

ABSTRACT

Analysis of Work System Design and Ergonomics (APK&E) Laboratory is a laboratory under the Industrial Engineering Undergraduate Study Program, Faculty of Industrial Engineering, Telkom University. APK&E Laboratory routinely holds practicum activities every odd semester for sophomores. In 2022, this activity involved 486 practitioners, but there were 116 practitioners who did not pass and had to repeat the following year. The main cause of this failure was the practitioners' lack of understanding of the practicum requirements, such as the completeness of documents and punctuality of attendance that had been previously informed through the Facebook group. This shows the need for improvement in the dissemination of practicum information. This research aims to design a mockup user interface for the APK&E Laboratory website as a medium for disseminating more effective practicum information.

The approach used in this research is the Double Diamond method. This method consists of four phases, namely the discover, define, develop, and deliver phases. In the discover and define phases, an in-depth analysis was conducted to understand the problem of practitioner failure in the APK&E Laboratory. This analysis involves identifying the needs of users, namely practitioners and laboratory assistants, as well as evaluating the existing way of disseminating information. The discover process includes data collection through interviews and surveys to APK&E Laboratory assistants and practitioners. The define phase involves processing the data that has been collected to find the root causes of the high number of failures. After the root cause was identified, the research moved on to the develop and deliver phase where at this stage a solution was designed in the form of a website mockup. The mockup was designed to fulfill the identified needs and tested to ensure its ease of use.

The website mockup that has been designed includes all the need statements that have been identified in the previous stage. The website design includes key features such as an easy-to-navigate main page, structured practicum information, and setting the upload time of practicum information. The verification process is carried out to ensure that the mockup design meets the needs of practitioners and

laboratory assistants. Usability testing was conducted using the System Usability Scale (SUS) to measure the usability of the mockup design. The results show a score of 88 which falls into the "acceptable" category with grade B which means "Excellent". These results indicate that the mockup design not only meets the needs of practitioners and APK&E Laboratory assistants but also has great potential to become an alternative media for disseminating practicum information.

This research provides significant benefits for researchers and users. For researchers, this research adds insight into the process of designing digital products, especially in the context of education and information dissemination. Experience in using the Double Diamond method enriches knowledge on how to identify and solve complex design problems. For users, namely practitioners and APK&E Laboratory assistants, this more effective website design is expected to be an alternative medium for disseminating practicum information. The ease of access to information offered by this website will help practitioners prepare themselves better before taking the practicum. Overall, this study shows that improvements in information dissemination through well-designed digital media can have a real positive impact in the academic and operational context of the laboratory. This underscores the importance of a user-centered design approach in developing effective technological solutions. This research is expected to serve as a reference for other educational institutions in an effort to improve the effectiveness of academic communication and information dissemination.

Keywords: Website, Double Diamond, User Interface