

Technological Pedagogical Content Knowledge-Oriented Instructional Design Workshop Using TESI (Technology Embedded Scientific Inquiry) to Optimize Pedagogic and Professional Competencies of Middle School Science Teachers Facing the 4.0 Revolution Era in the 21st Century 21

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ABSTRACT

This training activity aims to improve pedagogical competence and professional competence of junior high school science teachers in Sleman Regency in preparing learning designs that result in a TESI (Technology Embedded Scientific Inquiry) learning planning product.

This activity was attended by Muhammadiyah Junior High School Teacher of Sleman Regency. The invited participants were 30 IPA Muhammadiyah Sleman Junior High School teachers. However, when there were only 26 presentations, the training activities were carried out on 4, 5 and 6 October 2019. The material presented on the first day included insights on how to teach material based on TPACK (Technology Pedagogy Content Knowledge .. Activities on the second day focused on designing TESI-based lesson plans. The steps of the third day workshop activities consist of the presentation of lesson plans and learning tools and the process of revising the equipment. The method of training activities consists of lectures, questions and answers and discussions. The activities are carried out through the preparation, implementation and evaluation stages. The preparation phase is carried out by coordinating with the MGMP IPA Muhammadiyah Sleman Middle School in determining the time and place of training. The evaluation phase was carried out by giving a questionnaire for the teacher's response to the implementation of the activity.

Based on indicators of success, the PPM activities in the development of this area can be carried out quite successfully as seen from each Science teacher in each group actively participating in developing a TESI-based RPP. Science teachers respond very well to activities and provide suggestions for further training improvements.

Kata Kunci: TPACK, TESI, pedagogic and professional competence.