MOODLE: ENHANCING THE ASSESSMENT CAPABILITIES OF THE LEADING OPEN SOURCE VIRTUAL LEARNING ENVIRONMENT

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With the merger of Blackboard and WebCT, the selection of the open source system *Moodle* is an increasingly attractive alternative for many institutions. The Open University (OU) recently choose Moodle as a core component of its virtual learning environment after an extensive requirements gathering process and evaluations of commercial and open source products. The University has now launched a £4m programme to enhance the Moodle suite of e-learning tools, integrate Moodle with existing systems and promote the uptake of the new tools by course teams. It is feeding back its developments to the Moodle community and in turn hopes to reap the benefits of continual efforts taking place across the World to enhance the pedagogical provisions of the system.

A key Moodle module being enhanced by the OU is the Quiz Engine. While it has some good features e.g. ease of question authoring with an immediate preview facility, ability to define a range for numeric variables in numeric questions, and randomised questions in a test, it currently has a limited range of question types, does not fit well with University quality assurance and exception handling processes and is weak on feedback. Enabling better feedback is a particular concern as the OU has always paid attention to the role of assessment in the learning process. Our own in-house assessment system, OpenMark, has been designed to support the provision of detailed personalised feedback and to allow multiple attempts at each question thereby enabling students to receive feedback and act on it immediately. An initial assessment has been made of the potential for using Moodle to provide these more complex question types and we have concluded that it is possible to include such questions, and their feedback, within Moodle tests. Work is now being carried out to determine whether, or how, some of the other features of OpenMark, such as feedback on competences (evidenced from answers for a group of questions) can be built into Moodle.

The overall conclusion is that, while the Moodle quiz module does not currently meet OU functional requirements, it is proving feasible to substantially enhance and integrate it with other OU systems. Indeed, a common concern faced by institutions with well-developed but diverse systems is the effort required to incorporate them into a full VLE. Therefore, the OU is keen to pursue this interfacing in conjunction with the worldwide Moodle community.

This paper argues that there are many advantages in using an assessment system which fully integrates with an institutional virtual learning environment. It reports on the requirements gathering that has taken place, outlines the development work currently under way, examines some of the challenges and advantages of developing software as part of a global open source community and proposes future changes to the way assessments are handled within Moodle which should be of interest to the wider Moodle community. It also reports on the issues the OU is examining surrounding interoperability, accessibility, handling of maths questions, automated text marking, adaptive testing and item banks.