

THE EFFECT OF MODULAR INSTRUCTION IN LEARNING MECHANICS



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ABSTRACT

Modular instruction is a form of distance teaching that uses self-learning modules (SLM) as medium of serving continuous education to the learners. This type of modality was implemented to public schools because of the risk brought by COVID-19. This study aimed to determine the performance level and personal experiences of the Grade 9 students in modular instruction. This study applied a one group pretest-posttest design utilizing a mix of quantitative analyses, and qualitative analyses through focus group discussion (FGD). Results showed no significant difference in mean improvement of the pretest and posttest of the Grade 9 students. After the FGD of the six (6) Grade 9 students, it was found out that attitude and self-discipline, presence of an expert or facilitator, text or content of the modules, and time management were perceived factors that contributed to the poor performance of the students in modular instruction. Base on the findings of the study, modular instruction could be viewed as ineffective medium of self-learning to the Grade 9 students when delivered through a learning packet and when there was less supervision. In addition, we could utilize social media as an intervention to enrich the academic performance of the students by sharing fun conceptual physics activities online.

INTRODUCTION

SLM are designed to be self-sufficient and attainable so that it can cater to the different types of learners in a distance learning. Students are expected to perform the learning tasks in the modules within the range of time the DepEd has instructed. However, it is unconventional for public high school students to handle modules by themselves. Not to mention, acquiring knowledge of one of the perceived complex subjects, like Physics, involves terminologies and rigorous conceptual analysis. From the study of Camarao and Nava (2017), mechanics was reported by the students as one of the perplexing topic to relate in a real scenario. Therefore, this study wanted to know the Grade 9 students' level of performance in learning Mechanics, and the possible factors that contributed to their performance in modular instruction.

RESEARCH METHODOLOGY

A one group pretest-posttest design was utilized to determine the effect of modular instruction to a group of Grade 9 students from a public high school with an average grade of *Satisfactory* (80-84) from their 1st to 3rd quarter grades. Relevant information was described from the FGD. The following steps were followed to gather the data and interpretation of the results.



RESULTS AND DISCUSSION

Mean Improvement of the Grade 9 students in Mechanics from Pretest to Posttest						
n	Pretest Mean	Posttest Mean	\bar{d}	SD	t-value	Remarks
37	5.59	5.19	-0.41	3.94	2.03	not significant

The results showed that the Grade 9 students made no significant improvement after the implementation of the SLM. The students in the FGD shared that the scientific terminologies gave them harder time to execute and accomplish some of the activities in the SLM and learn further. The absence of supervision had also contributed to the decline of their scores.

Thematic Analysis on the Personal Experiences of the Grade 9 Students in Modular Instruction	
Factors	Remarks
Attitude and self-discipline	developed boredom, laziness and procrastination (due to distractions), cheating, negligence of evaluations made by the teachers, repetitive reading, and note taking
Presence of an expert or facilitator	reliance to further elaborate the lexicon, activities or experiments, and formulas or operations found in the SLM
Text or content of the module	faced a language barrier of the texts contained in the SLM, lack of elaboration and step-by-step instruction
Time management	insufficient time allotment that lead to loss of recollection of the topics and failure to complete the activities in the SLM

CONCLUSION

Based on the findings of the research from statistical analyses and descriptive analyses: (a) the SLM in Mechanics (energy and momentum) did not have a big impact on the performance level of the Grade 9 students; (b) external factors contributed slightly positive - note taking and initiative to research the difficult topics - and mostly negative such as the absence of a facilitator, short time preparation, inadequate content of the modules, and the presence of distractions. Modular instruction could be viewed as ineffective medium of learning delivery to the students who were unacquainted to doing it, extremely dependent to aid, and distracted that led to unfinished tasks.

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