ABSTRACT

A COMPARISON OF STUDENTS' LEARNING OUTCOMES IN PHYSICS THROUGH INQUIRY EXPERIMENTAL METHOD WITH VERIFICATION BASED ON SCIENCE PROCESS SKILL

By

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A Science process skill in physics is one of important factor in improving students' learning outcomes. This study aims to determine the average difference in learning outcomes of cognitive and psychomotor aspects of the students in learning physics on the use of approach with inquiry experimental method and verification experiment. The material used in this study was the subject matter of dynamic electricity. The learning outcomes of cognitive aspects were measured by N-pretest and posttest results, while for the psychomotor aspects were measured by the achievement of the skill aspects.

This study used experimental design of Quasi Experimental Design with the type of Non-Equivalent Control Group Design. The technique used in data analysis was N-gain while the hypothesis testing used Independent Sample T Test.

Based on the average scores of N-gain average, cognitive aspects of student learning outcomes in the first experimental class was 0.52 and the second experimental class score of N-2 was 0.33. These results indicate that the science

process skill approach with experimental inquiry method is more effective to be applied to improve student learning outcomes in the cognitive aspects of learning. In the psychomotor aspect, the average value of inquiry experimental class was 73.77 and 70.03 for verification experiment. These results indicate that there is no difference in the average results of the psychomotor aspects of student learning through inquiry and verification experimental method based on science process skill.

Key words : science process skills, experimental inquiry, experimental verification, learning outcomes