THE IMPLICATIONS OF MOODLE AS AN EFFECTIVE CONTENT MANAGEMENT SYSTEM IN EDUCATION

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Abstract
Digital technology is now the driving force of the global education sector. Billions of the world population have access to digital devices and millions of others use the same in public places or community settings. The global nations have issued policy agendas for propagating the use of digital technologies and it has resulted in the reduction of physical restrictions and frictions. Most of the educational institutions are getting familiarised with the content management systems and the various platforms offered under its umbrella. This study focuses on the use of Moodle as a Content management system and its effectiveness in delivering educational outcomes in the digital world. While there are several open source Learning Management Systems (LMSs) available today, Moodle is focussed because of its rapidly growing presence and also for promoting the free software and its learning outcomes.

Introduction
The most talked about topics in the field of digital technology enabled education are learning management systems and content management systems. The learning management system (LMS) is a type of software application which is much more robust than a content management system. The LMS is more of a training control system which provides a platform for housing all types of eLearning courses, as well as tracking who has completed them, when, and what kind of scores are received on assessments. Furthermore, an LMS allows administrators or trainers to prepare reports, make assignments, and send reminders all in one central location. An LMS provides the technology infrastructure for companies too in order to manage human capital development by tracking employee training information and managing all events and resources associated with corporate learning. A web based LMS provides online courses, event management content, resource management, comprehensive assessments, content authoring, email notifications, real time integration with human resources, financial and ERP systems. An LMS manages all training delivery types including classroom based learning, virtual classrooms, technology based training etc. There are hundreds of LMS solutions including open source learning management systems such as Moodle, tutor, Canvas, OLAT etc. There are some cloud LMS such as Eduwave, Expertus, Talent LMS and some proprietary LMS such as Blackboard, Edmondo, E College, Engrave etc.

A content management system (CMS) on the other hand is simply an application that allows a method for managing content from a central location. Users with appropriate permissions can edit, add, and view content, while those with lower level access can only view the content. These systems are very helpful with managing versions of a document and centralizing all aspects of something in one place.

Moodle, an Open Source Content Management System
Open source is a collective name for software codes that are freely available and distributed. In contrast to proprietary or commercial software, anyone may copy, modify, and share open source code without paying royalties or fees. The software often evolves through community development, contribution, and cooperation. They Permit free redistribution of source code, allows derived works, ensure integrity of the author's code, share licenses and do not discriminate against persons or groups. Moodle is an open source Content Management System (CMS), a free package which can be downloaded online and designed using known pedagogical principles to help the educators to create effective online learning communities. It has a clean design and flexible web application that enables educators to create their private websites filled with dynamic courses that extend learning anywhere and anytime. Moodle is usually completed by a student to interact with other students or with the teacher. The code for courses is available online and one can download the code for free or by paying a nominal fee to someone to host the code for them. This facilitates a cost effective way to get a Content management system up and running in an organisation.

Moodle stands for Modular object oriented dynamic learning environment. Moodle is also a verb that describes the process of lazily meandering through something; it stands for doing things as it occurs to you to do them and an enjoyable tinkering that often leads to insight and creativity. Moodle was created by Martin Dougiamas, a computer scientist and educator who spent time supporting CMS University in Perth, Australia. While he was working he grew frustrated with the system and learned that engineers, not educators had built it. He realised that a system built by someone who started with educational processes would be infinitely better than what he had to work with and he developed Moodle as an alternative to help educators to create online courses with a focus on interaction and collaborative learning. The first version of Moodle was released on 20th August, 2002 and these days it is led and coordinated by Moodle HQ, an Australian company of 30 developers.

Main Features

- **Innovation**
  Moodle learning innovations often motivate educators as it is grounded in a philosophy of collaborative learning. Educational Institutions often prefer to have a Moodle enhanced for their own purposes and contribute their code back to the community. Here people learn by investigating, analysing, collaborating, sharing and reflecting knowledge.

- **Usability and Stability**
  Moodle interface is easy to navigate on both desktop and mobile devices. Simple and powerful is the right terminology in this regard. It offers automated and personalised services, fast access and presentation of materials is hassle free. It is highly stable and can manage a large enterprise running 24/7.

- **Security**
  Moodle is regularly updated with security patches to help members to ensure that their site is secure. Moodle's current system of roles includes administrators, teachers, teaching assistants (without editing privileges) students and guests. Each of these has clearly defined privileges and cannot act beyond those privileges. The basic unit of the organisation is the course and administrator can assign any number of teachers (with or without editing rights) to a given course which has its own file area as well as its own discussion forums. The teachers can decide whether the content is visible or hidden for the students.

- **High Availability and Scalability**
  Moodle offers an efficient web based interface allowing learners, tutors and administrators to routinely login and carry out their daily tasks. The Moodle architecture makes it easy to respond to future demands by adapting technologies on which it runs i.e. the infrastructure can scale to meet future needs.

- **Personalization of Teachings Methods**
  Moodle is a good platform for teachers to personalise their teaching methods. On the basis of the analysis of student learning styles, English language proficiency, interests and professional characteristics, the teachers can design or edit their teaching materials and post them to Moodle course management module. It also enables teachers to group the students and promote healthy competition and collaborative learning. One to one guidance can be offered through blogs, chats, forums, wiki modules or through emails.

- **Personalization of Extra Curriculum Activities**
  Extra curriculum activities play an indispensable role in stimulating the student's interest in learning. Moodle modules have provided an ideal platform for carrying out personalised extra curriculum activities. Students can be encouraged to make full use of the Moodle platform for self-presentation, dialogue exercises, role play or interview activities. They may exchange ideas through chat, blogs, forums and other modules with teachers and other learning partners at any time.

- **Personalisation and Diversification of Evaluation System**
  In the Moodle based teaching, it is of great significance to conduct a personalised and diversified assessment on the students learning. The teachers can make full use of the functions of Moodle learning such as records tracking, a dual evaluation module and peer evaluation to track and analyse the students online behaviours to explore the relationship of the learner's behaviour and the learning outcomes.

Criticisms of Moodle

Moodle is often criticized on the ground of being an open source software. For example, some feel that Moodle is not quite "enterprise-ready," nor able to support "mission critical" programs. Some suggest that Moodle is not truly free, and is only as good as the expert support available and that problems may occur with too much customization.
Other common criticisms are that it lacks

- The ability to integrate with human resource systems.
- The ability to integrate well between student administration systems and Moodle student information.
- The ability to support specific and complex business-process models.
- The ability to use a distributed administration model to support multiple "schools" and "departments".
- Sophisticated assessment and grading capabilities.

Conclusion

The advancements in technology and increased use of Internet have resulted in a change in perceptions towards teaching and learning instruments used throughout the world. The growth in the number of educational Institutions adopting online courses and digital platforms to replace or supplement classroom activities are positive trends. This scenario guarantees the scope of learning and content management system development in future. Moodle being one of the pioneers in this regard is set to benefit more and continue to impact the educational outcomes of the global economy. The change in the perceptions of developing nations towards accepting learning platforms is evident with the educational reforms in Brazil and India. However the easiness with establishment in developed nations can't be expected from the developing nations as they lack infrastructural facilities. Measures should be taken to ensure promotion of customized learning management platforms especially those which are free software that offer benefits to all without discriminations but keeping in mind the requirements of the host country and its infrastructural and development issues.

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