Inculcating of thinking skills via practical work: science teachers' perception and practices in managing equipment

ABSTRACT

Solving problem skills is one of elements in thinking skills. The use of practical work involving students in solving problems related to science concepts. The appropriate interaction between students and practical equipment can lead to critical, creative and analytical thinking. This working paper aims to shed light on the results of the study on science teachers who apply practical work as one of approches in encouraging thinking skills. The focus of the study is on the management of equipment during practical classes conducted. A total of five science teachers were selected through purposive sampling from the Central Zone. Observation instruments and open questionnaire were used in this study while the data were analyzed manually based on themes relevant to the question of this research. The results showed that all science teachers prepared practical equipment before students' arrival to the laboratory. They also provided practical manual to guide the students, especially regarding practical equipment and laboratory procedures. The results of the open-ended questionnaire analysis showed that all the teachers complained of the lack of equipment when it comes to certain practicals. They also stressed the need for the presence of laboratory assistants in helping to manage practical classes, especially from the aspect of equipment management. The study concluded that improvement of practical methods, will encourage Science teachers to inculcate thinking skills via practical work.

Keyword: Problem solving; Science laboratory; Learning management