ABSTRAK

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Kata kunci : model *problem based e-learning*, kemampuan pemecahan masalah dan prestasi belajar

Tujuan penelitian ini adalah untuk mendeskripsikan perbedaan pengaruh model *Problem-Based e-Learning* (PBeL) terhadap kemampuan pemecahan masalah dan prestasi belajar siswa dalam pembelajaran fisika. Penelitian ini merupakan penelitian eksperimen semu dengan *non equivalent pretest posttest control group design*. Populasi penelitian ini adalah siswa kelas X MIPA SMA Negeri 1 Bebandem Tahun Pelajaran 2019/2020, yang terdiri atas tiga kelas (93 siswa). Sampel penelitian ini adalah dua kelas (61 siswa) yang ditetapkan menggunakan teknik *simple random sampling*, yang selanjutnya ditetapkan pula secara random untuk menentukan kelompok eksperimen dan kelompok kontrol. Data kemampuan pemecahan masalah dan prestasi belajar fisika dikumpulkan dengan tes essay. Analisis data menggunakan ujistatistik *Multivariat Analysis of Covarian* (MANCOVA) satu jalur. Pengujian hipotesis menggunakan taraf signifikansi 5%. Hasil penelitian menunjukkan bahwa (1) terdapat perbedaan kemampuan pemecahan masalah dan prestasi belajar Fisika secara bersama-sama antara siswa yang belajar dengan model *problem based e-learning* dan *direct e-learning* ($F = 16{,}249$; $p = 0{,}001 < 0{,}05$); (2) terdapat perbedaan kemampuan pemecahan masalah fisika antara siswa yang belajar dengan model *problem based e-learning* dan *direct e-learning* ($F = 15{,}888$; $p = 0{,}001 < 0{,}05$); (3) terdapat perbedaan prestasi belajar fisika antara siswa yang belajar dengan model *problem based e-learning* dan *direct e-learning* ($F = 9{,}643$; $p = 0{,}003 < 0{,}05$). Model *problem based e-learning* berpengaruh lebih besar dibandingkan dengan model *direct e-learning* terhadap kemampuan pemecahan masalah dan prestasi belajar fisika siswa kelas X SMA.

ABSTRACT

Sudarsana, I Putu. (2021). The Effect of Problem Based e-Learning on Problem Solving Skills anda Students Learning of Physics in Class X SMA. Thesis. Singaraja. Post-graduate program, Ganesha University of Education.

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Keywords: problem based e-learning model, problem solving skills and learning achievement

This research aimed at describing the effect of Problem Based e-Learning (PBeL) model on problem solving skills and students learning achievement of physics. This research is a quasi-experimental research with non equivalent pretest posttest control group design. The population of this research is the students of class X MIPA SMAN 1 Bebandem in the Academic Year 2019/2020 of three classes (93 students). The sample of this study was taken using a simple random sampling technique, two classes (61 students) are determined as samples, they are the experimental group and the control group. Problem solving skill and physics learning achievement data was collected with an essay test. Data analysis used the MANCOVA (Multivariate Analysis of Covarian) statistical test which involved one independent variable and two dependent variables with a significance level of 5% and continued with the assumption test. The results showed that (1) there are differences in problem solving skills and physics learning achievement together between students who learned with the problem based e-learning model and students who learned with the direct e-learning model ($F = 16{,}249$; $p = 0{,}001 < 0{,}05$); (2) there are differences in physics problem solving skills between students who learned with the problem based e-learning model and students learning with the direct e-learning model ($F = 15{,}888$; $p = 0{,}001 < 0{,}05$); (3) there are differences in physics learning achievement between students who learned with the problem based e-learning model and students learning with the direct e-learning model ($F = 9{,}643$; $p = 0{,}003 < 0{,}05$). Based on the results of the study it can be concluded that the problem based e-learning model influences problem solving skill and students learning achievement of physics in Class X SMA.