

**Paper 136 – Education**

**BASIC HIGH SCHOOL MATHEMATICS FOUNDATION AND ITS ROLE IN DETERMINING STUDENT PROFILE BEFORE ENTERING COLLEGE LEVEL ACADEMIA**

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**ABSTRACT**

Every mathematician knows that algebra is foundational to higher math learning skills. Since math is integral in our daily life. Every person even with a lack of a formal math education uses the applications on addition, subtraction, multiplication and division. At Asia Pacific International University during the time of freshmen registration a mathematics placement test is conducted to assess the mathematics level of the new incoming students. Before the test instrument is administered, a survey of the student profile is requested to be filled out. This student profile and the outcome of their math evaluation is used as the source of data for our analysis. Therefore, in this paper we assess the performance difference across gender, influencing factors such as the country/region of the student, exposure to the level of math prior to college entry and their self assessment on math skills and practice. We further look at the choice of their major course of study. Is this choice an influence due to their higher math performance or otherwise?

Unlike many studies performed in the past a test on a sample of 112 with 48 male and 64 female participants, results showed that there was no significant difference in their math performances. The nationalities of the students show that they come from twelve major countries of Asia which include the host country Thailand. There is no significant difference in their overall math performance. Even though, China stands higher than the rest of the nations. Most (about 67%) of them expressed that they did complete algebra before seeking a college degree. The description of their experiences in mathematics is given as 2.7% find math easy, 8.9% find math very hard and about 88.4% believe they are not too bad in the subject. The two most widely chosen career choice has been in the field of business and education (32.14% and 24.11% resp.). The participants results show that less than 50% of them have successfully passed the expected requirements to directly begin their college math courses. It is in adherence to the findings that Thomas C. Noser et.al, Journal of College Teaching & Learning – April 2008, math performance in the modern era is on the decline. There is need to look at school mathematics curriculum especially in Asian countries that are now looking serious progress and development.

**Keywords: Gender Bias (GB), Algebra, Math Ability (MA), Basic Foundation(BF), Mathematics Curriculum(MC)**

