

**PENGARUH PENERAPAN *HOME-BASED EXPERIMENT* TENTANG
BIOBATERAI MELALUI *E-LEARNING* TERHADAP KETERAMPILAN
BERPIKIR KRITIS SISWA**

SKRIPSI

diajukan untuk memenuhi sebagian syarat untuk memperoleh
gelar Sarjana (S.Pd.)



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Skripsi yang di ajukan untuk memenuhi sebagian syarat untuk memperoleh
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Abstrak

Penelitian ini bertujuan untuk menyelidiki pengaruh perkembangan keterampilan berpikir kritis siswa SMA dengan penerapan *home-based experiment* pada proyek biobaterai melalui *e-learning*. Keterampilan berpikir kritis merupakan salah satu keterampilan yang perlu di miliki siswa pada abad 21. Metode penelitian yang digunakan adalah pre-eksperimental dengan desain *One group pre-test post-test*. Partisipasi penelitian adalah tiga kelas X digunakan dalam penelitian yang terdiri dari 106 orang siswa. Sebanyak 53 dari 106 siswa digunakan sebagai data penelitian karena tidak semua data dapat digunakan. Instrumen yang digunakan berupa tes tulis keterampilan berpikir kritis dari *21st century skills standard rubrics*, penilaian kinerja siswa mengadaptasi keterampilan proses capaian pembelajaran kurikulum prototipe biologi SMA kelas X dan instrumen non-tes berupa angket respon siswa terhadap pembelajaran *home-based experiment*. Penelitian dilakukan dengan sistem pembelajaran jarak jauh (daring) dengan pendekatan model inkuiri terbimbing. Hasil analisis tes keterampilan berpikir kritis menunjukkan nilai rata-rata pada *pre-test* 54,60, *post-test* 66,45, dan *n-gain* 0,26 (kategori rendah). Data penilaian kinerja siswa dengan skor 74,88 atau kriteria baik. Terakhir data respon siswa menunjukkan siswa memberikan respon positif terhadap pelaksanaan *home-based experiment* melalui *e-learning*. Maka dapat disimpulkan penerapan *home-based experiment* belum mencapai hasil optimal, diperlukan waktu lebih lama untuk mengembangkan pembelajaran yang memberikan stimulus dan peningkatan yang lebih baik terhadap keterampilan berpikir kritis siswa.

Kata Kunci: *Home-based experiment*, Kemampuan Berpikir Kritis , *E-learning*, Inkuiri Terbimbing, Penilaian Kinerja Siswa

Abstract

This research was aimed to analyze an effect of critical thinking skills of high school students by applying *home-based experiments* on biobattery projects in *e-learning*. The ability to think critically is one of the skills that students need to have in the 21st century. The research method used is pre-experimental with a one group pre-test post-test design. Research participation was three classes X used in the study consisting of 106 students. A total of 53 out of 106 students were used as research data because not all data could be used. The instruments used are a written test of critical thinking ability from 21st century skills standard rubrics, assessment of student performance adapting the learning outcomes process skills of the high school biology prototype curriculum class X and non-test instruments in the form of questionnaires of student responses to *home-based experiment* learning. The research was conducted with a distance learning system (online) with a guided inquiry model approach. The results of the critical thinking ability test analysis showed an average score at pre-test 54.60, post-test 66.45, and n-gain 0.26 (low category). Student performance appraisal data with a score of 74.88 or good criteria. Finally, student response data shows that students give a positive response to the implementation of *home-based experiments* in *e-learning*. So it can be concluded that the application of *home-based experiments* has not achieved optimal results, it takes longer to develop learning that provides a better stimulus and improvement of students' critical thinking skills.

Keywords: *Home-based experiment*, Critical Thinking Ability, *E-learning*, Guided Inquiry, Student Performance Assessment

Daftar Isi

LEMBAR HAK CIPTA	ii
LEMBAR PENGESAHAN	iii
LEMBAR PERNYATAAN KEASLIAN PENELITIAN	iv
KATA PENGANTAR	v
UCAPAN TERIMA KASIH	vi
Abstrak	vii
Abstract	viii
Daftar Gambar	xi
Daftar Tabel	xii
BAB I PENDAHULUAN	1
1.1. Latar Belakang Penelitian.....	1
1.2. Rumusan Masalah Penelitian.....	4
1.3. Tujuan Penelitian.....	5
1.4. Manfaat Penelitian.....	5
1.5. Batasan Masalah.....	5
1.6. Hipotesis	6
1.7. Asumsi	6
1.8. Struktur Organisasi Skripsi.....	6
BAB II KAJIAN PUSTAKA	8
2.1. Pembelajaran Biologi Melalui <i>Home-based experiment</i>	8
2.2. Pembelajaran Inkuiri Laboratorium.....	10
2.3. Biologi Melalui <i>E-learning</i>	12
2.4. Keterampilan Berpikir Kritis	14
2.5. Kajian Pembelajaran Pada Materi Pencemaran Lingkungan.....	16
2.5.1. Limbah biomassa sebagai biobaterai	18
BAB METODE PENELITIAN	21

3.1.	Definisi Operasional.....	21
3.2.	Desain Penelitian.....	21
3.3.	Populasi dan Sampel	22
3.4.	Prosedur Penelitian.....	23
3.5.	Alur Penelitian	26
3.6.	Instrumen Penelitian.....	27
3.7.	Validasi Instrumen Penelitian.....	31
3.8.	Analisis Data	35
BAB TEMUAN DAN PEMBAHASAN		38
4.1.	Temuan Penerapan <i>Home-based experiment</i> Melalui <i>e-learning</i>	38
4.2.	Temuan Penelitian.....	44
4.1.1.	Keterampilan berpikir kritis siswa.....	44
4.1.2.	Penilaian Kinerja Siswa	48
4.1.3.	Survei pembelajaran <i>Home-based experiment</i> Melalui <i>e-learning</i> .	49
4.3.	Pembahasan Penelitian	50
4.2.1.	Kemampuan Berpikir Kritis	50
4.2.2.	Penilaian Kinerja Siswa	57
4.2.3.	Survei Pembelajaran <i>Home-based experiment</i> Melalui <i>e-learning</i> .	65
BAB SIMPULAN, IMPLIKASI DAN REKOMENDASI		68
5.1.	Simpulan.....	68
5.2.	Implikasi	69
5.3.	Rekomendasi.....	69
LAMPIRAN-LAMPIRAN		77

Daftar Gambar

Gambar 2.1 Enam Hal Yang Perlu Dipertimbangkan Dalam Mengembangkan Pembelajaran <i>Home-based experiment</i> Dalam Biologi (Robledo, 2021)	8
Gambar 2.2 Prinsip kerja Baterai konvensional (Siddiqui & Pathrikar, 2013)	19
Gambar 3.3 Alur penelitian.....	26
Gambar 4.1 Power Point Materi Limbah Dan Daur Ulang Limbah	39
Gambar 4.2 Hasil Penyajian Data Kelompok 2 X MIPA 6 dan Kelompok 3 X MIPA 7	43
Gambar 4.3 Bagan Hasil Keterampilan berpikir kritis siswa Pada <i>Pre-test</i> Dan <i>Post-test</i>	46
Gambar 4.4 Bagan Hasil Nilai <i>N-gain</i> Keterampilan berpikir kritis siswa Dengan <i>Home-based experiment</i> Melalui <i>e-learning</i>	47
Gambar 4.5 Hasil rancangan judul dan rumusan masalah pada kegiatan <i>home-based experiment</i> . a) kelompok 3 X MIPA 5; b) kelompok 3 X Mipa 7	59
Gambar 4.6 Hasil Rancangan Eksperimen Biobaterai Kelompok 3 X MIPA 6; a) Menentukan Variabel Berdasarkan Fenomena Yang Disajikan; b) Menentukan Alat Dan Bahan	61
Gambar 4.7 a) Hasil Penyajian Tabel Dan b) Pembahasan Temuan Biobaterai Kelompok 2 X MIPA 7.....	62
Gambar 4.8 Laporan Presentasi Yang Dilaksanakan Oleh Kelompok 5 X MIPA 7	63
Gambar 4.9 cuplikan penayangan video selama pelaksanaan eksperimen oleh kelompok 6 X MIPA 7	64

Daftar Tabel

Tabel 3.1 Rancangan Penelitian.....	22
Tabel 3.2 Rencana Pelaksanaan Penelitian	24
Tabel 3.3 Komponen dan Indikator Keterampilan Abad 21 Siswa.....	27
Tabel 3.4 Kisi-kisi Instrumen Keterampilan Berpikir Kritis	28
Tabel 3.5 Komponen Indikator Penilaian Kinerja Siswa.....	28
Tabel 3.6 Kisi-kisi Angket Respon Siswa.....	30
Tabel 3.7 Hubungan Home-based Experiment Dengan Kemampuan Pada Instrumen Penelitian	30
Tabel 3.8 Kriteria Kecocokan Butir Soal (Item Fit)	32
Tabel 3.9 Hasil Validitas Soal.....	32
Tabel 3.10 Kriteria Koefisien Reliabilitas Tes	33
Tabel 3.11 Kriteria Daya Pembeda Soal	33
Tabel 3.12 Kriteria Daya Pembeda Soal	33
Tabel 3.13 Kriteria Tingkat Kesukaran Soal.....	34
Tabel 3.14 Tingkat Kesukaran Soal	34
Tabel 3.15 Kriteria Skor N-gain.....	35
Tabel 3.16 Kriteria Ketuntasan belajar.....	35
Tabel 3.17 Kriteria Penilaian Kinerja Siswa	37
Tabel 3.18 Skala Likert Hasil Angket.....	37
Tabel 3.19 Kategori Hasil angket Respon Siswa.....	37
Tabel 4.1 Rancangan Home-Based Experiment Pada Biobaterai Yang Dilaksanakan Oleh Siswa	41
Tabel 4.2 Hasil Tes Keterampilan berpikir kritis siswa.....	47
Tabel 4.3 Penilaian Kinerja Siswa	48
Tabel 4.4 Hasil Survei Pembelajaran <i>Home-based experiment</i> Melalui <i>e-learning</i>	49

Daftar Lampiran

Lampiran 1 Rencana Pelaksanaan Pembelajaran	77
Lampiran 2 Instrumen Penelitian	84
Lampiran 3 Hasil Uji Coba Instrumen Penelitian Keterampilan Berpikir Kritis	100
Lampiran 4 Lembar Kerja Peserta Didik	101
Lampiran 5 Hasil Ketuntasan Belajar, <i>Pre-test</i> Dan <i>Post-test</i>	105
Lampiran 6 Hasil Penilaian Kinerja Siswa.....	108
Lampiran 7 Hasil Survei Pembelajaran.....	113
Lampiran 8 Penskoran Hasil Survei Pembelajaran	117
Lampiran 9 Contoh Hasil Rancangan biobaterai pada LKPD siswa.....	119
Lampiran 10 Contoh Penyajian hasil biobaterai Siswa	120

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