PENGARUH *E-LEARNING* BERBASIS INKUIRI TERBIMBING DAN *DIRECT INSTRUCTION* TERHADAP PEMAHAMAN KONSEP FISIKA SISWA SMA

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ABSTRAK

Penelitian ini bertujuan untuk mendeskripsikan perbedaan pemahaman konsep fisika siswa di SMA antara siswa yang belajar dengan model *e-learning* berbasis inkuiri terbimbing dan model *e-learning direct instruction.* Jenis penelitian ini adalah eksperimen semu (*quasi-experiment*) dengan desain *one way pretest-posttest non-equivalent control group design*. Populasi dalam penelitian ini yaitu seluruh siswa kelas X MIPA di SMA Negeri 1 Bangli yang terdistribusi dalam 4 kelas dengan anggota 143 siswa. Sampel dalam penelitian ini diambil dengan teknik *random assignment.* Sampel terdiri dari 2 kelas yaitu kelas X MIPA 1 sebagai kelas eksperimen berjumlah 35 orang dan kelas X MIPA 3 sebagai kelas kontrol berjumlah 36 orang. Data yang dikumpulkan dalam penelitian ini adalah pemahaman konsep fisika siswa, yang diperoleh dengan tes pemahaman konsep fisika siswa. Tes pemahaman konsep yang digunakan dalam bentuk *essay* yang terdiri dari 18 butir soal, konsistensi internal butir tes bergerak dari 0,31 s/d 0,50 dan reabilitas tes adalah 0,699. Data dianalisis berdasarkan analisis deskriptif dan ANAKOVA. Sebagai tindak lanjut ANAKOVA, digunakan *Least Significant Difference* (LSD) untuk menguji komparasi nilai rata-rata kelompok perlakuan. Semua pengujian hipotesis dilakukan pada taraf signifikansi 5%, namun sebelum uji hipotesis dilakukan uji asumsi, yang meliputi uji normalitas, uji homogenitas, dan uji linearitas. Hasil penelitian menunjukkan adanya perbedaan pemahaman konsep antara siswa yang belajar dengan model *e-learning* berbasis inkuiri terbimbing dan model *e-learning* berbasis *direct instruction* ($F = 997{,}308$; $p<0{,}05$). Hasil uji LSD menunjukkan pemahaman konsep fisika siswa yang belajar dengan model *e-learning* berbasis inkuiri terbimbing lebih tinggi dari model *e-learning* berbasis *direct instruction* (LSD = 0,870).

Kata-kata kunci; model *e-learning* berbasis inkuiri terbimbing, model *e-learning* berbasis *direct instruction*, pemahaman konsep.

THE EFFECT OF GUIDED INQUIRY E-LEARNING TOWARDS STUDENTNS' PHYSICS CONCEPT UNDERSTANDING IN SENIOR HIGH SCHOOL

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ABSTRACT

This study aims to describe the differences in understanding of physics concepts of students in high school between students who study with e-learning models based on guided inquiry and e-learning direct instruction models. This type of research is a quasi-experimental with a one way pretest-posttest non-equivalent control group design. The population in this study were all students of class X MIPA in SMA Negeri 1 Bangli which were distributed in 4 classes with 143 students. The sample in this study was taken by random assignment technique. The sample consisted of 2 classes, namely class X MIPA 1 as an experimental class totaling 35 people and class X MIPA 3 as a control class totaling 36 people. The data collected in this study is an understanding of students 'physics concepts, which are obtained by tests of students' understanding of physics concepts. The concept understanding test used in the form of essays consisted of 18 items, internal consistency of test items moved from 0.31 to 0.50 and the reliability of the test was 0.699. Data were analyzed based on descriptive analysis and ANAKOVA. As a follow-up to ANAKOVA, a Least Significant Difference (LSD) was used to test the comparison of the mean values of the treatment groups. All hypothesis testing is performed at a significance level of 5%, but before the hypothesis testing is carried out an assumption test, which includes the normality test, homogeneity test, and linearity test. The results showed a difference in concept understanding between students learning with the guided inquiry-based e-learning model and the e-learning model based on direct instruction ($F = 997,308$; $p < 0.05$). The LSD test results show that the understanding of the physics concepts of students who learn with the guided inquiry-based e-learning model is higher than the e-learning model based on direct instruction (LSD = 0.870).

Keywords: *guided inquiry based e-learning model, direct instruction based e-learning model, concept understanding*