

Abstrak

Aulia Sari Putri. (2024). “Pengembangan E-Modul Berbantuan *Hypertext Markup Language 5 Package* Melalui *Challenge Based Learning* Dalam Meningkatkan Kemampuan Komputasi Matematis dan *Persistence* Siswa”

Teknologi saat ini menjadi ciri utama praktik pendidikan di dunia, namun perkembangan teknologi yang cepat belum sepenuhnya dimanfaatkan secara optimal pada dunia pendidikan, khususnya pada bidang matematika. Kemajuan teknologi dalam matematika turut menghadirkan kemampuan baru dalam proses penyelesaian masalah matematis secara sistematis, praktis, dan runtut melalui kemampuan komputasi. Optimalisasi komputasi dalam penyelesaian masalah matematis harus dibarengi dengan *persistence*. Oleh karena itu, tujuan penelitian difokuskan untuk mengembangkan sebuah e-modul berbantuan *hypertext markup language 5 package (H5P)* melalui *challenge based learning* yang interaktif, inovatif, dan fleksibel dengan harapan dapat meningkatkan kemampuan komputasi dan *persistence* siswa. Metode yang digunakan dalam penelitian ini menggunakan *research and development* dengan model desain pengembangan *ADDIE (Analys, Design, Development, Implementation, Evaluation)*. Sumber data diperoleh dari hasil validasi media, bahasa, materi, guru matematika kelas VIII SMP Muhammadiyah 10 Bandung dan SMPN 3 Cileunyi, skala kecil, skala besar, dan kelas desiminasi tahun ajaran 2023/2024. Hasil dari penelitian ini, yaitu produk e-modul berbantuan *hypertext markup language 5 package (H5P)* dengan kategori valid, efektif meningkatkan kemampuan komputasi dan *persistence* siswa, serta sangat praktis digunakan sebagai sumber belajar pada materi statistika.

Kata kunci: e-modul, *hypertext markup language 5 package*, berpikir komputasi, *persistence*

Abstract

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Technology is currently the main characteristics of educational practice in the world, but the rapid development of technology has not been utilized optimally in the world of education, especially in the field of mathematics. Technological advances in mathematics also present new capabilities in the process of solving mathematical problems systematically, practically and coherently through computing capabilities. Computational optimization in solving mathematical problems must be accompanied by persistence. Therefore, the research objective is focused on developing an e-module assisted by the hypertext markup Language 5 package (H5P) through interactive, innovative and flexible challenge-based learning in the hope of increasing students' computing abilities and perseverance. The method used in this research uses research and development with the ADDIE (Analysis, Design, Development, Implementation, Evaluation) development design model. Data sources were obtained from validation results of media, language, materials, class VIII mathematics teachers at SMP Muhammadiyah 10 Bandung and SMPN 3 Cileunyi, small scale, large scale, and dissemination class for the 2023/2024 academic year. The results of this research, namely an e-module product assisted by hypertext markup Language 5 package (H5P) with a valid category, are effective in improving students' computing skills and persistence, and are very practical to use as a learning resource in statistics material.

Keywords: e-modul, hypertext markup language 5 package, computational thinking, persistence