**GAMIFIED MOBILE COURSEWARE’S EFFECT TO STUDENTS’ COGNITIVE & NON-COGNITIVE ABILITIES**

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**Abstract**

*The Covid-19 pandemic has affected both teachers’ and learners’ lives in the Philippines. While the country’s movement to quality education continues, the quest for effective instructional strategies for flexible learning also continues. The study’s purpose was to examine the effect of gamified mobile courseware in Statistics & Probability on senior high school students’ cognitive & non-cognitive abilities. The mixed-method experimental design was used in this study to answer the research questions. The researcher utilized the Cognitive Abilities in Mathematics Test, Non-Cognitive Abilities in Learning Mathematics Questionnaire, Perceptions on the Use of Gamified Mobile Courseware in Learning Mathematics, and focus group interview on gathering the necessary data. Since random assignments were not possible, the simple random sampling technique was used to select respondents for both the control and experimental groups. The study group consisted of 104 Grade 11 students in one public senior high school in Mandaluyong City, Philippines. Two pairs of control and experimental groups were used in the study: the STEM and Non-STEM groups. The respondents’ midterm grades in General Mathematics and present age were used to establish comparability in each group. The researcher employed the One-Way MANOVA and One-Way ANCOVA to analyze the gathered data. The results indicated no significant differences between the Non-STEM groups’ conceptual and procedural knowledge, but significant differences were found between the STEM groups’ procedural knowledge. Also, the results asserted significant differences between the Non-STEM groups’ motivation in learning mathematics, while no significant differences were found between the STEM groups’ non-cognitive abilities. The major themes that arose during the focus group interview include cohesiveness of learning content, effective assessment approaches, user efficiency, mobile apps features, and fun learning experience. Thus, the gamified mobile courseware in Statistics and Probability positively affected the students’ procedural knowledge and motivation in learning mathematics.*

**Keywords:**

Gamification, Mobile Learning Conceptual Knowledge, Procedural Knowledge, Non-Cognitive Abilities in Mathematics, Mathematics Courseware