

ABSTRACT

Information technology (IT) has delightfully given value added for education scope, particularly University level. Many educational industries in all around the world had created computer based learning or e-learning in order to fulfil information era's needs. Some people believe that e-learning would become such a future learning or next generation- learning method, overcoming time and class problem. An easily understanding object lecturing would be reached by student without tutors or lecturers' presence. Since the need of e-learning has been increasing dramatically, a number of vendors who created and develop a system – Learning Management System (LMS)—are increasing as well. There are two types of LMS, open source LMS and proprietary LMS. The best software so far would be open source LMS which has been developed and founded by Martin Dogiamas, a computer scientist in Perth Australia. He named his own project as *Modular Object-Oriented Dynamic Learning Environment* or well known as **Moodle**

IT Telkom is recently setting the goals in reaching *World Class University*, so that e-learning would be one of various ways to promote IT Telkom to foreign student. Within this final project, the writer offers a design of e-learning content in Industrial Engineering Faculty IT Telkom which is the subject is “Analysis of System Information and Design Method Subject (APSI)”. The writer uses Moodle as Learning System Management because it is the best LMS in any other open-source application. APSI is not easy to understand and it loads of difficult materials. Thus, the delivery of insight is very critical to lecturer. The writer divides her project into a five-step accomplishing. The first one is identifying the goals of project and references studies related to the topic. The second step is gathering some data which is very useful to design a tough content. The third one is analyzing and designing e-learning content as a whole; it means we build LMS and its content. Next, is analyzing the result of application testing and the last, is summarizing the project research and offering some kind of suggestion for the next research.

The testing of system shows that a multimedia based content gives a better comprehension for students. Almost 50 % respondents got better material understanding than before. As a consequence, we can sum up that the content packaging influences students' comprehension. In addition, Moodle also provides developer to vary the content with multimedia filter and create SCORM based learning object (SCORM is the standard of e-learning content). Hopefully, this project would give a better conception, strong motivation, and high enthusiasm for learning objects

Key words: design, system, LMS, *e-learning*, SCORM, Moodle.