

## Effectiveness of Self-Learning Module on the Academic Performance of Students in Statistics and Probability

**Authors :** Aneia Rajiel Busmente, Renato Gunio Jr., Jazin Mautante, Denise Joy Mendoza, Raymond Benedict Tagorio, Gabriel Uy, Natalie Quinn Valenzuela, Ma. Elayza Villa, Francine Yezha Vizcarra, Sofia Madelle Yapan, Eugene Kurt Yboa

**Abstract :** COVID-19's rapid spread caused a dramatic change in the nation, especially the educational system. The Department of Education was forced to adopt a practical learning platform without neglecting health, a printed modular distance learning. The Philippines' K-12 curriculum includes Statistics and Probability as one of the key courses as it offers students the knowledge to evaluate and comprehend data. Due to student's difficulty and lack of understanding of the concepts of Statistics and Probability in Normal Distribution. The Self-Learning Module in Statistics and Probability about the Normal Distribution created by the Department of Education has several problems, including many activities, unclear illustrations, and insufficient examples of concepts which enables learners to have a difficulty accomplishing the module. The purpose of this study is to determine the effectiveness of self-learning module on the academic performance of students in the subject Statistics and Probability, it will also explore students' perception towards the quality of created Self-Learning Module in Statistics and Probability. Despite the availability of Self-Learning Modules in Statistics and Probability in the Philippines, there are still few literatures that discuss its effectiveness in improving the performance of Senior High School students in Statistics and Probability. In this study, a Self-Learning Module on Normal Distribution is evaluated using a quasi-experimental design. STEM students in Grade 11 from National University's Nazareth School will be the study's participants, chosen by purposive sampling. Google Forms will be utilized to find at least 100 STEM students in Grade 11. The research instrument consists of 20-item pre- and post-test to assess participants' knowledge and performance regarding Normal Distribution, and a Likert scale survey to evaluate how the students perceived the self-learning module. Pre-test, post-test, and Likert scale surveys will be utilized to gather data, with Jeffreys' Amazing Statistics Program (JASP) software being used for analysis.

**Keywords :** self-learning module, academic performance, statistics and probability, normal distribution

**Conference Title :** ICHES 2023 : International Conference on Higher Education Studies

**Conference Location :** Oslo, Norway

**Conference Dates :** June 22-23, 2023