



AgED Open Course – ELearning Framework for ICRISAT

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Abstract :

E Learning is a learning that utilizes electronic resources to access educational curriculum outside a traditional classroom. In most cases it refers to a course, degree or program delivered completely online.

Introduction

E Learning is a learning that utilizes electronic resources to access educational curriculum outside a traditional classroom. In most cases it refers to a course, degree or program delivered completely online. E learning is percolating across many domains/industries as it can reach masses and can enable any time learning at one's convenience.

ICRISAT launched an Open Courseware platform, known as AgED Open Courseware platform (<http://www.aged.icrisat.org>) developed using Moodle, to bring research infused curriculum for enhancing the capacities of students, faculty members, extension agents, smallholder farmers etc. The main goal of AgED project is to initiate open distance learning (ODL) paradigm with inputs from research and have flexible curriculum for the benefit of students, extension workers and faculty of institutes located in semi-arid regions of Africa and Asia. AgEd Open Course Ware portal development was initiated by ICRISAT to meet the above challenges for the benefit of developing south-south nations. The AgEd Open CourseWare has 7 ICRISAT Courses, 11 FAO Short Courses, and 1932 Learner Participants from around 100 Countries. As the number of users increased the whole application was moved to a high end server at icrisat.

Moodle is a Course Management System (CMS) which is also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE) and is written in PHP. It is a Free web based open source application that educators/teachers can use to create effective online learning sites. The word Moodle was originally an acronym for Modular Object-Oriented Dynamic Learning Environment, which is mostly useful to programmers and education theorists.



Using Moodle any student or teacher might approach studying or teaching an online course. Anyone who uses Moodle can be called as Moodler.

Moodle is distributed under the GNU General Public License and Developed on pedagogical principles, and is used for blended learning, distance education, flipped classroom and other e-learning projects in schools, universities, workplaces covering and sinking into all the domains including agriculture. The first version of Moodle was released on August 2002 and was developed by Martin Dougiamas to help educators create online courses which allows educators to focus on interaction and collaborative construction of content. There are hundreds of plugins who are available for extending the core functionality of Moodle.

Methodology:

One can install and configure Moodle in different web server environments like windows, Unix, Macintosh and Linux/RedHat Linux. CentOS, An open source version of Linux appears to be highly suitable and does not require any financial investment. Basically it requires two software to be installed i.e 1). Web server compatible with PHP Scripting like Apache 2). Databases like MySQL and PostgreSQL. XAMPP/WAMP are some of the pre-built combinations of Moodle with a Web server and database are available.

We need to have decent configuration Server for hosting the web application. Cloud based virtual machines and elastic clouds are can be used for implementation of this.

Discussion:

We adopted Moodle for our virtual learning environment and implemented the same using Moodle. This is a learning management system to expand and improve access to educational modules. Moodle automates all the processes of teaching learning process. With this we have moved from traditional/onsite learning to virtual learning using Moodle.



AgEd Open Courseware

<http://www.aged.icrisat.org>

This Moodle enables learners and instructors to interact online. Learners can upload assignments, and instructor gets an alert when a new message arrives. Students get results through grade system. The Moodle offers built in chat enables group of students to work and discuss an issue without the presence of teacher and all the discussions are stored which can be retrieved by the Instructor later. Chats can be saved and can be reviewed by teacher at any time. Database module helps in storing the data where the data is available to all the end users anywhere anytime from data repository. The forum module enables the students to have virtual seminars. The instructor provides some text or audio file, which the students respond to one after the other. In the lesson module the teacher updates a series of lessons with questions at the end of each lesson. The student responds to the questions and the instructor provide feedback to the student. The quiz module offers a range of quizzes and tests

The web site of AgEd open course is developed where the participants can get registered they will be given username and id. Admin page have full access to the entire site and to all courses. Administrators are incharge of necessary enrolment and authentication process to the users, instructors and other members. Teachers page is completely for instructors where they will take care of courses, activities, classes and grading to the students. Students page allow them to interact, participate in virtual class rooms and quizzes.



AgED Statistics:

The main objective of this Open Courseware is to create learner centric interaction and support a flexible virtual learning environment that is advocated as anytime and anywhere learning. The platform also hosts ICRISAT partner courses and make it available to the Global community. It is an open platform for ICT-Mediated Learning for ICRISAT and its Partners, i.e., FAO, AgMIP, and ICAR. Currently, the AgEd Open CourseWare has **7 ICRISAT Courses, 11 FAO Short Courses, 1 SEWA Learning Module** and more than **6300 Learner Participants** from around **160 Countries**.

Available Courses (19)

ICRISAT Courses:

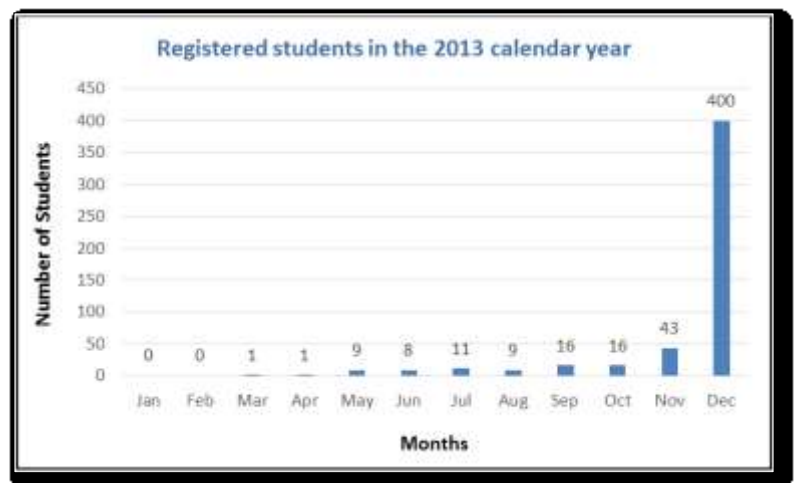
1. Pigeonpea
2. Public - Private Partnership
3. Aflatoxin
4. Climate
5. Groundnut
6. Sorghum
7. Pearl Millet

FAO Short Courses: 11

SEWA Learning Modules: 1

Registered students in the 2013 calendar year:

| Month | Students |
|--------------|------------|
| Jan | 0 |
| Feb | 0 |
| Mar | 1 |
| Apr | 1 |
| May | 9 |
| Jun | 8 |
| Jul | 11 |
| Aug | 9 |
| Sep | 16 |
| Oct | 16 |
| Nov | 43 |
| Dec | 400 |
| Total | 514 |





Registered students in the 2014 calendar year:

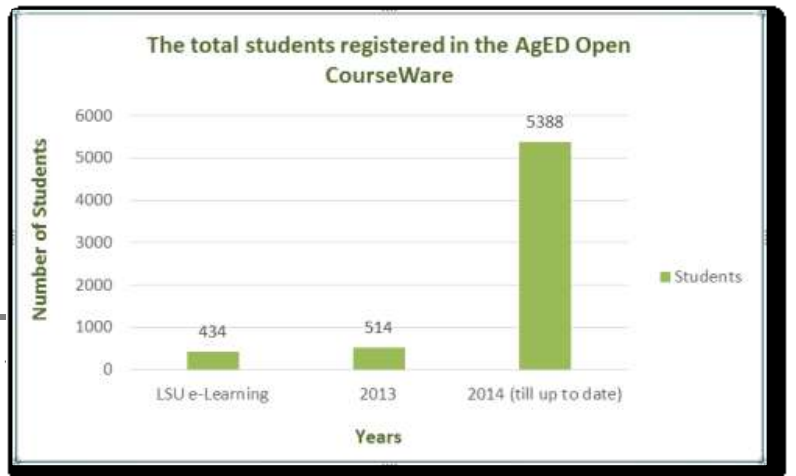
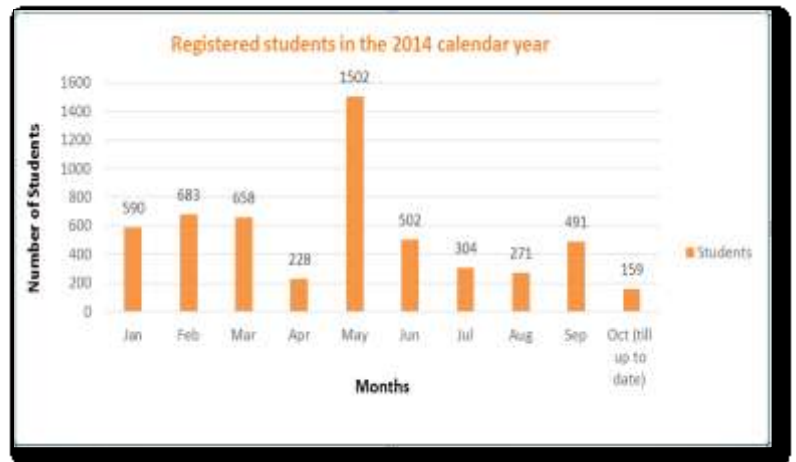
| Month (2014) | Students |
|--------------------------------|-------------|
| Jan | 590 |
| Feb | 683 |
| Mar | 658 |
| Apr | 228 |
| May | 1502 |
| Jun | 502 |
| Jul | 304 |
| Aug | 271 |
| Sep | 491 |
| Oct (till up to date) | 159 |
| Total (till up to date) | 5388 |

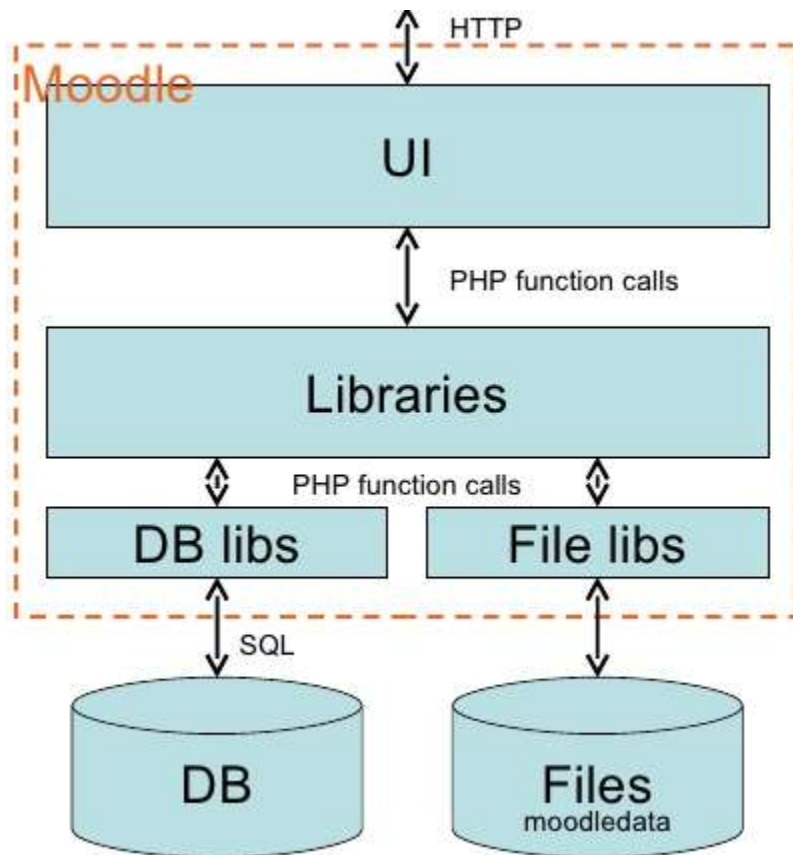
The total students registered in the AgEd Open CourseWare till up to date:

| Year | Students |
|--------------------------------|-------------|
| LSU e-Learning | 434 |
| 2013 | 514 |
| 2014 (till up to date) | 5388 |
| Total (till up to date) | 6336 |

Note: Launch of LSU e-Learning (Aug 2011) to till Launch of AgEd Open CourseWare registered students 434 are also included in the AgEd platform.

System Architecture: The application is a cloud based application and users shall access using role based access like admin, teacher and student. Many modules are built which are integral components of the application which enables smooth flow of information across different modules for successful automation of various activities of teaching learning process like assignments, quizzes, sharing resources, books and examinations etc.





The end user can browse all the research articles by Issue, Author and Title, which allows the user to browse and move across the articles seamlessly.

Conclusion:

The applications like AgED Open course were leveraging the strength of open source software like Moodle is really effective. The reach of e-learning software like Moodle are more compared to onsite classroom teaching. With little financial investments one can offer any time learning to the participants across globe and the need of the hour.

References:



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