

**IMPLEMENTASI PEMBELAJARAN SIKLUS AIR DENGAN
MODEL *CONTEXTUAL TEACHING AND LEARNING* (CTL)
BERBANTUAN MEDIA DIORAMA UNTUK PENGUASAAN
KONSEP SISWA SEKOLAH DASAR**

(Penelitian *Time Series Design* pada Materi Siklus Air di kelas IV Sekolah Dasar)

SKRIPSI

Diajukan untuk Memenuhi Salah Satu Syarat Memperoleh
Gelar Sarjana Pendidikan pada Program Studi
Pendidikan Guru Sekolah Dasar



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KAMPUS CIBIRU
UNIVERSITAS PENDIDIKAN INDONESIA
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Sebuah laporan penelitian skripsi yang diajukan untuk memenuhi sebagian syarat memperoleh gelar Sarjana pada Program Studi Pendidikan Guru Sekolah Dasar

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ABSTRAK

Penelitian ini dilatarbelakangi oleh rendahnya pemahaman siswa dalam memahami konsep materi siklus air yang kompleks dan abstrak. Bertujuan untuk mengetahui pengaruh implementasi pembelajaran siklus air menggunakan model *Contextual Teaching and Learning* (CTL) berbantuan media diorama berbasis *Augmented Reality* (AR) terhadap penguasaan konsep siswa sekolah dasar. Penelitian ini menggunakan pendekatan kuantitatif dengan desain eksperimen *time series*, yang melibatkan satu kali *pre-test* dan tiga kali *post-test* setelah setiap tahapan perlakuan. Instrumen yang digunakan mencakup tes tertulis untuk mengukur penguasaan konsep pada level C4 (menganalisis), C5 (mengevaluasi), dan C6 (mengkreasikan), angket respon siswa terhadap media pembelajaran, serta lembar observasi keterlaksanaan *Sintaks* model CTL oleh guru. Data dianalisis menggunakan perhitungan N-Gain untuk mengukur efektivitas peningkatan hasil belajar dan uji ANOVA untuk melihat signifikansi perbedaan antar waktu tes. Hasil penelitian menunjukkan bahwa model CTL dengan dukungan media diorama AR secara signifikan meningkatkan penguasaan konsep siswa. Uji ANOVA menunjukkan nilai $F = 181,344$ dan $p = 0,000$, menandakan perbedaan yang sangat signifikan. Hasil N-Gain meningkat secara bertahap dari kategori rendah (0,2163) pada materi fenomena kekeringan dan banjir, sedang (0,3705) pada materi badan air, hingga tinggi (0,6216) pada materi peran air dalam ekosistem. Observasi keterlaksanaan menunjukkan bahwa sebagian besar *Sintaks* CTL terlaksana sangat baik, terutama pada *Sintaks constructivism, inquiry, dan learning community*. Selain itu, respon siswa terhadap media juga sangat positif pada aspek visualisasi dan interaktivitas. Dengan demikian, pembelajaran berbasis CTL dan media AR terbukti efektif menciptakan pengalaman belajar yang kontekstual, bermakna, dan menyenangkan dalam memahami konsep siklus air.

Kata kunci: *Contextual Teaching and Learning*, media diorama, *Augmented Reality*, penguasaan konsep, siklus air

**IMPLEMENTATION OF WATER CYCLE LEARNING WITH THE CONTEXTUAL
TEACHING AND LEARNING (CTL) MODEL ASSISTED BY DIORAMA MEDIA
FOR ELEMENTARY SCHOOL STUDENTS' CONCEPT MASTERY**

*(A Time Series Design Study on the Water Cycle Topic in Grade IV of Elementary
School)*

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ABSTRACT

This study was motivated by the low level of students' understanding of the complex and abstract concepts of the water cycle. It aims to investigate the effect of implementing water cycle instruction using the Contextual Teaching and Learning (CTL) model supported by Augmented Reality (AR)-based diorama media on elementary students' conceptual understanding. The study employed a quantitative approach with a time series experimental design, involving one pre-test and three post-tests conducted after each treatment phase. The instruments used included written tests to measure conceptual understanding at levels C4 (analyzing), C5 (evaluating), and C6 (creating), student response questionnaires toward the learning media, and observation sheets on the implementation of CTL syntax by the teacher. Data were analyzed using the N-Gain formula to assess the effectiveness of learning improvement and ANOVA tests to examine the significance of differences across test times. The results revealed that the CTL model supported by AR diorama media significantly improved students' conceptual understanding. The ANOVA test showed an F value of 181.344 and a p-value of 0.000, indicating a highly significant difference. The N-Gain scores increased progressively from low (0.2163) in the topic of drought and flood phenomena, to medium (0.3705) in the topic of bodies of water, and high (0.6216) in the topic of the role of water in ecosystems. Observations showed that most CTL syntax components were implemented very well, particularly the constructivism, inquiry, and learning community stages. Moreover, students' responses to the media were highly positive, especially regarding visualization and interactivity. Therefore, CTL-based instruction combined with AR media has been proven effective in creating contextual, meaningful, and engaging learning experiences in understanding the water cycle.

Keywords: Contextual Teaching and Learning, Diorama Media, Augmented Reality, Concept Mastery, Water Cycle

DAFTAR ISI

LEMBAR PERNYATAAN	Error! Bookmark not defined.
MOTTO HIDUP	Error! Bookmark not defined.
KATA PENGANTAR.....	Error! Bookmark not defined.
ABSTRAK	4
DAFTAR ISI.....	6
DAFTAR TABEL	8
DAFTAR GAMBAR.....	9
DAFTAR LAMPIRAN	10
BAB I.....	Error! Bookmark not defined.
PENDAHULUAN	Error! Bookmark not defined.
1.1 Latar Belakang	Error! Bookmark not defined.
1.2 Rumusan Masalah	Error! Bookmark not defined.
1.3 Tujuan Penelitian	Error! Bookmark not defined.
1.4 Manfaat Penelitian	Error! Bookmark not defined.
1.5 Ruang Lingkup Penelitian.....	Error! Bookmark not defined.
BAB II	Error! Bookmark not defined.
KAJIAN PUSTAKA	Error! Bookmark not defined.
2.1 Landasan Teori.....	Error! Bookmark not defined.
2.1.1 Pembelajaran IPA di Sekolah Dasar	Error! Bookmark not defined.
2.1.2 Model Pembelajaran <i>Contextual Teaching and Learning</i>	Error! Bookmark not defined.
2.1.3 Media Pembelajaran Diorama.....	Error! Bookmark not defined.
2.1.4 Materi Siklus Air.....	Error! Bookmark not defined.
2.1.5 Integrasi Model CTL dan Media Diorama.....	Error! Bookmark not defined.
2.1.6 Penguasaan Konsep Siswa Sekolah Dasar	Error! Bookmark not defined.
2.2 Penelitian Terdahulu	Error! Bookmark not defined.
2.3 Kerangka Berpikir.....	Error! Bookmark not defined.
BAB III.....	Error! Bookmark not defined.
METODE PENELITIAN	Error! Bookmark not defined.
3.1 Desain Penelitian.....	Error! Bookmark not defined.
3.2 Populasi dan Sampel	Error! Bookmark not defined.
3.3 Instrumen Penelitian	Error! Bookmark not defined.
3.4 Teknik Pengumpulan Data.....	Error! Bookmark not defined.

3.4.1 Tes Tertulis	Error! Bookmark not defined.
3.4.2 Angket.....	Error! Bookmark not defined.
3.4.3 Observasi.....	Error! Bookmark not defined.
3.4.4 Dokumentasi	Error! Bookmark not defined.
3.5 Uji Validitas dan Uji Realibilitas	Error! Bookmark not defined.
3.5.1 Uji Validitas	Error! Bookmark not defined.
3.5.2 Uji Realibilitas	Error! Bookmark not defined.
3.6 Teknik Analisis Data.....	Error! Bookmark not defined.
3.6.1 Teknik Analisis Data Instrumen	Error! Bookmark not defined.
3.6.2 Teknik Analisis Data Angket.....	Error! Bookmark not defined.
3.6.3 Teknik Analisis Data Observasi.....	Error! Bookmark not defined.
3.7 Prosedur Penelitian	Error! Bookmark not defined.
3.7.1 Tahap Persiapan Penelitian	Error! Bookmark not defined.
3.7.2 Tahap Pelaksanaan Penelitian.....	Error! Bookmark not defined.
3.7.3 Tahap Akhir Penelitian	Error! Bookmark not defined.
BAB IV	Error! Bookmark not defined.
HASIL TEMUAN DAN PEMBAHASAN	Error! Bookmark not defined.
4.1 Profil Implementasi Model Pembelajaran CTL Berbantuan Media Diorama Siklus Air Terhadap Penguasaan Konsep Siswa.....	Error! Bookmark not defined.
4.2 Efektifitas Penggunaan Model CTL Berbantuan Media Diorama Terhadap Penguasaan Konsep Materi Siklus Air.....	Error! Bookmark not defined.
4.3 Peningkatan Penguasaan Konsep Siswa Terhadap Materi Siklus Air dengan Model CTL Berbantuan Media Diorama	Error! Bookmark not defined.
4.3.1 Analisis Hasil Uji N-Gain	Error! Bookmark not defined.
4.3.2 Analisis Hasil Rata-rata Indikator Penguasaan Konsep Pada Tes 1	Error! Bookmark not defined.
4.3.3 Analisis Hasil Rata-rata Indikator Penguasaan Konsep Pada Tes 2	Error! Bookmark not defined.
4.3.4 Analisis Hasil Rata-rata Indikator Penguasaan Konsep Pada Tes 3	Error! Bookmark not defined.
4.3.5 Analisis Hasil Rata-rata Indikator Penguasaan Konsep Pada Tes 4	Error! Bookmark not defined.
4.4 Pembahasan.....	Error! Bookmark not defined.
BAB V	Error! Bookmark not defined.
KESIMPULAN, IMPLIKASI, DAN REKOMENDASI...Error! Bookmark not defined.	
5.1 Kesimpulan	Error! Bookmark not defined.
5.2 Implikasi	Error! Bookmark not defined.
5.3 Rekomendasi.....	Error! Bookmark not defined.

DAFTAR PUSTAKA.....	8
LAMPIRAN.....	Error! Bookmark not defined.
RIWAYAT HIDUP.....	Error! Bookmark not defined.

DAFTAR TABEL

Gambar 2. 1 Kerangka berpikir	Error! Bookmark not defined.
Gambar 3. 1 Desain Penelitian.....	Error! Bookmark not defined.
Gambar 3. 2 Alur Penelitian.....	Error! Bookmark not defined.
Gambar 4. 1 Hasil Penggunaan Media Diorama berbasis Augmented Reality oleh Siswa.....	Error! Bookmark not defined.
Gambar 4. 2 Dokumentasi Penggunaan Media Diorama Berbasis AR.....	Error! Bookmark not defined.
Gambar 4. 3 Grafik Distribusi Rata-rata Penguasaan Konsep Siswa Pada Tes 1	Error! Bookmark not defined.
Gambar 4. 4 Grafik Distribusi Rata-rata Penguasaan Konsep Siswa Pada Tes 2	Error! Bookmark not defined.
Gambar 4. 5 Grafik Distribusi Penguasaan Konsep Siswa Pada Tes 3.....	Error! Bookmark not defined.
Gambar 4. 6 Grafik Distribusi Penguasaan Konsep Siswa Pada Tes 4.....	Error! Bookmark not defined.
Gambar 4. 7 Grafik Distribusi Perbandingan Rata-rata Penguasaan Konsep pada Setiap Tes.....	Error! Bookmark not defined.

DAFTAR GAMBAR

Gambar 2. 1 Kerangka berpikir.....	Error! Bookmark not defined.
Gambar 3. 1 Desain Penelitian.....	
Error! Bookmark not defined.	
Gambar 3. 2 Alur Penelitian	Error! Bookmark not defined.
Gambar 4. 1 Hasil Penggunaan Media Diorama berbasis Augmented Reality oleh Siswa	Error! Bookmark not defined.
Error! Bookmark not defined.	
Gambar 4. 2 Dokumentasi Penggunaan Media Diorama Berbasis AR...	Error! Bookmark not defined.
Gambar 4. 3 Grafik Distribusi Rata-rata Penguasaan Konsep Siswa Pada Tes 1	Error! Bookmark not defined.
Gambar 4. 4 Grafik Distribusi Rata-rata Penguasaan Konsep Siswa Pada Tes 2	Error! Bookmark not defined.
Gambar 4. 5 Grafik Distribusi Penguasaan Konsep Siswa Pada Tes 3...	Error! Bookmark not defined.
Gambar 4. 6 Grafik Distribusi Penguasaan Konsep Siswa Pada Tes 4...	Error! Bookmark not defined.
Gambar 4. 7 Grafik Distribusi Perbandingan Rata-rata Penguasaan Konsep pada Setiap Tes.....	Error! Bookmark not defined.

DAFTAR LAMPIRAN

Lampiran 1 Surat Pengangkatan Dosen Pembimbing.....	Error! Bookmark not defined.
Lampiran 2 Surat Izin Penelitian	Error! Bookmark not defined.
Lampiran 3 Surat Keterangan Selesai Penelitian.....	Error! Bookmark not defined.
Lampiran 4 Kartu Bimbingan Skripsi.....	Error! Bookmark not defined.
Lampiran 5 Tampilan dan Fitur Media Diorama Siklus Air Berbasis Augmented Reality	Error! Bookmark not defined.
Lampiran 6 Garis Besar Program Media	Error! Bookmark not defined.
Lampiran 7 Hasil Observasi Guru Mengenai Model Contextual Teaching and Learning	Error! Bookmark not defined.
Lampiran 8 Kisi-kisi Soal Tes 1, 2, 3, dan 4 Materi Siklus Air.....	Error! Bookmark not defined.
Lampiran 9 Pedoman Penskoran Tes.....	Error! Bookmark not defined.
Lampiran 10 Soal Tes	Error! Bookmark not defined.
Lampiran 11 Hasil Tes 1, 2, 3 dan 4	Error! Bookmark not defined.
Lampiran 12 Rekapitulasi Hasil Nilai Tes 1, 2, 3, dan 4 ...	Error! Bookmark not defined.
Lampiran 13 Modul Ajar	Error! Bookmark not defined.
Lampiran 14 Hasil LKPD Siswa.....	Error! Bookmark not defined.
Lampiran 15 Kisi-kisi Angket Respon Siswa Terhadap Media Diorama.....	Error! Bookmark not defined.
Lampiran 16 Angket Respon Siswa Terhadap Media Diorama.....	Error! Bookmark not defined.
Lampiran 17 Hasil Angket Respon Siswa Terhadap Media	Error! Bookmark not defined.
Lampiran 18 Rekapitulasi Hasil Angket Respon Siswa Terhadap Media	Error! Bookmark not defined.
Lampiran 19 Surat Permohonan Validasi Ahli	Error! Bookmark not defined.

Lampiran 20 Hasil Validasi Ahli Media	Error! Bookmark not defined.
Lampiran 21 Hasil Validasi Ahli Materi.....	Error! Bookmark not defined.
Lampiran 22 Catatan Perbaikan Validasi.....	Error! Bookmark not defined.
Lampiran 23 Hasil Uji Validitas dan Realibilitas	Error! Bookmark not defined.
Lampiran 24 Hasil Uji Normalitas SPSS.....	Error! Bookmark not defined.
Lampiran 25 Hasil Uji N-Gain SPSS.....	Error! Bookmark not defined.
Lampiran 28 Lampiran 26 Hasil Uji ANOVA SPSS.....	Error! Bookmark not defined.
Lampiran 27 Dokumentasi Kegiatan	Error! Bookmark not defined.
Lampiran 28 Lembar Perbaikan Skripsi	Error! Bookmark not defined.

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