

# **Determinants of Students' Achievement In High School Geometry**

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Abstract

One of the biggest challenges that the nation faces today is the problem on how to improve the performance of Filipino students in mathematics and science. The steep downfall of the science and mathematics competencies that Filipino students demonstrate in standards-based tests as measured against international levels has belittled the nation's capacity to compete globally in academic competitions. And the Philippine Educational System can only put the blame on the subject teachers who have a direct contact with learners.

But to educators, instruction may not be the sole factor that brings about the problem. Surely, there is more to determinants of students' performance in mathematics than teacher-factor. For one, attitude that is observed in different directions – student towards the subject, student towards the teacher, teacher toward the subject, teacher toward the student – may also be considered non-intellective factors that may bring about an effect on student performance in mathematics, not to mention environment, support from family, and the like which may also influence such. Some of these may be even traced back to a learner's remotest experiences, and reading difficulties can be one of them.

The general problem of the study is to determine factors influencing the performance of LCUP BED students in High School Geometry. Specifically, this study sought to answer the following: (1) how can the demographic profile of the respondents be described in terms of gender, age, IQ, GPA, parental educational attainment and reading proficiency; (2) What is the respondents' level of achievement in Geometry; (3) Which of these factors are significant determinants of achievement in mathematics; and, (4) what pedagogical implications may be drawn from the study? To realize this aim, a descriptive correlational method was employed. Performance in Geometry was measured using the Geometry California Mathematics Standards Test. This is one of the California Standards Test administered as part of the Standardized Testing and Reporting (STAR) program under policies set by the California State Board of Education. The reading proficiency level of the respondents, on the other hand, was identified using the Gates-MacGinitie Reading Test, a standardized test which was developed by Walter H. MacGinitie, Ph. D. The other factors considered were the demographic profile variables which included age, gender, IQ, GPA, and Parental Educational Attainment.

The respondents of the study were the one hundred sixty-eight (168) Grade 9 high school students of the Basic Education Department of La Consolacion University Philippines who were enrolled in the school year 2011-2012.

At the end of the study, the following were concluded: (1) the respondents of the study were almost equally distributed in terms of gender, were learners of normal schooling age, possessed average capacity to accept knowledge and obtained average GPA in the previous school year. Majority of the respondents' parents were non-bachelor's degree holders; (2) almost half of the respondents were diagnosed to have achieved at least the high school level of proficiency in reading while the other half

of the respondents were not able to cultivate desirable reading proficiency level; (3) Majority of the respondents demonstrated poor achievement in High School Geometry; and, (4) GPA, IQ and reading proficiency are good determinants of achievement in Geometry while age, gender and parental educational attainment were found not to be significant determinants of achievement in the subject.

Pedagogical implications and recommendations of the study were thoroughly discussed.