

DEVELOPMENT OF A DIFFERENTIATED LEARNING MODEL IN THE FRAMEWORK OF IMPLEMENTING OF KURIKULUM MERDEKA IN THE FIELD OF BIOLOGY IN SMA

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ABSTRACT

Variations in student characteristics from economic, social, cultural and other aspects, including real learning styles, are potentials that need to be accommodated in biology learning. On the other hand, this variation gives rise to differences in students' learning needs and abilities. Project-based differentiated learning is appropriate to be implemented to accommodate the variety of students, while simultaneously developing potential as optimally as possible. The unavailability of this model concept and its guidelines and learning tools has led to the need for development research.

The Project-Based Differentiated Learning Model in the Biology in Senior High School was developed through R&D using the ADDIE procedure. The research procedure used consists of 5 stages, namely Analysis, Design, Development, Implementation and Evaluation. The data collected in this research are: (a) the quality/feasibility of the model developed, (b) the practicality of the model implemented in learning, and (c) the effectiveness of applying this model to creative thinking skills and understanding of biological material/concepts. Data on the feasibility of the model being developed was collected through expert judgment, practitioners and users, using assessment sheets. Data on the practicality of implementing the model was collected through observing the implementation of learning, using an instrument in the form of an observation sheet. Meanwhile, the effectiveness of the application of the model on creative thinking skills and mastery of biological material/concepts was collected through tests on students using question instruments, pre- and post-experiments on the application of the model. The collected data will be analyzed descriptively and inferentially using descriptive statistics and inferential statistics.

The research results show that the project-based differentiated learning model is valid according to the results of expert assessments. The documents produced are: model books, guidelines for teachers, teaching modules (lesson plan), student's worksheets for three learning styles, learning materials for three learning styles (electronic modules), validation instruments for model and device development products, and instruments for measuring mastery of biological knowledge and students' creative thinking skills. The model is also known to be practical after going through limited trials. The results of extensive trials in the form of quasi-experiments have provided information that in general, the implementation of the project-based differentiated learning model has a significant effect on (increasing) creative thinking abilities and mastery of biology subject matter.

Kata Kunci: *differentiated learning, project-based learning, kurikulum merdeka, biology*