



A Study about the E-learning Platform Moodle in Teaching Learning Process

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Abstract: This paper presents a study about the utilisation of the E-learning platform Moodle in Government Polytechnic College Palakkad. Moodle has enhanced the online teaching learning process along with the traditional teaching since 2014 in the computer department. Since the COVID -19 pandemic has collapsed the normal lifestyle of people across the globe, all the departments of our institution have migrated completely to the moodle to conduct classes online. This paper aims to analyse a questionnaire given to a group of students and teachers to identify the effectiveness of moodle. This paper examines the effectiveness of moodle from the teacher's perspective as how it can be used for conducting classes, labs and assessments. This also investigates how effortless is to access the learning materials, perform lab activities and submit assessments from the student's perspective.

Keywords: Moodle, Questionnaire, Teacher's perspective, Student's perspective.

I. INTRODUCTION

Moodle (Modular Object-Oriented Dynamic Learning Environment) is an Open Source E-learning platform. It is a free, online Learning Management system enabling educators to create their own private website filled with dynamic courses that extend learning, any time, anywhere. Moodle presents an excellent platform for resources and communication tools. It was created by Martin Dougiamas, a computer scientist in 1999 and Moodle 1.0 was released in 2002. Moodle is written in php with an SQL database. Moodle has updates installed from time to time and so it is periodically being modified and enhanced. The latest version is moodle 3.10+. In order to use Moodle, it must be installed on a main server, an administrator configures the settings to enable access through usernames and passwords. The user accesses Moodle through the Internet as it is web based and does not have to install anything locally.

After the installation of moodle, we can get an administrator account and its password.

With this account we can create courses, add users to the system, and manage other system functions. Moodle uses a role based access mechanism, and implements three major roles: Administrator, Teacher, and Student. Only the administrator can control and create courses or assign teacher roles to others or assign administrator roles to others. In Moodle, a teacher has responsibility for the materials in their own courses. They can manage enrolments and are able to change the layout of the course page. A course is a space on a Moodle site where teachers can add learning materials for their students. A teacher may have more than one course and a course may include more than one teacher and more than one group of learners. The process of adding students to courses is called enrolment. Students can be enrolled using manual enrollment, self enrollment, guest access, or by cohort sync. Every course has its own Gradebook which can record scores from assignments and quizzes. An activity is a general name for a group of features in a Moodle course. There are 14 different types of activities in the standard Moodle. They are Assignments, Chat, Choice, Database, Feedback, Glossary, H5P activity, Lesson, (LTI) External tool, Quiz, SCORM, Survey, Wiki, Workshop.

II. EFFECTIVENESS OF MOODLE FROM TEACHER'S PERSPECTIVE

Moodle supports a range of resource types which teachers can add to their courses. A resource is an item that a teacher can use to support learning. The different resources are File, Folder, Page, URL, Label, BOOK, IMS Content package. Moodle is a platform for information exchange in flipped classrooms. There are several ways to track the progress of students like grades, activity completion and course completion. Course Outcome can be mapped and identifies what a student has demonstrated and understood at the completion of an activity or course.

Moodle has been adopted by all departments of our institution during covid -19 period since the education system has changed dramatically from classroom to online platforms. Prior to Covid-19 pandemic moodle has been used in the Computer department simultaneously with the traditional education system. So it becomes easy to extend the moodle facility to the whole institution in this pandemic period.

Moodle user accounts have been created for all the teachers and assigned courses for them. Teachers can access their courses and provide learning materials. Moodle helps the teachers to grade the students by giving assignments and quizzes. The questions for the quizzes can be stored in a question bank which can be used for creating quizzes in



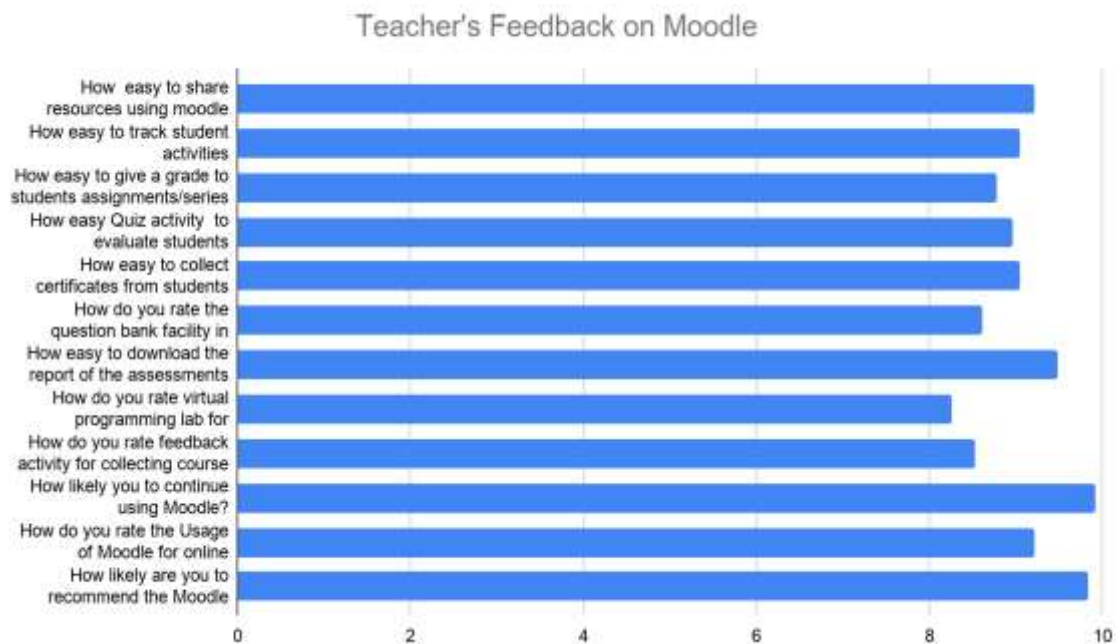
Moodle. Class work or series tests can be given in the form of assignment which the students can upload within a stipulated time period. Feedback can be gathered for all courses and Moodle platform provides a facility to download the certificates of students effortlessly. Moodle allows virtual programming which help to manage computer programming lab online and makes the evaluation task effortless.

It is established that 100% of the teachers in our institution are using moodle for teaching. All the courses and their assessments are conducted only through Moodle. A Questionnaire has been prepared and given to teachers to assess the efficiency of Moodle.

Questionnaire - Teachers (rated 0 to 10)

1. How easy to share resources using moodle
2. How easy to track student activities
3. How easy to give a grade to students assignments/series test
4. How easy Quiz activity to evaluate students
5. How easy to collect certificates from students
6. How do you rate the question bank facility in Quiz?
7. How easy to download the report of the assessments
8. How do you rate virtual programming lab for managing and assessing programming labs?
9. How do you rate feedback activity for collecting course feedback from students
10. How likely are you to continue using Moodle?
11. How do you rate the Usage of Moodle for online teaching during the covid-19 period?
12. How likely are you to recommend the Moodle LMS to a colleague or friend?

A graph has been plotted with the question in the questionnaire in the y-axis and a scale rating from 0 to 10 in x-axis



From the graph it is evident that teachers are able to adapt with the moodle LMS. They are ready to continue with moodle even after Covid-19 and would like to recommend moodle to other institutions. In order to maintain moodle, an institution should have a server, good network bandwidth and an administrator to monitor the activities.

III. EFFECTIVENESS OF MOODLE FROM STUDENT'S PERSPECTIVE

The learning process in our institution has completely migrated to moodle during this pandemic period. Moodle user accounts have been created for students and are enrolled into their corresponding courses. Students can access the course contents and can download the learning materials. Assessments are conducted in the form of quizz, assignments and class work. Students can submit their feedback for each course and give access to upload students certificates. Moodle facilitates virtual programming labs which provide an easy way to handle computer programming assignments. This helps the students to edit, run and evaluate programs online. Moodle has been used by computer department students prior to covid-19. It is noticed that the virtual programming lab was effective from that moment.

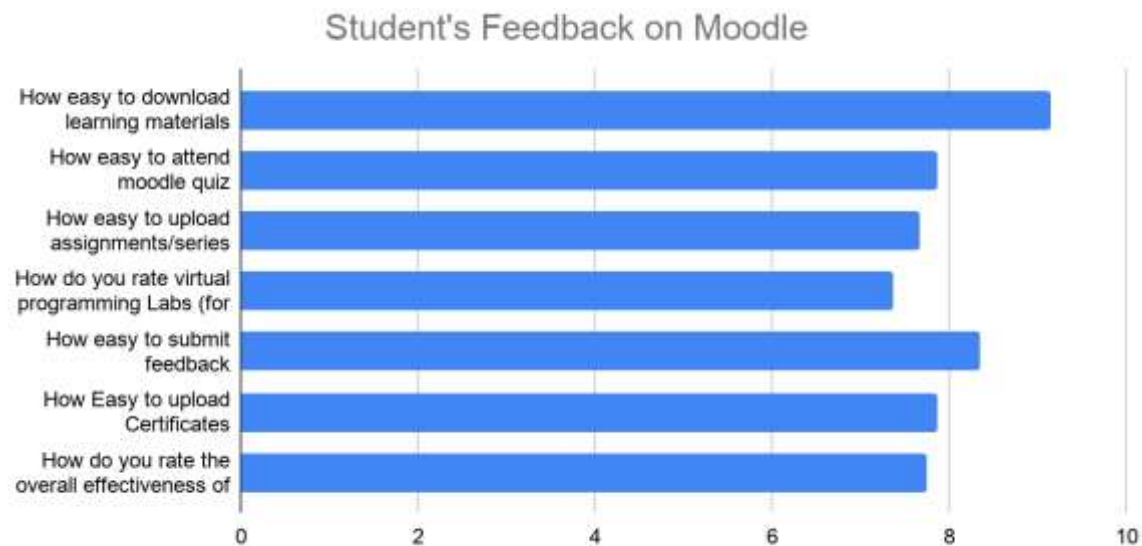


During this covid-19 period almost all the students migrated to moodle and the courses are accessed only through it. A Questionnaire has been prepared and given to the students to assess the overall effectiveness of moodle during Covid-19 period.

Questionnaire - Students(rated 0 to 10)

1. How easy to download learning materials
2. How easy to attend moodle quiz
3. How easy to upload assignments/series test/Lab Record
4. How do you rate Virtual programming Lab
5. How easy to submit feedback
6. How easy to upload certificates
7. How do you rate the overall effectiveness of moodle in Online Learning

A graph has been plotted with the question in the questionnaire in the y-axis and a scale rating from 0 to 10 in x-axis



From the graph it is evident that it is easy to access the study materials through moodle. Moodle can be accessed through mobile which makes it convenient for the students to learn from home during this pandemic. Students are comfortable in the overall success of moodle. The limitations with these online learning platforms is the bandwidth issue and the mobile phone accessibility to the students since most of the students are from remote places and from poor family background.

IV. CONCLUSION

With the advent of the internet, virtual learning platforms have gained its importance. Even after that it cannot replace the traditional system of education. But Covid-19 pandemic has changed the entire education system in the world to virtual classrooms, remote learning opportunities and high quality education. From this paper it is apparent that moodle is an effective learning management system which is used in our institution during this period. From the student's feedback it is clear that they are able to access the courses effortlessly through Moodle. From the teacher's perspective it is noticeable that it is simple to evaluate the students through moodle which also provides records keeping.

REFERENCES

<https://moodle.org/>