

Implementasi Dan Evaluasi Aplikasi Web Forum Diskusi Asinkron Berbasis Kerangka Kerja Community of Inquiry = Implementation and Evaluation for Application Web Asynchronous Discussion Forum Based on Community of Inquiry Framework

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Abstrak

Pembelajaran yang bermakna dan mendalam pada pembelajaran kolaboratif daring memerlukan suatu rancangan pemodelan pembelajaran. Kerangka kerja Community of Inquiry (CoI) berfokus pada memfasilitasi pengalaman belajar yang bermakna dan mendalam melalui tiga aspek kehadiran yaitu sosial, kognitif, dan pengajaran. Forum diskusi asinkron saat ini sudah banyak digunakan namun beberapa kekurangan masih dirasakan oleh peserta didik maupun pengajar. Penelitian ini bertujuan untuk melakukan implementasi dan evaluasi forum diskusi asinkron berbasis kerangka kerja CoI berupa aplikasi web yang dapat digunakan secara nyata berdasarkan hasil rancangan penelitian sebelumnya. Penelitian ini mengadopsi metode Waterfall sebagai metode Software Development Life Cycle (SDLC). Metode Waterfall yang dimodifikasi menjadi tiga tahapan yaitu design, implementation, serta verification & testing. Tahapan design menghasilkan definisi sistem secara teknis melalui rancangan Unified Model Language (UML) sistem. Tahapan implementasi menghasilkan aplikasi web yang dapat digunakan melalui kegiatan mempersiapkan tech stack, development backend, dan development frontend. Framework Django dan PostgreSQL digunakan untuk pengembangan backend dan Next.js untuk pengembangan frontend. Tahapan verification & testing menghasilkan bahwa tidak ditemukan error utama pada setiap fitur melalui pengujian User Acceptance Testing (UAT). Evaluasi dilakukan melalui survey daring yang berisi pertanyaan kualitatif dan kuantitatif untuk mengukur aspek usability dan keberhasilan memunculkan kehadiran pada model CoI. Hasil usability testing memperoleh tingkat complete success sebesar 81.08%. Evaluasi nilai System Usability Scale (SUS) memperoleh nilai 78,78 yang termasuk dalam kategori “Good” dan “Acceptable”. Hasil evaluasi terhadap aplikasi web menunjukkan bahwa fitur Reaction Post, Post, Thread Diskusi, Profil Pengguna, dan Text Editor dapat memunculkan kehadiran sosial. Fitur Post, Thread Diskusi, Ringkasan Diskusi, dan Referensi Diskusi dapat memunculkan kehadiran kognitif. Fitur Thread Diskusi, Panduan Diskusi, Referensi Diskusi, Week, dan Inquiry State dapat memunculkan kehadiran pengajaran.

.....Meaningful and deep learning in online collaborative learning requires a learning design framework. The Community of Inquiry (CoI) framework focuses on facilitating meaningful and deep learning experiences through three aspects of presence: social, cognitive, and teaching. Asynchronous discussion forums are widely used, but some shortcomings are still felt by students and teachers. This study aims to implement and evaluate an asynchronous discussion forum based on the CoI framework in the form of a web application that can be used effectively based on the previous research design. This research adopts the Waterfall method as the Software Development Life Cycle (SDLC) method. The modified Waterfall method consists of three stages: design, implementation, and verification & testing. The design stage produces a technical system definition through Unified Modeling Language (UML) system design. The implementation stage develops a web application through activities such as preparing the tech stack, developing the backend, and developing the frontend. The Django framework and PostgreSQL are used for backend development, and

Next.js is used for frontend development. The verification & testing stage confirms that no major errors were found in each feature through User Acceptance Testing (UAT). Evaluation is conducted through an online survey that includes qualitative and quantitative questions to measure usability aspects and the success of bringing presence to the CoI model. The results of the usability testing achieved a complete success rate of 81.08%. The System Usability Scale (SUS) evaluation obtained a score of 78.78, which falls into the "Good" and "Acceptable" categories. The evaluation of the web application showed that features such as Reaction Post, Post, Discussion Thread, User Profile, and Text Editor can evoke social presence. Features like Post, Discussion Thread, Discussion Summary, and Discussion References can evoke cognitive presence. Features like Discussion Thread, Discussion Guide, Discussion References, Week, and Inquiry State can evoke teaching presence.