Abstract

Constant developing technology becomes the trigger to change a learning environment into something new where the learners not only has a role as a consumer, but also as the provider of a new learning for the other learners to get the contexts which can be adjust with the learners condition. Several types of e-learning has been developed over the years, followed by M-Learning (Mobile Learning), but those learning technologies still hasn't let learners to get the learning context that corresponds with their conditions. That issue is caused of the system hasn't an ability to manage the context which given to the users. The technology which is support to context awareness is ubiquitous computing and in a learning technology known as ubiquitous learning (u-learning) which has a context awareness as a characteristic of that learning technology. Context awareness is a thing which can use contextual information of the users to improve the services for the users. Therefore this research is discuss about the developing of context awareness system which is implemented in a Learning Management System. Context system is developed within Case Based Reasoning method because of has a similar characteristic with the captured contexts and use the Nearest Neighbor Algorithm to check the similarity between the cases. Moreover this research is also discuss about the weight composition which is used for activities of Context Awareness System. In this research, we conducted experiment towards students which is used an LMS with context awareness system and an LMS without context awareness system. Moreover we conducted an experiment towards the weight composition. The result of the context awareness experiment is taken from the analysis using Likert Scale and the experiment of the weight composition if taken from the data trend of each weight composition. The conclusions of this research is the context recommendation from context awareness system is able to give the context which is adjust with the users condition and the value of the multiplication of weight with value of comparative context should be less than a half of the sum of weights are defined to produce the composition of weights which can be used in every activity of Context Awareness System.

Keyword: *Context awareness, ubiquitous learning, Case Based Reasoning, Nearest Neighbor Algorithm, Likert Scale, Learning Management System*