



## UTILIZATION OF OPEN APPROACH IN TEACHING AND LEARNING SENIOR HIGH SCHOOL PHYSICS

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### ABSTRACT

The study focused on the utilization of open approach in teaching and learning senior high school physics. The study described open approach and its utilization in Physics lessons. It also assesses science skills that are developed in using the approach. Further, difficulties and constraints in enhancing students' mathematical ability were also identified. The descriptive type of research was utilized in this study. The study described open approach as an instructional technique that promotes mathematical ability among students since the process is open to a variety of problem-solving approaches. Moreover, results showed that solving problems on the three laws of motion and calculating the amount of work done appeared to be the most applicable lessons where open approach can be used. The study also found that converting one unit to another, differentiating vectors and scalar quantities and solving measurement problems involving conversion of units were the science skills developed in studying measurement and vectors. On the other hand, analyzing scientific concepts on motion and forces and calculating problems involving work and energy was the most developed skill, respectively. The study further revealed that carelessness in manipulating the variables in solving an equation, weak foundation of the fundamental operations and poor in analyzing the word problems were the difficulties and constraints often encountered in enhancing students' mathematical ability. Based from the findings of the study, lesson exemplar integrating open approach which consists of four main phases such as introduction, development, engagement and assimilation was prepared to enhance physics teaching and learning.

*Keywords: open approach, science skills, mathematical ability, lesson exemplar*