Implementasi Model *Problem Based Learning* (PBL) Berbantuan Media Relai untuk Meningkatkan Pemahaman Konsep Digital dan *Attitude Towards Physics* Peserta Didik Madrasah Aliyah pada Materi Teknologi Digital

Marlius
1503367

Pembimbing I : Dr. Ida Kaniawati, M.Si
Pembimbing II : Dr. Selly Feranie, M.Si
Program Studi Pendidikan Fisika, Sekolah Pascasarjana UPI

Abstrak

Penelitian ini bertujuan untuk mengetahui peningkatan pemahaman konsep digital dan melihat profil *attitude towards physics* pada materi teknologi digital, antara peserta didik yang mendapatkan pembelajaran fisika dengan model PBL berbantuan media relai dibandingkan peserta didik yang mendapatkan model PBL tanpa berbantuan media relai. Metode yang digunakan dalam penelitian adalah eksperimen semu dengan *randomized control group pretest–posttest design.* Subjek penelitian adalah seluruh peserta didik kelas XII semester genap tahun ajaran 2016/2017 pada salah satu Madrasah Aliyah di Jawa Barat dengan sampel sebanyak dua kelas yaitu kelas eksperimen (N=29) dan kelas kontrol (N=29) yang dipilih secara acak. Pengumpulan data pemahaman konsep digital dan data *attitude towards physics meng*gunakan instrumen tes pemahaman konsep berbentuk pilihan ganda dan instrumen skala sikap. Untuk menentukan peningkatan pemahaman konsep digital peserta didik maka dilakukan perhitungan rata-rata N-gain. Sedangkan melihat profil *attitude towards physics* dilakukan dengan menghitung skor persentase tanggapan pada setiap pernyataan skala sikap. Peningkatan pemahaman konsep digital terlihat dari perolehan rata-rata N-gain 0,57 dikelas yang mendapatkan pembelajaran PBL berbantuan media relai dan 0,31 di kelas PBL tanpa berbantuan media relai. Skor persentase tanggapan positif peserta didik terhadap fisika yang mendapatkan pembelajaran model PBL berbantuan media relai sebesar 80.88% lebih baik dibandingkan peserta didik yang mendapatkan pembelajaran model PBL tanpa berbantuan media relai dengan skor 74,69%. Hasil uji hipotesis menggunakan uji-t dua sampel independen dengan SPSS 22 menunjukkan peningkatan pemahaman konsep digital antara peserta didik yang mendapatkan pembelajaran model PBL berbantuan media relai lebih tinggi dan berbeda secara signifikan dibandingkan dengan peserta didik yang mendapatkan pembelajaran model PBL tanpa berbantuan media relai.

Kata Kunci: Media relai, *Problem Based Learning*, pemahaman konsep digital, *attitude towards physics*, peserta didik MA(Madrasah Aliyah).

The Implementation of Problem Based Learning Model Assisted Relay Media to Improve MA (Islamic Senior High School) Learners' Conceptual Understanding of Digital and Attitude towards Physics

Marlius
1503367

Pembimbing I : Dr. Ida Kaniawati, M.Si
Pembimbing II : Dr. Selly Feranie, M.Si
Program Studi Pendidikan Fisika, Sekolah Pascasarjana UPI

Abstract

This study aims at investigating the improvement of conceptual understanding of digital and to see attitude profile towards physics on digital technology material, between learners who have received physics lesson through the application of PBL models assisted by relay media compared learners who have received lesson through the application of PBL models without relay's media assistance. The method used in this study was a quasy-experiment with randomized control group pretest-posttest design. The research subjects were all learners of grade XII at even semester 2016/2017 school year in one of the MA (Islamic Senior High School) in West Java. The samples were two classes consisting of the experimental class (N=29) and the control class (N=29) which were randomly selected. Test of the instrument's conceptual understanding of digital in the form of multiple choices and scale of attitude instrument were used in order to collect the data of the conceptual understanding of digital and attitude towards physics. To determine the increase in understanding of digital concepts of learners, the calculation of N-gain averages is carried out. Whereas to describe the attitude profile towards physics is done by calculating the percentage score of responses on each attitude scale statement. Improved understanding of digital concepts can be seen from the average N-gain of 0.57 in the class that gets PBL learning assisted by media relays and 0.31 in PBL classes without media relay assistance. The percentage score of the learners' positive responses to physics who learned PBL-assisted media models of relay was 80.88% better than learners who received PBL models learning without media relay assistance with a score of 74.69. Hypothesis test results using two independent samples t-test with SPSS 22 showed an increase in conceptual understanding of digital between learners who learned PBL assisted media relay models were significantly higher and significantly different compared to learners who received PBL models learning without media relay assistance.

Keywords: *Relay media, Problem Based Learning, conceptual understanding of digital, attitude towards physics, learners of MA (Islamic senior high school)*