Moodle as a Virtual Learning Environment

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INTRODUCTION

Teaching and learning online has become an established educational paradigm. Information and communication technologies have been adopted in education through online learning environments ("platforms") and are used across the world to offer complete courses, or even entire programmes in e-learning mode (Petrova, 2001; Satay, 2004). Across New Zealand universities, and in many New Zealand schools, students learn though participation in online courses (Butterfield, 2002). With the advent of the Internet and Web-based educational technologies, the quest for a better and more flexible but still manageable learning environment has continued (Nunes et al., 2002).

Although a number of proprietary products are offered commercially, a noticeable trend in the space of Virtual Learning Environments (VLEs) is the development of Open Source Course Management Systems, an example of which is *Moodle®* (http://moodle.org/).

Moodle is free to download, to install (requires PHP and MySQL), to host, to update with latest developments, and to use for educational and community purposes. Its design is based on **constructivist principles**. It aims to provide the educator with tools supporting creative design and to establish and maintain vibrant online learning communities.

The constructivist model of learning implies that knowledge is not transferred but is created (constructed) by the learner. Constructivist approaches help the student form abstract concepts representing reality (Leidner & Jarvenpaa, 1995). Central to constructivism is the notion of knowledge construction through independent discovery, where teachers do not direct, but support learning and provide learners with a variety of activities centred around the learner — an active participant in the knowledge construction process.

To the teacher, *Moodle* offers a platform where the constructivist approach can be implemented and extended to include social interaction. Its features include tools supporting interactive activities such as assessment tasks, discussion forums, chat rooms, journals, quizzes, glossaries, and wikipedias.

Moodle is an evolving work-in-progress, started by Martin Dougiamas from Curtin University of Technology (Australia). Martin continues to lead the project with input from the wider Moodle community — teachers in universities and schools, private and not-for-profit organizations, and independent educators. The main *Moodle* site boasts over 75,000 registered users, from 138 countries, speaking 70 languages (as of 19 December 2005).

As a multi-user system, *Moodle* scales well: it can be used comfortably by community groups, schools, and large universities. The system maintenance is streamlined and easy to perform. Teachers and students enjoy significant rights as participants and contributors to the course sites they are involved in.

The *Moodle* site is equipped with tutorials, demos, and practical hints for *Moodle* beginners. There is also an international discussion forum and a newsletter for *Moodle* users. Currently

(as of 19 December 2005) there are 7983 registered *Moodle* sites from 146 countries. In New Zealand, their number has climbed to over 50 (including schools, university and polytechnics, private training institutions, and community organizations).

RESOURCES

1. *Moodle* distribution in New Zealand is provided by moodle.co.nz. The company offers commercial support, consultancy, and hosting of *Moodle* Web sites.
2. The New Zealand *Moodle* Conference site at http://moodle.org/mod/forum/discuss.php?d=18012 and the *Moodle* Moot Update at site http://www.moodle.org.nz/mod/forum/discuss.php?d=10 offer news and a space to share experiences and ideas.
3. The AUT University IT Symposium workshop demonstration site can be visited at http://scisit.moodle.co.nz.

CONCLUSION AND FUTURE DIRECTIONS

Currently, educational institutions are rethinking the choice of platform and tools for flexible and online learning (Corich, 2005). As a well established and stable product with versatile structure, *Moodle* has much to offer to all stakeholders — educators, managers and students.

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