Measuring User Experience on Massive Open Online Course with User-Centered Metrics: A Case Study

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Abstract. Evaluation of user experience (UX) in learning applications is now very important. A good UX on MOOC will have an impact on increased completion rates and student satisfaction, student engagement, enhanced learning, and minimizing course implementation rework. In this study, the authors use MOOC called E-learning: Open of Knowledge Sharing (eLOK) as the object of research. User-centered metrics or known as HEART framework consisting of five metrics, including Happiness, Engagement, Adoption, Retention and Task Success. The framework that the authors used to measure the UX of eLOK is HEART metrics. The instrument that used in this study is a questionnaire consists of 33 statements which delivered to 94 students as the sample of the research, with the the number of population 1500. The questionnaire has been validated using SPSS 23 as the tools. The result of the validation is all the items of the questionnaire are valid and reliable with the percentage of reliability is 96%. The result of this study showed that the metrics obtained by Happiness was 76.5%, Engagement was 72.1%, Adoption was 73.6%, Retention was 72.6%, and Task Success was 78.6%. To achieve the Goal-Signal-Metrics set on the HEART framework, it is necessary to re-design the eLOK display by paying attention to UX and UI aspects, changing the greeting with user-guidance, improving push-notification features and navigation.

1. Introduction

Success of Learning Management System (LMS) if it meets the following criteria: high availability, usability, scalability, interoperability, stability, and security [1]. This is the basis for the emergence of online learning called OER (Open E-learning Resource) [2], which is open learning media that is commonly used in universities, is accessible, and can be used in general. To handle the growing number of participants, OER evolved into a new e-learning model called the MOOC (Massive Open Online Course). MOOC answers all the problems from the previous e-learning model. To develop web-based applications that meet these criteria to be different from existing competitors, the measurement of web-based applications that only consider their use is no longer sufficient. Thus, measuring the usefulness of web-based applications is no longer enough [3]. If an e-learning system is not useful enough, the user must spend a lot of time learning how to use the software, and as a result, the system will prevent the user from carrying out user tasks[4]. Besides usability, more comprehensive user experience needs to be measured as well [3].

Evaluation of user experience (UX) in applications is now very important. When developing an application that is concerned with UX will provide benefits in the form of; increased revenue, reduced expenses, enhanced productivity, and minimized redesign and redevelopment [5]. Similarly, in developing MOOCs, UX becomes very important because users are massive in the sense of large