

Original Article

AN EVALUATIVE STUDY OF A LEARNING MANAGEMENT SYSTEM USED BY LIBRARY AND INFORMATION PROFESSIONALS – WITH SPECIAL REFERENCE TO MOODLE

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ABSTRACT

This study examines the effectiveness of the MOODLE Learning Management System (LMS) among Library and Information Science (LIS) professionals associated with Sant Gadge Baba Amravati University. The research adopted a quantitative, descriptive, and exploratory approach, and data were collected from 176 respondents using a structured questionnaire. The findings indicate that most participants regularly use MOODLE and consider the platform accessible, reliable, and user-friendly. Respondents generally found the instructions easy to understand and the system simple to navigate. They also reported that MOODLE provides good opportunities for participation and interaction in the learning process. In addition, both system performance and instructor responsiveness received positive feedback from the respondents. However, some concerns were raised regarding the availability of dependable customer support services. The Chi-square test showed significant differences in the response patterns of participants. Overall, the study concludes that MOODLE is an effective platform for supporting and improving LIS education, although there is a need to strengthen technical support and improve instructional clarity for better user experience.

Keywords: Learning Management System (LMS), MOODLE, Library and Information Science (LIS), E-learning, User Satisfaction

INTRODUCTION

Conventional education encompasses any instructional approach that employs traditional paper-and-pencil techniques within a standard classroom environment. In essence, conventional learning pertains to any educational methods commonly practiced in schools Kaushik (2016). This involves standard lecture-based teaching, assignments, assessments, and homework for students, established pedagogical practices for educators, the utilization of designated textbooks and supplementary course materials, as well as a face-to-face teaching framework Amankwah et al. (2022). However, in the digital era, the integration of technology in education and information management has become indispensable Abdullateef et al. (2019). Learning Management Systems (LMS) have become an important part of modern education by providing effective platforms for teaching, learning, collaboration, and sharing of academic resources. Among the different LMS platforms available today, MOODLE (Modular Object-Oriented Dynamic Learning Environment) has emerged as one of the most widely used open-source learning platforms Dhawale and Tikar (2019), Mpungose (2020). In the field of Library and Information Science (LIS), professionals are increasingly adopting MOODLE to improve library services, support teaching and learning activities, and promote information literacy among users Kampa and Kaushik (2016), Bradley (2021).

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The use of MOODLE has significantly changed the role of Library and Information Science professionals by transforming traditional libraries into interactive and technology-driven learning centers [Arora et al. \(2022\)](#). Through the effective use of MOODLE, LIS professionals can improve service delivery, encourage continuous learning, and meet the changing information needs of users in the digital era [Devi et al. \(2020\)](#). Although certain challenges exist in the implementation and management of MOODLE, its advantages are considered much greater than its limitations, making it a valuable tool for modern libraries and educational institutions [Bheki \(2020\)](#).

Despite the growing importance of MOODLE in higher education, its actual role and effectiveness in Library and Information Science education in India, particularly in colleges affiliated with Sant Gadge Baba Amravati University, remain insufficiently explored. Learning is widely recognized as the process of acquiring knowledge and skills through study and practice. Therefore, it becomes necessary to evaluate the contribution of MOODLE in LIS education to ensure the development of competent professionals capable of serving researchers and information seekers effectively. Keeping this background in view, the present study was undertaken to critically examine and analyze the role of open-source e-learning initiatives, especially MOODLE, in the Department of Library and Information Science of Sant Gadge Baba Amravati University.

RESEARCH METHODOLOGY

In the current study, a quantitative approach was employed to address the study's objectives. The research employed a combination of descriptive and exploratory approaches. The data for the present study were collected from Library and Information Science (LIS) professionals working in educational institutions affiliated with Sant Gadge Baba Amravati University. Before selecting the respondents, a reconnaissance survey was conducted to identify the total population of LIS professionals, which was found to be finite in nature. The respondents were selected using probability sampling techniques, particularly the Simple Random Sampling method. During the field survey, responses were successfully collected from 176 LIS professionals, which constituted the final sample size of the study.

Both primary and secondary data sources were used for the investigation. Primary data were gathered through a structured questionnaire using the survey research method. Secondary data were collected from various sources such as books, scientific journals, publications of professional associations, research institute reports, general publications, works of national and international authors, and relevant online resources.

The collected data were analyzed with the help of different statistical techniques. Descriptive statistical tools such as frequency, percentage, and mode were used to summarize and interpret the data. In addition, inferential statistical techniques, particularly the Chi-Square test, were applied to examine significant differences in the responses. The entire statistical analysis was carried out using the Statistical Package for Social Sciences (SPSS). 18.0. A significance level of 0.05 was selected to minimize the consequences of potential errors.

RESULTS AND DISCUSSION

ACCESS OF LEARNING MATERIAL FROM THE MOODLE

Table 1

Table 1 Frequency of Access to MOODLE			
SN	Frequency	No. of Respondents	Percent
1	01-Feb	6	3.6
2	03-May	11	6.3
3	06-Oct	20	11.6
4	More than 10	138	78.6
Total		176	100

$\chi^2 = 172.929$; $df = 3$; $\chi^2_{crit} = 7.82$; $p < 0.05$

The frequency of access to the MOODLE platform by the respondents is presented in the [Table 1](#). The majority of the respondents, 78.6%, reported accessing MOODLE more than 10 times. This suggests a high level of engagement and familiarity with the MOODLE platform among the survey participants. Only a small percentage, 3.6%, accessed MOODLE 1-2 times, while 6.3% and 11.6% accessed it 3-5 times and 6-10 times, respectively. In view of the study results it is evident that most of the respondents have attended more than 10 times accessing of MOODLE.

CONSISTENCY OF ACCESS TO MOODLE**Table 2**

Table 2 Consistency of Access to MOODLE			
SN	Consistency	No. of Respondents	Percent
1	Excellent	44	25
2	Good	112	63.4
3	Average	14	8
4	Below average	6	3.6
Total		176	100

$\chi^2 = 99.5$; $df = 3$; $\chi^2_{crit} = 7.82$; $p < 0.05$

The [Table 2](#) shows the respondents' opinions regarding the consistency of access to the MOODLE platform. A large majority of the respondents expressed positive views, with 63.4% rating the access consistency as "Good" and 25% rating it as "Excellent." Only a small number of respondents (3.6%) considered the consistency to be "Below Average." The Chi-square test results indicate a significant difference in the pattern of responses ($\chi^2 = 99.5$, $df = 3$, $p < 0.05$), which means that the responses were not evenly distributed among the categories. Overall, the findings suggest that the MOODLE platform developed for the Department of Library and Information Science at Sant Gadge Baba Amravati University was generally viewed as reliable and consistent in terms of accessibility. Most respondents were satisfied with the consistency of access provided by the platform, as 'Good' or 'Excellent', with only a small percentage rating it as 'Below average'.

CLARITY AND CONCISENESS OF THE INSTRUCTIONS PROVIDED DURING ACCESS**Table 3**

Table 3 Clarity and Conciseness of the Instructions Provided During Access			
SN	Consistency	No. of Respondents	Percent
1	Very clear	41	23.2
2	Clear	101	57.1
3	Neutral	22	12.5
4	Unclear	13	7.1
5	Very unclear	0	0
Total		176	100

$\chi^2 = 112.643$; $df = 4$; $\chi^2_{crit} = 9.49$; $p < 0.05$

The [Table 3](#) presents the respondents' perceptions of the clarity and conciseness of the instructions provided for accessing the MOODLE platform. The majority of the respondents, 57.1%, rated the instructions as 'Clear', while 23.2% rated them as 'Very clear'. Only a small percentage, 7.1%, found the instructions to be 'Unclear', and none of the respondents rated them as 'Very unclear'.

The chi-square analysis reveals a statistically significant difference in the distribution of responses, indicating that the respondents' perceptions of the clarity and conciseness of the instructions were not equally distributed. These findings suggest that the instructions provided for accessing the MOODLE platform were generally perceived as clear and concise by the Library and Information Science professionals at Sant Gadge Baba Amravati University. The results show that the majority of the respondents perceived the instructions for accessing the MOODLE platform as 'Clear' or 'Very clear', with only a small percentage finding them 'Unclear'.

OPPORTUNITIES FOR ACTIVE STUDENT PARTICIPATION AND INTERACTION**Table 4**

Table 4 Opportunities for active students of participation and interaction

SN	Response	No. of Respondents	Percent
1	Yes	112	63.4
2	No	22	12.5
3	Not sure	42	24.1
Total		176	100

$\chi^2 = 76.145$; **df:** 2; $\chi^2_{crit} = 5.99$; $p < 0.05$

Table 4 highlights the respondents' views regarding the opportunities for active student participation and interaction provided through the MOODLE platform. The findings show that a majority of the respondents (63.4%) believed that the platform offers good opportunities for active participation and interaction among students. In contrast, 12.5% of the respondents felt that such opportunities were not available, while 24.1% remained uncertain about it. The Chi-square analysis indicated a statistically significant difference in the distribution of responses, suggesting that the opinions of the respondents were not equally distributed across the categories.

Overall, the results clearly indicate that most respondents perceived the MOODLE platform as supportive of active student engagement and interaction. This suggests that the MOODLE platform used at Sant Gadge Baba Amravati University plays an important role in promoting interactive and participative learning, which is considered an essential component of effective e-learning.

EASE OF NAVIGATION THROUGH THE PLATFORM

Table 5**Table 5 Ease of Navigate through the platform**

SN	Response	No. of Respondents	Percent
1	Very easy	38	21.4
2	Somewhat easy	124	70.5
3	Not at all easy	14	8
Total		176	100

$\chi^2 = 114.058$; **df:** 2; $\chi^2_{crit} = 5.99$; $p < 0.05$

Table 5 presents the respondents' opinions regarding the ease of navigating the MOODLE platform. The findings show that a large majority of the respondents (70.5%) considered the platform to be "Somewhat Easy" to navigate, while 21.4% felt that it was "Very Easy." Only a small proportion of respondents (8%) reported that the platform was "Not at all Easy" to use. These results indicate that most respondents were comfortable using and navigating the MOODLE platform. The Chi-square analysis further revealed a statistically significant difference in the distribution of responses, showing that the opinions of the respondents were not equally distributed among the categories. Overall, the findings suggest that the MOODLE platform used at Sant Gadge Baba Amravati University was generally perceived as user-friendly and easy to navigate. Ease of navigation is an important factor in creating a positive learning experience and improving the effectiveness of e-learning platforms.

SYSTEM'S/INSTRUCTOR'S RESPONSIVENESS TO QUESTIONS AND CONCERNS

Table 6**Table 6 System's/Instructor's responsiveness to questions and concerns**

SN	Response	No. of Respondents	Percent
1	Very responsive	52	29.5
2	Responsive	82	46.4
3	Neutral	25	14.3
4	Unresponsive	17	9.8

5	Very unresponsive	0	0
Total		176	100

$\chi^2 = 117.807$; **df**: 4; $\chi^2_{crit} = 9.49$; **p**<0.05

The Table 6 presents the respondents' perceptions of the responsiveness of the system or the instructor to their questions and concerns during their engagement with the MOODLE platform. The majority of the respondents, 46.4%, rated the responsiveness as 'Responsive', while 29.5% rated it as 'Very responsive'. Only a small percentage, 9.8%, found the system or the instructor to be 'Unresponsive', and none of the respondents rated it as 'Very unresponsive'. The chi-square analysis reveals a statistically significant difference in the distribution of responses, indicating that the respondents' perceptions of the responsiveness were not equally distributed. These findings suggest that the Library and Information Science professionals at Sant Gadge Baba Amravati University generally perceived the system or the instructor to be responsive to their questions and concerns during their engagement with the MOODLE platform.

AVAILABILITY OF RELIABLE CUSTOMER SUPPORT

Table 7

Table 7 Availability of reliable customer support to address technical issues and concerns			
SN	Response	No. of Respondents	Percent
1	Yes	60	33.9
2	No	42	24.1
3	Not sure	74	42
Total		176	100

$\chi^2 = 8.774$; **df**: 2; $\chi^2_{crit} = 5.99$; **p**<0.05

Table 7 presents the respondents' opinions regarding the availability of reliable customer support for resolving technical issues and concerns related to the online learning platform. The findings reveal that a large proportion of respondents (42%) were uncertain about whether reliable customer support was available. Meanwhile, 33.9% of the respondents stated that reliable support services were available, whereas 24.1% believed that such support was not available.

The Chi-square analysis showed a statistically significant difference in the distribution of responses, indicating that the perceptions of the respondents were not equally distributed across the categories. Overall, the findings suggest that there is a need to improve the availability and effectiveness of customer support services associated with the MOODLE platform. Since a considerable number of respondents were either unsure or dissatisfied with the support system, strengthening technical assistance and responsiveness could help enhance the overall user experience at Sant Gadge Baba Amravati University.

CONCLUSIONS

MOODLE plays a transformative role in LIS education by providing a dynamic and flexible platform for teaching, learning, and resource sharing. It enables LIS educators to design and deliver interactive courses, integrating multimedia content, quizzes, and collaborative activities to enhance student engagement. The findings of the study indicate that most of the participants had attended a considerable number of online sessions conducted through the MOODLE platform. Their level of participation in these online sessions was found to be satisfactory, showing regular engagement with the learning system. However, a significant number of respondents felt that the instructions provided during the online sessions were not always clear. This issue can be addressed effectively, as the majority of the participants also believed that the platform provides sufficient opportunities for active student participation and interaction.

The study further reveals that navigating the MOODLE platform was generally considered easy by most users, including those with different levels of technical knowledge and expertise. In addition, the responsiveness of the system and instructors in addressing students' questions and concerns was viewed positively by the respondents. Overall, the findings suggest that MOODLE has emerged as a useful and effective learning platform for Library and Information Science education in colleges affiliated with Sant Gadge Baba Amravati University.

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