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Junior high school students' views, learning experiences and academic performance in mathematics

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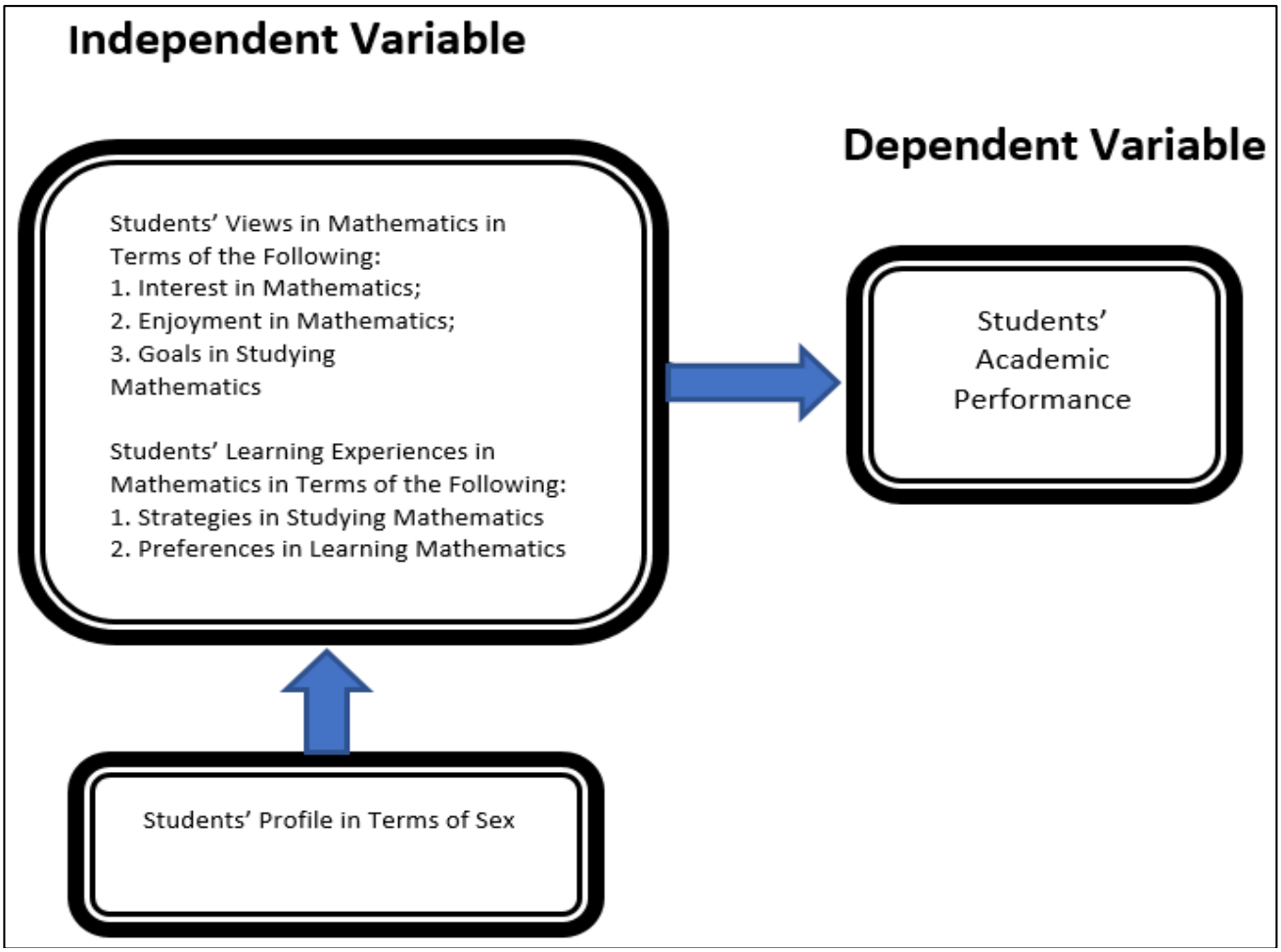
Abstract
The focus of this study was to examine the views and learning experiences of the high school students in Mathematics and their relationship to their academic performance. The respondents of the study were the 190 students from the three secondary schools of Valencia district. The correlational method was used in this study. It utilized the t-test and Pearson Product-Moment Correlation Coefficient.
The study revealed that the students had a a.) "moderate" level of interest in Mathematics but "low" in the area of participation in a club or organization; b.) "moderate" level of enjoyment; and c.) "high" regard on the importance of some goals in Mathematics. Furthermore, students had a a.) "high" level of self-regulated learning strategies but "moderate" in other strategies that involve other persons; and b.) "very high" preference that Mathematics would be discussed by their teachers.
The students' academic performance was revealed to be on the "approaching proficiency" level. The data further indicated that a significant relationship existed between the academic performance of the students and their views and learning experiences in Mathematics. Students who had better views and learning experiences in Mathematics had better academic performance.

Keywords: Academic performance, competence, interest, learning experience, strategies

Introduction
The conceptions, attitudes, and expectations of the students regarding Mathematics and Mathematics teaching are very significant factor underlying their school experience and achievement (Borasi and Shoenfeld).
Most people today still believe that Mathematics is all about computation. However, computation for mathematicians is merely a tool for comprehending structures, relationships and patterns of Mathematical concepts, and therefore producing solutions for complex real-life problems. This perspective of mathematicians has gained more attention and importance with rapid advancements in information and communication technologies. It has become necessity for people of all ages to reach, analyze, and apply the Mathematical knowledge effectively and efficiently to be successful citizens in our information age. Students need to be well-equipped with higher-order Mathematical knowledge (Cai 12).
In all educational systems, students are introduced to a variety of subjects in all disciplines and programmed for both academic and professional purposes. However, Mathematics holds a key position in the school curriculum and in practically all countries it is a core component. It is also seen as a pivotal subject, both, and because of its important connections in diverse fields such as the natural sciences, engineering, medicine, and the social sciences (Keith).
A student can become Mathematically competent if his environment is safe, clean and well-equipped with learning tools, if there is communication between him and his teacher, and if he is actively engaged during the learning process.
Moreover, in our match towards scientific and technological advancement, we need nothing short of good performance in Mathematics at all levels of schooling. To achieve this, the present study aims to gain a deeper understanding and investigation the way students view their interest, enjoyment and goal in studying Mathematics. Likewise, their learning experiences on their strategies and preferences in learning Mathematics are also taken into consideration for basis in strengthening Mathematics education.

Methodology

This study was the correlation method. It was a correlational since it determined the relationship between the two or among variables. The study was conducted in the town of Valencia, Negros Oriental. The respondents of the study were the fourth-year high school students enrolled in the following schools: Valencia National High School, Balugo National High School and Pulangbato National High School. Of the 361 population of the three high schools, 190 were the sampled students. They were selected through systematic sampling method in which every second student in the list was considered. The questionnaire was made up of five parts. Part 1 was on the students' extent of interest in Mathematics. Part 2 was on the students' extent of enjoyment in Mathematics. Part 3 was on the students' extent of importance of some goals in Mathematics. Part 4 was on the students' extent of doing the strategies in learning Mathematics and Part 5 was on the students' extent of preference in learning Mathematics. A five-point scale was used in answering each item. The details were shown in the statistical treatment of data.



Conceptual Framework of the Study

The figure shows the Conceptual Framework of the Study. It indicates the primary independent variable which is the views and learning experiences of the students in Mathematics. It also shows the secondary independent variable that refers to the sex of the students. The dependent variable in the illustration is the students' academic performance in Mathematics. The framework of the research indicates the connection between the sex of the students and their views and learning experiences in Mathematics. These views and learning experiences are assumed to have an influence on the students' academic performance.

Results and Discussions

1. Students' Views and Learning Experiences in Mathematics

The findings showed that the students had "moderate" views regarding Mathematics and had "high" learning experiences in studying Mathematics.

2. Academic Performance of the Students in Mathematics IV during the First Grading Period

The findings revealed that 4.21% of 190 students were in the "advanced" level of proficiency and 15.26% were in the "proficient" level. Furthermore, 37.90% belonged to the "approaching proficiency" level and 41.05% were in the "developing" level. It also disclosed that only 1.58% were classified still to be in the "beginning" level.

Integrating all the ratings, the researcher was also to find out that the students obtained an average performance of 80.86% and they were classified to be in the "approaching proficiency" level. This meant that the students at this level has developed the fundamental knowledge and skills and core understandings, and with little guidance from the teacher and/or with some assistance from peers, and could transfer these understandings through authentic performance tasks.

3. Relationship between the Academic Performance of the Students and Their Views and Learning Experiences in Mathematics

The data pointed out that the computed r values in all areas were all greater than the tabular r value at 5% level of significance. This was enough evidence to reject the null hypothesis. This meant that the academic performance of the students was significantly related to their views and learning experiences in Mathematics.

4. Difference in the Students' Extent of Views and Learning Experiences in Mathematics When They Are Grouped according to Their Sex

The data reflected that the mean scores of the male and female students differed. To test the data statistically, t- test for comparing two means is applied. It showed that the computed t values in all areas are less than the tabular t value of 1.96. At 5% level of significance the null hypoyhesis is not rejected. This meant that there was no enough evidence that significant difference existed between students' views and learning experiences in Mathematics when they are grouped according to their sex.

Conclusions

Based on the findings cited above, the following conclusions were hereby drawn that students had a "moderate" level of interest in Mathematics but "low" in the area of participation in a club or organization; "moderate" level of enjoyment; and "high" regard on the importance of some goals in Mathematics. Students had a "high" level of self-regulated learning strategies but "moderate" in other strategies that involve other persons; "very high" preference that Mathematics would be discussed by their teachers. The students' academic performance was on the "approaching proficiency" level. A significant relationship existed between the academic performance of the students and their views and learning experiences in Mathematics. Students who had better views and learning experiences in Mathematics had better academic performance. There was no significant difference in the students' extent of views and learning experiences when they were grouped according to their sex. In general, the fourth-year high school students who had better views and learning experiences in Mathematics had better academic performance.

Recommendations

It is suggested to enhance the students' views and learning experiences in Mathematics and to improve their academic performance in Mathematics by creating regular opportunities for student to work in groups on Mathematical tasks teachers should help develop students' abilities to work cooperatively with other students. The group activity should be structured so that all students participate in the discussion, listen and respond to each other, and reflect on each other's suggestions in completing the task. Teachers should keep on emphasizing the usefulness of Mathematics in everyday life and to their career especially in the middle grades and high school as students began to make choices about their future. Since participation in a club or organization is a great way to spark students' interest and enjoyment in learning Mathematics teachers should organize a well-led club or organization related to Mathematics and motivate students to get involved.

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