

## INTISARI

Pemanfaatan teknologi informasi dalam pendidikan berkembang pesat, termasuk penggunaan *Learning Management System* (LMS) sebagai media pembelajaran. Sekolah Murid Merdeka (SMM) merupakan salah satu institusi yang telah mengintegrasikan LMS dalam kegiatan belajarnya. Untuk memastikan LMS berfungsi secara optimal, diperlukan evaluasi tingkat *usability* melalui *usability testing*, di mana pemilihan metode *testing* akan memengaruhi hasil evaluasi. Penelitian ini bertujuan mengkomparasi dua teknik *usability testing* berbasis *expert*, yaitu metode *Cognitive Walkthrough* (CW) dan *Heuristic Evaluation* (HE), untuk menentukan metode yang paling tepat digunakan untuk pengujian LMS SMM. Komparasi kedua metode CW dan HE diukur berdasarkan tiga metrik, yaitu jumlah permasalahan *usability* yang ditemukan, *coverage* dari atribut *usability* (*learnability*, *efficiency*, *memorability*, *error*, dan *satisfaction*), dan metrik *severity rating*. Kedua metode pengujian ini akan dilakukan oleh 3 evaluator yang *expert* pada bidang *Human Computer Interaction* (HCI) dan menggunakan 3 evaluator yang sama untuk menghindari adanya bias data. Hasil komparasi kedua metode menunjukkan bahwa metode *heuristic evaluation* lebih banyak menemukan jumlah permasalahan *usability* dibandingkan metode *cognitive walkthrough*, dimana HE menemukan 80 permasalahan *usability*, sedangkan CW menemukan 39 permasalahan. Berdasarkan metrik *coverage* atribut *usability*, metode HE dapat menemukan lebih banyak permasalahan dari kelima atribut dibandingkan metode CW. Sedangkan untuk metrik *severity rating*, metode CW menemukan permasalahan dengan tingkat keparahan yang lebih tinggi (rata-rata 2.32) dibandingkan metode HE (rata-rata 2.06). Melalui penelitian ini diharapkan dapat menjadi bahan referensi dalam menentukan metode *usability testing* berbasis *expert* yang paling tepat digunakan pada LMS.

Kata kunci : *usability testing*, *cognitive walkthrough*, *heuristic evaluation*, *learning management system*

## **ABSTRACT**

*The use of information technology in education is growing rapidly, including the use of Learning Management System (LMS) as a learning medium. Sekolah Murid Merdeka (SMM) is one of the institutions that has integrated LMS into its learning activities. To ensure that LMS functions optimally, an evaluation of the level of usability is needed through usability testing, where the choice of testing method will affect the evaluation results. This study aims to compare two expert-based usability testing techniques, namely the Cognitive Walkthrough (CW) and Heuristic Evaluation (HE) methods, to determine the most appropriate method to use for testing the LMS SMM. The comparison of the two CW and HE methods is measured based on three metrics, namely the number of usability problems found, coverage of usability attributes (learnability, efficiency, memorability, error, and satisfaction), and severity rating metrics. Both of these testing methods will be carried out by 3 evaluators who are experts in the field of Human Computer Interaction (HCI) and using the same 3 evaluators to avoid data bias. The results of the comparison of the two methods show that the heuristic evaluation method finds more usability problems than the cognitive walkthrough method, where HE finds 80 usability problems, while CW finds 39 problems. Based on the usability attribute coverage metrics, the HE method can find more problems from the five attributes than the CW method. As for the severity rating metrics, the CW method finds problems with a higher level of severity (average 2.32) than the HE method (average 2.06). This study is expected to be a reference material in determining the most appropriate expert-based usability testing method used in LMS.*

*Keyword: usability testing, cognitive walkthrough, heuristic evaluation, learning management system*