

Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan e-LKPD berbasis model problem based learning berbantuan PhET pada materi pemanasan global terhadap keterampilan berpikir kritis peserta didik. Penelitian ini dilaksanakan di SMA Negeri 1 Seputih Raman semester ganjil tahun ajaran 2023/2024, dengan sampel penelitian peserta didik kelas X2 dan X4. Desain penelitian yang digunakan adalah non-equivalent control group design, dengan variabel bebas (eLKPD berbantuan PhET), variabel terikat (keterampilan berpikir kritis), dan variabel moderator (model PBL). Berdasarkan hasil uji penelitian yang telah dilakukan, diketahui bahwa terdapat pengaruh pada penggunaan e-LKPD berbasis model pembelajaran problem based learning berbantuan PhET pada materi pemanasan global terhadap keterampilan berpikir kritis peserta didik. Hal ini ditandai dengan hasil uji n-gain total yang diperoleh kelas eksperimen sebesar 0,498 dengan kategori sedang dan kelas kontrol sebesar 0,299 dengan kategori rendah. Hasil uji n-gain indikator involve basic clarificatio, the bases for decision, inference, advanced clarification, supposition and integration pada kelas eksperimen juga mendapatkan nilai yang lebih tinggi dibandingkan kelas kontrol dengan perbedaan yang cukup signifikan, selain itu hasil dari uji Effect Sizememperoleh skor 1,78 dengan interpretasi sangat tinggi sehingga penggunaan e- LKPD berbasis model problem based learning berbantuan PhET pada kelas eksperimen lebih efektif daripada LKPD konvensional berbantuan video pada kelas kontrol.

Kata Kunci : e-lkpd, keterampilan berpikir kritis, Problem based learning, phet.

Abstract

The aim this research to determine the effect of using e-worksheets with the PBL model assisted by PhET on global warming material on critical thinking skills. The sample in this study: students in classes X2 and X4 of SMA Negeri 1 Seputih Raman odd semester of the 2023/2024 academic year. This research uses a non-equivalent control group design, with independent variable (e-worksheets assisted by PhET), dependent variable (critical thinking skills), and moderator variable (PBL model). Based on the results of research tests and discussions that have been carried out, it's concluded that there is an influence of the use of eworksheets with the PhET-assisted PBL model on global warming material on students' critical thinking skills. This is indicated by the results of the n-gain test indicators involving basic clarification, the bases for a decision, inference, advanced clarification, supposition and integration in the experimental class getting a higher value than the control class with quite a significant difference, apart from that the results of the test Effect Size obtained a score of 1.78 with a very high interpretation so that the use of PhET-assisted PBL-based e-worksheets in the experimental class was more effective than conventional video-assisted worksheets in the control class

Keyword: e-worksheet; critical thinking skills; problem based learning; phet.