Department of Education
Region VI – Western Visayas
Schools Division of Iloilo City
ILOILO CITY NATIONAL HIGH SCHOOL
M.H. Del Pilar St., Molo, Iloilo City

ANXIETY LEVELS AND ACADEMIC PERFORMANCE AMONG STEM STUDENTS AT ILOILO CITY NATIONAL HIGH SCHOOL

A Research Study
Presented to the Faculty of the
Senior High School Department
Iloilo City National High School

In Partial Fulfillment of the
Requirements of Research Report
(Quantitative Research)

by:

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May 2024

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APPROVAL SHEET

A Research Proposal as Partial Fulfillment

of the requirement for

Senior High School

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ABSTRACT

This study investigated the anxiety levels and academic performance of STEM students at Iloilo City National High School for the school year 2023-2024. Using a correlational design, 67 randomly selected STEM students were assessed using the State-Trait Anxiety Inventory (STAI) for anxiety levels and their grade point averages (GPA) for academic performance.

Results indicated that both male and female students, as well as all STEM sections, experienced severe levels of anxiety. While there were no significant differences in anxiety levels by sex or section, academic performance differed significantly, with males outperforming females and significant variability across sections. The analysis found no significant correlation between anxiety levels and academic performance, suggesting that other factors such as motivation, support systems, and resilience might influence academic success.

These findings provided valuable insights for students, teachers, parents, and school administrators, emphasizing the need for targeted interventions to address severe anxiety and support academic achievement. Future research should explore additional factors affecting the relationship between anxiety and academic performance among STEM students.

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ACKNOWLEGDEMENT

In embarking on this research endeavor, we owe a debt of gratitude to numerous individuals whose unwavering support and contributions have been invaluable to the completion of this study. First and foremost, we extend our heartfelt appreciation to the respondents who willingly participated in our research, providing us with valuable insights and data essential to our investigation. Their cooperation and willingness to share their experiences are deeply appreciated and have greatly enriched the findings of our study.

We are also immensely grateful to our classmates and friends whose encouragement, feedback, and moral support have been instrumental throughout this journey. Their constructive criticisms, insightful discussions, and words of encouragement have continually inspired us to strive for excellence in our research endeavors.

To our esteemed adviser, Sir Glenn Mark D. Fallera, we extend our sincerest gratitude for his invaluable guidance, expertise, and unwavering support throughout the research process. His mentorship, encouragement, and insightful feedback have been instrumental in shaping the direction and quality of our study.

We would like to express our profound appreciation to our validators, Ma'am Astrid O. Haresco, Sir Rosen Anthony S. Marquez, and Ma'am Jennifer Ann Molina, whose expertise and meticulous review significantly enhanced the rigor and credibility of our research. Their constructive feedback, valuable suggestions, and attention to detail have been instrumental in refining our study and ensuring its validity and reliability.

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Special recognition is also extended to Sir Kritzman E. Armisa, whose exceptional dedication, expertise, and willingness to assist us in analyzing and interpreting the results of our research were invaluable. Despite not being one of our validators, his insights and contributions significantly enriched our study, and we are deeply grateful for his assistance.

Lastly, we express our heartfelt gratitude to our parents for their unwavering love, support, and encouragement throughout this research journey. Their sacrifices, guidance, and unwavering belief in our abilities have been a constant source of strength and motivation.

Above all, we offer our sincerest thanks to God for His guidance, grace, and blessings, which have sustained us and enabled us to overcome challenges and achieve success in our research endeavors. His divine providence has been the foundation of our journey, and we humbly acknowledge His unwavering presence in our lives.

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ANXIETY LEVELS AND ACADEMIC PERFORMANCE OF STEM STUDENTS FROM ILOILO CITY NATIONAL HIGH SCHOOL

CHAPTER 1

INTRODUCTION

This chapter is divided into six parts: (1) Background of the Study, (2) Conceptual Framework, (3) Statement of the Problem, (4) Definition of Terms, (5) Significance of the Study, and, (6) Scope and Delimitation of the Study.

Part One, Background of the Study, includes the potential contribution of the study, glimpse of related literature and studies, and the discussion of the identified research gap.

Part Two, Conceptual Framework, shows the relationship of the variables in the study.

Part Three, Statement of the Problem, indicates the purpose of the investigation generally and specifically use qualitative questions.

Part Four, Definition of Terms, alphabetically lists and defines the constructs and variables in study for clarity and understanding.

Part Five, Significance of the study, includes the benefits to be derived from the results of the study.

Part Six, Scope and Delimitation of the study, gives the brief and concise scope or boundaries of the study.

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Background and Theoretical Framework of the Study

Tension-inducing sensations, uneasy thoughts, and bodily changes like elevated blood pressure are all characteristics of the emotion of anxiety (American Psychological Association, 2008). Anxiety falls within the spectrum of emotional and behavioral disorders. Among students with anxiety disorders, there is a noticeable passivity in their approach to academics. This manifests as a lack of enthusiasm for learning, subpar exam performance, and struggling with assignments. The psychological symptoms of anxiety in students encompass pre-tutorial nervousness, test-induced panic, mental blankness during exams, a sense of helplessness when tackling assignments, and disinterest in challenging subjects (Vitasari et al., 2010). These conditions may also result in a phenomenon known as school avoidance or school-related anxiety wherein a student's anxiety or depression becomes so debilitating that they start avoiding school altogether. This avoidance behavior might start with skipping classes, leaving school prematurely, and ultimately, it can even lead to them dropping out of school. According to the Centre for Emotional Health at Macquarie University, 49% of adults who experienced anxiety reported leaving school prematurely, and 24% cited anxiety as the main factor behind their decision to do so (International Board of Credentialing and Continuing Education Standards, 2019).

A study entitled “Tracking stress, depression, and anxiety across the final year of secondary school: A longitudinal study,” found that mean levels of student distress significantly increased between 10 weeks prior to the major examination period and 10 days prior to the major examination period. Furthermore, they also found that in 154 Brazilian students who completed the Positive and Negative Affect Scale, the negative affect scores increased greatly over time with no significant change in positive affect scores (Wuthrich et al., n.d.).

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In another study conducted by McCurdy, et al, where investigations primarily examine anxiety within specific areas of study, such as mathematics anxiety, language-related anxiety, or test-related anxiety, research has demonstrated that anxiety can adversely affect academic performance, regardless of whether an individual has been diagnosed with Attention-deficit/hyperactivity disorder (ADHD). However, when researchers have incorporated broader measures of anxiety that are not specific to particular subjects, they have observed no discernible impact on academic achievement. For instance, Wu et al. (2012) observed that an individual's performance in mathematics was influenced by their math-related anxiety but remained unaffected by their general trait anxiety (McCurdy et al., 2022).

The present study is based on the Cognitive Appraisal Theory, which proposes that emotion is a complex phenomenon that involves the interaction of physiological, cognitive, and behavioral components. According to this theory, our emotions are determined by how we interpret and evaluate events in our lives. This theory posits that individuals' emotional and behavioral responses to stress are determined by their cognitive appraisal of the situation. In the context of academic stress, students' cognitive appraisal of their academic abilities, the difficulty of the task, and their chances of success will influence their anxiety levels and academic performance (Smith & Lazarus, 2022).

Based on this theoretical foundation, cognitive appraisal theory provides a valuable framework for understanding the relationship between academic performance and anxiety levels among STEM students at ICNHS. This study can develop more effective interventions to help students. By understanding the cognitive processes that lead to anxiety, we can manage their anxiety and improve their academic performance.

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This study is a correlational analysis and will be conducted with the help of surveys, and data analysis. The participants will be STEM (Science, Technology, Engineering, and Mathematics) students from Iloilo City National High School.

The findings of this study will provide insights into the academic performance and anxiety levels of STEM students, and will contribute to the existing literature on the topic. Furthermore, it will provide evidence-based findings on the relationship between academic performance and anxiety levels, including the impact of anxiety on grades and overall academic performance. It may also offer recommendations on how to effectively manage anxiety and minimize its negative impact on academic performance. Additionally, it may inspire further research on the topic or lead to the development of interventions that support students in managing their anxiety.

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Conceptual Framework

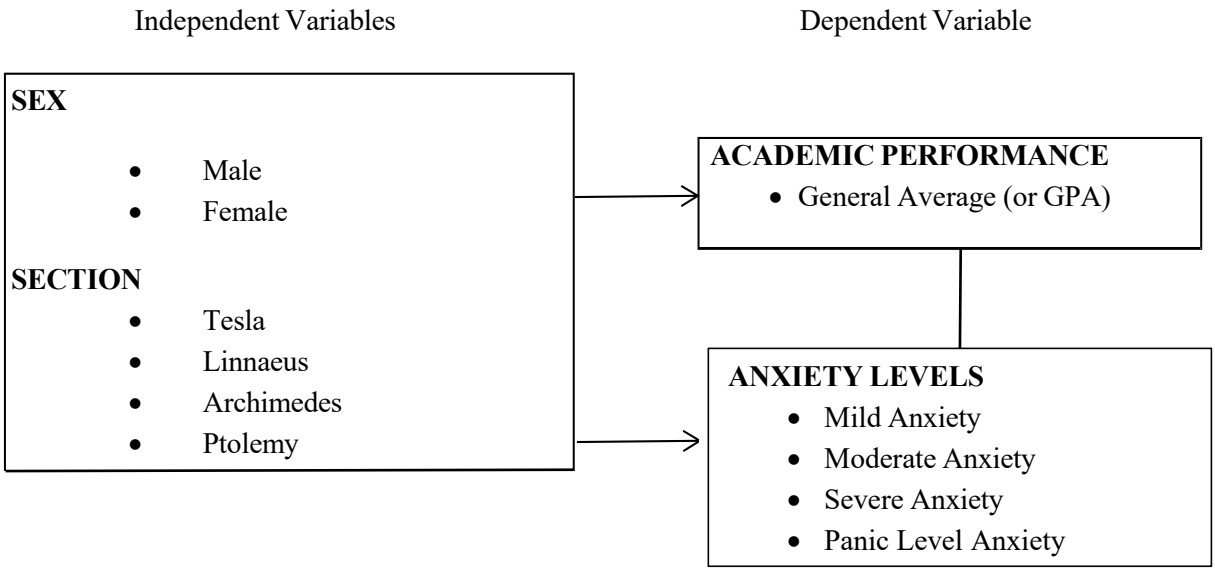

Figure 1: A conceptual framework showing the relationship of the variables of the study.

Statement of the Problem

This study aims to determine the anxiety levels and academic performance of STEM students from Iloilo City National High School for the school year 2023-2024.

Specifically, it aims to answer the following questions:

1. What is the anxiety levels of STEM students as a whole and when grouped according to sex, and section?
2. What is the mean academic performance of STEM students during first semester of school year 2023-2024 when grouped according to sex, and section?
3. Are there significant differences in the anxiety levels of STEM students when grouped according to sex, and section?

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4. Are there significant differences in the mean academic performance of STEM students during first semester of school year 2023-2024 when grouped according to sex, and section?

5. Is there a significant relationship between anxiety levels and academic performance of STEM Students?

Hypotheses

In view with the preceding problems, the following hypotheses were formulated:

1. Null Hypothesis (H_0): There are no significant differences in anxiety levels of STEM students when grouped according to sex, and section.

   Alternative Hypothesis (H_a): There is a significant differences in anxiety levels of STEM students when grouped according to sex, and section.

2. Null Hypothesis (H_0): There are no significant differences in the mean academic performance of STEM students during first semester of school year 2023-2024 when grouped according to sex, and section.

   Alternative Hypothesis (H_a): There is a significant differences in the mean academic performance of STEM students during first semester of school year 2023-2024 when grouped according to sex, and section.

3. Null Hypothesis (H_0): There is no significant relationship between anxiety levels and academic performance among STEM students.

   Alternative Hypothesis (H_a): There is a significant relationship between anxiety levels and academic performance among STEM students.

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Definition of Terms

It is essential to establish a clear understanding of key terms to ensure precise comprehension and interpretation of the study's findings. Therefore, this section provides a comprehensive overview and definition of key terms relevant to the research, laying the foundation for a thorough exploration of anxiety levels and academic performance among STEM students at Iloilo City National High School.

Academic Performance. Academic performance/achievement is the extent to which a student, teacher, or institution has attained their short or long-term educational goals and is measured either by continuous assessment or cumulative grade point average (CGPA) (Tadese et al., 2022).

In this study, academic performance will be measured using the students' cumulative grade point average (CGPA) from the first semester.

Anxiety Levels. Anxiety is an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure (American Psychological Association, 2008).

Anxiety can be categorized into four levels, namely mild anxiety, moderate anxiety, severe anxiety, and panic level anxiety, based on the degree of distress and impairment they cause. Additionally, the four components of anxiety can be affected by various factors such as an individual's personality, coping mechanisms, life experiences, and gender (Valentin, 2022).

In this study, anxiety levels will be measured through a survey questionnaire based on the Cognitive Appraisal Theory.

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STEM. STEM is a common abbreviation for four closely connected areas of study: science, technology, engineering and mathematics. The fields are often associated due to the similarities that they share both in theory and practice (Gustavsen, 2022).

In this study, STEM students will be defined as respondents of the study who are enrolled in the STEM program at Iloilo City National High School.

Section. According to the Merriam Webster Dictionary, a section is a class that is created by dividing the students who are enrolled in a particular course (Merriam-Webster Dictionary, n.d.).

In this study, it is being used as a variable to group STEM students according to their section and examine the relationship between their anxiety levels and academic performance.

Sex. The term "sex" typically pertains to the biological characteristics that distinguish males from females. It can also encompass the physiological and psychological mechanisms associated with reproduction and sexual gratification (American Psychological Association, 2022).

In this study, it is being used as a variable to group STEM students according to their sex and examine the relationship between their anxiety levels and academic performance.

Significance of the Study

This study can provide insights on how the anxiety levels and academic performance of STEM students from Iloilo City National High School are related. The study's findings will also be beneficial to all stakeholders involved in the education system. Specifically, it will aid the following:

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Students. This study empowers STEM students by providing them with insights into their own academic performance and anxiety levels. Knowledge of their strengths and areas of improvement can help students develop effective coping strategies, thereby enhancing their overall learning experience.

Teachers. Teachers and administrators can use the study's results to adapt teaching methods and support mechanisms to better address the specific needs of STEM students. Strategies to alleviate anxiety and improve academic performance can be tailored accordingly.

Parents and Guardians. The study provides valuable information for parents and guardians to understand the challenges their children may face in STEM education. This knowledge can facilitate meaningful discussions and support at home.

School Administrators. This study can provide valuable insights by studying the behaviors of STEM students. This knowledge can aid in addressing the potential negative impacts of anxiety on students' academic performance and can help identify specific areas where additional support may be needed.

Future researchers. The research findings can serve as a reference for future studies on anxiety levels and academic performance of STEM students. It can help researchers overcome any difficulties they may encounter in their future research and can be used as a baseline for comparison with future studies.

Scope and Delimitation of the Study

The study aimed to determine and analyze the correlation between the academic performance and anxiety levels of Science, Technology, Engineering, and Mathematics (STEM) students from Iloilo City National High School for the school year 2023-2024.

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The study included only students in the STEM track, and excluded students from other academic tracks. The students were chosen by the researchers through random sampling. The study focused only on the impact of the anxiety levels of a student on their academic performance and did not explore other factors that may influence academic performance.

The study gathered data through a survey questionnaire distributed to the participants via Google Forms. SPSS was utilized in the study and employed T-test, One-way Analysis of Variance (ANOVA), and Spearman's rho to analyze data from the respondents.

Supposedly, more than 67 students were to answer the survey, but due to technical issues in the Google Form, as well as difficulty in reaching them via Facebook Messenger, the study did not attain the required number of 116 respondents.

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CHAPTER 2

REVIEW OF RELATED LITERATURE AND STUDIES

In order to determine the data and information to be authentic and legitimate, the correlation of the anxiety levels and academic performance among STEM students of Iloilo City National High School SY 2023-2024 will be confirmed and validated with the following precursor studies that were conducted and gathered information from different locations both local and foreign in varying degrees of interpretation and different methods of data gathering and methodology which have a definite relation and resemblance that can aid in the development of researcher's current study.

Academic anxiety and its effects on academic performance.

In this study, the researchers aimed to investigate the extent of academic anxiety and its impact on academic performance, as well as explore the effects of social and family sources of anxiety on academic performance. The study utilized a cross-sectional design and administered a questionnaire based on pre-validated tools to assess academic anxiety and evaluate its effect on students with high and low academic performance. The sample consisted of 132 pharmacy undergraduates from stages 3 and 4 at the University of Wolverhampton.

The results showed that academic performance was significantly associated with factors such as test anxiety, academic competence, and time management skills. A considerable number of participants reported low academic performance due to the perceived course load and the amount of study material assigned for each examination. The study also found a positive relationship between social and family sources of anxiety and academic performance and stressors. Additionally, the researchers observed that demographic variables, such as a family

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history of anxiety and different stages of education, could have either a positive or negative effect on academic performance (Mirawdali et al., 2018).

Family and Academic Stress and Their Impact on Students' Depression Level and Academic Performance.

Recent research investigates how academic and familial stress impacts students' depression levels and subsequently influences their academic performance, drawing from Lazarus' cognitive appraisal theory of stress. The study employed a non-probability convenience sampling technique and utilized a modified questionnaire with a five-point Likert scale to gather data from undergraduate and postgraduate students. Structural equation modeling (SEM) was employed to analyze the relationship between stress, depression, and academic performance. The findings confirmed that both academic and family stress contribute to students experiencing depression, which in turn negatively affects their academic performance and learning outcomes. This study offers valuable insights for parents, educators, and other stakeholders concerned about students' education and performance (Deng et al., 2022).

The Impact of Anxiety and Depression on Academic Performance: A Cross-Sectional Study among Medical Students in Syria.

The National Medical Unified Examination (NMUE) is a crucial event for medical students in Syria, as it determines their selection for residency programs. Higher scores are required for competitive specialties, making NMUE preparation a potential source of anxiety and depression. This study aims to assess the impact of anxiety and depression on NMUE scores, while also exploring the influence of factors such as exercise, breakfast, sleep, and social media on anxiety and depression.

A total of 130 students participated in the study, with 83 of them being women (63.8%). The prevalence of anxiety and depression was found to be 59.2% and 58% respectively, with no significant difference between genders. Initially, anxiety and depression were found to have a negative correlation with NMUE scores. However, when considering other predictors, this relationship did not hold. Among the examined factors, only exercise was found to significantly reduce PHQ-9 scores, while none of the factors significantly reduced GAD-7 scores. The study revealed high levels of anxiety and depression among participants, which, although not causally linked, were associated with lower NMUE scores. The prevalence of mental health issues, affecting around two-thirds of the participants, poses a significant threat to student well-being and may impact the quality of care provided by future healthcare professionals (Jamil et al., 2022).

Academic Experiences as Determinants of Anxiety and Depression of Filipino College Students in Metro Manila.

There is a growing demand, both locally and internationally, to incorporate mental health into educational institutions, particularly in developing countries like the Philippines, where discrimination and limited access to mental healthcare services are prevalent. However, there is a lack of comprehensive information on mental health in these settings. This study aimed to explore the relationship and extent of adverse academic experiences, anxiety, and depression among Filipino college students.

The study utilized a randomized cross-sectional design, employing descriptive statistics and logistic regression as the analytical methods. A total of 232 adult college students participated in the study. The findings revealed that 35% of the college students were at risk for depressive disorders, while 47.2% were at risk for anxiety disorders. Experiencing difficulties in coping with studies was significantly associated with higher levels of depressive symptoms

(OR=4.824, p<.001) and anxiety problems (OR=2.148, p<.040), with an index of determination ranging from 8.5% to 18.6%.

The study discussion highlighted that the rates of depression and anxiety among college students have been increasing over the years. College students are also two to three times more likely to be at risk for depression and anxiety compared to the general population. Specifically, students facing challenges in coping with their studies have up to five times higher risk for depression and anxiety. Therefore, integrating mental health promotion programs within educational settings can potentially reduce these rates by up to 18.6%. The study emphasizes the importance of integrating mental health promotion into the educational system to enhance students' mental well-being (Alibudbud, 2021).

Analysis of Anxiety, Motivation, and Confidence of STEM Students During the COVID-19 Pandemic.

This study examined the impact of the COVID-19 pandemic on STEM students' anxiety, motivation, and confidence. Survey data from 53 calculus students over nine weeks were analyzed. Male and freshman/sophomore students reported increased anxiety, while female and freshman/sophomore students showed higher motivation. Junior/senior and male students demonstrated higher confidence. Motivation and confidence levels declined towards the end of the semester, while anxiety increased. Access to math resources, such as tutoring, decreased during the pandemic. These findings emphasize the need for ongoing support for STEM students during challenging times (Soysal et al., 2022).

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Student Anxiety and Perception of Difficulty Impact Performance and Persistence in Introductory Biology Courses.

This study examined the relationship between classroom anxiety and student performance and persistence in the major. Students in introductory biology classes self-reported their anxiety levels and perceived course difficulty. Final course grades were collected, and demographic variables were considered. The results showed that an increase in perceived course difficulty was associated with lower final course grades, particularly for female, non-Caucasian, and students with fewer AP courses. Higher general class anxiety at the beginning of the semester was linked to an intention to leave the major, especially for female students. Female students, freshmen, and those with fewer AP courses reported higher general class anxiety and perceived course difficulty. These findings highlight the importance of addressing classroom anxiety and providing support to improve student performance and persistence in the major (England et al., 2019).

The Relationship between Study Anxiety and Academic Performance among Engineering Students.

This research examined the relationship between study anxiety levels and academic performance among engineering students. A total of 205 male and female second-year students from four engineering faculties at Universiti Malaysia Pahang (UMP) participated in the study. Study anxiety levels were measured using the State Trait Anxiety Inventory (STAI), while academic performance was assessed using Grade Point Average (GPA). The results indicated a significant correlation between high levels of anxiety and low academic performance among engineering students, with a small negative correlation coefficient of r=-.264 (p=0.000). The findings highlight the importance of addressing study anxiety to improve the academic performance of engineering students, and further research with a larger sample size is

recommended to strengthen the correlation coefficient (Vitasari et al., 2010).

Summary

This study seeks to explore the correlation between anxiety levels and academic performance among STEM students at Iloilo City National High School during the academic year 2023-2024. To ensure the credibility of the study, a comprehensive review of related literature and studies has been conducted. These precursor studies, conducted both locally and internationally, utilize varied methodologies and offer valuable insights that can contribute to the current research.

Researchers have looked into how stress from school and family affects students, leading to feelings of sadness and impacting how well they do in school. Using fancy math models in some studies helped us understand more about how stress, feeling down, and school performance are connected.

In a study about medical students in Syria, they found that a big test called the NMUE can make students really worried and sad. Other things like exercise also affect how they feel. This could be a problem for the students' well-being and the care they provide in the future.

Other studies focusing on college students in Metro Manila found that more students are feeling sadder and more worried, especially when they're having a hard time with their studies. The researchers suggest that schools should have programs to help students feel better.

During the tough times of the COVID-19 pandemic, a study about STEM students found that some groups of students are feeling more worried, and they're not as excited or sure of themselves. This shows that students need more help and support during difficult times.

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In another study about students taking biology, they found that being anxious in class and thinking the course is hard can make students not do as well. So, it's important to help students feel less anxious to help them do better in their studies. Lastly, in a study about engineering students, they discovered that feeling anxious about studying is linked to not doing as well in school. So, helping students with their anxious feelings is important for them to do better in their studies.

The collective findings from these precursor studies provide a robust foundation for investigating the correlation between anxiety levels and academic performance among STEM students at Iloilo City National High School. The diverse methodologies and insights gained from these studies inform the research design and contribute to a deeper understanding of the complex relationship under investigation.

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CHAPTER 3

METHODOLOGY

This chapter consists of four parts:

Part One, Purpose of the Study, Research Design and the Variables used in the Study

Part Two, Methodology, the Respondents of the Study, the Data Gathering Instrumentation, and the Data Gathering Procedure.

Part Three, Data Analysis Procedure, and Statistical Tool employed to test the hypotheses.

Part Four, Ethical Considerations, it surmises the ethical issues concerning the parameters set in the study such as the participants and the setting of the study.

Research Design

This study aims to examine the correlation between academic performance and anxiety levels of STEM students from Iloilo City National High School. The research design for this study is a correlational design, which is a type of quantitative research that investigates the relationship between two or more variables without manipulating or controlling any of them (Bhandari, 2021).

The independent variable is anxiety level, which is measured by a standardized questionnaire, such as the State-Trait Anxiety Inventory (STAI). The dependent variable is academic performance, which is measured by the grade point average (GPA) of the students. The hypothesis is that there is a negative correlation between anxiety level and academic performance, meaning that higher anxiety levels are associated with lower academic performance.

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Respondents of the Study

To determine the minimum sample size used in the study, Slovin's Formula, as shown below, was utilized. As a result, 116 samples out of a total of 163 STEM students from Iloilo City National High School, enrolled during the academic year 2023-2024, were chosen as the respondents of the study.

Where: $n = \frac{N}{1+N(e)^2}$

n = sample size,

N = population,

e = margin of error

The 116 sample size was then divided by 4, giving us a total of 29 students per STEM section as shown in table 1.

SECTIONS	POPULATION	Sample Size
Archimedes	40	29
Ptolemy	40	29
Tesla	41	29
Linnaeus	42	29
Total:	**163**	**116**

Table 1. STEM Students Population and Sample Size in Iloilo City National High School (S.Y. 2023-2024) set at e = 0.05 margin error.

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The Random Sampling was employed in the selection of the respondents of the study. The Fishbowl technique was used wherein numbers, which corresponded to a certain student based on the adviser's list of students from each of the 4 STEM Sections of Iloilo City National High School, were written on small pieces of paper, rolled and picked randomly based on the sample size.

Data Gathering Instrument

The study utilized The Speilberger State/Trait Anxiety Inventory (STA), authored by the University of Wisconsin–Madison, which consists of 2 subscales, the State scale (SAI) and the Trait scale (TAI). Each subscale consists of 20 items and yields a total score of 40 points. There are 2 parts to this.

Part One, Personal Data Sheet. This is a brief information sheet about the participants name, sex, strand, and 1st quarter general average.

Part Two, Instrument, is composed of instructions on how to answer the questionnaire. The instrument is composed of 40 items in total. Both the SAI and TAI consists of 20 items that are rated on a 4-point Likert scale as follows: Very Much So, Moderately So, Somewhat, and Not at All.

The instrument identified four levels of Anxiety and the level of Anxiety was indicated by the score of 1, 2, 3, 4. Zero (0) was given if the participant failed to mark the checklist or given statement.

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State Anxiety Inventory (SAI)		Trait Anxiety Inventory (TAI)	
Answer	**Point**	**Answer**	**Point**
Very Much so	4	Very Much so	4
Moderately So	3	Moderately So	3
Somewhat	2	Somewhat	2
Not at all	1	Not at all	1

For computation, the responses Very Much So, Moderately So, Somewhat, and Not at All were accepted for each State-Anxiety and Trait-Anxiety question.

Level of Anxiety

Mean	Description
3.26 - 4.00	Panic-Level
2.51 - 3.25	Severe Level
1.76 - 2.50	Moderate Level
1.00 - 1.75	Mild Level

DATA GATHERING RELIABILITY TEST INSTRUMENT - to determine the reliability of the test instrument.The researcher will conduct the pilot testing to 20 STEM students who were not the respondents. The result was subjected to Cron Bach Alpha reliability test.

VALIDITY OF TEST INSTRUMENT - The researcher faced validation from the research adviser to ascertain the validity. Recommendations and remarks were integrated to enhance the questionnaire.

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Data Gathering Procedure

Permission to conduct the study was secured from the office of the Asst. Principal of the Senior High School Department of Iloilo City National High School. After the approval of the two Asst. Principals, the researchers administered the questionnaire during the first semester of the academic year 2023-2024. After the retrieval of the questionnaire, the results were treated statistically in order to generate results on the anxiety levels and academic performance of STEM students from Iloilo City National High School.

Data Analysis Procedure

The data obtained in this investigation were subjected to the following descriptive and inferential statistical analysis using the Statistical Package for Social Sciences (SPSS) software.

Statistical Tools

Mean was used to describe the Anxiety Levels and Academic Performance of STEM Students from Iloilo City National High School when classified according to sex, and strand.

Independent t-test was used to determine a significant difference in the anxiety levels and academic performances between male and female students.

One-way Analysis of Variance (ANOVA) was used to determine a significant difference in the anxiety levels and academic performances between sections.

Spearman's rho was used to assess the degree of association between the anxiety levels and academic performance of STEM Students from Iloilo City National High School.

All statistical computations were computer-processed using the Statistical Package for Social Sciences (SPSS) software set at 0.05 level of significance. The decision to reject or not

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reject the null hypothesis in this study was based on the alpha level 0.05 level of significance.

Ethical Considerations

The participants were requested to provide consent for their participation in the study. They were also asked to take part in surveys for data collection purposes. They were informed about their rights as participants and the purpose of the research. An information sheet was provided to them, containing the researchers' contact details, an overview of the research, and how the information would be utilized.

The participants were informed about the requirements for their involvement in the study. This included the estimated duration of their participation and their roles and rights, such as the ability to skip questions or withdraw without facing any penalties at any time. They were also made aware of any potential risks or benefits that might arise from participating.

Furthermore, the participants were presented with the study's findings and asked if they felt that the results accurately reflected their views based on their provided answers. They also had the opportunity to indicate if there were any results they preferred to exclude. After the survey, the participants were given the chance to review and confirm the accuracy of their responses.

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CHAPTER 4

RESULTS AND DISCUSSION

Descriptive Data Analysis

The descriptive findings characterized the Anxiety Levels and Academic Performance among STEM Students at Iloilo City National High School as a whole and when grouped according to sex and strand.

Table 2 reveals that students, as a whole, exhibit a mean anxiety score of 3.0493, indicating a classification within the Severe Level Anxiety bracket.

Table 2. *Anxiety Levels among STEM Students at Iloilo City National High School as whole.*

	N	Mean	Interpretation
AnxietyLevels	67	3.0493	Severe Level Anxiety
Valid N (listwise)	67		

Level of Anxiety

Mean	Description
3.26 - 4.00	Panic-Level
2.51 - 3.25	Severe Level
1.76 - 2.50	Moderate Level
1.00 - 1.75	Mild Level

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In Table 3, anxiety levels categorized by sex shows that both male and female students experience Severe Level Anxiety, with mean scores of 3.0028 and 3.0752, respectively. Notably, female students exhibit a slightly higher mean score compared to their male counterparts.

Table 3. *Anxiety Levels among STEM Students at Iloilo City National High School when grouped according to sex*

Sex	N	Mean	Interpretation
Male	24	3.0028	Severe Level Anxiety
Female	43	3.0752	Severe Level Anxiety
Total	67	3.0493	Severe Level Anxiety

Table 4 showcases the anxiety levels across all STEM sections, each registering within the Severe Level Anxiety range. Ptolemy boasts the highest mean score of 3.1535, closely followed by Tesla with 3.1453, Archimedes with 3.0786, and Linnaeus with 2.9017.

Table 4. *Anxiety Levels among STEM Students at Iloilo City National High School when grouped according to section*

Section	N	Mean	Interpretation
Archimedes	7	3.0786	Severe Level Anxiety
Ptolemy	15	3.1535	Severe Level Anxiety
Linnaeus	25	2.9017	Severe Level Anxiety
Tesla	20	3.1453	Severe Level Anxiety
Total	67	3.0493	Severe Level Anxiety

Table 5 displays the academic performance of STEM students as a whole with a mean score of 95.1385. The table indicates that majority of the participants are With High Honors students.

Table 5. *Academic Performance among STEM Students at Iloilo City National High School as whole.*

	N	Mean	Interpretation
AcademicPerformance	65	95.1385	With High Honors
Valid N (listwise)	65		

Table 6 illustrates the mean academic performance categorized by sex, revealing slight variation. Males achieved a mean score of 95.7391, while females attained a mean score of 94.8095, resulting in a combined mean of 95.1385.

Table 6. *Academic Performance among STEM Students at Iloilo City National High School when grouped according to sex*

Sex	N	Mean	Interpretation
Male	24	95.7391	With High Honors
Female	43	94.8095	With High Honors
Total	67	95.1385	With High Honors

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Table 7 presents the mean academic performance by section. The data reveals that the mean academic performance for the Archimedes section is 93.7143, followed closely by Ptolemy with a mean of 93.5333. Linnaeus section demonstrates a slightly higher mean of 95.7917, while the Tesla section boasts the highest mean of 96.1053. Overall, when considering all sections combined, the total mean academic performance is calculated to be 95.1385. The findings suggest that the academic performance of the respondents is relatively consistent across sections.

Table 7. *Academic Performance among STEM Students at Iloilo City National High School when grouped according to section*

Section	N	Mean	Interpretation
Archimedes	7	93.7143	With High Honors
Ptolemy	15	93.5333	With High Honors
Linnaeus	25	95.7917	With High Honors
Tesla	20	96.1053	With High Honors
Total	67	95.1385	With High Honors

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Inferential Data Analysis

This inferential finding characterized the significant difference between variables**.**

Table 8 shows that in terms of the anxiety levels, the t-test results shows that the male and female group obtained a significant value of .492 in Sig. 2-tailed. These values are greater than the level of significance of .05 with the degree of freedom 65. Therefore, the null hypothesis is accepted. There is no significant difference in Anxiety Levels of STEM Students when grouped according to sex.

Table 8. *Independent-Samples T-Test of Anxiety Levels among STEM Students at Iloilo City National High School when grouped according to sex*

	Sex	M	t-value	df	2-tailed Significant	Description
Anxiety Levels	Male	3.0028	-.692	65	.492	Not Significant
	Female	3.0752				

Table 9 reveals that in terms of anxiety levels, the ANOVA analysis shows that the results of the f test is .146 in 2-tailed significant. This value is greater than the level of significance of 0.05 with the degree of freedom 66. Therefore the null hypothesis is accepted. There is no significant difference in Anxiety Levels of STEM Students when grouped according to section.

Table 9. *One-Way ANOVA Test of Anxiety Levels among STEM Students at Iloilo City National High School when grouped according to section*

	Sum of squares	df	Mean square	F	Sig.	Description
Between Groups	.897	3	.299	1.855	.146	Not Significant
Within Groups	10.161	63	.161			
Total	11.058	66				

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According to the t-test analysis shown in Table 10, the 2-tailed significant value between male and female students towards their academic performance at Iloilo City National High School is 0.029, which is less than the set significance value of 0.05 with the degree of freedom 63. As the significant value is less than 0.05, this would indicate that there is a significant difference in the mean score between males and females in terms of their academic performance towards the school. Therefore, the alternative hypothesis is accepted. There is a significant difference in the mean academic performance of STEM students when grouped according to sex.

Table 10. *One-Way ANOVA Test of Anxiety Levels among STEM Students at Iloilo City National High School when grouped according to section*

	Sex	M	t-value	df	Sig. 2-tailed	Description
Academic Performance	Male	3.0028	2.229	63	.029	Significant
	Female	3.0752				

Table 11 presents the ANOVA results for academic performance, revealing a significant f-test result of .000 with 2-tailed significance. This value is less than the level of significance of 0.05 with the degree of freedom 64. Therefore, the alternative hypothesis is accepted. There is a significant difference in Anxiety Levels of STEM Students when grouped according to section.

Table 11. *One-Way ANOVA Test of Academic Performance among STEM Students at Iloilo City National High School when grouped according to section*

	Sum of squares	df	Mean square	F	Sig.	Description
Between Groups	80.844	3	26.948	17.320	.000	
Within Groups	94.910	61	1.556			Significant
Total	175.754	64				

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As seen on Table 12, the Spearman's rho of Correlation result indicates no strong correlation between the variables of Anxiety Level and Academic Performance among STEM Students. Thus, the decision was to accept the null hypothesis (Sig. 0.966 > 0.05).

Table 12. *Spearman's rho Correlation of Academic Performance among STEM Students at Iloilo City National High School*

Nonparametric Correlations

```
[DataSet1] C:\Users\Administrator\Desktop\Anxiety_Levels_&_Academic_Performance_among_STEM_Students_at_ICHNS.sav
```

Correlations

					AcademicPerformance	AnxietyLevels
Spearman's rho	AcademicPerformance	Correlation Coefficient			1.000	.001
		Sig. (2-tailed)			.	.996
		N			65	65
		Bootstrap[b]	Bias		.000	-.019
			Std. Error		.000	.117
			95% Confidence Interval	Lower	1.000	-.289
				Upper	1.000	.160
	AnxietyLevels	Correlation Coefficient			.001	1.000
		Sig. (2-tailed)			.996	.
		N			65	65
		Bootstrap[b]	Bias		-.019	.000
			Std. Error		.117	.000
			95% Confidence Interval	Lower	-.289	1.000
				Upper	.160	1.000

*. Correlation is significant at the 0.05 level (2-tailed).

b. Unless otherwise noted, bootstrap results are based on 67 bootstrap samples

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CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

This chapter is divided into four parts: (1) Summary, (2) Findings, (3) Conclusions, and (4) Recommendations.

Part One, Summary of Findings, collected data were grouped into meaningful information in which it will specifically answer the four specific questions.

Part Two, Conclusions, collected data were synthesized to construct a concrete conclusion that answers the four specific questions.

Part Four, Recommendations of the Study, discussed and thoroughly expounded the significance of the study based on the implications both in theory and practice.

Summary

Conducted on the second semester of school year 2023-2024, this investigation aimed to determine the Anxiety Levels and Academic Performance among STEM Students at Iloilo City National High School for the School Year 2023-2024. The respondents of the study were 67 STEM Students chosen by Random Sampling, Fishbowl Technique.

This study aimed to determine the Anxiety Levels and Academic Performance among Grade 12 Students of Iloilo City National High School as a whole and when respondents were classified according to sex and sections. The researcher’s made instrument on the Anxiety Levels and Academic Performance among Grade 12 Students of Iloilo City National High School was used to gather and obtained data used in this study.

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The mean was utilized as a descriptive statistical tool to determine Anxiety Levels and Academic Performance among Grade 12 Students of Iloilo City National High School as a whole and when classified according to sex, and section. The t-test was utilized to determine the significant difference in the anxiety levels and academic performance of the respondents when classified according to sex. One-way ANOVA was used to determine the significant difference in the anxiety levels and academic performance of STEM students when classified according to section. Statistical Package for Social Science (SPSS) Version 20 software was used in doing statistical data processing and the computations were set at 0.05 level of significance. The study reviewed literature regarding Anxiety Levels and Academic Performance among Grade 12 Students of Iloilo City National High School.

Findings

The researchers found out that:

1. STEM Students, when grouped according to sex, have “Severe Level Anxiety” on both male and female in terms of Anxiety Levels. Thus, null hypothesis is accepted. There is no significant difference in the Anxiety Levels of STEM Students when grouped according to sex.
2. When grouped according to section, the all STEM Sections - Archimedes, Ptolemy, Linnaeus, and Tesla - have “Severe Level Anxiety” in terms of Anxiety Levels. Therefore, null hypothesis is accepted. There is no significant difference in the Anxiety Levels of STEM Students when grouped according to section.

3. In terms of Academic Performance, STEM Students were shown to have attained “With High Honors” for both male and female when grouped according to sex. However, the t-test analysis shows that the 2-tailed significant value between male and female is 0.029. Thus, null hypothesis is rejected. There is a significant difference in the Academic Performance of STEM Students when grouped according to sex.
4. STEM Students, when grouped according to section, all have “With High Honors” in their Academic Performance. However, the One-Way ANOVA analysis shows that the 2-tailed significant value between the sections is 0.000. Thus, null hypothesis is rejected. There is a significant difference in the Academic Performance of STEM Students when grouped according to section.
5. The Spearman's rho of Correlation result indicates no strong correlation between the Anxiety Level and Academic Performance among STEM Students. Therefore, the decision was to accept the null hypothesis (Sig. 0.966 > 0.05). There is no significant relationship between anxiety levels and academic performance among STEM students.

Conclusion

The following conclusions are drawn from the findings of the study:

1. The overall anxiety level of STEM students at Iloilo City National High School is classified as "Severe Level Anxiety," with a mean score of 3.0493. This indicates that the general student body experiences high levels of anxiety. When classified according to sex, both male and female students exhibit "Severe Level

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Anxiety," with mean scores of 3.0028 and 3.0752, respectively. This shows that female students have a slightly higher level of anxiety compared to male students, but the difference is not statistically significant. Analysis by section reveals that all STEM sections (Ptolemy, Tesla, Archimedes, and Linnaeus) report severe levels of anxiety, with mean scores indicating consistently high anxiety across sections. Section Ptolemy has the highest mean anxiety score (3.1535), while Linnaeus had the lowest (2.9017).

2. The academic performance of STEM students, measured by mean scores, is generally high, with a combined mean score of 95.1385, indicating that most students are achieving "With High Honors" status. When academic performance is categorized by sex, male students have a slightly higher mean score (95.7391) compared to female students (94.8095). The t-test analysis indicates a significant difference in academic performance between male and female students, suggesting that sex plays a role in academic outcomes. By section, academic performance shows some variability. Tesla has the highest mean academic performance (96.1053), while the Archimedes section has the lowest (93.7143). The ANOVA results indicate significant differences in academic performance across sections, highlighting that section affiliation impacts academic outcomes.

3. The Spearman's rho correlation analysis indicates no significant relationship between anxiety levels and academic performance among STEM students (Sig. 0.966 > 0.05). This implies that high levels of anxiety do not necessarily correlate with lower or higher academic performance. Additionally, the lack of a strong correlation between anxiety levels and academic performance suggests that

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anxiety alone does not determine academic success or failure. Other factors such as motivation, support systems, and individual resilience may play significant roles in academic outcomes.

Recommendations

Further research is recommended to investigate the Anxiety Levels and Academic Performance of STEM Students of other public high schools in the Division of Iloilo City offering Senior High School Curriculum in order to validate the findings of the research.

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APPENDICES

APPENDIX A

LETTER REQUEST TO VALIDATORS

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APPENDIX B

LIST OF VALIDATORS

The following is a list of the validators, who are senior high school (SHS) teachers, involved in the research study titled "Anxiety Levels and Academic Performance of STEM Students from Iloilo City National High School" These validators provided their expertise and guidance throughout the research process.

ROSEN ANTHONY S. MARQUEZ, PHD
Teacher III
Mathematics Department
Iloilo City National High School

ASTRID O. HARESCO
Assistant Principal II
Junior High School
Iloilo City National High School

JENIFFER ANN MOLINA
Guidance Counselor
Iloilo City National High School

We express our gratitude to the above-mentioned validator for their valuable contributions and input in ensuring the quality and validity of the research study.

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APPENDIX C

Eight-Point Criteria for Content Validation
By Good and Scates (2002; Good & Scates, 1974)

The checklist for validating the questionnaire using the eight point criteria for content validation by Good and Scates.

	Criteria	Yes	No
1	Are the items relevant to the subject?		
2	Are the items perfectly clear and unambiguous?		
3	Do the items get at something stable, well-considered, non-superficial and non-ephemeral but something which is typical of the individual or the situation?		
4	Do the items "pull" or have extractive power? Will each be answered by a large proportion of respondents to have validity?		
5	Do the responses show a reasonable range of variation?		
6	Is the information consistent? Does it agree of what is known?		
7	Are the items sufficiently inclusive?		
8	Is there a probability of obtaining external criterion to evaluate the interview schedule?		

Suggestions/ recommendations:
_____
_____
_____

_____
Validator

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APPENDIX D

LETTER TO THE SCHOOL HEAD

February 22, 2024

ALPHA A. JAVA
School Principal IV
Office of the Principal

Dear Ma'am Java:
Good Day.

I, the undersigned, a STEM 12 a student at the Senior High School Department, am now undergoing my research writing entitled **"ANXIETY LEVELS AND ACADEMIC PERFORMANCE AMONG STEM STUDENTS AT ILOILO CITY NATIONAL HIGH SCHOOL"** as partial fulfillment for the subject, Inquiry, Immersion, and Investigation (Research Report).

In this regard, I would like to ask permission from your good office to conduct our study to **GRADE 11 AND 12 STEM STUDENTS** who have enrolled in the current school year. There would be no disruption of classes. The data collection schedule is on the vacant time of the target respondents.

I fervently hope that this request merits your kind attention and favorable response. Thank you very much. May God bless us all.

Respectfully yours,

LOURIE JULAN L. GARCIA
Research Leader

Noted:

GLENN MARK D. FALLERA
Adviser

KRISTIAN FELIMON A. SUMOGAT
Head Teacher III

Approved:

ALPHA A. JAVA
School Principal IV

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APPENDIX E

LETTER TO RESPONDENTS

January 18, 2024

Sir/Madam:

You are selected as one of the respondents in a research study entitled "**ANXIETY LEVELS AND ACADEMIC PERFORMANCE AMONG STEM STUDENTS AT ILOILO CITY NATIONAL HIGH SCHOOL**" in partial fulfillment of the requirements in Research Report (Quantitative Research).

Please accomplish honestly the questions to be asked in the SAI and TAI questionnaire. The information you will be giving will be held strictly confidential. In connection to this, I would like to ask permission to allow me to record the answers for documentation. Please see attached letter of consent.

Your help will be appreciated.

Thank you very much.

Respectfully yours,

LOURIE JULAN GARCIA

Researcher

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APPENDIX F

PART I OF THE INSTRUMENT: PROFILE FOR RESPONDENTS

ANXIETY LEVELS AND ACADEMIC PERFORMANCE QUESTIONNAIRE

General Direction: Please fill out the necessary details.Rest assured that any information you supply will be treated with utmost confidentiality.

PART I. PERSONAL INFORMATION

Directions: Please provide the requested information by filling in the blank/s. Mark **X** to the option you choose on each variable.

Name (Optional):

_____

Sex

	MALE
	FEMALE

Grade Level

	11
	12

Section

	ARCHIMEDES
	PTOLEMY
	LINNAEUS
	TESLA

1st Semester General Average for S.Y. 2023-24:

_____

Submit a photo of your card in this link as proof:
https://docs.google.com/forms/d/e/1FAIpQLScrjBBN4o3Jt7-gUkZGFBOHOfzNVENaXs8W24fasAENnRtVCQ/viewform

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APPENDIX G

PART II OF THE INSTRUMENT: ASSENT AND CONSENT FORM

PART II. ASSENT FORM

The following were provided to me as a respondent of the study:

1. The researcher has supplied me an information sheet which provides his/her contact details for my queries and clarification with regards to the research.
2. The researcher has explained to me the outline and nature of the research.
3. The researcher has explained in detail how the information will be used.
4. The researcher has explained to me in detail how long will my participation take as a respondent in the study.
5. The researcher has explained to me my role as a respondent.
6. The researcher has discussed my rights as a respondent including the right to skip questions or withdraw without penalty at any time.
7. The researcher has also discussed the risks and benefits which may rise as a result of participating as a respondent of the study.
8. The researcher has explained if I will be receiving any cost/payment or none at all. This was stated clearly to me.

Statement of Confirmation	YES	NO
Has this been provided?		
Have you received verbal confirmation/explanation when needed?		

_____
Respondent's Name and Signature

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APPENDIX H

ANXIETY LEVELS AND ACADEMIC PERFORMANCE QUESTIONNAIRE

PART III. STEM STUDENTS' ANXIETY LEVELS AND ACADEMIC PERFORMANCE

This checklist is divided into two parts. It is composed of State Anxiety Inventory, and Trait Anxiety Inventory.

A. State Anxiety Inventory

State anxiety refers to the temporary experience of anxiety or stress in response to a specific situation or event. It is a transient emotional state influenced by the circumstances that can vary in intensity and duration, and can fluctuate based on different factors. For example, feeling anxious before a job interview or a public speaking engagement are instances of state anxiety.

INSTRUCTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and put a mark **X** on the appropriate box to indicate how you feel *right now*, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement, but give the answer which seems to describe your present feelings best. Please write cleanly and legibly if completing in hard copy. If a statement is left unmarked, it will be considered as a score of zero (0).

State Anxiety Statements		Optional			
		Not at all	**Somewhat**	**Moderately so**	**Very Much so**
		1	**2**	**3**	**4**
1.	I feel calm when I do the breathing exercises.				

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2.	I feel secure when I enter the exam room and see my familiar desk in the corner, surrounded by classmates I've studied with throughout the semester.				
3.	I feel tense when the exam proctor announces that there are only five minutes remaining, and I still have several questions left to answer.				
4.	I feel strained when I realize I've been studying for hours without taking a break, and my eyes are starting to blur from staring at the textbooks.				
5.	I feel at ease when I recognize the first question on the exam as one of the topics I've studied extensively, giving me confidence to start strong.				
6.	I feel upset when I glance at the clock and realize that I've spent too much time on a single difficult question, leaving me with less time for the rest of the exam.				
7.	I am presently worrying about possible misfortunes when I hear my classmates discussing answers after the exam, making me doubt my own choices.				
8.	I feel satisfied when I review my answers and realize that I've covered all the main points and provided thorough explanations where necessary.				
9.	I feel frightened when I hear someone in the exam room sigh heavily, making me worry that I may have overlooked an important aspect of the material.				
10.	I feel comfortable when I recall the study group sessions where we discussed key concepts and practiced solving problems together, reinforcing my understanding of the material.				
11.	I feel self-confident when I remember the positive feedback I received from my professors on previous assignments and exams, affirming my				

	competence in the subject.				
12.	I feel nervous when I notice that the person next to me is writing frantically, making me wonder if I'm working too slowly or if I've missed something crucial.				
13.	I am jittery when I hear the sound of someone tapping their pencil nervously on the desk behind me, causing me to lose focus on the task at hand.				
14.	I feel indecisive when I encounter a question that presents two equally plausible answers, leaving me uncertain about which one to choose.				
15.	I am relaxed when I take a moment to stretch and breathe deeply during the exam, releasing tension from my body and allowing me to refocus on the remaining questions.				
16.	I feel content when I reflect on the effort I've put into studying for the exam, knowing that I've given it my best shot regardless of the outcome.				
17.	I am worried when I overhear classmates discussing how difficult they found the exam, causing me to doubt my own performance and second-guess my answers.				
18.	I feel confused when I read a question that uses unfamiliar terminology or presents a scenario I hadn't considered before, making it challenging to formulate a response.				
19.	I feel steady when I remind myself to approach each question methodically, focusing on one task at a time and not allowing myself to become overwhelmed by the scope of the exam.				
20.	I feel pleasant when I recall moments of camaraderie and support from classmates during study sessions, reminding me that I'm not alone in facing the challenges of the exam.				

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B. Trait Anxiety Inventory

Trait anxiety refers to a stable and enduring tendency to experience anxiety across various situations and over time. It represents an individual's general predisposition to feel anxious. People with high trait anxiety may consistently experience worry, fear, and nervousness in their daily lives, regardless of specific circumstances. Trait anxiety is thought to be influenced by both genetic and environmental factors and can be relatively consistent throughout a person's life. For example, someone with high trait anxiety may frequently feel anxious even in non-threatening situations.

INSTRUCTIONS: A number of statements which people have used to describe themselves are given below: Read each statement and put a mark X on the box to indicate how you feel on a daily basis. There are no right or wrong answers. Do not spend too much time on any statement, but give the answer which seems to describe your persistent feelings best. Please write cleanly and legibly if completing in hard copy. If a statement is left unmarked, it will be considered as a score of zero (0).

Trait Anxiety Statements	**Optional**			
	Almost Never	**Sometimes**	**Often**	**Almost Always**
	1	**2**	3	**4**
1. I feel pleasant when I am studying for an important exam.				
2. I feel nervous and restless during class presentations or tests.				
3. I feel satisfied with myself when I achieve good grades in my academic performance.				

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4. I wish I could be as happy as other students who excel academically.				
5. I feel like a failure when I struggle to understand or keep up with the academic material.				
6. I feel rested when I have successfully completed my academic tasks.				
7. I am "calm, cool, and collected" when I am well-prepared for academic challenges.				
8. I feel that difficulties are piling up that I cannot overcome them, leading to academic overwhelm and stress.				
9. I worry too much over something that really doesn't matter, causing unnecessary anxiety and distraction from important academic tasks.				
10. I am happy when I achieve academic success and make progress towards my educational goals.				
11. I have disturbing thoughts related to academic stress and pressure that affect my concentration and well-being.				
12. I lack self-confidence in academic settings, impacting my belief in my abilities and academic performance.				
13. I feel secure academically when I have a strong support system, knowledge base, and clear academic goals.				
14. I make decisions easily in academic matters, demonstrating confidence and				

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clarity in selecting courses and navigating academic choices.				
15. I feel inadequate when it comes to my academic abilities, and this constant worry and self-doubt are causing me significant anxiety.				
16. I am content with my academic progress and achievements, finding satisfaction in my educational journey.				
17. Some unimportant thought runs through my mind and bothers me everytime i think about the schoolworks that I need to pass.				
18. I take disappointments so keenly that I can't put them out of my mind and blame myself for the things that I think I can do better.				
19. I am a steady person but when I get low marks I can't maintain my composure and it leads me to overthinking some things.				
20. I get in a state of tension or turmoil as I think about my recent concerns and interest about my grades and the pressure to succeed in my academics.				

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APPENDIX I

SPSS RESULTS AND HISTOGRAMS

Descriptives

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```

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
AnxietyLevels	67	1.63	3.93	3.0493	.40933
Valid N (listwise)	67				

```
DESCRIPTIVES VARIABLES=AcademicPerformance
  /STATISTICS=MEAN STDDEV MIN MAX.
```

Descriptives

```
[DataSet1] C:\Users\Administrator\Desktop\Anxiety_Levels_&_Academic_Performance_among_STEM_Students_at_ICHNS.sav
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Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
AcademicPerformance	65	90.00	98.00	95.1385	1.65715
Valid N (listwise)	65				

```
MEANS TABLES=AnxietyLevels BY Sex Section
  /CELLS MEAN COUNT STDDEV.
```

Anxiety Levels and Academic Performance of Stem Students as a whole

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
AnxietyLevels * Sex	67	56.8%	51	43.2%	118	100.0%
AnxietyLevels * Section	67	56.8%	51	43.2%	118	100.0%

AnxietyLevels * Sex

AnxietyLevels

Sex	Mean	N	Std. Deviation
Male	3.0028	24	.46772
Female	3.0752	43	.37626
Total	3.0493	67	.40933

AnxietyLevels * Section

AnxietyLevels

Section	Mean	N	Std. Deviation
Archimedes	3.0786	7	.37289
Ptolemy	3.1535	15	.30046
Linnaeus	2.9017	25	.44004
Tesla	3.1453	20	.42398
Total	3.0493	67	.40933

```
MEANS TABLES=AcademicPerformance BY Sex Section
  /CELLS MEAN COUNT STDDEV.
```

Anxiety Levels of STEM Students when grouped according to sex and section.

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Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
AcademicPerformance * Sex	65	55.1%	53	44.9%	118	100.0%
AcademicPerformance * Section	65	55.1%	53	44.9%	118	100.0%

AcademicPerformance * Sex

AcademicPerformance

Sex	Mean	N	Std. Deviation
Male	95.7391	23	1.25109
Female	94.8095	42	1.77019
Total	95.1385	65	1.65715

AcademicPerformance * Section

AcademicPerformance

Section	Mean	N	Std. Deviation
Archimedes	93.7143	7	1.60357
Ptolemy	93.5333	15	1.64172
Linnaeus	95.7917	24	.97709
Tesla	96.1053	19	1.04853
Total	95.1385	65	1.65715

Academic Performance of STEM Students when grouped according to sex and section

T-Test

```
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```

Group Statistics

	Sex	N	Mean	Std. Deviation	Std. Error Mean
AnxietyLevels	Male	24	3.0028	.46772	.09547
	Female	43	3.0752	.37626	.05738

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AnxietyLevels	Equal variances assumed	2.255	.138	-.692	65	.492	-.07242	.10471	-.28155	.13670
	Equal variances not assumed			-.650	39.774	.519	-.07242	.11139	-.29759	.15274

```
T-TEST GROUPS=Section(1 2)
  /MISSING=ANALYSIS
  /VARIABLES=AnxietyLevels
  /CRITERIA=CI(.95).
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T-test of Anxiety Levels of STEM Students when grouped according to sex.

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```
ONEWAY AnxietyLevels BY Section
  /MISSING ANALYSIS.
```

Oneway

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```

ANOVA

AnxietyLevels

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.897	3	.299	1.855	.146
Within Groups	10.161	63	.161		
Total	11.058	66			

```
T-TEST GROUPS=Sex(1 2)
  /MISSING=ANALYSIS
  /VARIABLES=AcademicPerformance
  /CRITERIA=CI(.95).
```

One-way ANOVA of Anxiety Levels of STEM Students when grouped according to section.

```
T-TEST GROUPS=Sex(1 2)
  /MISSING=ANALYSIS
  /VARIABLES=AcademicPerformance
  /CRITERIA=CI(.95).
```

T-Test

```
[DataSet1] C:\Users\Administrator\Desktop\Anxiety_Levels_&_Academic_Performance_among_STEM_Students_at_ICHNS.sav
```

Group Statistics

	Sex	N	Mean	Std. Deviation	Std. Error Mean
AcademicPerformance	Male	23	95.7391	1.25109	.26087
	Female	42	94.8095	1.77019	.27315

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AcademicPerformance	Equal variances assumed	3.335	.073	2.229	63	.029	.92961	.41713	.09604	1.76318
	Equal variances not assumed			2.461	58.775	.017	.92961	.37771	.17376	1.68545

T-test of Academic Performance of STEM Students when grouped according to sex.

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Oneway

```
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```

ANOVA

AcademicPerformance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	80.844	3	26.948	17.320	.000
Within Groups	94.910	61	1.556		
Total	175.754	64			

```
EXAMINE VARIABLES=AcademicPerformance AnxietyLevels BY Sex Section
  /PLOT BOXPLOT STEMLEAF HISTOGRAM NPPLOT
  /COMPARE GROUPS
  /PERCENTILES(5,10,25,50,75,90,95) HAVERAGE
  /STATISTICS DESCRIPTIVES EXTREME
  /CINTERVAL 95
  /MISSING LISTWISE
  /NOTOTAL.
```

One-way ANOVA of Academic Performance of STEM Students when grouped according to section.

Nonparametric Correlations

```
[DataSet1] C:\Users\Administrator\Desktop\Anxiety_Levels_&_Academic_Performance_among_STEM_Students_at_ICHNS.sav
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Correlations

					AcademicPerformance	AnxietyLevels
Spearman's rho	AcademicPerformance	Correlation Coefficient			1.000	.001
		Sig. (2-tailed)			.	.996
		N			65	65
		Bootstrap[b]	Bias		.000	-.019
			Std. Error		.000	.117
			95% Confidence Interval	Lower	1.000	-.289
				Upper	1.000	.160
	AnxietyLevels	Correlation Coefficient			.001	1.000
		Sig. (2-tailed)			.996	.
		N			65	65
		Bootstrap[b]	Bias		-.019	.000
			Std. Error		.117	.000
			95% Confidence Interval	Lower	-.289	1.000
				Upper	.160	1.000

*. Correlation is significant at the 0.05 level (2-tailed).

b. Unless otherwise noted, bootstrap results are based on 67 bootstrap samples

Spearman's rho Correlation of Academic Performance among STEM Students at Iloilo City National High School

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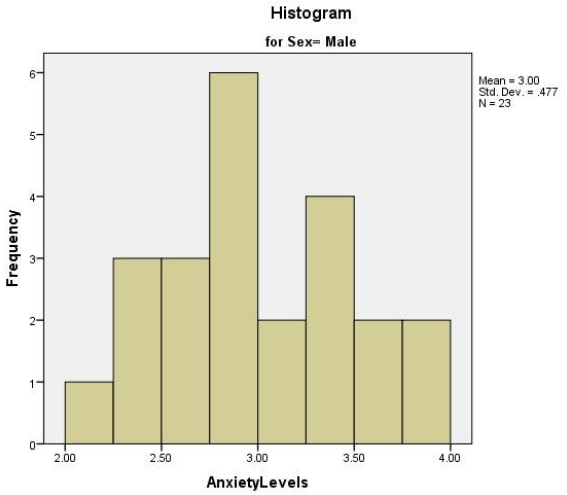

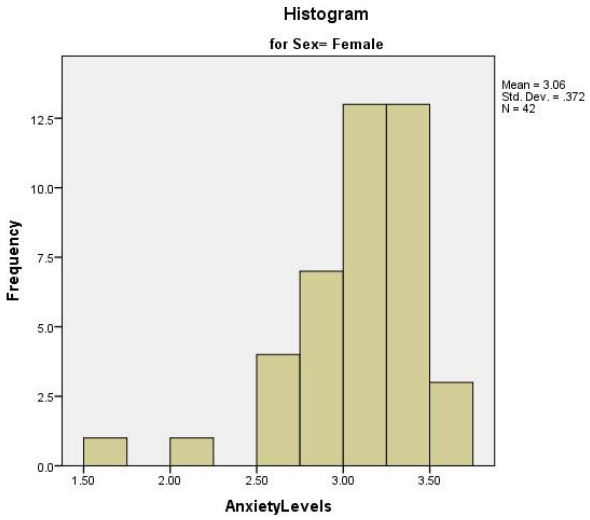

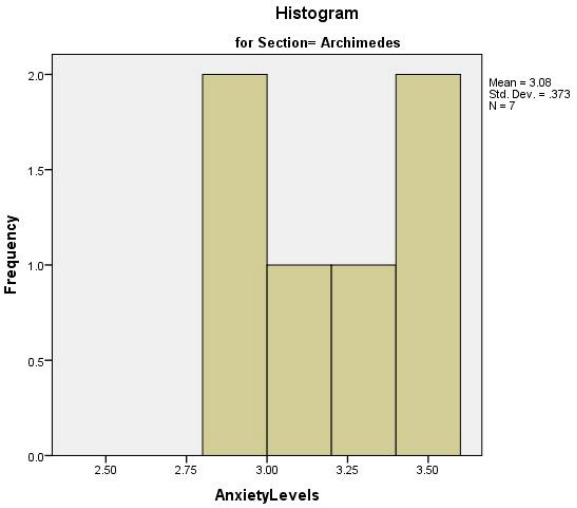

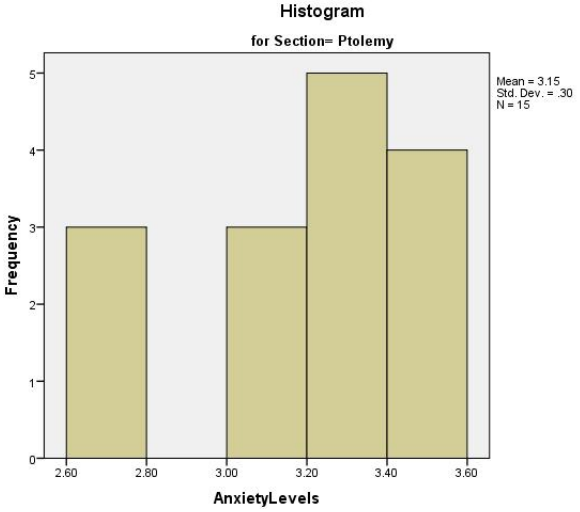

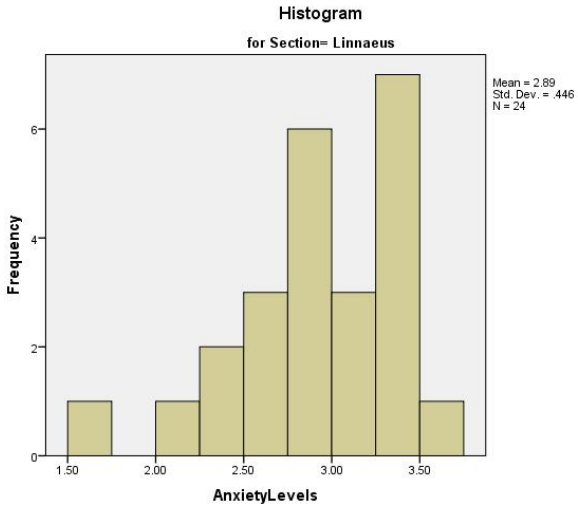

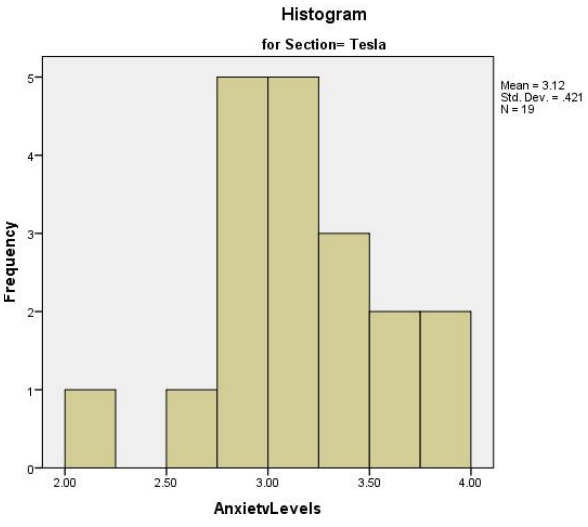

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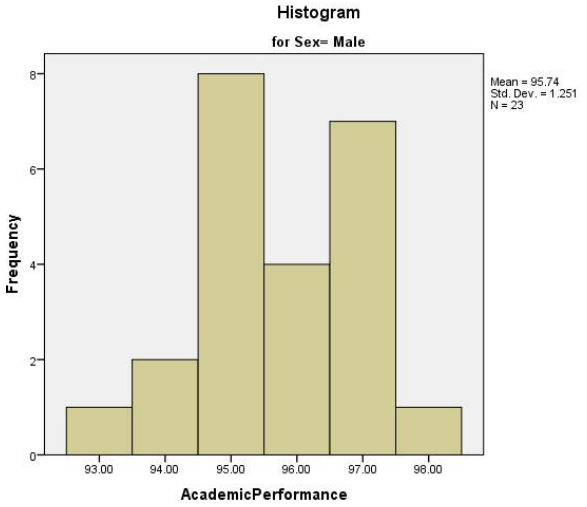

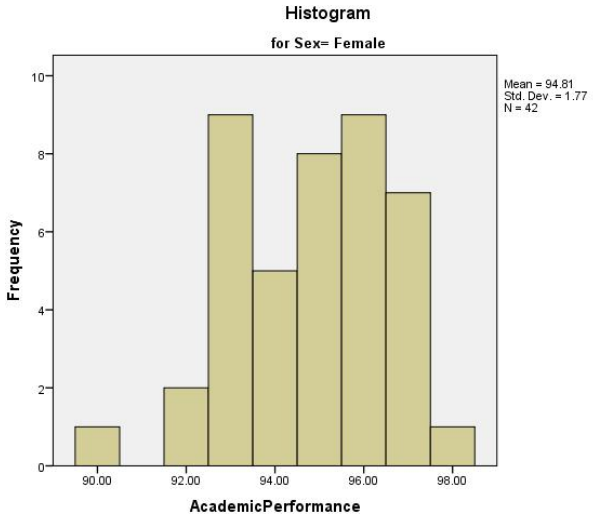

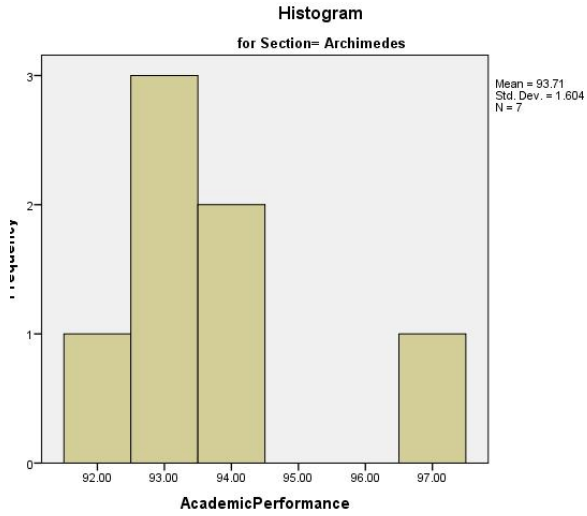

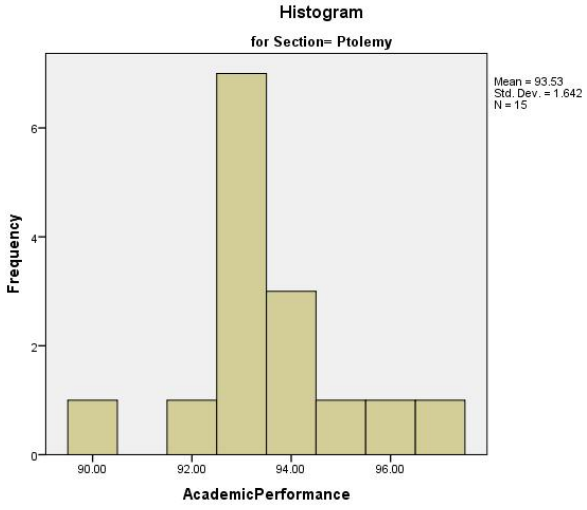

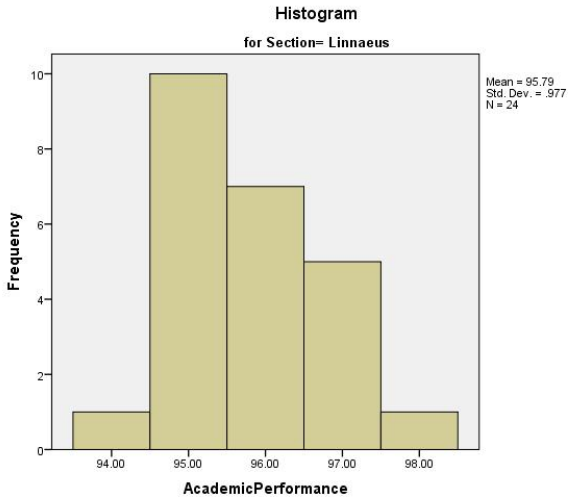

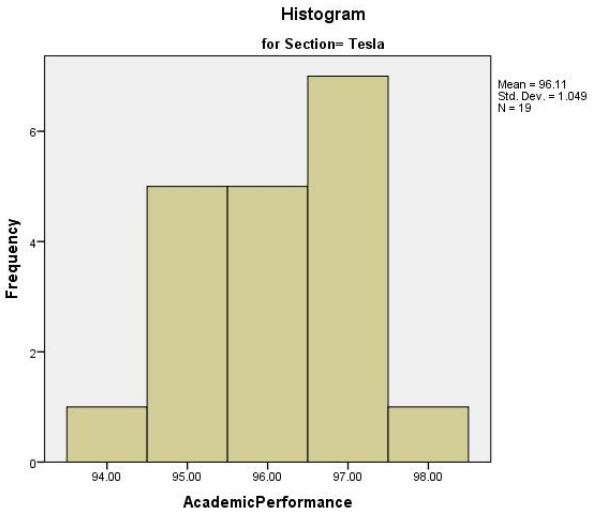

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APPENDIX J

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	Messenger (Optional)	Andrie Lance