Outcome Based Education (OBE) Tools: A Study of EvalTools LMS

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Abstract: Global developments in higher education show a shift from the traditional teacher-centered model that stresses on lectures, tests and other methods of assessments towards the technology supported learning that emphasize on what students know and can actually do. To meet this challenge a new learning model called Outcome-Based Education (OBE) emerged which was adopted by many educational institutions around the world in order to promote educational reform and renew education strategy. This model emphases on extra attention towards the evaluation of learning outcomes which has resulted in new challenges for teachers and administrators. The traditional manual paper-based process of evaluation to assess the achievement of learning outcomes in a course is usually an exhaustive process. Since the assessment and evaluation is foremost measure for educational effectiveness that is required by accreditation bodies, therefore, there was need for an organized computerized system to link all the course level assignments, quizzes and other activities for the assessment. Learning Management Systems (LMS) are such systems that facilitate the capture and storage of all course related activities like, quizzes, exams, assignments, projects etc. along with the scores and evaluation of each of these activities. EvalTools LMS is one such software that has all the features that can fulfill the requirements of OBE learning model. Keeping in view the importance of LMS in OBE model, this paper discusses EvalTools LMS and its various features.

Index Terms - **Outcome Based Education (OBE), EvalTools, Education, eLearning, Learning Management System (LMS)**

I. INTRODUCTION

Learning Management System (LMS) like Blackboard and EvalTool are the main tools that have made serious impression on teaching, learning and assessment by providing flexible schedules, superior content, secure access, delivery of content, discussions, chat, assignments, quiz, etc. There are more than five hundred LMS softwares available in the market and the size of this market is expected to grow from USD 5.22 Billion in 2016 to USD 15.72 Billion by 2021 [1]. These are many LMS tools like Blackboard, WebCT, EvalToosl, Moodle etc. that have produced remarkable results for teachers, students and higher education institutions as they support the teachers in delivery of course material to the students, manage assignments and assessment, keep track of student performance, and manage all the records. Presently, most of the universities around the world are using LMS tools for teaching and learning. Keeping in view the importance of these tools, this paper discusses EvalTools LMS and its features. EvalTools is a new LMS software developed by MAKTEAM Software and many universities and other institutions have adopted this tool for teaching and learning.

II. OUTCOME BASED EDUCATION (OBE)

Global developments in higher education show a shift from the traditional teacher-centered model that stresses on lectures, tests and other methods of assessments towards the technology supported learning that emphasize on what students know and can actually do. Consequently, there was need to supplement the traditional class-based teaching, training and learning of students with that of online which is commonly known as e-learning.

Later, a new learning model called Outcome-Based Education (OBE) emerged which was adopted by many educational institutions around the world in order to promote educational reform and renew education strategy. OBE methodology makes both teaching as well as learning more challenging for the teachers and students. The core foundation of OBE is to produce the output rather than focus on inputs.

According to Spady, Outcome-Based Education (OBE) approach focuses and organizes all the activities in an educational framework around enhanced student learning experience that results in their success. This indicates beginning with a clear picture of what's essential for students so one can do, then organizing the program curriculum, teaching and evaluation to ensure this learning in the long run occurs [2].

This model emphases on extra attention towards the evaluation of learning outcomes which has resulted in new challenges for teachers and administrators. The traditional manual paper-based process of evaluation to assess the achievement of learning outcomes in a course is usually an exhaustive process. Since the assessment and evaluation is foremost measure for educational effectiveness that is required by accreditation bodies, therefore, there was need for an organized computerized system to link all the course level assignments, quizzes and other activities for the assessment. Learning Management Systems (LMS) are the web based applications that facilitate the capture and storage of all course activities like, quizzes, exams, assignments, projects etc. along with the scores and evaluation of each of these activities.

III. LEARNING MANAGEMENT SYSTEM (LMS)

In the last three decades, education has witnessed paradigm shift in teaching and learning due to integration of technology into the education system. Rapid development of technology have resulted in students who are deeply engrossed in new web based technologies like social network sites, discussion forums, blogs, YouTube, twitter, wikis, virtual reality, gaming etc. These technologies is forcing the higher education institution to revise and redefine their strategy and create technology enabled educational environment.

Learning Management Systems (LMS) is a promising technology that is changing traditional classroom teaching and learning into technology integrated and enabled teaching and learning.

LMS evolved from the Course Management Systems (CMS) that were introduced in the 1990s, with the focus on the delivery and contents of the courses while as focus of the LMS is on the requirements of the student as well as that of the e-learning teachers regarding tasks [3].

LMS support e-learning through the development and access of course content to the users [4]. Nowadays, LMS are commonly used in education sector to create, access, manage, distribute, and retrieve the course related materials. They facilitate the novel and innovative methods in teaching and learning by providing various tools for interactive learning for instance quizzes, assignment, online assessment, discussions, surveys, chat rooms, blogs, and wikis [5] [6]. Majority of students pursuing their degrees through fulltime on-campus or distance mode have found these collaborative tools of LMS such as chats, wikis and discussion boards as valuable in sharing their learning experiences especially during group tasks [7].

Advancement of the ICT has resulted in increased in the number of teachers and students who are adapting the online teaching and learning environment [8]. There are many LMS tools both open source and commercial such as Blackboard, MOODLE, EvalTools, WebCT, Sakai, Claroline, etc. Available in market.

The educational institutions should first decide what exactly they want to achieve through the LMS before they adopt such tools. Iqbal & Qureshi have suggested that following features are vital to consider while choosing LMS: objectives and goals of the organization, details of the LMS design specifications, technical specification of the LMS, ease of use GUI, decent course database, course administration capability, collaborative, assessment and feedback, profile of students and training [3].

Utilizing the LMS to augment the capability of students to find answers rapidly empower them to take manage the student-centric learning [3]. Additionally, makes sure that they are accomplishing right king of learning, it is also of greatest importance that they are having a encouraging involvement in the LMS environment. But some students have voiced concern over issues with the LMS. Raj established that students complain about the design of user interface which is not so friendly, have unattractive design and are not able to read from the screen [9]. The course content quality of online teachers was found to be diverse. But students appreciated the capability of LMS to offer a database of information and course messages. This helped them to meet the targets and manage their time more efficiently.

Meiselwitz & Sadera, employed survey based methods to study the association among learning outcomes and usability in an online teaching and learning setting [10].

Maria et.al. defines an combined usability assessment technique tested within an educational setting in their university [11]. Their findings indicate that an LMS must sufficiently meet the requirements of the educational process and support learning.

Costabile et al. presented a set of principles that capture LMS features [12]. Their findings are acquired from interpretations and analysis of user's interactions with LMS. .

IV. LMS- EVALTOOLS

EvalTools is developed by MAKTEAM Software and it offers all the important features to manage routine classroom activities. According to the developer of this software, it is well-integrated with the outcome based assessment system. It helps in management of all daily classroom activities and contribute flawlessly to the course's outcomes assessment along with complete program outcomes assessment.

EvalTools have many components including Home, Faculty Office, My Community, and My Survey Sites. The details of these components are given below:

I. **Home:** Home takes you to any of the other component like Faculty Office, My Community and My Survey Sites.
II. **My Community:** It has all the information about the committees to which the user belongs.
III. **My Survey Sites:** It includes all the surveys like Course Exit, Course Level, and Project Survey.
IV. **Faculty Office:** It is the main component of the EvalTools and has all the information related to a course, its assessment, attendances etc.

Faculty Office is the main component and consists of the eight subcomponents as shown in fig.1 which are given below:

(1) Set Up Course Portfolio: In this component the teachers setup the all the course related activities for the whole semester including course info, lessons, assignments, attendance gradebook etc. It has various subcomponents as given below.

a) **Course Info Setup:** In a traditional class environment teachers used to provide current course specific syllabus to students. In the Course Info section of EvalTools, teachers can upload the current course specific syllabus along with the details of the of the Textbook, Course Description, Pre-requisites, Course Outcomes, Course Outlines, Course Assessment Methods, Supporting Tools, Course Policies, Grading Policies. The course info reflects the information specific to course syllabi as well as information related to the delivery format. The course info must be maintained in a current format and should be specific to the on line nature of the course offering and the semester of the offering. Clearly stated course outcomes,

prerequisites and grading standards must be present. All information related to the manner in which assignments will be submitted, how they will be graded and how grade information will be provided is included.

Fig. 1: Components of Faculty Office Section of EvalTools
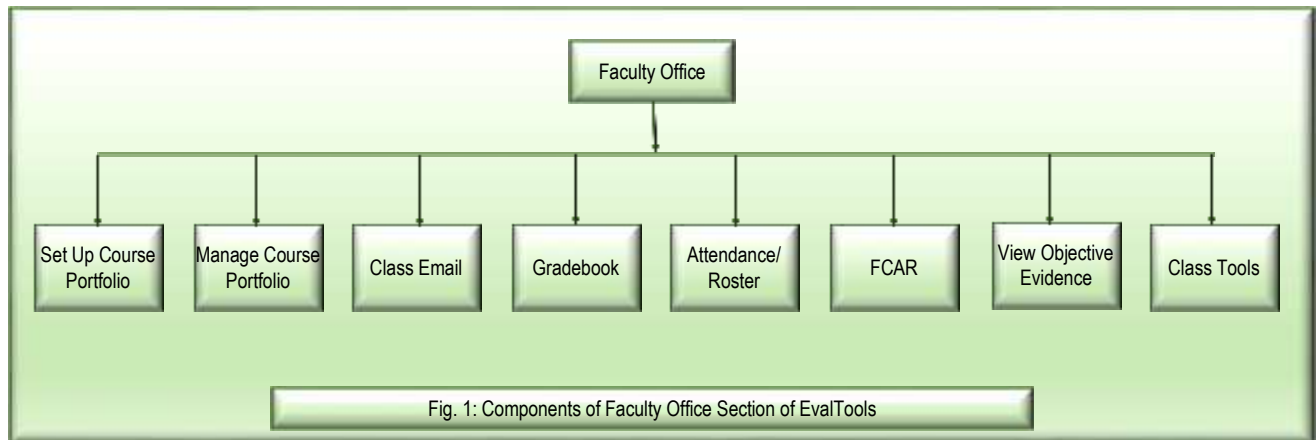
b) **Lesson Setup:** In this section teachers upload the course material like PowerPoints, videos etc. It has all the information related to lessons and the plan for the whole semester.

c) **Assignment Setup:** Teachers can upload all the assignments in this section like home work, quiz, project, lab work, case studies, examinations etc. They can map these assignments to CO's and PI's of the course. Even they can define the performance criteria of each assignment by using the already created rubrics. Also they can upload the grade points of each assignment which helps in automatic generation of the gradebook. There is option of uploading the assignment files for keeping the record.

d) **Rubric Setup:** In this section teachers can create and update an existing scoring rubrics for an assignment. A scoring rubric is used to define consistent criteria for grading. A scoring rubric allows both teachers and students to evaluate criteria, which can be complex and subjective.

e) **Online Assignment:** Teachers can upload the assignments along with the correct answer in this section and students can upload the answers. It has the option where teacher can allow the students to view the correct answer after the expiry of submission date of assignments. It keeps all the records related to the date of uploading of assignment by the teacher, date of submission of assignment by the students.

f) **Weighting Factors:** Teacher of a course can adjust the weighting factors to fix how much an individual assignment or a group of assignments adds toward final grades. Different weighting factors can yield significantly different grades.

(2) Manage Course Portfolio

This component is used to manage all the course related activities for the whole semester including course info, lessons, assignments, grades, attendance, etc. It has various subcomponents as given below.

- **Course Info:** In the Course Info section of EvalTools, teachers can upload the current course specific syllabus along with the details of the of the Textbook, Course Description, Pre-requisites, Course Outcomes, Course Outlines, Course Assessment Methods, Supporting Tools, Course Policies, Grading Policies.

- **Lessons:** This section displays the uploaded course material like PowerPoints, videos etc. which can be downloaded by the authorized users.

- **View Submitted Assignment:** This section has all the information related to all the assignments like homework, quiz, midterm, lab, final etc.

- **Grade Assignment/Quiz:** In this section, teacher can select an assignment like quiz, exams, homework, Lab etc. to fill the grades of the students.

- **Upload/Download Assignment:** The uploaded assignments can be viewed and downloaded from this section. It keeps all the records related to the date of uploading of assignment by the teacher, date of submission of assignment by the students.

(3) Class Email

This component facilitates the individual or group email to the students. This is an effective tools for teachers that enables to send-out a message to a large group of students at the same time. Teachers can use e-mail to send a definite communication while conveying a tough call to action. This can help teachers to engage the students by asking them to work on some task in the EvalTools, thus enhancing their performance.

(4) Gradebook

This component consists of the following subcomponents.

- **View Gradebook:** Teachers should maintain recent grade information of students in the gradebook section. The user can view the grades of students in all the evaluated assignments. This tool provides both students and teachers proper feedback regarding the grades.

- **View Performance Vector:** This feature provides the statistics of the performance of students in the course. It also provides the performance statistics of the students in each course outcome.
- **Manage Gradebook:** Teachers having the gradebook privilege, can manage the Gradebook by adding the assignments categories like tests, quizzes, homework, exams etc. along with the percentage score of each assignment for which they want to enter scores in the Gradebook.
- **Grade Assignment/Quiz:** This feature allows teacher to select an assignment like quizzes, homework, exams etc. and enter the grade of the students in that assignment.
- **Grade Adjustment:** This feature as makes adjusting of grades much easier for teachers and administrators by providing an area to quickly override grades. There may be some students where a minor adjustment of grades can put them in the higher grade therefore this feature is very beneficial to the users.

(5) Attendance/ Roster

This component offers the facility of recording and tracking the student attendance. It also provides the full timetable information of the courses.

(6) Faculty Course Assessment Report (FCAR)

FCAR is a unique feature which gives teachers a chance to evaluate the performance of their teaching at the end of the semester The FCAR compiles the performance vectors for the key assignments of a course. It generates various types of analytical reports and charts which can help the teachers in tracking the performance of the students as well as the effectiveness of teaching

(7) View Objective Evidence

EvalTools composes all the key assignments as part of the objective evidence for direct assessment and the course-exit survey (end-of-semester survey) results as the indirect assessment objective evidence.

(8) Class Tools

This feature allows teachers to create and manage a discussion forum where students can discuss the topics related to their course. Discussion forum tool enables teachers to provide an online communication platform among the students. The users of EvalTool can start the discussion on different issues. Students will try to give solutions to raised issue or topic according to their understanding. Teacher can monitor such discussions and whenever required can provide guidance.

V. CONCLUSION:

Learning Management Systems have significant potential to augment the learning environment of a traditional classroom setting. Growing number of educational institutions especially universities worldwide are now using LMS to create a technology enabled collaborative teaching and learning environment. In fact, use of LMS has become part of Outcome Based Education (OBE) courses as it enhances the effectiveness of teaching as well as improves the efficiency and performance of students. When classroom teaching is integrated with LMS, it enhances skills and knowledge of students that results in better learning outcomes. EvalTools LMS is one such software that has all the features that can fulfill the requirements of these educational institutions. EvalTools LMS provides platform for the students to become more acquainted with technology and access the various resources related to courses from anywhere and anytime.

Acknowledgements

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