

RANCANG BANGUN *BACK END* SISTEM INFORMASI *MONITORING* KEGIATAN PEMBELAJARAN DAN PRAKTIK KLINIS BERBASIS *WEBSITE* (STUDI KASUS: PROGRAM STUDI FISIOTERAPI UPNVJ)

ABSTRAK

Program Studi Fisioterapi Universitas Pembangunan Nasional “Veteran” Jakarta masih menghadapi kendala dalam *monitoring* kegiatan pembelajaran dan praktik klinis karena pengelolaan jadwal, *logbook*, penilaian, bimbingan, serta ujian dilakukan secara terpisah. Kondisi tersebut menyebabkan proses pemantauan, validasi data, dan penyusunan laporan menjadi kurang efektif dan efisien. Penelitian ini bertujuan merancang dan membangun Sistem Informasi *Monitoring* Kegiatan Pembelajaran dan Praktik Klinis berbasis *website* yang mampu mengintegrasikan seluruh proses tersebut dalam satu sistem. Pengembangan sistem menggunakan metode *Agile* dengan pendekatan Scrum yang meliputi *Product Backlog* hingga *Sprint Retrospective*. Perancangan sistem dilakukan menggunakan *Unified Modeling Language* (UML), sedangkan implementasi menggunakan Next.js sebagai *frontend*, NestJS sebagai *backend*, PostgreSQL sebagai basis data, dan Prisma ORM sebagai penghubung basis data. Sistem yang dikembangkan menyediakan fitur pengelolaan jadwal perkuliahan, *logbook* pembelajaran, praktik klinis, penjadwalan bimbingan dan ujian, berita acara, penilaian praktik klinis, serta *monitoring* aktivitas mahasiswa secara terintegrasi. Hasil pengujian *Black Box Testing* menunjukkan seluruh fungsi sistem berjalan sesuai kebutuhan pengguna. Selain itu, hasil *User Acceptance Testing* memperoleh tingkat penerimaan sebesar 96,47%, yang termasuk kategori Sangat Baik. Dengan demikian, sistem yang dibangun mampu meningkatkan efektivitas, efisiensi, dan kemudahan *monitoring* kegiatan pembelajaran serta praktik klinis di Program Studi Fisioterapi UPNVJ.

Kata Kunci : Sistem Informasi, *Monitoring*, Praktik Klinis, *Logbook*, *Agile Scrum*, *Website*.

**DESIGN AND DEVELOPMENT BACK END OF A WEB-BASED
INFORMATION SYSTEM FOR MONITORING LEARNING ACTIVITIES
AND CLINICAL PRACTICE (CASE STUDY: PHYSIOTHERAPY STUDY
PROGRAM, UPNVJ)**

ABSTRACT

The Physiotherapy Study Program at Universitas Pembangunan Nasional "Veteran" Jakarta faces challenges in monitoring learning activities and clinical practice because schedules, logbooks, assessments, supervision, and examinations are managed separately. This condition reduces the effectiveness and efficiency of monitoring, data validation, and report generation. This study aims to design and develop a web-based Information System for Monitoring Learning Activities and Clinical Practice that integrates these processes into a single platform. The system was developed using the Agile methodology with the Scrum framework, consisting of Product Backlog until Sprint Retrospective. System design employed Unified Modeling Language (UML), while implementation+ utilized Next.js for the frontend, NestJS for the backend, PostgreSQL as the database management system, and Prisma ORM for database access. The developed system provides integrated features for lecture scheduling, learning logbooks, clinical practice logbooks, supervision and examination scheduling, meeting reports, clinical assessments, and student activity monitoring. Black Box Testing confirmed that all system functionalities operated according to user requirements. Furthermore, User Acceptance Testing achieved a user acceptance score of 96.47%, which is classified as Excellent. Therefore, the proposed system effectively improves the efficiency, effectiveness, and integration of monitoring processes for learning activities and clinical practice in the Physiotherapy Study Program.

Keywords: *Information System, Monitoring, Clinical Practice, Logbook, Agile Scrum, Website.*