

ABSTRAK

PENGARUH MODEL *PROBLEM BASED LEARNING* DENGAN METODE EKSPERIMEN TERHADAP KETERAMPILAN PROSES SAINS DAN HASIL BELAJAR SISWA KELAS X SMA STELLA DUCE 2 YOGYAKARTA PADA MATERI MOMENTUM DAN IMPULS

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Tujuan dari penelitian ini adalah untuk mengetahui: (1) pengaruh penerapan model *problem based learning* dengan metode eksperimen terhadap keterampilan proses sains pada materi momentum dan impuls siswa kelas X SMA Stella Duce 2 Yogyakarta; (2) Pengaruh model *problem based learning* dengan metode eksperimen terhadap hasil belajar pada materi momentum dan impuls siswa kelas X SMA Stella Duce 2 Yogyakarta

Subyek dalam penelitian ini adalah siswa kelas X MIPA 1 dan X MIPA 2 SMA Stella Duce 2 Yogyakarta yang berjumlah 63 siswa. Instrumen yang digunakan di dalam penelitian ini berupa soal *pre-test* dan *post-test* yaitu untuk mengetahui apa ada pengaruh penerapan model *problem based learning* terhadap hasil belajar, dan juga menggunakan lembar observasi serta LKPD untuk mengetahui pengaruh model *problem based learning* terhadap keterampilan proses sains siswa.

Setelah menggunakan uji *t*, hasil penelitian menunjukkan bahwa; (1) Model *problem based learning* dengan metode eksperimen dapat meningkatkan hasil belajar siswa dan terdapat perbedaan peningkatan antara kelas *problem based learning* dengan ceramah dimana model *problem based learning* mempunyai pengaruh lebih baik; (2) Terdapat perbedaan pengaruh model pembelajaran terhadap keterampilan proses sains, dimana model *problem based learning* mempunyai pengaruh lebih baik dari metode ceramah.

Kata kunci: model *problem based learning*, metode eksperimen, metode ceramah, keterampilan proses sains, hasil belajar, momentum dan impuls.

ABSTRACT

***THE EFFECT OF PROBLEM-BASED LEARNING MODEL USING
EXPERIMENTAL METHODS ON SCIENCE PROCESS SKILLS AND
LEARNING OUTCOMES OF CLASS X SMA STELLA DUCE 2
YOGYAKARTA ON MOMENTUM AND IMPULSE MATERIALS***

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This study aims to determine: (1) the effect of applying the problem based learning model using the experimental method on science process skills in the momentum and impulse material of class X SMA Stella Duce 2 Yogyakarta, (2) the effect of the problem based learning model using the experimental method on The subjects in this study were students of class X MIPA 1 and X MIPA 2 at SMA Stella Duce 2 Yogyakarta, totaling 63 students.

The instruments used in this study were in the form of pre-test and post-test questions, namely to find out whether there was an effect of applying the problem-based learning model on learning outcomes, and also used observation sheets and worksheets to determine the effect of problem-based learning models on students' science process skills.

After using the t test, the results showed that; (1) The problem based learning model with the experimental method can improve student learning outcomes and there is a difference in improvement between problem based learning classes and lectures where the problem based learning model has a better effect; (2) There are differences in the effect of the learning model on science process skills, where the problem based learning model has a better effect than the lecture method

Keywords: *problem based learning models, experimental methods, science process skills, learning outcomes, momentum and impulse.*