

**PENGEMBANGAN UNIT KEGIATAN BELAJAR BERBASIS  
PERCOBAAN PENEMUAN PADA MATERI LARUTAN PENYANGGA  
UNTUK MENINGKATKAN HASIL BELAJAR SISWA**

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**ABSTRAK**

Kegiatan praktikum belum terlaksana karena bahan ajar yang berisi kegiatan praktikum masih jarang tersedia di sekolah. Oleh karena itu, perlu dilakukan penelitian dan pengembangan bahan ajar berupa unit kegiatan belajar berbasis percobaan penemuan. Penelitian dan pengembangan ini bertujuan untuk mendeskripsikan dan menjelaskan karakteristik, kevalidan, kepraktisan, dan keefektifan unit kegiatan belajar berbasis percobaan penemuan pada materi larutan penyangga. Prosedur pengembangan yang digunakan adalah model Borg dan Gall yang telah dimodifikasi sampai tahap keempat, yaitu (1) analisis kebutuhan, (2) perancangan produk, (3) pengembangan produk, dan (4) uji coba terbatas. Instrumen yang digunakan dalam penelitian dan pengembangan ini adalah catatan dokumen, lembar validasi, angket kepraktisan, dan tes uraian pemahaman konsep siswa. Hasil uji kevalidan isi dan konstruksi dihitung berdasarkan pendekatan Gregory dan diperoleh skor rata-rata 1,0 dari skor maksimal 1,0 dengan kriteria validasi sangat tinggi. Hasil uji kevalidan bahasa diperoleh skor rata-rata 3,63 dalam skala 4,00 dengan kriteria sangat valid. Hasil uji kepraktisan ditinjau dari kemudahan guru dalam menggunakan diperoleh skor rata-rata kepraktisan sebesar 3,48 dalam skala 4,00 dengan kriteria praktis. Hasil uji keefektifan ditinjau dari persentase siswa yang lulus KKM diperoleh persentase sebesar 86,67% dengan kriteria sangat baik sehingga unit kegiatan belajar dinyatakan efektif.

**Kata kunci:** unit kegiatan belajar, percobaan penemuan, larutan penyangga, hasil belajar siswa

**THE DEVELOPMENT OF LEARNING ACTIVITY UNIT BASED ON  
DISCOVERY EXPERIMENT ON THE TOPIC OF BUFFER SOLUTION  
TO INCREASE STUDENT LEARNING OUTCOMES**

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**ABSTRACT**

Practical activities have not been implemented because teaching materials containing practical activities are still rarely available in schools. Therefore, it is necessary to conduct research and development of teaching materials in the form of learning activity units based on discovery experiments. This research and development aims to describe and explain the characteristics, validity, practicality, and effectiveness of learning activity units based on discovery experiments on buffer solution materials. The development procedure used is the Borg and Gall model which has been modified to the fourth stage, namely (1) needs analysis, (2) product design, (3) product development, and (4) limited trial. The instruments used in this research and development are document notes, validation sheets, practicality questionnaires, and students' concept understanding tests. The results of the content and construction validity tests were calculated based on the Gregory approach and obtained an average score of 1.0 from a maximum score of 1.0 with very high validity criteria. The linguistic validity test results obtained an average score of 3.63 on a 4.00 scale with very valid criteria. The practicality test results in terms of the practicality of the teacher in using it obtained an average score of 3.48 on a 4.00 scale with practice criteria. The effectiveness test results in terms of the percentage of students who passed the Minimum Criteria of Mastery Learning (*KKM*) obtained a percentage of 86,67% with very good criteria so the learning activity unit was proven effective.

**Keywords:** learning activity unit, discovery experiment, buffer solution, students learning outcomes