
I enjoy going beyond the assigned work more than us expected of me.	3.87	Generally true to me
Mathematics gives me much satisfaction.	3.82	Generally true to me
I find mathematics useful for problems of everyday life.	3.82	Generally true to me
I think I have more chances of becoming successful if I am good in mathematics.	3.78	Generally true to me
In mathematics I am not satisfied with just passing grade, I want something really high.	3.75	Generally true to me
My favourite subject is math.	3.71	Generally true to me
I think my mind works well when doing with math problem.	3.69	Generally true to me
When working with math problem I find that my thinking and reasoning are sharpened.	3.67	Generally true to me
Of all my teachers, it is my math teacher that I like the least.	3.55	Generally true to me
If I had my way out, I would avoid taking math subjects.	3.55	Generally true to me
I am unable to think clearly when working with math.	3.47	Generally true to me
Math is a subject which I have always enjoyed studying.	3.46	Generally true to me
Math problems often scare me.	3.45	Generally true to me
I would willingly exchange my mathematics subject for an easier subject in school.	3.43	Generally true to me
My parents love mathematics.	3.43	Generally true to me
In school I thoroughly enjoy my mathematics class.	3.42	Generally true to me
Mathematics makes me more inquisitive abut things that are not clear to me.	3.41	Generally true to me
Mathematics makes me feel as though I am lost in a jungle of numbers and cannot find my way out.	3.35	Neutral
I feel happier in my math class than in any other classes.	3.31	Neutral
I easily give up when I cannot solve mathematics	3.25	Neutral

problem.		
I always need someone to help me with mathematics because it confuses me.	3.26	Neutral
I feel uncomfortable with numbers and symbols.	3.22	Neutral
The people I enjoy going with are those who are good in math.	3.15	Neutral
I would be happy if math were to be taken out of the curriculum.	3.13	Neutral
I feel I have a good if I have a strong foundation in Math	3.10	Neutral
I am too nervous to think of my mathematics class.	2.94	Neutral
My poorest mark is math.	2.88	Neutral
I think I will stand a better chance to succeed in my course if it does not require mathematics.	2.84	Neutral
Over-all weighted mean	3.46	Generally true to me

Table 3 presents the over-all attitude of the freshmen criminology students towards the study of their math subject.

The over-all weighted mean of the respondents' attitude towards mathematics is 3.46 which fall on generally true to me. This implies that the students have a positive attitude towards the subject. It is inspiring to note that majority of the students regardless of sex perceived mathematics positively. Hence, the more favourable the attitude of students towards math 123, the higher his or her level of performance in the subject.

Table 3a. The Mean Attitude of the Male Respondents in College Algebra with Plane Trigonometry

Items	Item mean	Interpretation
I am interested to acquire further knowledge in math	4.12	Generally true to me
I consider mathematics my most difficult subject	3.86	Generally true to me
I enjoy going beyond the assigned work more than us expected of me.	3.77	Generally true to me
Mathematics gives me much satisfaction.	3.75	Generally true to me
I find mathematics useful for problems of everyday life.	3.74	Generally true to me
I think I have more chances of becoming successful if I am good in mathematics.	3.71	Generally true to me
In mathematics I am not satisfied with just passing grade, I want something really high.	3.71	Generally true to me
My favourite subject is math.	3.66	Generally true to me
I think my mind works well when doing with math problem.	3.61	Generally true to me

When working with math problem I find that my thinking and reasoning are sharpened.	3.55	Generally true to me
Of all my teachers, it is my math teacher that I like the least.	3.54	Generally true to me
If I had my way out, I would avoid taking math subjects.	3.54	Generally true to me
I am unable to think clearly when working with math.	3.48	Generally true to me
Math is a subject which I have always enjoyed studying.	3.47	Generally true to me
Math problems often scare me.	3.45	Generally true to me
I would willingly exchange my mathematics subject for an easier subject in school.	3.45	Generally true to me
My parents love mathematics.	3.45	Generally true to me
In school I thoroughly enjoy my mathematics class.	3.40	Generally true to me
Mathematics makes me more inquisitive abut things that are not clear to me.	3.37	Neutral
Mathematics makes me feel as though I am lost in a jungle of numbers and cannot find my way out.	3.36	Neutral
I feel happier in my math class than in any other classes.	3.34	Neutral
I easily give up when I cannot solve mathematics problem.	3.30	Neutral
I always need someone to help me with mathematics because it confuses me.	3.22	Neutral
I feel uncomfortable with numbers and symbols.	3.18	Neutral
The people I enjoy going with are those who are good in math.	3.17	Neutral
I would be happy if math were to be taken out of the curriculum.	3.15	Neutral
I feel I have a good if I have a strong foundation in Math	2.94	Neutral
I am too nervous to think of my mathematics class.	2.91	Neutral
My poorest mark is math.	2.82	Neutral
I think I will stand a better chance to succeed in my course if it does not require mathematics.	2.48	Slightly true to me
Weighted mean	3.42	Generally true to me

Table 3a presents the distribution of the attitude of the male respondents in Math 123. It also shows the weighted mean.

The item on “I am interested to acquire further knowledge in mathematics” got the highest mean which is 4.12 or generally true to me. This implies that although the respondents only achieved fairly in mathematics, the male respondents revealed that their desire to acquire

more knowledge in mathematics, However, their limited capacity in math, sometimes hinder them to attain this desire.

The lowest mean of 2.48 or slightly true to me is "I think I will understand a better chance to succeed in my course, if it does not require mathematics". This implies that the respondents could have also enrolled in Engineering or Mathematics related course, if only they had the capacity to understand mathematics better.

The weighted mean is 3.42 or generally true to me. This means that the male group perceived mathematics positively, as revealed by their mean achievement of 80.83. The students' being able to pass the semi-final grading period is a manifestation of positive attitude towards the subject.

Findings of past studies negates the common belief that the male students have more positive attitude than females in her study in the College of Criminology

Table 3b. The Mean Attitude of Freshmen Criminology Female Students Towards College Algebra with Plane Trigonometry

Items	Item mean	Interpretation
I am interested to acquire further knowledge in math	4.29	Very true to me
I consider mathematics my most difficult subject	4.24	Very true to me
I enjoy going beyond the assigned work more than us expected of me.	4.12	Generally true to me
Mathematics gives me much satisfaction.	4.14	Generally true to me
I find mathematics useful for problems of everyday life.	4.02	Generally true to me
I think I have more chances of becoming successful if I am good in mathematics.	4.00	Generally true to me
In mathematics I am not satisfied with just passing grade, I want something really high.	3.93	Generally true to me
My favourite subject is math.	3.88	Generally true to me
I think my mind works well when doing with math problem.	3.85	Generally true to me
When working with math problem I find that my thinking and reasoning are sharpened.	3.83	Generally true to me
Of all my teachers, it is my math teacher that I like the least.	3.79	Generally true to me
If I had my way out, I would avoid taking math subjects.	3.74	Generally true to me
I am unable to think clearly when working with math.	3.62	Generally true to me
Math is a subject which I have always enjoyed studying.	3.52	Generally true to me
Math problems often scare me.	3.60	Neutral
I would willingly exchange my mathematics subject for an easier subject in school.	3.50	Generally true to me

My parents love mathematics.	3.36	Neutral
In school I thoroughly enjoy my mathematics class.	3.36	Neutral
Mathematics makes me more inquisitive about things that are not clear to me.	3.38	Neutral
Mathematics makes me feel as though I am lost in a jungle of numbers and cannot find my way out.	3.26	Neutral
I feel happier in my math class than in any other class.	3.00	Neutral
I easily give up when I cannot solve mathematics problem.	3.24	Neutral
I always need someone to help me with mathematics because it confuses me.	3.19	Neutral
I feel uncomfortable with numbers and symbols.	3.19	Neutral
The people I enjoy going with are those who are good in math.	3.12	Neutral
I would be happy if math were to be taken out of the curriculum.	3.02	Neutral
I feel I have a good if I have a strong foundation in Math	2.76	Neutral
I am too nervous to think of my mathematics class.	2.74	Neutral
My poorest mark is math.	2.60	Neutral
I think I will stand a better chance to succeed in my course if it does not require mathematics.	2.38	Sometimes true to me
Over-all weighted mean	3.50	Generally true to me

Table 3b shows that attitude of the freshmen criminology male students towards the study of their mathematics subject.

The highest with an item mean of 4.29 or very true to me is “my favourite subject is mathematics”. This implies that although the students did not excel in mathematics they still affirmed their love for mathematics in spite of their limited capacity. Since mathematics is an everyday endeavour, since they make us of it in their daily life, they have developed love for it. Their love for mathematics was contributory to their achievement in the subject.

The lowest with an item mean of 2.38or slightly true to me is “I will be happy if mathematics were to be taken out of the curriculum”. This means that although the respondents expressed liking and satisfaction for mathematics, they also revealed that they are equally happy if mathematics were to be taken out of the curriculum. They revealed that since mathematics is a part of the criminology curriculum, they have no choice but fall in love with it or else they will fail. In short, the students were forced to study and like mathematics because it is a part of the curriculum.

Table 4. Difference in the Attitude of the males and females towards College Algebra with Plane Trigonometry

Group	Mean	Standard Deviation	Difference	t-ratio
Male	98.82	13.45	2.39	1.05
Female	101.21	14.34		

df= 291 LS= 0.05 t_t= 1.645 Decision: Accept Ho

Table 4 shows the difference in the attitude of the male and female students towards college algebra with plane trigonometry. The obtained mean attitude score of male group was 98.82 with a standard deviation of 13.45 while the female group scored an average mean attitude of 101.21 with a standard deviation of 14.34. The two groups have a mean difference of 2.39.

When scores were subjected to statistical treatment, the t-test was used to determine if there exists a significant difference between the two groups. The computed t-ratio is 1.05 which is lower than the tabular value of 1.645 at 5 percent level of significance. This implies that a significant difference does not exist between the attitude of the male and female students towards math 123.

Therefore, the hypothesis which was stated earlier is accepted. Hence, there is no significant difference between the attitude of male and female respondents in mathematics. The data further implies that sex in anyway does not affect one's mathematical attitude.

Table 5a. The Correlation Between Achievement and Attitude of the Male respondents towards College Algebra with Plane Trigonometry

Variables	Coefficient Correlation (r)	Critical Ratio (t)	Level of Significance
Achievement Attitude	-0.26	Accepted Value 1.64 Computed Value 4.82	0.05

Table 5a presents the relationship between the achievement and the attitude of the male respondents towards college algebra with plane trigonometry. The coefficient correlation was obtained by correlating the students' attitude scores with their individual semi-final grades in Math 123. The computed value of -0.26 was subjected to t-test to determine if there exist a significant correlation between the obtained t-value which was -4.82. The absolute t-value was found greater than the critical value of 1.64 which shows that the

correlation is significant of 5 percent level. Thus, the hypothesis is rejected and the alternative hypothesis is accepted. This indicates that there is a strong significant correlation between the achievement in Math 123 and their attitude towards the subject. The information gathered derived from the foregoing table implies that the students who exhibit favourable positive attitude towards math has a better achievement than those with negative attitude. Therefore, attitude affects ones achievement or performance. The better or positive attitude a person has the better or higher is his or her performance.

Table 5b. The Correlation Between Achievement and Attitude of the Female Respondents towards College Algebra with Plane Trigonometry

Variables	Coefficient Correlation (r)	Critical Ratio (t)	Level of Significance
Achievement Attitude	-0.82	Accepted Value 1.645 Computed Value 9.06	0.05

Table 5b presents the relationship between the achievement and the attitude of the female respondents towards Math 123.

The coefficient correlation (r) obtained -0.82 which was subjected to t-test to determine if there exists a significant correlation between the obtained t-value which was -9.06. The absolute t-value was found greater than the critical value of 1.645 which shows that the correlation is significant at 5 percent level. Thus, the hypothesis is rejected and the alternative hypothesis is accepted. This indicates that there is a strong significant correlation between the achievements in Math 123 and their attitude towards the subject. The data gathered implies that the students who exhibit favourable positive attitude towards math has better achievement than those with negative attitude. Therefore, attitude affects ones' achievement or performance.

CONCLUSION

Based on the findings of the study, the following conclusions were formulated.

- The level of achievement of students in their subjects indicates the amount of learning taken place within a given period.
- Sex does not affect one's achievement or performance. Therefore the more favourable the attitude of the students in mathematics the better or higher is the level of performance or achievement in the subject.

- The College of Criminology is dominated by males.

RECOMMENDATIONS

In the light of the foregoing findings and conclusions, the following recommendations are made:

1. Findings of this study should be disseminated to math teachers topropose of making an intelligent efforts to adapt instructions suited to the specific need, ability of the students. Teachers should encourage students to love the subject in order to excel in the world of mathematics. This would likewise serve as a benchmark for them to give proper motivation which would enliven boredom and eradicate the idea that mathematics is boring and difficult.
2. Since the focus of this study confined to the College of Criminology on the first year level, a similar study should be conducted in all the colleges of Cagayan Colleges Tuguegarao so that future findings can shed light on the conclusions drawn from this study.
3. Mathematics subjects should be scheduled during last period and first period in the afternoon to minimize boredom.
4. Mathematics teachers should be competent, energetic, alive and enthusiastic to motivate students to love mathematics.
5. Students should be encourage to excel in Mathematics, eventhough its not the focus of their course because mathematics is very indispensable in all walks of life.

REFERENCES

1. Beaton, Albert,et.al. Mathematics Achievement in the Middle School year JEAS Third International Mathematics and Science Study. Junior Study Center, USA, (1996)
2. Husen, Jorsten, International Study of Achievement in Mathematics (NY: Worlay and Sons, 1967)
3. Purdy, Bridget Colean, "Attitudes Towards the Enjoyment and the value of math to Sex Roles Attitude at the Sixth and Eleventh Grade Level" (Unpublished Dissertation Abstract, V27, No. 3 Sept. 1976)
4. Reyes, L.H. " Affective Variables and Mathematics" The Elementary School Journal, (1984).
5. Witting, et.al. Introduction to Psychology (Mc Graw Hill Book Co. 1984).