ABSTRAK

Nurhayati: Pengembangan Media Pembelajaran *Computer Based Instruction* (CBI) Pada Mata Pelajaran Dasar-Dasar Pengembangan Perangkat Lunak Dan Gim di Smk Negeri 1 Percut Sei Tuan. Fakultas Teknik Universitas Negeri Medan, 2024.

Perubahan kurikulum yang terjadi, terutama dengan diterapkannya kurikulum merdeka, mempengaruhi kegiatan pembelajaran di sekolah. Observasi menunjukkan bahwa media pembelajaran yang digunakan guru seperti powerpoint dan buku paket cenderung menampilkan teks, yang kurang menarik dalam mencapai capaian pembelajaran pemrograman berorientasi objek. Siswa mengalami kesulitan memahami mata pelajaran karena terbatasnya kegiatan praktikum. Selain itu, kurangnya *software* pendukung pembelajaran menjadi hambatan signifikan, menghambat siswa dalam mengembangkan keterampilan menulis program yang penting untuk pemahaman materi. Siswa kurang mandiri dalam belajar dan jarang mengulang materi di rumah. Materi pemrograman berorientasi objek sulit dipahami karena kompleksitas dan kesulitan memahami program C++. Siswa diharapkan mampu menerapkan konsep *class, object, method, package, access modifier*, enkapsulasi, *interface*, pewarisan, dan *polymorphism* dalam proyek pengembangan perangkat lunak sederhana.

Penelitian ini bertujuan mengembangkan media pembelajaran berbasis *computer based instruction* (CBI) yang dapat diakses siswa kapan saja dan di mana saja sebagai media pembelajaran mandiri. Penelitian ini menggunakan model pengembangan ADDIE (*Analyze, Design, Development, Implementation, Evaluation*) dan MDLC(*Multimedia Development Life Cycle*), mencakup pengujian media yang mencakup kelayakan materi dan media serta kebergunaan media.

Hasil uji kelayakan menunjukkan nilai 4,71 untuk kelayakan materi dan 4,68 untuk kelayakan media. Uji akseptabilitas oleh siswa memperoleh nilai 4,71. Hasil uji efektivitas dengan nilai N-Gain sebesar 0.63 dengan persentase 63%. Berdasarkan hasil tersebut, media pembelajaran berbasis *Computer Based Instruction* (CBI) dinyatakan cukup efektif digunakan dalam pembelajaran dan dapat meningkatkan hasil belajar siswa.

Kata Kunci: Media Pembelajaran, *Computer Based Instruction*, Pemograman Berorientasi Objek.

ABSTRACT

Nurhayati: Development of Computer Based Instruction (CBI) Learning Media in the Basic Subjects Software and Game Development at SMK Negeri 1 Percut Sei Tuan. Medan State University Faculty of Engineering, 2024.

Curriculum changes that occur, especially with the implementation of the independent curriculum, affect learning activities in schools. Observations show that the learning media used by teachers such as PowerPoint and textbooks tend to display text, which is less interesting in achieving object-oriented programming learning outcomes. Students have difficulty understanding subjects due to limited practical activities. In addition, the lack of learning support software is a significant obstacle, preventing students from developing program writing skills that are important for understanding the material. Students are less independent in learning and rarely repeat material at home. Object-oriented programming material is difficult to understand because of the complexity and difficulty of understanding C++ programs. Students are expected to be able to apply the concepts of class, object, method, package, access modifier, encapsulation, interface, inheritance, and polymorphism in simple software development projects. This research aims to develop computer based instruction (CBI) based learning media that students can access anytime and anywhere as an independent learning media. This research uses the ADDIE (Analyze, Design, Development, Implementation, Evaluation) and MDLC (Multimedia Development Life Cycle) development models, including media testing which includes the suitability of the material and media as well as the usability of the media.

The feasibility test results showed a value of 4.71 for material feasibility and 4.68 for media feasibility. The acceptability test by students obtained a score of 4.71. Effectiveness test results with an N-Gain value of 0.63 with a percentage of 63%. Based on these results, Computer Based Instruction (CBI) based learning media is declared very suitable for use in learning and can improve student learning outcomes.

Keywords: Learning Media, Computer Based Instruction, Object Oriented Programming.