ANALYSIS AND DESIGN OF WEB-BASED BIOLOGY LEARNING APPLICATION BY USING WEB 2.0 TECHNOLOGY (CASE STUDY: SMP al muslim IN EAST JAVA BRANCH)

Name of University Student: Faridha Kusuma Wardhani
NRP: 9106205301
Guidance Lecturer: Ir. Aris Tjahyanto, M.Kom

ABSTRACT

Student of Yunior High School al muslim at East Java Branch experiences difficulty in accepting biology subject. It is because biology subject is an exact sciences that needs understanding and application. And there is biology subject that cause learning has one way expository in nature that is from teacher to student, therefore student tends to become passive information receiver. Thus, in order to handle problems that support Biology teaching activities, there is a need of web-based learning model by using web 2.0 technology. In order to make such design, there is analysis of system needs and design planning that suitable with those needs has the character of web 2.0.

This research has 3 (three) steps, in which its first step is need identify activity by using interview, literature study, and data collection that related with biology learning process, that result in system needs list. Its second step is data design step and process design that performed by using waterfall methodology that modeled by using level data current diagram (DAD) or data flow diagram (DFD), and interface design step. The third step is verification and validation of system and among interface.

The result of this research is that process design is figured in the form of level flow diagram form, started from diagram context until Level 5 diagram that identify processes of system and interface design that suitable with the need that is interface design of theme data management, topic and sub topic, interface design of library data management, interface design of material searching, interface design of discussion forum, contribution adding design (comment) and evaluation of interface design.

Keywords: biology, data flow diagram, web-based learning, web 2.0