

THE USE OF VIRTUAL LAB AND ROLE PLAY IN DIFFERENT SEQUENCE TOWARDS STUDENTS' UNDERSTANDING IN LEARNING SOLAR SYSTEM

Chika Laraswati Putri
International Program on Science Education
Universitas Pendidikan Indonesia
Chika.lputri@student.upi.edu

ABSTRACT

Role play as a teaching method could improve cognitive, affective and psychomotor skills of students even though it has several disadvantages of applying this in learning science since it needs longer time to prepare and not all of science topics can be taught using role play. The topic that could be abstract phenomena that occur in a daily life which involves analogical analytic. Solar system concept is one of the topic which is suitable to be learned using role play. The aim of this research is to investigate how is the differences between role play that conducted in the beginning of the learning process and role play that conducted in the end of a learning process. The method used in this research is quasi experiment. This research used two classes, experiment class 1 and experiment class 2. Before the learning process conducted, pre-test is given to know the initial of students' understanding. The result is there are no significant difference between experiment class 1 and experiment class 2. The same materials given to both classes but the syntax of learning was different. After that, the post-test was conducted in the end of learning process. The result is statically significant, experiment class 1 get higher score than experiment class 2. The N-gain of experiment class 1 was 0.40 and experiment class 2 was 0.18. Students performance and students respond are better in experiment class 1 because the students more ready to implement the role play. The conclusion is before the students conduct the role play, students need to be taught about the concept because without prior knowledge, the role play is much less effective.

Keywords: *Virtual Lab, Role play, Students' Understanding, Students' Performance, Solar System Concept*