

Chapter 71

Open Source and Free E-Learning Tools Useful in LIS Education

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ABSTRACT

E-learning is commonly referred to the intentional use of networked information and communications technology in teaching and learning. The present paper discusses the synchronous and asynchronous mode of e learning with its features. It also defines and summarizes the impact of open source software on teaching and learning process. The numerous open source e learning tools are discussed with examples such as Open source LMS, Open source authoring tools, Open source audio editing software, Open source social bookmarking tools, Open source CMS etc. It also throws light on free e learning tools useful in e learning such as Slideshare, Youtube, Wikis, RSS, Wordpress etc. The paper concludes with e learning initiatives in India.

E-LEARNING: DEFINITION AND ITS TYPES

E-learning is commonly referred to the intentional use of networked information and communications technology in teaching and learning. E learning term is used interchangeably with the number of other terms. They include online learning, virtual learning, distributed learning, network and web based learning (Sawant, 2013). Fundamentally, they all refer to educational processes that utilize information and communications technology to mediate asynchronous as well as synchronous mode of learning and teaching activities. In this

e learning environment the web is used as the medium for communication, collaboration, content hosting, and assessments.

In the synchronous learning model (Online model), the students can attend 'live' lectures at the scheduled hour from wherever they are irrespective of their location forming a virtual classroom. The lectures by the teacher are accessible to all registered students over the net. A synchronous learning includes text-based conferencing, and one or two-way audio and videoconferencing. But due to bandwidth constraints, these do not normally broadcast live video feed of the faculty; instead they restrict to audio and slides, and in

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some cases a whiteboard with live marking. The second method is asynchronous (Offline model) where the notion of classroom lectures is not included. They may be held in the traditional way in addition to the elearning setup (generally called blended learning). The typical example of this kind of activity includes on-line discussions via electronic mailing lists.

The asynchronous mode of elearning generally offers the following facilities:

1. Teacher can post study material – downloaded files, web links, own notes and articles, videos, etc – for anytime anywhere access by the students. It is generally possible to check if and when students have accessed these materials.
2. Announcements and calendar online.
3. Assignment posting, submission, and evaluation with feedback can be done online. Rich control is often possible to restrict what can be submitted.
4. Encourage student-student interaction, discussion of issues, etc. through discussion boards and chats.
5. Keeping track of student performance and grades.

To achieve the asynchronous learning requires Learning Management System (LMS). An LMS is an integrated software environment supporting all these functionalities along with some mechanism for student enrolment into courses, general user management (including administrator, teacher, and student) and some important system functions like backup and restore.

WHAT IS OPEN SOURCE SOFTWARE?

The Open Source Initiative (“OSI”) defines Open Source as software providing the following rights and obligations:

1. **Unrestricted distribution:** No royalty or other fee imposed upon redistribution.
2. **Source code distribution:** Availability of the source code of the entire open source product.
3. **Modifications:** Right to create modifications and derivative works.
4. **Author’s source code integrity:** May require modified versions to be distributed as the original version plus patches.
5. **No personal discrimination:** No discrimination against persons or groups.
6. **No restriction on application:** No discrimination against fields of endeavor or purpose.
7. **License distribution:** All rights granted must flow through to/with redistributed versions.
8. **License must not be product-specific:** The license applies to the program as a whole and each of its components.
9. **No restriction on other software:** The license must not restrict other software, thus permitting the distribution of open source and closed source software together (Webbink, 2003).
10. **Technology neutrality:** Licenses should not be issued on the basis of the specific technology involved (Lakhan & Jhunjhunwala, 2008).

OPEN SOURCE APPLICATIONS AND ITS IMPACT ON TEACHING & LEARNING

Open source e-learning software’s has emerged as a viable solution to many school, college and university administrators, particularly universities. The advantages of use of open source e learning software’s are as follows:

- **Free availability:** Most universities annually pay large sums to software companies to use their products, but open source li-

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