

# DEVELOPMENT OF ADAPTIVE MOOC BASED METACOGNITION TO SUPPORT PERSONALIZED LEARNING

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## ABSTRACT

### Abstract

The purpose of this study is to develop metacognition-based adaptive MOOCs to support Personalized Learning. Developed by the 4D method (D efine, D esign, D evelop, D esiminate). In order for the MOOC to be adaptive to various types of users, Artificial Intelligence (AI) will be embedded in the MOOC developed and we will classify users based on the user's metacognition capabilities. This adaptive technology is believed to be able to support Personalized Learning (PL). Personalized learning is an educational approach that aims to tailor learning to each student's strengths, needs, skills, and interests. Internet has brought about a significant change in the learning environment. The Internet provides billions of information that anyone can access. However, with such a large amount of data and balanced with a very large number of users, it demands a means that can organize systematically and be able to be accepted by users who have very diverse backgrounds and literacy skills. MOOCs (Massive Open Online Courses) can be one of the models that provide an online learning platform that is open to anyone and allows it to be used by very large/massive users. The development of information and advances in Learning Management System (LMS) technology did not necessarily have a significant effect on MOOC users. Based on a survey of a thousand academicians of Yogyakarta State University consisting of lecturers and students from various faculties, it turned out that only 11.3% had taken an online course and 28.8% had not completed the course they were taking. Based on various references, it is indicated that there are problems with the various levels of motivation to learn from online courses, digital literacy skills, and the lack of interactivity in the MOOCs that are already available. The results of the study at the Define and Design stage show that MOOCs are mentioned in a massive which means they have an unlimited scale. This is because there is no limit to the number of people to access. However for consideration of the effectiveness of the results, providers usually limit the number of classes primarily in virtual synchronous schemes. Even though it is restricted, the term massive still remains appropriate because users can access on a schedule provided by the service provider. Open, has the meaning of open. This means that it can be accessed only with a device and does not require certain requirements. On some platforms, this openness can also be seen from the opportunity for institutions to take advantage of the platform to develop their own MOOCs and be able to register their content with HaKI. Online, has the meaning of access to learning is carried out online. Although its use continues to grow as is done in some universities that use not fully online, it combines it with conventional lectures which are often called blended learning. Courses, defined as courses that are managed like a full class. There are learning objectives, material explanations, reference sources, and evaluations to see the achievement of learning objectives. MOOCs need to be designed to be more adaptive to user metacognition.

Kata Kunci: *MOOC, Adaptive, metacognitive, Personalized Learning*