



## **DEPLOYMENT OF REALTIME DYNAMIC KNOWLEDGE, LEARNING AND RESEARCH ENVIRONMENT USING MOODLE**

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### **ABSTRACT**

In the last few years, the development and usage of e-products and e-services are in fame. The use of technology driven products are escalating in numerous domains whether it is a service oriented organization or product oriented company. The world of academia is not untouched with this growing field in which the services are provided online by the mentors to their students. The education world is using e-products and technology driven modules to execute their academic practices. It helps in the development and deployment of Anytime-Anywhere learning environment or simply realtime dynamic knowledge environment. Thousands of software applications and modules are available on the information superhighway to implement e-learning and m-learning in the academic organization. These applications are available in the global market as proprietary, freeware and open source products whereby some or none factor is associated with the cost. This paper highlights the excellent features of an open source e-learning and virtual learning environment Moodle with tremendous performance.

### **Keywords**

Dynamic Learning Environment, E-Learning, M-Learning, Moodle, Real Time Learning, Virtual Learning Environment

### **INTRODUCTION**



The learning management systems are having numerous features which are required to deploy the e-learning products and modules in the academic institute. However, hundreds of e-learning software products are available in the software industry, Moodle is still on top and possess almost every feature which is required in an excellent learning management system. The development, customization, implementation and deployment of open-source software products are a promptly growing route and in the near future, the academe will get great premium from these products.

**Moodle** is a software package for producing Internet-based courses and web sites. It is a global development project designed to support a social constructionist framework of education.

Moodle is provided freely as Open Source software (under the GNU Public License). Basically this means Moodle is copyrighted, but that you have additional freedoms. You are allowed to copy, use and modify Moodle provided that you agree to: **provide the source to others; not modify or remove the original license and copyrights**, and **apply this same license to any derivative work**. Read the license for full details and please contact the copyright holder directly if you have any questions.

**Moodle** (abbreviation for *Modular Object-Oriented Dynamic Learning Environment*) is a free and open-source e-learning software platform, also known as a Course Management System, Learning Management System, or Virtual Learning Environment (VLE). As of October 2010 it had a user base of 49,952 registered and verified sites, serving 37 million users in 3.7 million courses.<sup>[3]</sup>

Moodle was originally developed by Martin Dougiamas to help educators create online courses with a focus on interaction and collaborative construction of content, and is in continual evolution.

Moodle can be installed on any computer that can run PHP, and can support an SQL type database (for example MySQL). It can be run on Windows and Mac operating systems and many flavors of linux (for example Red Hat or Debian GNU). There are many **knowledgeable Moodle Partners** to assist you, even host your Moodle site.

The word Moodle was originally an acronym for Modular Object-Oriented Dynamic Learning Environment, which is mostly useful to programmers and education theorists. It's also a verb that describes the process of lazily meandering through something, doing things as it occurs to you to do them, an enjoyable tinkering that often leads to insight and creativity. As such it applies both to the way Moodle was developed, and to the way a student or teacher might approach studying or teaching an online course. Anyone who uses Moodle is a Moodler.

### MOODLE STATISTICS

Registered sites [50,201](#)

## International Journal of Reviews, Surveys and Research (IJRSR)



International Refereed and Indexed Journal for Research Scholars and Practitioners

Countries	<a href="#">212</a>
Courses	4,240,340
Users	40,068,879
Teachers	1,126,424
Enrolments	18,480,033
Forum posts	68,603,313
Resources	36,841,036
Quiz questions	66,216,477

Country	Registrations
United States	9,481
Spain	4,533
Brazil	3,432
United Kingdom	3,221
Germany	2,417
Mexico	1,912
Portugal	1,809
Australia	1,407
Italy	1,257
Colombia	1,183

Top 10 from registered sites in 212 countries

- By 5 October 2010, Moodle had a user-base of 49,952 registered sites with 36,920,681 users in 3,732,772 courses in 210 countries and in more than 75 languages.<sup>[13]</sup>
- The site with the most users, moodle.org, has 63 courses and 838,109 users. Following a £5 million investment in 2005, The Open University, UK is the second-largest Moodle deployment by user-base, with 607,536 users and 4,731 courses. A comprehensive list of the top ten Moodle sites (by courses and by users) is maintained at moodle.org.<sup>[14]</sup>



- In India, Moodle is being extensively used by Chitkara University, Punjab for 5000 Students and 250 Courses. All the Academic Practices are deployed on MOODLE at Chitkara University including E-Assignments, Online Tests, Feedback, Questionnaires and Voting.
- Moodle is in use in India by Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib, Indian Institute of Management Calcutta( IIM C), Indian Institute of Management Bangalore (IIMB), Goa University, Goa, Christ University, Indian Institute of Technology Madras (IITM), Indian Institute of Technology, Bombay, Chennai Mathematical Institute (CMI) and BITS Pilani campuses.
- In Argentina, Moodle is used extensively by the University of Buenos Aires<sup>[15][16]</sup>, National University of Córdoba<sup>[17]</sup>, the National University of Salta<sup>[18]</sup> and the University of San Andrés<sup>[19]</sup>.
- In Australia, Moodle is used by numerous universities, including the Australian National University, Central Queensland University, University of Canberra, UniSA, University of New South Wales and University of Southern Queensland, and is scheduled for deployment in La Trobe University (2011), University of Ballarat, University of New England (2011), Monash University (2012) and Macquarie University (2012). Moodle is also used by the largest vocational training institute in the Australian Capital Territory, Canberra Institute of Technology. In the State of South Australia<sup>[20]</sup> more than 250 public schools are provided with instances of Moodle through a centrally managed and externally hosted model.
- In the Kingdom of Saudi Arabia, the Department of English at [6] Umm al-Qura University started to use Dr. Ali Abureesh's proprietary moodle, makkahlearning.net, in 2003.
- In Pakistan, the Department of Mathematics at LUMS [7], and UIMS (University of Arid Agriculture, Rawalpindi) is actively using Moodle, proprietary of Management Sciences teaching faculty Usman Asar [8].
- In the Philippines, the Department of Computer Science at Xavier University - Ateneo de Cagayan uses moodle as an online resource and for assignment or activity submission.<sup>[21]</sup>
- In the UK, Birmingham City University has used Moodle as a university-wide VLE since 2004. The Robert Gordon University, Aberdeen adopted Moodle for all taught programmes across its 12,790 member student body, in 2007.<sup>[22]</sup> It has more recently been adopted by the City University London<sup>[23]</sup>, University of Kent<sup>[24]</sup>, Strathclyde University, the London School of Economics and the University of St Andrews, replacing WebCT. Randolph College implemented Moodle as a course management system in the summer of 2010. The University of Exeter has also migrated from WebCT to Moodle in



2010<sup>[25]</sup>. The University of York also uses Moodle to teach its mathematics course and the University of Bath uses Moodle as an online resource for all of its courses.

- In the United Arab Emirates, Ajman University of Science and Technology (AUST) adopted Moodle in 2007. AUST is one of the pioneers and is the largest user of Moodle in the UAE, serving more than 5,000 users in approximately 500 courses. The projected plan is to serve 10,000 users and about 1,000 courses by year end 2011.
- In the United States, The Ohio State University<sup>[26]</sup>, Louisiana State University, University of Montana, Louisiana Tech University, Lehigh University, Bryn Mawr School, The Pingry School, Occidental College, Oakland University, and Gilman School use Moodle for instructional purposes.<sup>[27]</sup>
- In the West Bank, Hebron University makes extensive use of Moodle for a blended approach to education.<sup>[28]</sup>
- In Canada, Vancouver Island University, Université du Québec à Montréal, St. Thomas University, Concordia University, Mount Allison University and Queen's University use Moodle for most courses.

Moodle has several features considered typical of an e-learning platform, plus some original innovations (like its filtering system)<sup>[citation needed]</sup>. Moodle is very similar to a learning management system. Moodle can be used in many types of environments such as in education, training and development, and business settings.

Developers can extend Moodle's modular construction by creating plugins for specific new functionality. Moodle's infrastructure supports many types of plug-ins:

- activities (including word and math games)
- resource types
- question types (multiple choice, true and false, fill in the blank, etc)
- data field types (for the database activity)
- graphical themes
- authentication methods (can require username and password accessibility)
- enrollment methods
- content filters

Many freely-available third-party Moodle plugins make use of this infrastructure.<sup>[4]</sup>

Moodle users can use PHP to author and contribute new modules. Moodle's development has been assisted by the work of open source programmers.<sup>[5]</sup> This has contributed towards its rapid development and rapid bug fixes.



By default Moodle includes the TCPDF library that allows the generation of PDF documents from pages.

### POODLE

Poodle (Portable Moodle) is a software tool **designed** to allow for the delivery of Moodle content offline.

Moodle is designed to offer an online environment for learning and collaboration between teachers and students. Many different education institutions have created content for classes and instruction in the Moodle platform. The Poodle is a way to bring some of that content to those who are in low-bandwidth and no-bandwidth areas.

One expected benefit of the Poodle software project is that educational institutes can expand their training to offline students in a format they are familiar with. Learners no longer need to find a computer with an internet connection, but only a computer.

### Description

Poodle is a PortableApps based program. It uses Firefox, Portable Edition and a portable web server to deliver an offline Moodle experience. It is primarily designed to be used on a removable writable media (USB flash drive).

### Status

Poodle v1.2 has just been released (April 2010). Poodle uses the following software:

- PortableApps v1.6
- Mozilla Firefox, Portable Edition 3.6.3
- Sumatra PDF Portable 1.0.1
- Moodle 1.9.8+ (Build: 20100407)
- MoodleStart.exe 1.0
- The miniServer 21 v2