THE IMPLEMENTATION OF MULTIPLE REPRESENTATION-BASED INSTRUCTION AND ITS IMPACT TOWARDS STUDENTS CONCEPTUAL MASTERY IN LIGHT REFLECTION CONCEPT

Nurul Aisyah[1]

[1]International Program on Science Education, Indonesia University of Education

ABSTRACT

This research aims to investigate the implementation of Multiple Representation basd Instrutction and discovering its impact towards students conceptual mastery in light reflection concept, the Multiple Representation (MR) based instruction in this studies emphasize MR model based on Investigative Science Learning Environment Curriculum (ISLE Curriculum). The method taken in this research is pre-experimental group with One-Group Pretest-Posttest Design. The sample was taken in one of public school in Bandung which implemented Indonesian Curriculum (n=34). The quantitative data of this research was obtained through objective test, while supporting data were obtained through multiple representation skill rubric, scientific communication rubric, experiment and data analysing rubric, and also students engagement survey which gained through *Likert-Scale.*This research explored how multiple representation instruction influenced conceptual mastery for student. Students conceptual mastery is measured in accordance to Revised Bloom Taxonomy Theory in cognitive domain through objective test. Hypothesis testing was done by using normalized gain and One Sample T-test, the result shows that there is medium improvement of students conceptual mastery and the result also shows that the multiple representation instruction give impact in improving students conceptual mastery.

Key words: light reflection, multiple-representation, Investigative Science Learning Environment.