

The analysis of biology teachers technological pedagogical content knowledge development in lesson study in West Java Indonesia

ABSTRACT

The study aimed to analyze the development of biology teachers' Technological Pedagogical Content Knowledge (TPACK) in lesson study and to describe the role of the observer in developing teacher's TPACK during the activity. The lesson study was carried out in two from, school-based lesson study and biology teacher association based lesson study. The method used in the study was descriptive involved teachers in one school located in Bandung and member of biology teacher association in West Bandung District West Java, Indonesia. The development of TPACK was focused on five components; they are: learning objective, concept, pedagogy, evaluation, and technology. The information of teachers' TPACK was gain from CoRe + technology, and the result was categorized in pre, growing, and maturing TPACK. The study revealed that the teachers' TPACK in school-based lesson study was more in the aspect of pedagogical knowledge meanwhile teacher TPACK in biology association lesson study improved their TPACK in pedagogical knowledge, content knowledge, and technological knowledge. The development of teachers' TPACK was varied for each indicator from pra to maturing and from growing to maturing. The overall result, the development of teachers' TPACK in the two types of lesson study (school-based lesson study and Biology association lesson study) was more to the pedagogical aspect. The research suggests that teacher association based lesson study is more useful to develop teacher TPCAK than school-based lesson study, and the role of the observer is essential in developing teacher TPACK.

Keyword : TPACK; Lesson study; Biology teacher