

ABSTRAK

Thimoti Brema Pandia, 5203151001: Rancang Bangun Sistem Informasi Monitoring Kegiatan Ekstrakurikuler Berbasis Android Di SMK Negeri 13 Medan. Skripsi. Fakultas Teknik Universitas Negeri Medan. 2025

Kegiatan ekstrakurikuler memiliki peran penting dalam pengembangan potensi siswa di lingkungan pendidikan. Namun, proses *monitoring* kegiatan ekstrakurikuler kerap menghadapi kendala, seperti kesulitan pembina dalam pelaporan dan keterbatasan penyebaran informasi kepada siswa. Penelitian ini bertujuan merancang sistem informasi *monitoring* kegiatan ekstrakurikuler berbasis Android di SMK Negeri 13 Medan guna meningkatkan efisiensi pengawasan dan penyebaran informasi. Penelitian menggunakan model pengembangan *Agile* dengan pendekatan kuantitatif. Metode pengumpulan data dilakukan melalui kuesioner.

Analisis data menggunakan pendekatan ISO 25010 dengan menguji aspek *functional suitability*, *reliability*, *usability*, dan *performance efficiency*. Sistem dikembangkan menggunakan *React Native Expo*, dirancang untuk perangkat Android versi 6 ke atas, dengan fitur utama meliputi *posting* informasi, manajemen kegiatan, absensi, dan penilaian ekstrakurikuler. Hasil penelitian menunjukkan sistem informasi yang dikembangkan layak digunakan. Pengujian menghasilkan skor 100% pada *functional suitability*, mengindikasikan seluruh fungsi sistem berjalan optimal. Aspek *reliability* mencapai 77%, *reliability* yang baik dengan ruang pengembangan. Uji *usability* mendapatkan skor 98%, menandakan antarmuka sangat mudah digunakan, sementara *performance efficiency* mencapai 94%, menunjukkan sistem sangat efisien dalam penggunaan sumber daya.

Simpulan penelitian adalah sistem informasi *monitoring* kegiatan ekstrakurikuler berbasis Android berhasil dikembangkan dan terbukti efektif membantu proses pengawasan serta penyebaran informasi di SMK Negeri 13 Medan. Sistem mampu mempermudah pembina dan pihak sekolah dalam mengelola kegiatan ekstrakurikuler secara *real-time*, serta meningkatkan partisipasi dan keterlibatan siswa. Temuan penelitian menunjukkan bahwa sistem informasi berbasis teknologi dapat secara signifikan mengatasi kendala administratif dalam pengelolaan kegiatan ekstrakurikuler, menyediakan solusi komprehensif yang mendukung transparansi, efisiensi, dan komunikasi yang lebih baik antara sekolah, pembina, dan siswa.

Kata kunci: Sistem Informasi, *Monitoring*, Ekstrakurikuler, Android, *React Native*

ABSTRACT

Thimoti Brema Pandia, 5203151001: Design and Development of an Android-Based Extracurricular Activity Monitoring Information System at SMK Negeri 13 Medan. Essay. Faculty of Engineering, State University of Medan. 2025

Extracurricular activities play a crucial role in developing student potential within the educational environment. However, the monitoring process of extracurricular activities often faces challenges, such as instructors' difficulties in reporting and limited information dissemination to students. This research aims to design an Android-based monitoring information system for extracurricular activities at SMK Negeri 13 Medan to improve supervision efficiency and information distribution. The research employed an Agile development model with a quantitative approach. Data collection was conducted through questionnaires.

Data analysis utilized the ISO 25010 approach by testing aspects of functional suitability, reliability, usability, and performance efficiency. The system was developed using React Native Expo, designed for Android devices version 6 and above, with primary features including information posting, activity management, attendance tracking, and extracurricular assessment. Research results demonstrated that the developed information system is viable for use. Testing yielded a 100% score in functional suitability, indicating that all system functions operate optimally. The reliability aspect reached 77%, representing good reliability with room for development. Usability testing obtained a 98% score, indicating a highly user-friendly interface, while performance efficiency reached 94%, showing the system is highly efficient in resource utilization.

The research concludes that the Android-based extracurricular activity monitoring information system was successfully developed and proven effective in supporting supervision and information dissemination at SMK Negeri 13 Medan. The system facilitates instructors and school administrators in managing extracurricular activities in real-time, thereby enhancing student participation and involvement. Research findings demonstrate that technology-based information systems can significantly address administrative challenges in extracurricular activity management, providing a comprehensive solution that supports transparency, efficiency, and improved communication between schools, instructors, and students.

Keywords: Information System, Monitoring, Extracurricular, Android, React Native