ABSTRAK

Pemahaman konsep merupakan kemampuan yang perlu dimiliki oleh setiap siswa dalam proses pembelajaran matematika. Kurangnya menghubungkan relevansi kehidupan sehari-hari dengan matematika membuat siswa Asli Orang Papua (AOP) termasuk siswa baru SMA YPPK Adhi Luhur tahun ajaran 2024/2025 yang mengalami kesulitan dalam kemampuan dasar matematika, terutama pada materi Aljabar. Program matrikulasi menjadi solusi yang diambil oleh SMA YPPK Adhi Luhur, namun masih kekurangan untuk sumber belajar dalam kelas. Penelitian ini bertujuan untuk mengembangkan media pembelajaran dengan mengetahui proses pengembangan dan kualitas media pembelajaran dari segi kevalidan, kepraktisan, dan keefektifan.

Penelitian ini merupakan penelitian jenis *research and development (R&D)*, dengan model ADDIE yang terdiri dari analisis *(Analysis)*, desain *(Design)*, pengembangan *(Development)*, implementasi *(Implementation)*, dan evaluasi *(Evaluation)*. Subjek penelitian ini adalah siswa-siswi kelas X 1 di kelas matrikulasi SMA YPPK Adhi Luhur Nabire tahun ajaran 2024/2025. Instrumen penelitian berupa lembar wawancara, observasi, lembar kevalidan, kepraktisan, keefektifan, dan tes, dengan teknik analisis deskriptif kualitatif untuk wawancara dan observasi, dan teknik analisis deskriptif kualitatif untuk lembar kevalidan, kepraktisan, dan keefektifan.

Proses pengembangan dilakukan sesuai tahapan model ADDIE. Pada analisis didapatkan materi aljabar menjadi kesulitan siswa-siswa baru yang didominasi siswa AOP. Desain dilakukan dengan pemilihan materi dan media yang akan dikembangkan, serta membuat prinsip desain ataupun *storyboard*. Pengembangan dilakukan membuat *prototype* produk dan memvalidasi media bersama validator. Implementasi dilakukan sebanyak dua kali dengan melaksanakan proses pembelajaran menggunakan media yang telas divalidasi oleh validator. Evaluasi dilakukan pada setiap tahapan ADDIE yang beguna memperbaiki kekurangan media selama proses pengembangan.

Hasil kualitas media pembelajaran yang dikembangkan sudah valid sesuai dengan hasil dari kedua validator dan juga praktis. Sedangkan, untuk keefektifan belum dapat dikatakan efektif dari hasil tes kemampuan akhir. Namun, siswa mendapatkan manfaat setelah penggunaan modul. Awalnya mayoritas siswa tidak dapat memahami bentuk aljabar serta PSLV. Tetapi, ada salah satu siswa AOP dengan percaya diri menjawab tes kemampuan akhir dan benar dalam membedakan PLSV serta operasi di bentuk aljabar.

Kata kunci: Pemahaman Konsep, Aljabar, Modul.

ABSTRACT

Conceptual understanding is a crucial skill that every student must possess in the process of learning mathematics. The lack of connection between mathematics and real-life relevance causes difficulties for Asli Orang Papua (AOP) students, including new students at SMA YPPK Adhi Luhur in the 2024/2025 academic year, especially in basic mathematical skills, particularly in Algebra. A matriculation program has been implemented as a solution at SMA YPPK Adhi Luhur, but there is still a shortage of learning resources in the classroom. This study aims to develop a learning media by identifying the development process and evaluating the quality of the learning media in terms of validity, practicality, and effectiveness.

This is a Research and Development (R&D), using the ADDIE model, which consists of Analysis, Design, Development, Implementation, and Evaluation. The subjects of this study were students of class X-1 in the matriculation class at SMA YPPK Adhi Luhur Nabire for the academic year 2024/2025. Research instruments included interview sheets, observation sheets, and sheets to assess validity, practicality, effectiveness, and tests. Data were analyzed using descriptive qualitative techniques for interviews and observations, and descriptive quantitative techniques for the validity, practicality, and effectiveness assessments.

The development process followed the stages of the ADDIE model. In the analysis phase, it was found that Algebra was a major difficulty for the new students, mostly AOP students. The design phase involved selecting the content and media to be developed and creating design principles or storyboards. In the development phase, a prototype of the product was created and validated by experts. The implementation phase was conducted twice by carrying out learning activities using the media validated by the validators. Evaluation was performed at each stage of ADDIE to improve the media throughout the development process.

The results of the study showed that the developed learning media was valid and practical according to the assessments by two validators. However, in terms of effectiveness, it could not yet be declared effective based on the post-test results. Nevertheless, students benefited from using the module. Initially, the majority of students were unable to understand algebraic forms and linear equations with one variable. However, one AOP student could confidently answered the final test correctly, demonstrating an understanding of the differences between linear equations and algebraic operations.

Keywords: Conceptual Understanding, Algebra, Module