

## **The use of Moodle e-learning platform: A study of Sanatan Dharma College, Ambala Cantt**

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### **ABSTRACT**

This article details research conducted at Sanatan Dharma College in Ambala Cantt, which examined the Moodle platform's functions and tools, as well as their utilization by students. The information was gathered by content analysis, a non-structured interview with the Moodle coordinator from SD College, and a survey of 278 students. The findings reveal that, despite its enormous potential, Moodle is primarily used as a material repository. Students, on the other hand, appreciate the value of using the platform's other features to help the teaching/learning process succeed.

### **1. INTRODUCTION:**

It is now impossible to consider the teaching and learning process without thinking of information and communication technologies (ICTs) (ICTs). In fact, ICTs are present in all processes involving data collecting, information processing, and knowledge creation, with teaching and learning being one of the most common processes with these features.

ICTs play a significant role in education, with a particular focus on the instructional component, which is aided by Learning Management Systems (LMS) such as Moodle. These platforms, on the other hand, have a lot of potential if they are utilised to their maximum potential. Interaction, feedback, conversation, and networking are just a few of the actions that may be taken with learning platforms. They also provide several chances to experiment with new teaching and learning approaches.

They also provide several chances to experiment with new teaching and learning approaches. The Sanatan Dharma College's Moodle platform, in particular, includes various modules that allow for creation, organisation, delivery, communication, collaboration, and assessment activities.

The purpose of this study is to examine the Moodle platform's primary features and tools, as well as the SD College's utilization of them. It also analyses the findings of a study conducted in the Department of Commerce, Management, and Humanities, which involved administering a questionnaire to students with the goal of describing how they utilize Moodle and its key tools. In this way, the paper intends to contribute to a systematization of the activities and the respective modules provided by Moodle, as well as their importance in the students' perspective, revealed in an exploratory study.

## 2. E-LEARNING PLATFORMS:

Educational computer programmes are referred to by a variety of terms, including e-learning systems, Learning Management Systems (LMS), Course Management Systems (CMS), and even Virtual Learning Environments (VLE). Students can use these systems to obtain course content in various media (text, image, sound), as well as connect with teachers and/or peers via message boards, forums, chats, video conferencing, and other communication tools

[1]. These platforms offer a collection of customizable tools that allow users to create online courses, subject sites, work groups, and learning communities

[2]. In addition to the pedagogical aspect, these systems provide a set of capabilities for registering, monitoring, and evaluating student and teacher actions, as well as the ability to control information over the Internet.

An e-learning platform, according to Piotrowski [3,] is a system that provides integrated assistance for six main activities: **creation, organisation, delivery, communication, collaboration, and assessment.**

From a technical standpoint, there are various types of LMSs, some of which are commercial (such as Blackboard/WebCT) and others which are open-source (such as Moodle). Regardless of the kind, various studies have found that adopting e-learning platforms has significant benefits, but their adoption comes with some problems for institutions, as well as the proper selection of a technological platform.

In terms of open-source solutions, various studies show that Moodle (Modular Object-Oriented Dynamic Learning Environment) is the most widely used and easiest to use platform in higher education.

**2.1 MOODLE IS A PLATFORM FOR LEARNING.**

Moodle is one of the most extensively used open-source e-learning platforms, allowing instructors to create course websites that are only accessible to enrolled students. Through synchronous (chats) and asynchronous communication protocols, this platform allows geographically distributed individuals to exchange information (discussion forums). From a functional standpoint, it has easily configurable features that allow for the creation of student assessment processes (quizzes, online tests, and surveys), as well as the management of their tasks with their timetable, as well as a wide range of complementary tools to help them insupporting the teaching and learning process.

**Table 1. Activities and modules of the Moodle platform.**

Activity	Module	Description
Creation	Database	allows to build, display and search a bank of record entries about any topic allows to share a collection of data
Organization	Lessons	represent a set of ordered topics summarizing the instructional materials and allow the access to them through the respective link
Delivery	Assignments	allow teachers to collect work from students; allow teachers to evaluate the student's work and provide feedback including grades, in a private mode allow students to upload assignment files
	Workshops	represent a peer assessment activity with many options allow students to submit their work via an online text tool and attachments
Communication	Chats Forums News	allow synchronous conversation represent a communication tool where students and teachers can exchange ideas by posting comments represent a special forum for general announcements; allow teachers to add posts and to send emails
Collaboration	Glossary  Wikis	allows creating and maintaining a list of definitions represents a mechanism for collaborative activities that can be restricted to entries made by the teacher allow users to edit collaborative Web pages provide space for collaborative work

Assessment	Choice	allows teachers to ask questions and specify multiple choice answers represents a useful mechanism to stimulate thinking about a topic allows teachers to design and build quizzes with a variety of questions, with different types of answers, such as multiple choice, true/false, short answer allows teachers to gather feedback from students using prepackaged questionnaires allows teachers to create surveys to collect feedback
	Quiz	
	Survey	
	Feedback	

According to the Moodle platform's taxonomy, it is comprised of a set of features divided into two categories: resources and modules. The term "resources" refers to educational materials that are typically prepared in digital formats before being posted to the platform. These materials include web pages, PowerPoint presentations, word documents, flash animations, video, and audio files, to name a few. Modules are Moodle components that allow students and teachers to interact with one other in order to manipulate and alter content . The Moodle platform offers numerous options in this regard modules. such as Database, Lessons, Assignments, Workshops, Chats, Forums, News, Glossary, Wikis, Choice, Quiz, Survey, Feedback.

**1. METHODOLOGY**

The SD College's Moodle (Moodle.sdcollegeambala.org) was evaluated in this study through a content analysis, which was supplemented by a non-structured interview with the person in charge of the platform at Sanatan Dharma College.

The utilization of Moodle' tools by students from Sanatan Dharma College was then investigated. The data was obtained using a paper-based questionnaire based on the literature research and validated through the referred interview, and it was applied to 278 students studying Commerce & Humanities disciplines.

The following sections made up the questionnaire:

**Section 1** – Participants' demographics, including gender, age, course and degree attended, type of device and network used to access the Internet, purpose of access in the learning context, and average time spent on the Internet per day for educational purposes.

**Section 2** – A description of the general use of the Moodle platform,

including the purpose of use, and the format of the material accessed/posted.

**Section 3** – Quantification of the degree of importance ascribed to the usage of Moodle' tools (yes/no) and characterization of the use of Moodle' tools (yes/no).

The IBM SPSS Statistics 19 programme was used to analyze the collected data. To begin, a descriptive analysis was used to characterize the behaviour of each variable that was measured. After that, paired samples t-tests were used to see if there were any statistically significant differences in the average importance of each Moodle tool between the groups that use it and those who don't.

## **2. RESULTS AND DISCUSSION**

There are two sub-sections in this section. Sanatan Dharma College Moodle is briefly studied in the first, and the findings of the questionnaire are analyzed in the second.

**4.1. Sanatan Dharma College Moodle :**Moodle is the e-learning platform used by the Sanatan Dharma College ([moodle.sdcollegeambala.org](http://moodle.sdcollegeambala.org)), and it was characterized using a content analysis and an interview with the Sanatan Dharma College coordinator.

Moodle@Sanatan Dharma College includes a range of tools for use in the teaching and learning process that are divided into the categories: Assignments/Workshops, Chats, Forums, News, and Quiz/Survey are customizable modules from the core Moodle platform that offer interaction between students and teachers (see **Table 1**)

### **2.2. The usage of the Moodle platform by SD College students**

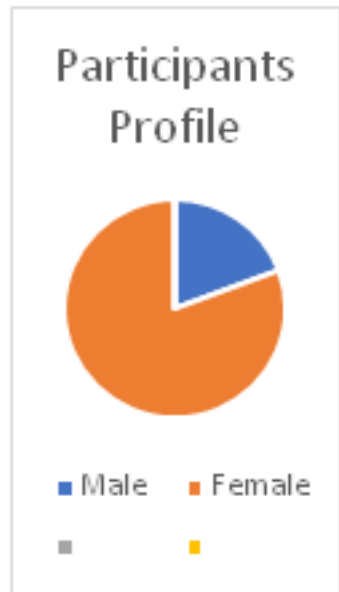
In this sub-section the usage of the Moodle platform by the students of the SD College is considered, through the analysis of the results obtained from a questionnaire applied to 278 of them (see section 3). The section is organized as the questionnaire' components, namely: characterization of the participants, general characterization of the use of the Moodle' platform and characterization of the use of the Moodle' tools.

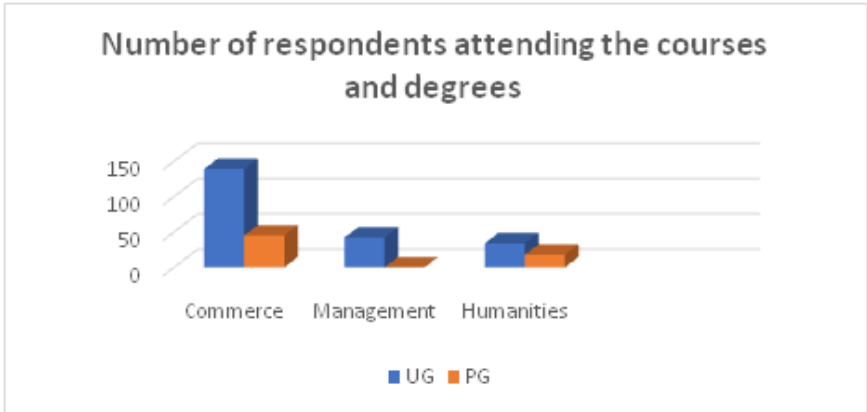
**2.2.1. Characterization of the participants Stream**

Stream	UG	Master
	Commerce	139
Management	42	.....
Humanities	34	18
<b>Total</b>	<b>215</b>	<b>63</b>

**Table 2. Number of respondents attending the courses and degrees**

The majority of the participants (77%) were undergraduate students, and the majority of them were from Management and Commerce, both at the undergraduate (65%) and master's (71%) levels. When asked about the devices they use to access the Internet, all of the respondents said they use a mobile phone, and about 15% said they also use a Computer/Laptops along with Mobile phone. It was discovered that 80% of the participants reported using a private network, while the remaining 20% stated that they do not have Internet access at home. 60% of respondents suggested using the Sanatan Dharma College network, 30% suggested using personal mobile data, and 10% suggested using networks from public places.





Students were also asked about the general purposes for which they used the Internet on the learning context. Fig. 1. (a) presents the number of respondents that referred each of the purposes. It can be noted that 'email' and 'Search' are the most mentioned purposes by respondents and that 'Social Networks' are not so used in this context. Concerning how long participants use the Internet per day on the learning context, it can be noticed that on average, respondents use the Internet about 1.5 hours per day ( $s=1.22$ ). Fig. 1. (b) presents the histogram of the referred variable.

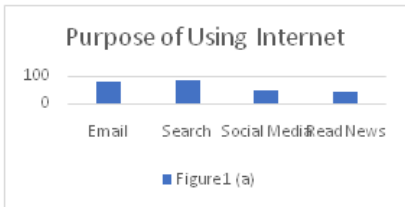


Figure 1(a)

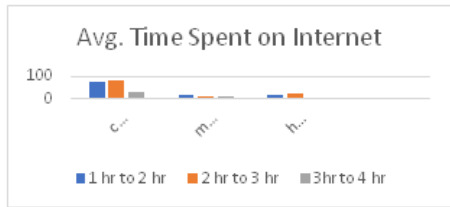


Figure 1(b)

Table 3 presents the number of users of each tool included in the Moodle@SDC and some descriptive statistics of the respective degree of importance evaluated in a scale of 1 (unimportant) to 5 (very important)

**Table 3. Descriptive statistics of the importance level of the use of the Moodle@SDC tools.**

	Nvalid	Nuse	Mod	Mean	s
Assignments	174	103	5	4.15	1.02
Chats	110	18	1	2.45	1.19
Forums	127	35	3	2.801.18	
Quiz/Survey	148683	3.051.13			

**Legend:** Nvalid – Number of respondents that answered the question; Nuse – Number of respondents that use the tool; Mod – sample Mode; Mean – sample mean; s – sample standard deviation; – Two modes

'Quiz/Survey' and 'Assignments' are the most used Moodle tools and also those respondents consider the most important ones. Again, the possibility of the main utilization of the Moodle being that of a repository of materials and information must be considered.

### CONCLUSION

This paper analyzed the main functionalities and tools available in the Moodle platform and their use at the Sanatan Dharma College. It was found that the Moodle@SDC contains some of the main tools of the standard Moodle platform, like Assignments, Chats, Forums, News and Quiz/Survey. The analysis of the students' answers to the applied questionnaire revealed that the most mentioned purpose of the use of the Moodle@SDC were 'Download materials', 'News' and 'Deliver assignments' and that the most used information materials are 'Texts' and 'Slides'. Additionally, students gave more importance to 'News' and 'Assignments'. These results are compatible with the hypothesis that the Moodle@SDC is being used mainly as a repository of materials and information. Besides, it can be noticed that students that use the tools typically assign more importance to them, being the difference statistically significant at 5% (except for Forums). It can also be noted that the not so used tools and thus not so important for students, enable the interaction, the collaboration and the real time communication. To overcome the constraints just presented it should be taken into account that the successful use of e-learning platforms in the teaching and learning



context critically depends on the teachers having knowledge about the tools, being aware of how they should be used and being capable of organizing all the communication process. As future work it is considered important to perform a careful analysis of the underlying reasons for the use, or not, of the e-learning tools by the academic community, as well as to investigate on how these tools can help on promoting the success of the teaching and learning process

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