

The effectiveness of practical work on students' motivation and understanding towards learning physics

Abstract

This study aims to determine the use of practical work in secondary school can develop students' understanding and motivation towards learning physics. A secondary school from Semporna district in Sabah, Malaysia is selected to conduct this research. A total of sixty-six (66) Form Four students (e.g., 16 years old) participated in this research. The experimental group was taught by practical work meanwhile the control group was taught by the traditional teaching method. The qualitative and quantitative data were collected via questionnaire and interviews. Pre-survey and post-survey were administered before and after the treatment for both groups. A focus group interview was conducted in both groups to observe about their feedback. Quantitative data were gathered and analysed by using the Statistical Package for Social Science (SPSS) Version 22.0. Wilcoxon Signed Ranks Test showed that students in the experimental group and control group showed no significant difference in their motivation towards learning physics. However, there was a significant difference in their understanding towards learning physics after the treatment in the experimental group compared to control group. All the interviews were audio-taped and transcribed, indicated that students in the experimental group revealed more motivated and understood while learning physics as compared to the control group. Therefore, school teacher should conduct practical work with students frequently to increase their motivation and understanding towards learning physics.