

ABSTRACT

DEVELOPMENT OF LEARNING OBJECT MATERIALS BASED ON PROBLEM-BASED LEARNING INTEGRATED WITH CANVAS LMS TO ENHANCE THE INDEPENDENT LEARNING OF STUDENT'S GRADE XI IN LM GEOGRAPHY'S CLASS, AT SUGAR GROUP SENIOR HIGH SCHOOL

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This research is designed with the aim of developing a learning object material based on Problem-Based Learning (PBL) model, which integrated with LMS Canvas to enhance the learning independence of 11th-grade students, specifically in the LM Geo class at SMA Sugar Group. The type of research used is Research & Development (R & D), with the ILDF (Integrative Learning Design Framework) development model, which consists of three stages: Exploration, Preparation, and Evaluation: Local Impact. The tools used for data collection in this study are Learning Independence Questionnaires, Observation Guidelines, and Interview Guidelines. The subjects of this study are 30 students of the 11th-grade LM Geo class at SMA Sugar Group for the 2023/2024 academic year, with data analysis techniques used being the Paired Sample T-Test and N-Gain Test.

The results obtained from the study include: SMA Sugar Group has sufficient potential and resources to support the development of PBL-based learning object materials integrated with the Canvas LMS. The results of the expert validation test during the development process indicate that the product is suitable for use as a learning medium to enhance students' learning independence. This is evidenced by the expert validation results stating that the product is highly suitable for use (Media Expert Test 96.7%, Material Expert Test 90.90%, and Learning Expert Test 97.5%). The calculation results in the N-Gain table also show that the mean N-Gain obtained is 69.6301, where this result indicates that the use of problem-based learning object material with the assistance of Canvas LMS is within the range of 66-79, meaning it is effective in enhancing the learning independence of 11th-grade LM Geo students at SMA Sugar Group. The product of the research development has several characteristics, including: Granularity, Reusability, Flexibility, Equipped with Metadata, Aggregate, Cost-Effective, and Customizability. The results of the student response test also showed that the student response score reached 98.5%, indicating that the development of Problem-Based Learning Object Material with the help of Canvas LMS has been very well received by the students.

Key Word: Learning Object Material (LOM), Problem-Based Learning, Student Self-Directed Learning

ABSTRAK

PENGEMBANGAN *LEARNING OBJECT MATERIAL* BERBASIS *PROBLEM BASED LEARNING* YANG TERINTEGRASI DENGAN LMS CANVAS UNTUK MENINGKATKAN KEMANDIRIAN BELAJAR GEOGRAFI SISWA KELAS XI SMA SUGAR GROUP

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Penelitian ini dirancang dengan tujuan mengembangkan sebuah *learning object material* berbasis *Problem-Based Learning* (PBL) yang terintegrasi dengan LMS Canvas untuk meningkatkan kemandirian belajar siswa kelas XI, khususnya di kelas LM Geo di SMA Sugar Group. Jenis penelitian yang digunakan yaitu *Research & Developmen (R & D)*, dengan model pengembangan ILDF (*Integrative Learning Design Framework*) yang terdiri dari 3 tahapan, yaitu: Eksplorasi, penyusunan, dan evaluasi: local impact. Alat yang dipakai dalam pengumpulan data pada penelitian ini yaitu Angket kemandirian belajar, pedoman pengamatan, dan juga pedoman wawancara. Subyek dalam penelitian ini yaitu siswa-siswi kelas XI LM Geo SMA Sugar Group tahun ajaran 2023/2024 berjumlah 30 orang, dengan teknilk analisis data yang digunakan yitu Uji Peaired Sample T-Test dan Uji N-Gain.

Hasil yang didapat dari penelitian diantaranya yaitu: SMA Sugar Group memiliki potensi dan sumber daya yang cukup untuk mendukung pengembangan *learning object material* berbasis PBL yang terintegrasi dengan LMS Canvas. Hasil uji validasi ahli pada proses pengembangan mendapatkan hasil bahwa produk layak untuk dipakai sebagai media pembelajaran bagi siswa dalam meningkatkan kemandirian belajar siswa. Hal ini terbukti dari hasil validasi ahli yang menyatakan bahwa produk sangat layak untuk digunakan (Uji ahli media 96,7%, Uji ahli materi 90,90%, dan Uji ahli pembelajaran 97,5%). Hasil hitung pada tabel N-Gain menunjukkan juga bahwa *mean N-Gain* yang didapat adalah sebesar 69,6301, dimana hasil tersebut menunjukkan bahwa penggunaan *learning object material* berbasis *problem based learning* dengan bantuan LMS Canvas berada pada rentang 66-79, yang artinya **efektif** untuk meningkatkan kemandirian belajar siswa kelas 11 LM Geo SMA Sugar Group. Produk hasil pengembangan penelitian memiliki beberapa karakteristik diantaranya yaitu: *Granularity*, *Reusable*, *Fleksibel*, Dilengkapi dengan metadata, *Aggregate*, *Cost-Effective*, dan *Costumizabillity*. Dari hasil uji respon siswa juga didapat bahwa skor respon siswa mencapai 98,5% yang artinya angka tersebut menunjukkan bahwa pengembangan Learning Object Material berbasis Problem Based Learning dengan bantuan LMS Canvas telah diterima dengan sangat baik oleh siswa.

Kata Kunci: Learning Object Material (LOM), *Problem Based Learning*, Kemandirian Belajar Siswa