

ABSTRAK

Latar belakang : Interpretasi elektrokardiogram (EKG) merupakan kompetensi klinis esensial yang harus dikuasai mahasiswa kedokteran. Namun, keterbatasan paparan kasus dan waktu tatap muka dalam kurikulum sering menjadi hambatan pembelajaran. *Massive Open Online Course* (MOOC) berbasis Moodle menawarkan fleksibilitas dan kesempatan latihan berulang, tetapi keberhasilan implementasinya sangat dipengaruhi oleh tingkat *usability* sistem.

Tujuan : Untuk menilai tingkat *usability* MOOC berbasis Moodle dalam pembelajaran EKG pada mahasiswa preklinik menggunakan instrumen *System Usability Scale* (SUS).

Metode : Penelitian ini merupakan studi deskriptif kuantitatif dengan analisis data sekunder dari 153 mahasiswa preklinik Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan Universitas Gadjah Mada tahun 2024. *Usability* diukur menggunakan kuesioner SUS (skor 0–100), disertai analisis deskriptif, uji perbedaan antar kelompok, serta eksplorasi struktur konstruk melalui *Exploratory Factor Analysis* (EFA).

Hasil : Rerata skor SUS sebesar $66,9 \pm 14,2$ masuk ke dalam kategori *marginal high* dan *adjective rating* “baik”. Tidak terdapat perbedaan bermakna berdasarkan program studi ($p = 0,706$), namun terdapat perbedaan kecil berdasarkan jenis kelamin ($p = 0,033$; Cohen’s $d = 0,389$). Skor rata-rata tidak berbeda signifikan dari nilai acuan 68 ($p = 0,352$).

Kesimpulan : MOOC berbasis Moodle memiliki tingkat *usability* yang dapat diterima pada pembelajaran EKG, meskipun masih terdapat ruang untuk optimalisasi antarmuka dan pengalaman pengguna.

Kata kunci: *usability*, *System Usability Scale*, MOOC, Moodle, pembelajaran EKG.

ABSTRACT

Background: Electrocardiogram (ECG) interpretation is an essential clinical competency for medical students. However, limited case exposure and restricted face-to-face instructional time within the curriculum often hinder effective learning. A Moodle-based Massive Open Online Course (MOOC) offers flexibility and opportunities for repeated practice, yet its successful implementation largely depends on system usability.

Objective: To assess the usability level of a Moodle-based MOOC for ECG learning among preclinical medical students using the System Usability Scale (SUS).

Methods: This study employed a quantitative descriptive design using secondary data from 153 preclinical students at the Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, in 2024. Usability was measured using the SUS questionnaire (score range 0–100). Descriptive analysis, group comparison tests, and construct exploration through Exploratory Factor Analysis (EFA) were conducted.

Results: The mean SUS score was 66.9 ± 14.2 , categorized as *marginal high* with an adjective rating of “good.” No significant difference was found based on study program ($p = 0.706$), whereas a small but statistically significant difference was observed based on gender ($p = 0.033$; Cohen’s $d = 0.389$). The mean score did not significantly differ from the reference value of 68 ($p = 0.352$).

Conclusion: The Moodle-based MOOC demonstrated an acceptable level of usability for ECG learning, although further optimization of the interface and user experience is warranted.

Keywords: usability, System Usability Scale, MOOC, Moodle, ECG learning.