

ABSTRACT

Developing Problem Based Instruction Set on Rotation Dynamics Topics and Its Effect on Students' Competency in SMA.

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This research was conducted based on the observation which was done by the researcher in SMA in which the schools had not yet had a learning set which was suitable to what was required by the local-based curriculum and the characteristics of the students. This research was aimed to develop a problem-based instruction set which was valid, practical and effective and to see its effect on students' competency in Math.

This was a developmental research which used 4D model that consisted of Defining, Designing, Developing and Disseminating. In defining phase, the researcher decided and defined the learning requirements which were: syllabus, lesson plan, module, LKPD and evaluation. The validity, practicality and effectiveness of the learning set were seen in the developing phase.

The result of the research showed that the learning set which had been tested its validity, practicality and effectiveness by the scientists, practitioners and students was valid. The learning set was also very practical. The average score of the questionnaire for the teacher and the students also showed that the learning set which had been developed was also very effective. The effectiveness of the set also could be seen from the teacher's activity and the students' activity. The average score of the students in cognitive aspect was 79,62, in affective aspect was 85,35 and in psychomotor aspect was 85,88. Based on the result of the research had produced a learning set which was valid, practical and effective to be used in teaching-learning process in order to improve students' competency.

ABSTRAK

Pengembangan Perangkat Pembelajaran Model *Problem Based Instruction* Pada Materi Dinamika Rotasi dan Dampaknya Terhadap Kompetensi Fisika Peserta Didik SMA”.

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Penelitian ini dilatar belakangi belum tersedianya perangkat pembelajaran yang sesuai dengan tuntutan KTSP dan karakteristik peserta didik, yaitu mampu menciptakan proses pembelajaran yang aktif, kreatif efektif dan menyenangkan. Penelitian ini bertujuan untuk mengembangkan perangkat pembelajaran dan menguji validitas, praktikalitas, dan efektifitas perangkat pembelajaran yang dikembangkan dan untuk mengetahui dampaknya terhadap kompetensi.

Jenis penelitian yang digunakan adalah penelitian pengembangan (*Development Research*) menggunakan rancangan model 4-D yang terdiri dari 4 tahap pengembangan yaitu pendefinisian (*Define*), perancangan (*Design*), pengembangan (*Develop*) dan penyebaran (*Dessmination*). Pada tahap *define* menetapkan dan mendefinisikan syarat-syarat pembelajaran yaitu analisis kurikulum KTSP 2006 mata pelajaran fisika, analisis peserta didik dan analisis konsep. Tahap *design* menyiapkan perangkat pembelajaran (Silabus, RPP, Modul, LKPD dan penilaian). Tahap *development* melakukan validitas perangkat pembelajaran. praktikalitas dan efektifitas perangkat pembelajaran.

Hasil penelitian adalah perangkat pembelajaran fisika yang di uji kevalidan, kepraktisan dan keefektifan oleh pakar, praktisi dan peserta didik, menyatakan bahwa silabus, RPP, modul, LKPD dan penilaian dengan kategori sangat valid. Rata-rata angket kepraktisan perangkat pembelajaran oleh guru dan peserta didik dengan kategori produk yang dikembangkan sangat praktis. Rata-rata angket keefektifan perangkat pembelajaran oleh guru dan peserta didik berkategori sangat efektif. Selain itu keefektifan suatu perangkat dapat dilihat dari aktivitas guru dan peserta didik. Data pengolahan penilaian peserta didik di kelas XI IPA₃ pada ranah kognitif 79.62, ranah afektif 85.35 dan ranah psikomotor 85.88. Penelitian ini menghasilkan perangkat pembelajaran yang valid, praktis dan efektif ketika digunakan dalam proses pembelajaran dan meningkatkan kompetensi peserta didik.