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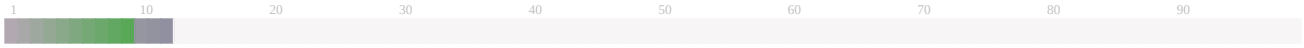

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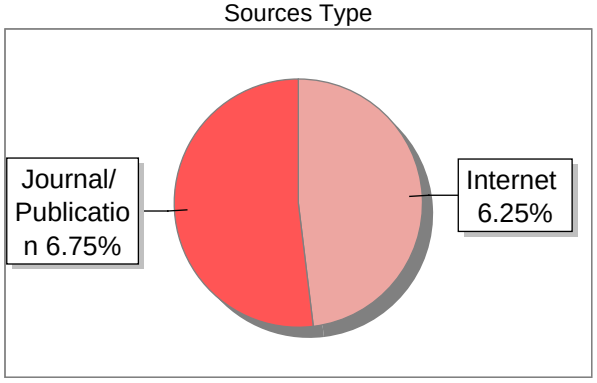

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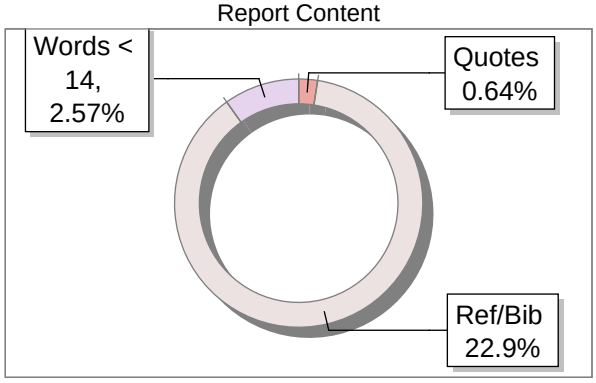

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Students' Perceptions and Attitudes toward Learning Based on Learning Management System: A Future Recommendation on Blended Learning Design

Akhmad Asyari[1]

[1]Universitas Islam Negeri Mataram, Lombok Barat Provinsi Nusa Tenggara Barat Indonesia

Abstract

The current research seeks to analyze university students' perceptions and attitudes of LMS-based learning. This research is a descriptive study with 607 students of State Islamic University of Mataram as the research subjects. Subjects are randomly selected from all students who used LMS as a learning medium. A 36-item questionnaire was administered to capture their perceptions and attitudes. The results of the questionnaire indicated that majority of students have a good perception on the LMS usability, learning design, material content, language and communication, interactions with instructors, and interactions with peers. Pertaining to attitudes, students have good attitudes toward LMS-based learning. For the composition of attitude that are good for cognitive, affective, and conative. Furthermore, based on the distribution of student perceptions on the application of LMS-based learning, blended learning should be applied with the following approach: moderator role is needed in discussions or forums among the students and the lecturers actively present in LMS-based learning either to provide explanations to students or lead them to be actively involved in the LMS. A future recommendation on blended learning design is pivotal with the following approach: moderator role is required in the discussion among students where lecturers actively provide explanations to students or guide them to be active in the LMS.

Keywords: Perception, Attitudes, Learning Management System.

Introduction

Post-Covid 19 pandemic in Indonesia leads to the massive use of Learning Management System (LMS) ranging from elementary school to university level (Dindar et al., 2021; Roy and Brown, 2022). Learning using LMS application has been blended with face-to-face learning so-called blended learning where it shows the transition from e-learning to blended learning (Aboagye, Yawson and Appiah, 2020). Furthermore, this strengthens the necessity of both face-to-face and online learning during the pandemic (Li, 2022). Hence, to increase the learning quality in higher education during the post-covid 19 pandemic, educational institution should improve the students' convenience in generating the LMS (Hussein and Hilmi, 2021). Continous training for lecturers is essentially needed to increase LMS-based learning quality (Berényi et al., 2021)

Moodle, one of the learning management systems, comes with easiness to be applied in learning, but the students rather choose face-to-face learning (Maatuk et al., 2022). There are some types of learning supported by Moodle including (1) video; (2) discussion board; (3) chat; (4) material; (5) quiz (Simanullang and Rajagukguk, 2020). A standardized LMS tend to be equipped with features that can enhance the online learning, especially when working in a group, having a discussion as well as a communication among LMS users (Bradley, 2020). It also provides opportunity for students to have a collaborative study although they live in a distance area (Abdulah and Rochmadi, 2020).

On the other hand, several studies pointed out that students' perception on face-to-face learning was higher than online learning (Bali and Liu, 2018), even they shown a negative perception on e-learning and tend to avoid this mode of learning compared with the offline ones (Abbasi et al., 2020). In addition, a significant number of students (295 or 77%) in that study also confirmed that they more dominantly recommended face-to-face learning rather than e-learning (Abbasi et al., 2020). Therefore, investigation on students' perception as well as attitudes on learning management system as part of blended learning, more specifically in the state Islamic university of Mataram, seems very pivotal and a little information is known about it.

Factors that might influence student perceptions and attitudes towards LMS-based learning need to be considered as they determine the success in LMS-based learning (Hamidy, Mashur and Yaqin, 2021).

Corresponding Author e-mail: akhmadasyari@uinmataram.ac.id

https://orcid.org/xxxx-xxxx-xxxx-xxxx

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Their perceptions on online learning is also closely related to the motivation (Valdez and Maderal, 2021), where it is considered as the main determining factor to influence attitudes toward the platform (Bervell, Nyagorme and Arkorful, 2020). Moreover, easiness in accessing material and other resources also impact the students' attitudes toward LMS (Mundir and Umiarso, 2022). Besides, usability and ease of use should be taken into account as other robust factors that might affect how students perceive online learning (Vitoria, Mislinawati and Nurmasyitah, 2018). Hence, curriculum developers, teachers and researchers need to pay attention on the external characteristics including the usability and quality of selected LMS (Başaran, Khalleefah and Mohammed, 2020). On the other hand, in terms of learning success, there are several rigorous factors that strongly relate to the quality of students' learning output such as the presence of teacher in learning as well as the interaction among students, teachers, content and design (Nortvig, Petersen and ..., 2018).

To enhance the quality of LMS, the key elements that should be unveiled are usability, function or features, visual communication, instructional design, content or material as well as language and communication (R Rabiman, Nurtanto & Kholifah, 2020). In addition to the usability, there are several attributes that consist of content quality, learning support, visual design, navigation, ease of access, interaction system, as well as evaluation and learning system where those attributes contribute to create students' perception (Binyamin et al., 2019). However, a study reavelad there were nine challenges or problems emerged on the LMS usability (Hasan, 2019).

According to the above-explained background of information, the researcher aims to evaluate students' perception and attitudes on LMS-based learning, particularly in the aspects of usability, learning design, content or material, language and communication, interaction with lecturers and interaction with students.

Literature Review

A list of controversy regarding online-based learning has been emerged recently where e-learning is very feasible deals with the ease of use (Rabiman Rabiman, Nurtanto and Kholifah, 2020), but LMS-based learning does not provide a sufficient learning experience for students, while it presents the ease of learning instead (Syauqi, Munadi and Triyono, 2020). Eventhough students have a positive attitudes towards LMS-based learning, however many obstacles need to be overcome before evolving from traditional learning to online learning (Karasneh et al., 2021). Teachers have to understand the weaknesses of LMS and identify the various influential elements associated with LMS, so there is a further need to prepare students and LMS toward a successful online learning (Lin and Nguyen, 2021).

Another determining factor toward successful LMS-based learning is the students' attitudes. Moreover, important factors that might change students' attitudes towards LMS-based online learning encompass knowledge, training, and experience about the learning and previous experience using LMS-based learning where these provide a good opportunity for subsequent learning (Migocka-Patrzałek et al., 2021).

Attitude is a basic element of behavior changes that civilize the learning process and implemention (Nazilah et al., 2021). The lecturer as one of the factors is also very decisive on the success of learning with LMS because those who are not well-trained in implementing LMS will have a negative impact on students' projects. They will also face difficulty in accessing smartboards and learning resources. Hence, training is crucially needed for lecturers in implementing LMS (Msiza, Malatji and Mphahlele, 2020). Student interaction in the LMS will be automatically high if the lecturer provides good feedback in the discussion (Almasi and Zhu, 2020)

The essential factor that might determine an appropriate online learning technology are its use and its benefit (Sadeck, Chigona and Cronjé, 2020). The ease to understand the content, security, design and evaluation are also highly considered factors to be accepted by the users (Mkpojiogu, Okeke-Uzodike and Emmanuel, 2021). Moodle is one of the learning management systems that has a high acceptability rate compared with other (Alghafis, Alrasheed and Abdulghany, 2020). While, the benefit deals with the effectiveness, efficiency and ease of use (Abuhlfaia and De Quincey, 2018). Therefore, the reality of online learning by using LMS at State Islamic University of Mataram should be investigated and explored to spread the information to relevant stakeholders with some intervention needed toward better learning quality.

Research Method

This research is a descriptive study and was conducted in June 2022. The ultimate purpose of this study was to find out a description of students' attitudes and perceptions of the post-covid-19 lecture system, which has implemented a 50% online lecture system. This research involved students from State Islamic University of Mataram, one of the leading universities in West Nusa Tenggara province. The subjects of this study consisted of 607 students from various majors who had experienced 50% online lecture system. Subjects were randomly selected from all students who used LMS as a learning medium. The data in this study were obtained by providing online questionnaires to respondents. The data was analyzed using descriptive statistics by determining the percentage of each item and then creating a category from each domain measured. The questionnaire consists of 26 question items consisting of two categories, namely student attitudes and perceptions of online learning. The questionnaire before use has been validated by two experts in the field of psychology and measurement, the results of the questionnaire that have been valid are then used to retrieve data The grid of questionnaire instruments that have been used can be seen in table 1 and table 2.

Table 1: distribution of items on online learning (LMS)

Aspect	Questionnaire Item
LMS usability	1,2,3,4,5,22,32
learning design/ course design	6,7,8,14,
Material contents	11,19,20,21,27,29,30,31,
Language and communication	12,16, 24,26,34,35,
Interaction with the instructor	9,15,17,23,
Interaction with peer students	10,13,18,25,33,36

Table 2: distribution of students' attitudes towards online learning (LMS)

Domain	Questionnaire Item
Cognitive attitude component	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16
Affective attitude component	17,18,19,20,21,22,23,24,25,26
Conative attitude componet	27,28,29,30,31,32,33,34,35,36

The data obtained from student responses were then analyzed descriptively, determining the percentage of each student's statement. Furthermore, the category of student responses based on the results of the questionnaire was carried out. Finally, a cross-analysis was carried out with related items. In addition, based on the results of the cross-analysis, the conclusions and recommendations are drawn up.

Results And Discussion

Based on the questionnaires' results, 36 items distributed to 607 respondents, the researcher obtained students' perceptions and attitudes toward LMS.

Students' Perceptions toward LMS usability

Table 3: percentage of students' perceptions of Usability of LMS

Items	Responses				
	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
LMS-Based learning is easy to learn	124(20.43%)	382(62.93%)	42(6.92%)	54(8.90%)	5(0.82%)
LMS-Based learning provides broad and flexible opportunities to access lecture materials	158(26.03%)	357(58.81%)	39(6.43%)	49(8.07%)	4(0.66%)
LMS-based learning does not require much Internet Quota	50(8.24%)	288(47.45%)	94(15.49%)	151(24.88%)	24(3.95%)
LMS-Based learning can be done anywhere	225(37.07%)	318(52.39%)	30(4.94%)	31(5.11%)	3(0.49%)
LMS-based learning can be done using a smartphone	225(37.07%)	333(54.86%)	23(3.79%)	21(3.46%)	5(0.82%)
I enjoy learning by using an LMS	107(17.63%)	298(49.09%)	116(19.11%)	73(12.03%)	13(2.14%)
I will use a smartphone to access LMS-based learning	216(23.23%)	319(61.45%)	32(6.59%)	36(8.07%)	4(0.66%)
Average percentage	26.01%	54.01%	8.85%	9.77%	1.37%

Table 3 shows that students' perceptions of the usefulness of LMS used at Mataram State Islamic University have a high percentage of benefits. It can be seen from the cumulative rate of students' perceptions answering agree and strongly agree with seven statements related to the usefulness of the LMS. Each piece of information obtains more than 50% of responses from the students who agree and strongly agree. It further denotes that LMS-based learning is easy to learn and is very important for software (Abuhlfaia & de Quincey, 2018). LMS-based knowledge provides broad and flexible opportunities for accessing lecture materials. LMS-based learning can be done anywhere and can be done using mobile phones. The benefits of the LMS are vital for an application or software.

The questionnaire results related to LMS usability showed positive things because student responses unveiled that cumulatively 506 (83.36%) students supported that LMS-based learning was easy to learn. This provides an excellent opportunity for LMS to be implemented as a medium to bolster higher education learning. As innovation in education, LMS must have ease in learning it so that it will be easy to be adopted as an innovation in learning. This corroborates with the results of the research done Alshira'h et al., (2021) which found that LMS is easy to use. A total of 515 (84.84%) students supported the statement that LMS-based learning provides a comprehensive and flexible opportunity to access lecture materials; this is following the findings which state that with the existence of LMS, students can access, store, and share learning materials (Rabiman et al., 2020).

Pertaining to the quota used in LMS-based learning, 175 (28.83%) students stated that LMS-based learning uses a large allocation. Based on this, it is necessary to study further how the online learning process is carried out and whether learning using the LMS uses meetings or not. If it is done with meetings, it is likely to use a larger quota than other features in the LMS,

such as discussion forums or others. However, if blended learning is implemented in which the meetings are conducted face-to-face, then the use of a large quota will not be an issue.

In addition, learning with LMS can be done anywhere, it can be done using mobile phones to get great support based on student responses that reach more than 75% and this shows that learning with LMS is flexible in use. The flexibility of using LMS has an impact on student attitudes, especially on affective and conative attitudes, namely the tendency of student behavior. The statements "I enjoy learning using LMS" and "I will use my cellphone to access LMS-based learning" belong to affective and conative for students. They also perceive the sefulness and ease of use that positively affect students' attitudes toward using LMS.

Students' Perception of Learning Design/Course Design

Table 4: percentage of students' perceptions of Learning Design / Course Design in LMS

items	Responses				
	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Learning Instructions on the LMS is easy to understand	90(37.07%)	359(54.86%)	98(3.79%)	50(3.46%)	10(0.82%)
Learning materials with LMS are well accessible in their respective courses/courses/courses	132(21.75%)	387(63.76%)	60(9.88%)	26(4.28%)	2(0.33%)
Coursework is presented clearly and easily accessible	134(22.08%)	385(63.43%)	55(9.06%)	31(5.11%)	2(0.33%)
LMS-based learning makes the learning atmosphere becomes erratic	95(15.65%)	264(43.49%)	80(13.18%)	150(24.71%)	18(2.97%)
Average percentage	18.57%	57.45%	12.07%	10.58%	1.32%

Table 4 reveals that the learning design/course design LMS implemented at the Mataram State Islamic University possesses a good learning design/course design. A high percentage of each statement about learning design/course design was obtained. However, there is still a negative statement that received a high agreement rate of 168 (59.14%) students stating that LMS-based learning makes the learning atmosphere uncertain about getting approval.

Based on the student's responses regarding their perceptions of the LMS, as shown in table 4, it is noticeable that the learning instructions in the LMS that students have used so far are pretty good. Nevertheless, it requires some improvements as about 60 (4.28%) students still do not support the statement "learning instructions on the LMS are easy to understand." Learning instructions at LMS aim to lead students related to what students should do in the learning process. Learning will run smoothly if the instructions are clear and easy for students to understand. The learning materials available at the LMS used at the Mataram state Islamic university are also accessible. It can be seen from 519 (85.51%) students supporting the statement "learning materials with LMS are well accessible." The conditions in a facilitating LMS must be addressed critically when implementing LMS-enabled blended learning because these factors have a direct effect on students' attitudes toward the intention to use LMS-based learning (Bervell et al., 2020)

Students' Perception of the Material Content

Table 5: Percentage of Students' Perceptions toward Material Content in LMS

items	Responses				
	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Collecting coursework is easy to do on the LMS	166(27.35%)	359(59.14%)	49(8.07%)	30(4.94%)	3(0.49%)
I feel happy to study the material provided in the LMS	86(14.17%)	364(59.97%)	96(15.82%)	58(9.56%)	3(0.49%)
I love collecting tasks through the LMS	156(25.70%)	380(62.60%)	42(6.92%)	26(4.28%)	3(0.49%)
I feel glad the task was set up on the LMS	139(22.90%)	391(64.42%)	47(7.74%)	28(4.61%)	2(0.33%)
When there is a task given to the LMS, then I will do it	251(41.35%)	339(55.85%)	13(2.14%)	3(0.49%)	1(0.16%)
I will ask the existing discussion forum if there is anything that I do not understand yet	161(26.52%)	366(60.30%)	57(9.39%)	19(3.13%)	4(0.66%)
I will download the materials provided on the LMS	241(39.70%)	347(57.17%)	14(2.31%)	3(0.49%)	2(0.33%)
I will study the material provided on the LMS	189(31.14%)	356(58.65%)	56(9.23%)	5(0.82%)	1(0.16%)
Average percentage	28.60%	59.76%	7.70%	3.54%	0.39%

According to table 5, the LMS implemented at the State Islamic University of Mataram has suitable content materials. This can be seen from the high percentage of agreement of positive statements related to material content, which is above 50% in each statement. However, it is still necessary to improve the quality of content materials because students still disagree with statements related to material content that is not significantly large.

Students' Perceptions toward language and communication

Table 6: percentage of students' perceptions toward language and communication of LMS

items	Responses				
	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Through LMS, it is easier to understand the concepts or material studied	67(11.04%)	271(44.65%)	142(23.39%)	113(18.62%)	14(2.31%)
Learning with LMS does not get an explanation from the lecturer	80(13.18%)	231(38.06%)	96(15.82%)	175(28.83%)	25(4.12%)
I feel happy with the learning situation in the classroom	231(38.06%)	309(50.91%)	46(7.58%)	18(2.97%)	3(0.49%)
I feel happy with learning offline	231(38.06%)	287(47.28%)	46(7.58%)	38(6.26%)	5(0.82%)
I will understand the material better if it is explained by the lecturer directly	307(50.58%)	265(43.66%)	23(3.79%)	11(1.81%)	1(0.16%)
I am more fun to learn if I study offline	228(37.56%)	270(44.48%)	68(11.20%)	38(6.26%)	3(0.49%)
Average percentage	31.41%	42.09%	11.56%	10.79%	1.40%

Based on table 6, it can be revealed that starting from a high percentage of 200 (32.95%), students do not support the statement that learning with LMS do not get an explanation from the lecturer, has an impact on the high percentage of 127 (20.93%) to the item stated that through LMS, it is easier to understand the concept or material being studied. This also resulted in a high percentage, namely 572 (94.24%) to students support if the material is explained directly by the lecturer, 540 (88.97%) students like learning in the classroom, 518 (85.34%) students support preference of offline learning, and 498 (82.04%)) perceive offline as more fun learning.

These language and communication aspects are essential since the easier the students understand the concept of the material being studied, the better the student's learning outcomes. Some of the findings gained in this aspect are that although the usability of the LMS, material content, and learning design are excellent, most students still prefer face-to-face learning. Also, many students still expect explanations from lecturers related to the material and understand the material if the lecturer explains it. Lecturers are essentially student facilitators in learning, not people who transfer knowledge. However, shifting the function of lecturers may take time. One of the transitions from explanatory lecturers to facilitator lecturers is the application of blended learning. Hence, the teaching will be more effective with adequate and appropriate blended learning implementation.

Student's perception of interaction with the instructor

Table 7: the percentage of students' perceptions of Interaction with the instructor LMS

Item	Response				
	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Discussions with lecturers is easy to do with LMS	82(13.51%)	280(46.13%)	102(16.80%)	125(20.59%)	18(2.97%)
Learning with LMS interaction with less active lecturers	110(18.12%)	287(47.28%)	65(10.71%)	124(20.43%)	21(3.46%)
I enjoy discussing with lecturers on the forums in LMS	74(12.19%)	290(47.78%)	114(18.78%)	123(20.26%)	6(0.99%)
I'm happy to get an explanation from the lecturer	216(35.58%)	319(52.55%)	32(5.27%)	36(5.93%)	4(0.66%)
Average percentage	19.85%	48.43%	12.89%	16.80%	2.02%

Based on table 7, starting from a high percentage, 535 (88.13%) students support the statement that they are happy with the explanation from the lecturer and 143 (23.56%) students state that they do not support the statement that discussions with lecturers is easy to do with LMS. This means that there are still many students who state that LMS-based learning discussions with lecturers are not easy to do, which has an impact on the high percentage, namely 129 (21.25%), to students stated that they do not support the statement I am happy to discuss with lecturers through the existing forums at LMS. This is in line with statemnet that students support direct discussions with lecturers. Moreover, this has an influence on

the high percentage, 397 (65%), students stating that they support the statement that learning with LMS interactions with lecturers are less active. This means that student discussion activities with lecturers using LMS are still lacking. Some findings in the aspect of interaction with the instructor is found that lecturers have a tendency to be passive with the LMS as a learning medium. This also can be seen from the high response of students who support interaction with less active lecturers. This gives a signal that in LMS-based learning, the lecturer continues to control and monitor both in discussion forums or in the tasks they are doing. The high response of students is also indicated on their expectation on the explanation from the lecturer through LMS. This strengthens the issue that lecturers are passive in LMS-based learning.

Student's perception of interaction with peer student

Table 8: the percentage of students' perceptions of the Interaction with peer students LMS

Item	Response				
	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Discussions with students is easy to do with LMS	86(14.17%)	279(45.96%)	108(17.79%)	120(19.77%)	14(2.31%)
Interaction with fellow students is lower at learning with LMS	103(16.97%)	331(54.53%)	69(11.37%)	92(15.16%)	12(1.98%)
I enjoy discussing with friends on the forums on the LMS	70(11.53%)	296(48.76%)	99(16.31%)	130(21.42%)	12(1.98%)
I enjoy learning that interacts directly with classmates	276(45.47%)	282(46.46%)	34(5.60%)	13(2.14%)	2(0.33%)
I will interact more actively if I study offline	178(29.32%)	304(50.08%)	78(12.85%)	42(6.92%)	5(0.82%)
I will interact with friends if I study offline	241(39.70%)	300(49.42%)	31(5.11%)	34(5.60%)	1(0.16%)
Average percentage	26.19%	49.20%	11.50%	11.83%	1.26%

Based on table 8, it can be seen that 134 (22.08%) students do not support the statement that discussions with students is easy to do with LMS. This means that there are still many students who state that it is difficult to hacve discussion with peers in LMS. This has an impact on the high percentage of students, namely 434 (71.5%) which states that interaction with fellow students in LMS is lower than face-to-face learning. It will also have an impact on the high percentage of students, 142 (23.4%), stating that they do not support the statement that they are happy to discuss in the forums in the LMS. Furthermore, it has an influence as well on the high percentage of the three statements that lead to face-to-face learning, 558 (91.93%), that find students are happy with learning which interacts directly with classmates, and 482 (79%) of them will interact actively if learning offline or face to face, and 541 (89.12%) of students will interact with their friends if they study offline.

The difficulty of students to have discussing in the LMS can be indicated because the discussions in LMS tend to be multi-directional and multi-theme due to the absence of lecturers as active moderators in LMS discussions. This will have an impact on the tendency of student behavior to choose not to interact in discussions, while students will prefer to be passive in discussions, and prefer to discuss in face-to-face learning.

Students' attitudes of LMS

Table 9: percentage components of student attitudes towards LMS

Component of Attitude	Category				
	Very Good	Good	Fair	Poor	Very Poor
Cognitive attitude component	40(6.59%)	129(21.25%)	273(44.98%)	127(20.92%)	38(6.26%)
Affective attitude component	49(8.07%)	130(21.42%)	250(41.19%)	136(22.41%)	42(6.92%)
Conative attitude componet	52(8.57%)	110(18.12%)	302(49.75%)	109(17.96%)	34(5.60%)

Students' responses pertaining to student attitudes towards LMS are the accumulation of students' experiences in learning to generate LMS. Students' attitudes consist of students' knowledge about learning using LMS, students' feelings of learning with LMS, and students' behavior or tendencies related to learning using LMS in the following lesson. Based on table 9, it can be seen that the cognitive component of students' attitudes or knowledge toward is positive because only 165 (27.18%) students responde poor and very poor. The affective component of the attitude or favorable or liking towards the LMS can be concluded as positive perception because only 178 (29.33%) students belong to poor and very poor category to the statement of affective attitudes, and for the conative component of the attitude or tendency of students to act can also be said to be positive because only 143 (23.55%) students respond poor and very poor on conative statements of attitude. In general, student attitudes towards LMS can be seen in table 10.

Table 10: the percentage of students' attitudes towards LMS

Component of Attitude	Category				
	Very Good	Good	Fair	Poor	Very Poor
Attitude	39(6.43%)	142(23.39%)	243(40.03%)	147(24.22%)	36(5.93%)

Result

Covid-19 has brought very significant changes in the implementation of education, especially in terms of meeting the demands of education implementation standards during the pandemic, including at UIN Mataram which uses LMS as a tool in supporting the implementation of education for students during the Covid-19 pandemic. Previous research has shown that the implementation of the online learning model has many shortcomings and requires adjustments to the habits of learners (Aboagye, Yawson and Appiah, 2020; Hussein and Hilmi, 2021) although the online learning model is considered quite easy and simple to do. In line with this study, it shows that most students view the LMS positively in almost all aspects: usability, learning design, materials, language and communication, intraction with instructors and instruction with peers.

Students' perceptions of LMS are good for its usefulness, for the design of learning and even the interactions that arise from the existence of an LMS are considered very positive for students. But ofcourse LMS has some weaknesses that can be seen in students' perceptions, especially this is something new (as a method) and takes time to adjust students' abilities and needs in learning. The results of this study show something similar about the anxiety expressed towards students about LMS as a new method. After being measured using several methods, the results were not always bad and obtained a positive assessment. Students find it easier to learn using an LMS, but that convenience is not always oriented towards the desired outcomes when compared to contemporary learning methods. So that the application of LMS as a learning method still needs to be studied in many aspects, which is not limited to the function and willingness of the system. However, it is more about the targets and achievements that cannot be obtained in conventional learning methods, whether they can be achieved and targeted by the LMS method.

This finding is in line with research conducted by Rabiman Rabiman, Nurtanto and Kholifah (2020) which found that ease of use is an operational aspect that needs to be considered in the implementation ofLMS Covid. Presenting these easy digital tools to support learning will result in meaningful learning experiences for students (Syauqi, Munadi and Triyono, 2020). In addition, most students have a positive experience in studying using LMS at Mataram State Islamic University. They may have adequate facilities and instructions given by lecturers that allow them to actively conduct discussions with lecturers and students indicated by a high percentage of positive perceptions. This is in contrast to the research conducted by Msiza, Malatji and Mphahlele (2020) which claims that students face some type of difficulty in learning to use LMS. Previous research also revealed that student interaction with lecturers was ineffective because lecturers did not provide enough feedback (Almasi and Zhu, 2020), while this study found that students rated this section positively.

Conclusion

Based on the data and discussion the research result on students' perceptions and attitudes toward LMS, it can be concluded that majority of students have a good perception on the LMS usability, learning design, material content, language and communication, interactions with instructors, and interactions with peers. Pertaining to attitudes, students have good attitudes toward LMS-based learning. For the composition of attitude that are good for cognitive, affective, and conative. Furthermore, based on the distribution of studens't perceptions on the application of LMS-based learning, blended learning should be applied with the following approach: moderator role is needed in discussions or forums among students where lecturers are actively present in LMS-based learning either in order to provide explanations to students or guide them to be active in the LMS.

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