

# Students' Perceptions of Its Usefulness and Ease of Use on Learning Management System

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**Abstract**—The importance of the Learning Management System (LMS) has been discussed over recent years as it is crucial for students to manage this tool for their learning. The study's objective was to ascertain whether learners believe the LMS satisfies their learning goals and to bridge the gap between the growing body of research on learner-centered instructional design and LMS design. A survey was carried out with 528 students to get the data. The results revealed that most of the learners agreed that LMS is a useful tool to enhance their learning. This proves that LMS can be used as a device to make their learning better and more effective. The study's conclusions could be used as a guide for the university's administration as it adopted pertinent digital technologies, with the goal of creating an efficient implementation strategy that would enhance service delivery. Universities and colleges would benefit from this established approach in selecting the best learning management system (LMS) to meet their diverse needs. It will also act as a guide for developers who want to create an assessment system.

**Keywords**—Learning management system; perceptions; usefulness; ease of use

## I. INTRODUCTION

A Learning Management System (LMS) is used by many institutions to manage their students' education. An LMS is a dashboard or web-based platform that gives instructors the ability to organize, assess, automate administration, record training sessions, and carry out the learning process [1]. According to Alharbi [2] and Turnbull [3], the LMS is a digital technology used to develop, distribute, track, and manage a variety of training and educational content. In higher education, a dynamic and reliable LMS is seen as essential to the administration and execution of the teaching, learning, and assessment processes. Students must stay in touch with the learning environment outside of scheduled class times since group projects, peer learning, and group activities all contribute to their learning in addition to in-class involvement. Distributing educational resources, managing student learning activities, assigning assignments, displaying grade transcripts, holding quizzes, and holding discussions with students can all be facilitated by an LSM. Students can perform a variety of things to make learning more flexible and efficient rather of relying solely on one approach. This platform facilitates an interactive learning environment with audio, video broadcasting, forums, and discussions. An LMS may be a very useful tool for tracking student participation and reporting on their academic achievement. Students with an Internet connection can access this LMS from any location.

Higher education institutions use a variety of learning management systems, including Sakai, Moodle, Blackboard, and Canvas [4, 5]. LMSs are used as sustainability platforms by cutting-edge digital networks like Edmodo, Google Classroom, Forum, EdX, MOOC, and Coursera, as well as by specialized education. Interactive and computer-managed learning are two types of LMS. A key component of an institutional LMS is the sharing of learning resources, which are always available to students and accessible from anywhere. Moreover, LMS facilitates learning assessment by organizing tests, generating quizzes, and importing grades. The instructor can tie the learning experiences and assessments with the established outcomes for each course and the matching Blooms level through the institutional LMS. Tools for gathering stakeholder input on the curriculum and the teaching and learning process are also included in LMSs. Thus, this study is to elicit students' perceptions of its usefulness and ease of use on a Learning Management System. The purpose of the study was to close the knowledge gap between the increasing amount of research on learner-centered instructional design and LMS design and to find out if learners perceive that the LMS meets their learning goals.

## II. LITERATURE REVIEW

Universities must take into account the needs of a variety of stakeholders when selecting an LMS, including administration, faculty, support staff, and all of their students. Numerous students, including undergraduates, graduates, professionals, and other trainees, are frequently enrolled at colleges and universities. They might also choose to offer their staff compliance-based training using the learning management system, or they might want to provide opportunities for faculty development. When choosing their various LMSs, higher education institutions frequently take into account two main features: the capacity to interact with students and alternatives for instructors to arrange content [6-7].

Previous studies have been carried out where a small sample of students may be directly involved in the search process [7] or many universities may take student satisfaction into account [8]. In these situations, students participate in the technology selection committee and offer their comments on specific features or how easy they think the technology is to use. Students should be given the chance to express and select the learning resources they use. Generally speaking, while creating products like an LMS, sound design principles demand that all end users be taken into account [9]. There is not much study that assesses students' choice in the design of their learning management

system (LMS), despite earlier studies looking at how satisfied students are with their LMS. The study contributed to the corpus of research that views college students as co-designers of the learning resources they utilize.

An open-source learning management system called Moodle encourages instructors to build their own webpages for their classes [10]. This strategy makes sense because administrators typically buy these systems and support their deployment. The other university gives the LMS a different name. Numerous universities worldwide, including those in Malaysia, have made extensive use of the online learning management system. Public and private universities in Malaysia, such as Taylor's University (Times), Universiti Teknologi Mara (iLearn), and International Islamic University Malaysia (iTa'leem), each have their own LMS. For the purpose of facilitating virtual communication between students and instructors, each university creates its own LMS. The official LMS for the institution was designed to handle subjects, courses, tests, and any other pertinent course-related learning materials.

Constructivist learning theory is taken into consideration in contemporary teaching and learning methods. According to this theory, students build their knowledge through experiences, and a combination of application activities, and interwoven recall practice [11-12]. Experts also started endorsing the idea of growth mindsets, which hold that learners can acquire challenging new ideas rather than having a fixed belief in their own intelligence [13]. Thus, teaching has changed from being an instructor-focused activity through lectures to one that is learner-centered, based on data from cognitive science [14].

The mechanisms by which students independently activate and maintain thoughts, feelings, and behaviors methodically geared toward achieving personal goals are referred to as self-regulated learning, whether or not they enlist the assistance of peers, coaches, and instructors [15]. Self-directed learning, in which students select their own learning path at a speed and time that best suits them, is supported by an LMS. This guarantees that the students assume accountability for their education. It is commonly acknowledged that peer interactions contribute to the effectiveness of learning. Through synchronous and asynchronous methods, the LMS offers the chance for these kinds of interactions so that they can consider what they have learned. Although most faculty members are satisfied with the LMS that their university offers, some research indicates that instructors often underuse it, either by not utilizing it for all facets of their teaching or by not taking advantage of all the features that could be useful [16].

Over the past few years, a number of studies have assessed the effect that an LMS has on learning outcomes. According to certain research [17], students who utilized the LMS more frequently had higher grades overall and were more engaged with the course. This finding is not surprising overall. In theory, students should be able to perform well academically if instructors use an LMS to store course content. This is because the more students access the material that is relevant to their courses, the better.

In support of this idea, [18] discovered that specific personality traits predicted the use of LMS, which in turn predicted academic success, especially in online classrooms

where students had access to all course materials through the LMS. On the other hand, some, none, or all of the content for in-person classes could be stored on the LMS. Still, there are other ways for students to benefit from the LMS beyond just using it to access their learning outcomes. Kim [19] discovered a positive relationship between learning outcomes and students' proficiency with the LMS and observed that knowledgeable teachers had an impact on students' capacity to master the LMS. Additionally, a study discovered a link between students' motivation for the course and how they used the LMS [20]. These two studies in particular demonstrated that the learner-instructor paradigm went beyond fostering interpersonal relationships and that teachers' role modeling of LMS engagement had a direct and indirect impact on students' performance.

An LMS must offer the essential resources that students often use in order to maximize its effectiveness and aid in the learning process for students. In order to tailor the system's use to the demands of students, its comprehensiveness should be determined by their preferences. According to a study, an LMS can create a favorable correlation between intentional and behavioral usage [21].

The relationship between the instructor and the student should, although it is still hierarchical, represent a two-way partnership rather than a giver-receiver relationship as a result of course design and teaching that puts the learner first. In this collaboration, the learner ought to have a say in the LMS and other resources that help shape and interpret their learning. The study's objective was to ascertain whether learners believe the LMS satisfies their learning goals and to bridge the gap between the growing body of research on learner-centered instructional design and LMS design.

Two studies that researched the LMS design found that it was not adaptable enough to accommodate the needs of all demographics. According to Almaiah [22], many of their instructors and students lacked the baseline technological literacy that the LMS design required. Similar to this, [23] observed that the LMS design functioned best when accessed using a desktop or laptop; yet, a large percentage of the students polled relied on smartphones as they did not have access to personal computers. Several elements influencing students' opinions of their LMS during COVID were also assessed in several research.

Lastly, an American study discovered that elements associated with learning engagement mattered to college and university students. According to Murphy [24], the study discovered that students wanted to participate more actively in synchronous learning activities that used technology, such as audience response systems. This conclusion is especially intriguing because the students said that they would like to modify the teaching strategies to better meet their individual learning needs. However, the study's participants only mentioned external technology to accomplish this; integrated learning management system components were left out. According to Gamage [25], "encouraging quality in online education is not primarily a question of IT support but of academic strategy and educational design" (p. 6), they concur that instructional techniques should alter.

Thus, while using the LMS to assist in constructing and providing meaning to their learning, students' voices matter. In light of this, this study looks into how satisfied students are with the LMS they now use at their university. This study aims to investigate how students perceive the LMS's usefulness and simplicity of use. This study's primary goal is to investigate how undergraduate students see an LMS in terms of its usability and convenience of use. This is a gap that this research aims to fill. The study's objective was to ascertain whether learners believe the LMS satisfies their learning goals and to bridge the gap between the growing body of research on learner-centered instructional design and LMS design.

Specifically, the research objectives are:

- 1) Assess students' satisfaction with the university's current learning management system; and;
- 2) Design a user-friendly interface for a learning management system support system for UTeM.

### III. METHODOLOGY

This study examined undergraduate students' perceptions of an LMS's usefulness and convenience of use. The purpose of the study was to close the knowledge gap between the increasing amount of research on learner-centered instructional design and LMS design and to find out if learners perceive that the LMS meets their learning goals.

An overview and analysis of the Learning Management System (LMS) response data are included in this section. The purpose of this survey was to get feedback from LMS users regarding their opinions and experiences with using LMS. For this study, there were 528 respondents randomly recruited. There were 302 males (57.2%) and 226 females (42.8%) who were aged from 19 to 24 years old; they were undergraduates from all faculties at UTeM. These students use the LMS as part of their academic education.

Quantitative data was used in this research. The study employed a free online survey application called Google Forms. In multiple survey questions, students were asked to indicate alternate ways to navigate their learning management system and to assess the perceived importance of various features on a weighted scale. Prior to completing the questionnaire, students were asked to sign a consent form indicating their willingness to engage in the research, the contents of which would only be used for this study and would remain private. They were made aware of the study's goals. Before beginning to complete the questionnaire, they all signed the consent form. A total of 528 surveys were collected in the study.

This study used the survey approach to gather information on the attitudes, behaviors, opinions, and intentions of a substantial population. In social science, the survey approach is well-established since it helps researchers gather data that can be evaluated to explain certain phenomena [26]. In order to validate the questionnaire, the researchers first reviewed pertinent literature to gain an understanding of the state of multimodal language learning education, as well as the problems and trends that surround it, based on their research goals and objectives. Following the questionnaire's design, they assessed its content validity. They tested the questionnaire's content

validity by showing it to professionals in the field of language learning, and they made adjustments in response to their suggestions.

The aim of the research was to ascertain the opinions of undergraduate students regarding the design of their individual learning management systems. The researchers also wanted to know if the students thought the layout of their learning management system helped them learn. Participants specifically discussed how they saw the use of an LMS as a learning tool and how well it facilitated learning activities that adhered to the learner-centered teaching philosophy.

There were 16 multiple choice Likert scale questions where respondents could answer the closed-ended question using a Likert scale or ranking system. The Likert scale identified four levels of agreement: Excellent, Satisfactory, Needs Improvement, and Unsatisfactory. Users of the LMS were sent a link to a Google form, which contained the survey. According to the survey instrument, it would take participants about 20 minutes to finish the questionnaire. The participants are free to respond to every question; they have the choice to skip any question they should not answer for any reason.

There were three primary portions to the questionnaire: the first part asked participants' gender, faculty, and year of study. In the second segment, students answered closed-ended questions on a 4-point Likert scale to elicit their responses about the use of LMS in learning. According to Sharma [27], the Likert scale is a well-accepted psychometric instrument that is mostly utilized in educational and social scientific literature to assess the quantification of attributes. The last segment is students' perceptions of LMS.

### IV. RESULTS AND DISCUSSION

This section shows the findings of the research. Regarding student attitudes and opinions regarding the design of their learning management systems, or LMSs, the study included three research questions. The researchers gathered information primarily from a survey.

Question 1 is about the gender of the participants. A total of 528 students (42.8%) female and (57.2%) male were given a questionnaire. The study's conclusions are anticipated to serve as a guide for the university's administration as it adopts pertinent digital technologies, with the goal of creating an efficient implementation strategy that would enhance service delivery. LMS users received the survey, which had 20 questions in total, through a link to a Google form. Their responses were tabulated in Fig. 1.

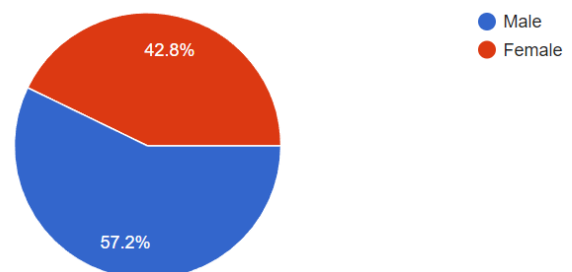


Fig. 1. Gender of the participants.

Question 2 elicits information about the year of study and is presented in Fig. 2. The majority are from the Second year (50.8%), followed by the Third year (50.8%), and the First year (50.8%).

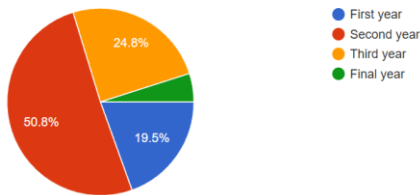


Fig. 2. Year of study.

Fig. 3 presents the results, where the majority of students have Intermediate (48.9%) and Advanced (47.5%) levels of LMS expertise (Q3). The fact that the majority of students are aware of the LMS and possess the skills necessary to use it.

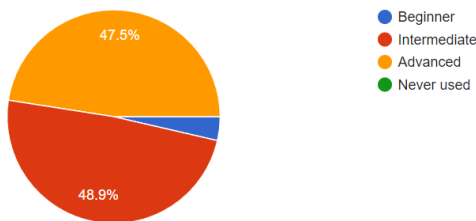


Fig. 3. Level of expertise.

The next question (Q4) is whether students use LMS in their learning. The majority (99.8%) indicated that they use LMS for learning, as shown in Fig. 4.

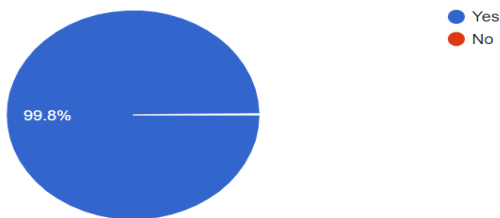


Fig. 4. Do you use LMS in your learning?

Additionally, students reported using the LMS for a variety of reasons (Q5). Fig. 5 shows that the majority of students use LMS for these tasks: submitting assignments (97.9%), taking quizzes (97.7%), downloading documents (97.3%), and recording attendance (93.4%). Subsequently, 86.4% of the respondents watched videos, 70.5% read the announcements, 70.6% provided feedback, 65.2% completed the survey, 60.2% read books or other resources, and 59.1% participated in forums. Viewing their grade or marks (44.5%) was the least useful. This demonstrates how engaged students are in using their LMS. Students are actively using the LMS in their learning.

The next survey question (Q6) asks about users' satisfaction with the LMS's tools. The majority of students are satisfied (48.3%) and very satisfied (41.1%), as illustrated in Fig. 6.

The next question (Q7) concerns how students view the LMS resources. The data in Fig. 7 shows that the majority of students (91.5%) describe the LMS as user-friendly. Students

can learn how to utilize the LMS via the instructions and the video. Furthermore, a few students mentioned that the LMS has an intuitive interface. A few students concurred that the LMS is adaptable to combine with other social media platforms or educational tools (51.5%), improves communication and involvement in the classroom (53.2%), and is customizable (50.8%). Only 38.6% of students said they found the LMS fun to use. Tests and quizzes are administered via the LMS, which also serves as a formal venue for teaching and learning. The findings demonstrate that students have a favorable opinion of the features and capabilities of their learning management system.

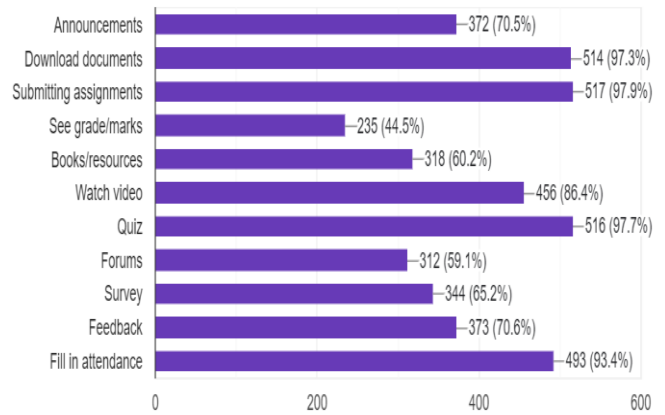


Fig. 5. How do you use LMS?

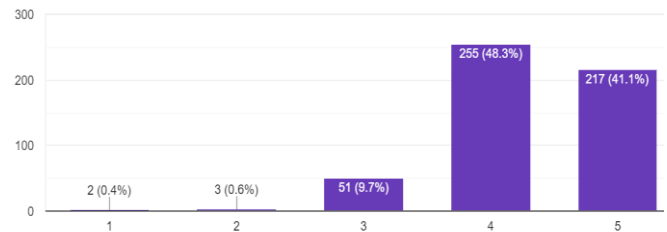


Fig. 6. How satisfied are you with the following LMS tools? (Announcements, feedback, quiz, etc)

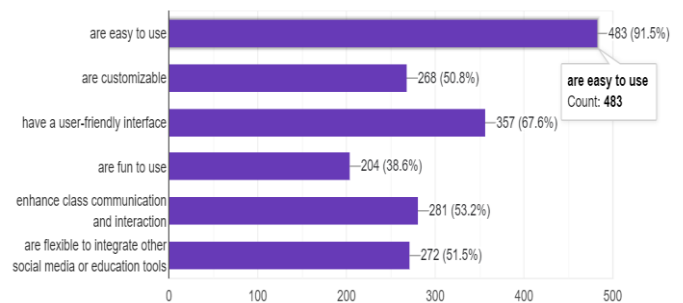


Fig. 7. The perceptions about LMS tools.

The stability of the system is the subject of the following query (Q8). This question asks about the system's dependability and whether it performs as planned. The results in Fig. 8 indicate many students expressed Satisfactory (51.9%), whereas few students selected Excellent (27.7%) and Needs Improvement (20.3%). This data indicates that students are satisfied with the tool.

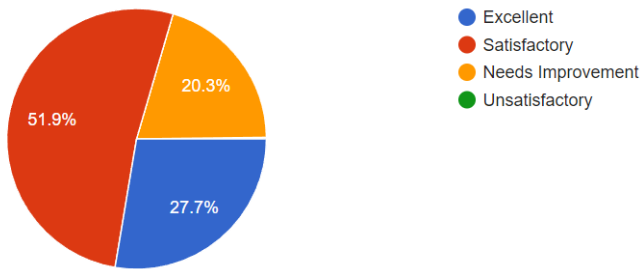


Fig. 8. Students' perception about LMS tools: Stability.

The next question (Q9) is about the reliability of the tool, and the data is shown in Fig. 9. Students have expressed their concern in Fig. 9, where many students expressed satisfaction (56.3%), followed by Excellent (32%), and require improvement (11.6%). This shows students trust the tool to perform their tasks.

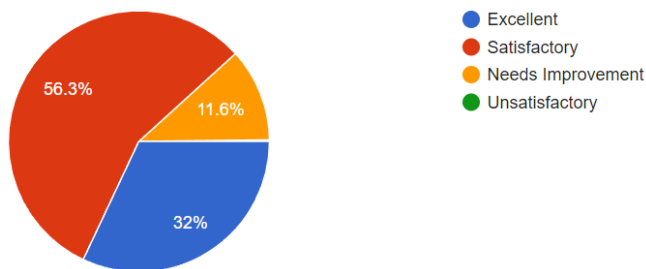


Fig. 9. Students' perception about LMS tools: Reliability.

Question 10 asks students about the speed of the tool. The feedback in Fig. 10 shows the majority students chose Satisfactory (49.4%). However, only some of them selected Excellent (23.3%) and require improvement (26.5%). This signifies that students are quite content with the speed of the tool to perform their tasks.

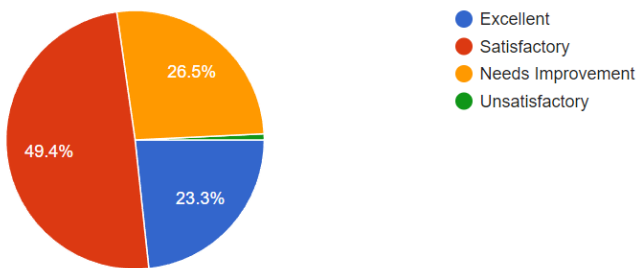


Fig. 10. Students' perception about LMS tools: Speed.

Question 11 seeks information about the usability of the tool. The feedback in Fig. 11 shows the majority of students expressed their satisfaction with Satisfactory (53.4%), and Excellent (39.4%), whereas only a few students chose the option of Needs Improvement (7.2%). This proves that students are very happy with the tool.

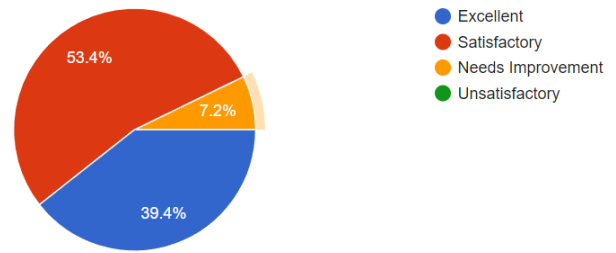


Fig. 11. Students' perception about LMS tools: Usability.

Question 12 asks students to rate the user interface in order to provide information on its appearance. Students reported Satisfactory (51.7%), and Excellent (36.7%) whereas, only a small percentage selected the option Needs Improvement (11.4%). The data is illustrated in Fig. 12.

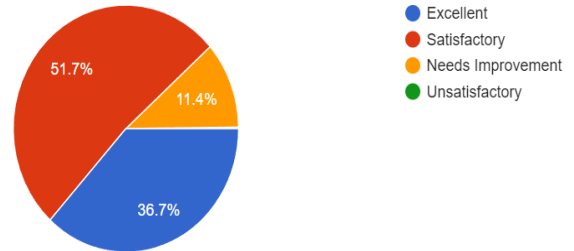


Fig. 12. Students' perception about LMS tool: Appearance.

Question 13 aims to obtain details regarding the navigation of the course. This is about the functionality of navigating through the course, locating, and accessing course material. Students reported Satisfactory (51.9%) and Excellent (36.6%). Only a small percentage selected Needs Improvement (11.6%). This indicates that students do not have difficulty accessing the tool to do their tasks. The data is shown in Fig. 13.

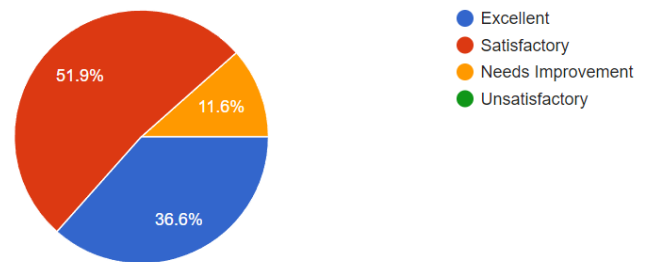


Fig. 13. Course navigation.

The purpose of question 14 is to obtain data regarding the rate of ease of accessing and completing coursework, including tests or quizzes, assignments, and discussion boards. Fig. 14 shows that students agreed that the LMS is accessible and convenient, as proven by their selections of Satisfactory (48.7%) and Excellent (41.3%). Only a few students chose Needs Improvement (10%).

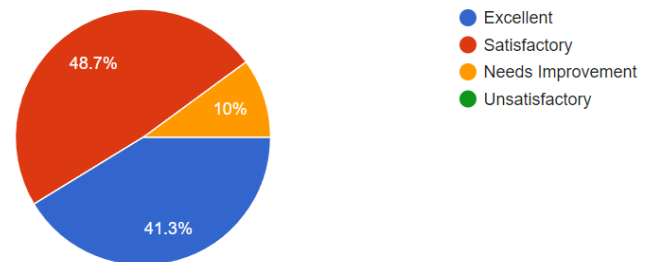


Fig. 14. Students' perception about LMS tool: Completing their coursework.



The next question (Q15) elicits information about Communication Tools: Rating the ease of accessing and using other communication tools, including how simple it is to use the syllabus, announcements, calendar, and personal notifications. Fig. 15 shows that only a small percentage of students selected Excellent (32.6%) and require improvement (12.7%), out of those who expressed Satisfactory (54%). This shows that the majority of students agree that the tools are easy to use and user-friendly.

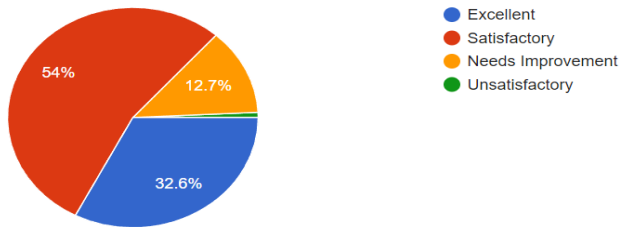


Fig. 15. Students' perception about LMS tools: Communication tools.

Question 16 elicits information about the LMS's functionality. Many students reported being satisfied (57.6%) and Excellent (34.3%), and with only a small percentage, selecting requires improvement (8.1%). This shows that students are happy and satisfied with the tool. The data is presented in Fig. 16.

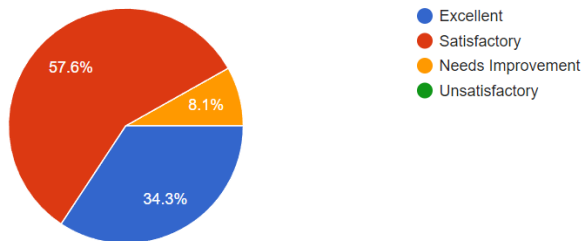


Fig. 16. Students' perception about LMS tools: Functionality.

Overall, the findings of the study showed that the majority of students believed that the LMS's design generally supported their learning needs. In addition, the findings showed that despite having different learning levels and degree programs, and students still had similar needs in terms of features and navigation strategies. According to the study, LMS plays a crucial role in making their learning meaningful as the tool meets the demands of the students. The study's findings can be used to help colleges and universities choose and support LMS. In order to give their students a more efficient learning experience and to fully support learner-centered instructional methods, higher education institutions should think about offering more organized support and development opportunities to front-line instructors.

## V. CONCLUSION

In academic contexts, learning management systems, or LMSs, are becoming more and more common. Most Malaysian universities employ several LMSs for their academic activities. LMSs have the power to alter how education is delivered in formal settings. It may significantly optimize the entire process of creating and disseminating knowledge, creating room for creativity and innovation, in addition to making the learning

process more focused on the needs of the individual student. When LMSs are used in educational settings properly, classes may become far more inclusive and engaging. Furthermore, it has the potential to enhance the entire learning ecosystem by contributing an engaging and dynamic layer. Creating a shared experience and fostering creative interchange are the goals of implementing LMS-based interactive learning, which will benefit the entire learning community. Therefore, in order to enhance participation in higher education for sustainability, LMS investment optimization is crucial. Funding will be needed in the future for researchers who want to carry out comparable studies so they can publish their results. Stakeholders ought to be more equipped to view remote learning as a practical solution for long-term sustainability in light of the current crisis. This study contains numerous limitations, even though it shows statistical evidence exists.

Future research will need more respondents from a wider range of majors, as well as examinations of other aspects, including educators' opinions regarding LMS and their reasons to utilize them, given that this study's respondents are all from the same university.

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