

## Web Based Information Literacy Module Using MOODLE Open Source Software For Faculties and Students

*Dr. C. Anandhi*

*Assistant Professor, Department of Library and Information Science, Annamalai University  
(Deputed to Madurai Kamaraj University, Madurai )*

**Abstract:** Learning Management System (LMS) is a useful academic tool for online learning and on line instruction. LMS allows students to build, impart, deliver, and track training content in on line system. This article focuses on the design and method of Information Literacy Instruction through LMS. This paper overviews the implementation of a web-enabled information literacy Module among the students of college and University education. It focuses the designing the web enabled module, construction of the course, designing the content and installing the open sources content management system and developing the module for the information literacy skill. The paper has discussed the development of web-enabled information literacy module by using MOODLE - Open Source Software and explained its usefulness in terms of knowledge transfer and information literacy instruction for Faculties and Students.

### Introduction

In an era of information overload, information literacy and being information literate is important for every individual to become a lifelong learner. Information Literacy Skill is the capacity to seek and evaluate right sources of information and acquire it. We are facing new challenges like information obsolescence, information poverty, etc., to face these challenges, the Librarians and educationists must think collaboratively to impart information literacy among the students so as to survive in this information age. The teachers should be information literate so that they can implement the information literacy programme in their schools. But there is a need to impart the information literacy skills among the teachers during their pre service teacher education. Teachers play a key role in providing students with diverse opportunities to learn how to use information wisely.

The information literacy training by online method increases the students searching skill. The Online tutorial increases the academic and research skill of Faculties and students and it was developed for the distant learners. The web enabled module means its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself.

### Background of Related Studies

The efficiency of the Learning Management System (LMS) at Arab Open University(AOU), Kuwait was studied and found that the majority of the AOU, Kuwait students welcome the LMS system at their university (Alfadly Ahmad Assaf,2013). The effectiveness of an online information literacy tutorial with a face-to-face session for teaching information literacy skills to nurses was conducted and found that the searching skills of first year pre-registration

nursing students was improved and remain unchanged one month later, regardless of teaching method. The two methods produce a comparable improvement and there is no improvement or degradation of skills one month post-session for either method. Nurses Information literacy skills improve after both face-to-face and online instruction. There is no skills degradation at one month post-intervention for either method (Brettle and Raynor, 2013). The effectiveness of first-grade information literacy instruction and students', teacher's as well as parents' opinions towards the curriculum was studied and the results showed that students' library and media literacy were improved; they did not like the units involving reading and writing, though their performance on them was fine. Both teachers and parents thought information literacy instruction would help other subjects learning and should be taught systematically (Chen and Kuo ,2012). The effectiveness of Web Enabled Information Literacy Modules and its impact of training among the teacher education students was studied and found that there is a serious impact of training, among the teacher education students in information literacy skill (Kamatchi and Balasubramani ,2012)

### **Objectives of the study**

The following objectives are framed to study the variables of the research problem chosen and its scope.

- a) To design and develop the Web enabled Information Literacy module for Fucalties and students.
- b) To integrate the MOODLE – Open Source Software to assess the e-learning skills.
- c) To Identify and collect the course content on ICT Skills of Fucalties and students.
- d) To upload the content for the Information Literacy Module and to given open access for the Fucalties and students.

### **Methodology**

The information literacy module was developed by the researcher with the purpose of inculcating information literacy skills to students in the colleges of education. This was done by integrating the knowledge from information behaviour research and educational theory and current Information and Library Science perspectives of information literacy. Information behaviour concepts (such as knowledge states; cognitive states; affective states; behaviour and characteristics of sources) were integrated into the programme. These were supported by pedagogic theories (such as behaviourist and constructivist approaches), together with thinking skills associated with independent learning and creativity including productive and reflective thinking.

### **Developing Module**

The Researchers aim to summarize content to developing online course in information literacy. We begin by highlighting the advantages of using the Moodle open source Software for courseware. Developing courseware is not merely a matter of preparing a series of lectures, linking them together and packaging them as a course. A comprehensive design strategy must also consider how to implement and manage a course, how to evaluate the materials that are used, and how to assess the learners. Therefore a systematic approach to the development of course materials. According to Rowntree the systems approach should incorporate four basic strands:

- e) Identify course aims and objectives;
- f) Develop necessary learning experiences;
- g) Evaluate the effectiveness of learning experiences; and
- h) Improve the experiences in the light of evaluation.

### **Module design**

The major objective of this study was to design web enabled information literacy module on students of teacher education institutions in order to inculcate their information literacy competencies.

The Web enabled information literacy module was designed by using Moodle (Modular Object Oriented Dynamic Learning Environment) which is an open source course management system also known as learning management system. It is a popular one among educators around the world as a tool for creating online dynamic websites for their students and also to help educators create online courses with a focus on interaction and collaborative construction of content , and is in continual evolution. Moodle runs in the platform of Unix, Linux, Windows operating system that supports PHP. Data goes in a single database. Database servers such as Oracle and Microsoft SQL Server can be used.

### **Managing Moodle Course**

A course in Moodle is an area where a teacher will add resources and activities for their students to complete. It might be a simple page with downloadable documents or it might be a complex set of tasks where learning progresses through interaction. Progress can be tracked in a number of ways. The course page is made up of central sections which contain the tasks and blocks to the side. The course teacher has control over the course layout and changes it at any time. Students can be enrolled manually by the teacher, automatically by the administrator, or they can be allowed to enroll themselves. Students can also be added to groups if they need to be separated from classes sharing the same course or if tasks need to be differentiated. It contains the following menus such as Courses, Editing Texts, Activities, Resources, Blocks, Questions, Course enrollments, Grouping Users, Tracking progress and reusing activities respectively.

### **Information Literacy Module**

The Module providing high-quality, high-end technical material to students and professionals to bring higher-quality deliveries without incurring the cost of developing courses. By working with Module our initial offering of 5 topics related to Information Literacy. This Module was developed with the help of moodle and its supporting for searching and browsing. Moodle is a Course Management System (CMS), also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). It is a Free web application that educators can use to create effective online learning sites. 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).

### **Content Design**

The online information literacy module was prepared on the basis of ACRL's Information Literacy Standards. According to the standards, five competency areas referred in the present investigation as dimension in information literacy are identified and indicated in the present research as dimensions which are listed below.

1. Knowledge seeking skill
2. Quality information product  
Producing skill
3. Self directed learning skill
4. Group contribution skill

## 5. Ethical information usage skill

Each competency area is divided in to several component skills for the purpose of the project; each stage was taken as equivalent to a topic. Each subsequent topic was designed to build on preceding one with increasing complexity as based on Bloom's taxonomy of cognitive domain of knowledge. Bloom's taxonomy model consists of six levels namely, knowledge, comprehension, application, analysis, synthesis and evaluation (Clark 2001).

Proper teaching learning materials were also developed. In each topic, 4- 7 tasks were added that students were expected to tackle by reading various sources of information, which were provided online and by previous learned experiences. At the end of topic they were expected to submit their completed assignments online to the tutor for grading.



**Figure 1 Homepage of web enabled information literacy module**

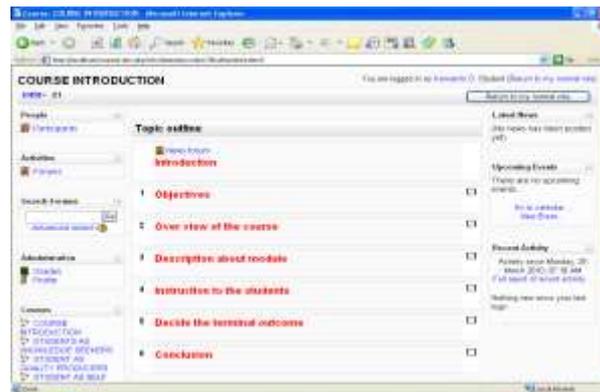
It could be interpreted that the information literacy skill and its five dimensions were instructed through Moodle, a learning management system. Homepage of web enabled information literacy module was shown in figure 1

It was listed as course categories. Each course has sub categories. Information literacy Contents was created and organized with assignments, journals, lessons, quizzes, and surveys. Main Menu is added in the left column, with links to detailed information about the site.



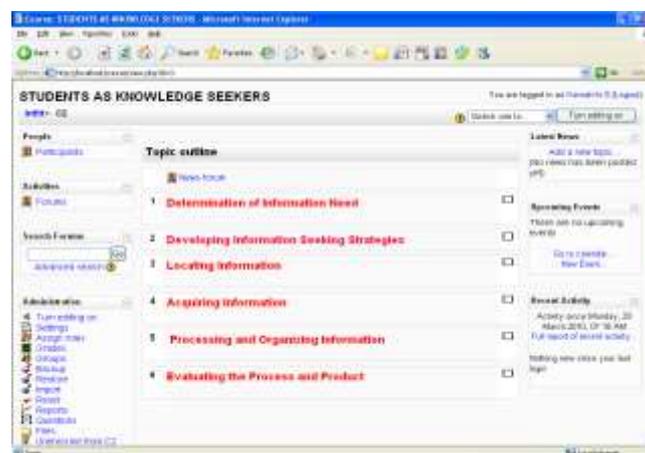
**Figure 2 Screenshot of a course – Identify the Information Need**

From the above Figure 2, was shown that the courses were created with objectives and outcome of the course. The course is designed by organizing text material, pdf content and power point slides. Students were assessed by a test, quizzes, and discussions.



**Figure 3 Screenshot of a Course Introduction**

The figure 3 was depicts that the introduction module. It listed out the objective, overview and description of the course. Each items leads the students to know about the course.



**Figure 4 Screenshot of a course topic – Students as Knowledge Seekers**

The figure 4 was shown that the one course module. The each item in the module contains the assignment and test. Each module has invited the students for discussion.

### Features of Information Literacy Module

- Students can create their own login accounts. Email addresses are verified by confirmation.
- Teachers can create courses, teach in them. Typically, a teacher has full control over all settings for a course.
- Students can participate and view activities.
- Guests are view only users.
- Teachers and Students can be placed in one or more Groups.
- The chat module allows smooth text interaction.
- Different types of forum are available and discussions can be viewed nested.
- Courses can be categorized and searched - one Moodle site can support thousands of courses
- It promotes a social constructionist Pedagogy (collaboration, activities, critical reflection, etc).

### Conclusion

The web enabled module course is effective tool to impart the knowledge of information Literacy skill among the Faculties and students. Feedback can be obtained

throughout the course. The feedback mechanism helped to provide a critical evaluation of the module as well as to encourage faculties and students to reflect on the various activities carried out in each session. The study has explained the designing the web enabled module and course creation on the basis of active, situated and problem-based learning. In these, learners frame experience through a series of problem solving activities by actively participating in problem solving activities collaboratively and through knowledge sharing. These methods help to support learners' critical knowledge, problem solving proficiency, self-directed learning strategies, and team participation skills. An understanding of pedagogy meant that teaching methods and techniques could be applied to foster the learning process in the most appropriate way and in a manner that engaged the students. Lastly, the Library Science approach to information literacy helped to provide the overall structure for the module.

## References

- Alfadly Ahmad Assaf "The efficiency of the learning management system in AOU, Kuwait, as a communication tool in an E-learning system", International Journal of Educational Management, Vol. 27, No. 2, pp. 157-169, 2013.
- Brettle, A. and Raynor, M. "Developing information literacy skills in pre-registration nurses: an experimental study of teaching methods", Nurse Education Today, Vol. 33, No. 2, pp. 103-109, 2013.
- Chen, L.C. and Kuo, M.S. "Effectiveness of first-grade information literacy instruction", Journal of Educational Media and Library Science, Vol. 50, No. 1, pp. 41-74, 2012.
- Kamatchi, S. and Balasubramani, R. "Effectiveness of web enabled information literacy module among the teacher education students in Chennai city", European Journal of Scientific Research, ISSN 1450-216X, Vol. 79, No. 2, pp.191-197, 2012.
- Clark D. (2001). "Learning domains or Bloom's taxonomy". Retrieved September 9th, 2006 from <http://www.nwlink.com/~donclark/hrd/bloom.html>
- RowntreeD. (1994) Teaching through self-instruction: how to develop open-learning materials. London: Kogan Page. Read More: <http://journals.heacademy.ac.uk/doi/full/10.11120/ital.2003.02010001>
- <http://www.mysql.com>.