

## **INTERNALIZING LEARNING MANAGEMENT SYSTEM TO INCREASE LEARNING QUALITY AT SELECTED STUDY PROGRAMS IN HASANUDDIN UNIVERSITY**

**Yusring SANUSI BASO**  
Hasanuddin University  
Arabic Department, INDONESIA

### **ABSTRACT**

The use of e-learning in education grows very rapidly. To meet this need, Hasanuddin University has set up e-learning since 2009, namely Learning Management System (LMS). The purpose of this media is to improve the quality of teaching at this campus. Unfortunately, this LMS is un-utilized. This research was conducted to change the academic culture, from where lecturers have not accustomed LMS in teaching and learning process to be more familiar with it.

In regard to this need, several activities have been conducted to internalize LMS in order to increase learning quality at Selected Study Program at Hasanuddin University. Those activities are: presentation in front of USAID regarding the achievement of action research, evaluation and conducting assessment in regard to the quality of Learning Management System (LMS), dissemination through social media, a series of Workshops on LMS, data cleaning and backing up, uploading courses on LMS, monthly meeting and survey on students' satisfaction in utilizing LMS. There were two study programs involved in this research, they are Arabic and Fishery Resources Utilization Study Programs

A Survey has been conducted by using Technology Acceptance Model (TAM). This TAM consists of Perceived Ease of Use (PEU), Perceived Usefulness (PU), Attitude toward Using (AtU), and Behavioral Intention to Use (BIU). Scales used is ranging from 1 to 5. Surveys show that Perceived Ease of Use reaches 4.33; Perceived Usefulness reaches 4.18; Attitude Toward Using reaches 4.22; and Behavioral Intention to Use reaches 3.86. These percentages indicate a high student's satisfaction especially in the first three constructs. For that reason, technological variables are not the problems. The researchers most likely conclude that the policy from the leaders has to be strict, not only to support the LMS utilization but also issue the decision letter stating that LMS is a compulsory learning tool to support the learning process at Hasanuddin University.

**Keywords:** Learning Management System (LMS), learning, TAM Model, students' satisfaction, policy.

## **INTRODUCTION: Background**

**Non-stop development of technology is happen. As we know, students at the moment are technological generation (Natali, 2014). They were born as multitask learners (Helene Hembrooke, Geri Gay (Helene Hembrooke, Geri Gay, 2003), 2003). The research has found on its research that a kid has minimal 4 technological devices, such as TV, Play Station, Hand Phone and Computer (either PC or Laptop). These devices are growing by the time not just in number of production, but also in quality and price (Woodcock, S., Sisco, A. & Eady, M, 2015).**

**In other side, developments of educational technology also increase (Meyer, 2014). Internet use in academic area also grows faster in the latest ten year (Courville, 2011). Along with IT development in the learning, the education world also participates in the competition of having high-tech facilities in their leraning process. Therefore, our facilities in order to guide them to achieve their need must be based on technology.**

**As one of the biggest universities in the country, Hasanuddin University (Unhas) is not left behind in utilizing technology in its education. Since 2008, through INHERENT and IMHERE projects, the university built its intergrated system including e-learning services that is so called Learning Management System (LMS).**

**LMS development through the INHERENT project was based on accelerating the spread of knowledge and sciences from trusted resources. By utilizing LMS, faculty members are hoped to provide reading sources as well as sciences and technology references which are acaddeemically accountable. Moreover, LMS development is also to help Unhas faculty members who travel around the country and are assigned to be assessors as additional tasks for instance, assessors of BAN-PT (Higher Education - National Accreditation Board), reviewers of di DPT DIKTI and other important tasks from the government. As a result, the classes of those assessors and reviewers may be left behind.**

**Other important points, LMS is technologically and environmentally friendly as less paper is used. According to a colleague of the Faculty of Forestry, one of their important research findings is that one tree which has diameter 30 cm and height of 18 meters, will produce 873 rims A4 paper, 70 grams. If 30.0000 of Hasanuddin University Stakeholders do not use a paper daily, for one year Hasanuddin University will save 283 trees. We help Faculty of Forestry not to cut those trees yearly. Can you image how many trees we can keep? The development and capacity increase of LMS as one of learning media at Unhas is a nonstop development of its program, management and infrastructures, for instance network and Personal Computer (PC) provision in several areas of learning such as library, reading room faculty and study program.**

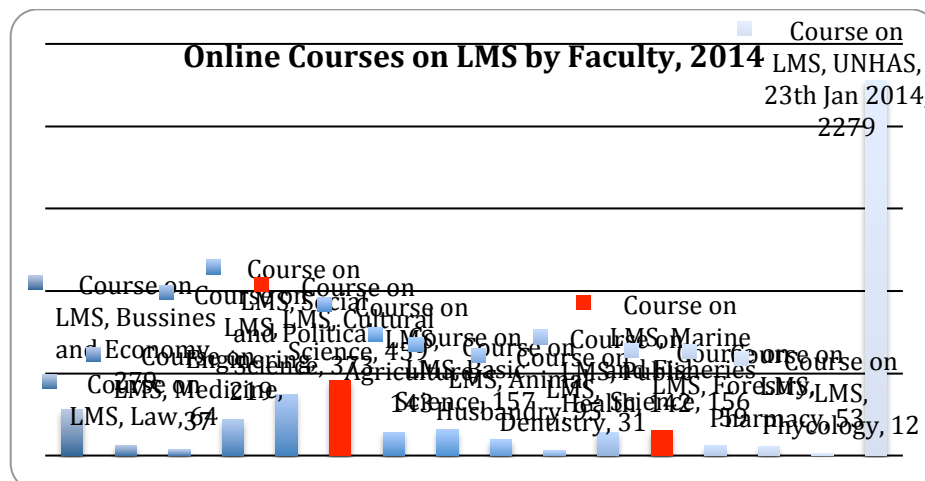
**Moreover, internet accesses are also provided around the campus. However, numbers of lecturers utilizing LMS as learning media remain low. Other issue is LMS utilized as supplement in learning process and not a compulsory for teachers. Consequently, many teachers who have basically been trained do not seem to be very motivated.**

## PROBLEM IDENTIFICATION

Since its implementation from 2008 until 2014, numbers of courses registered on LMS are 2279 courses. Besides, several budgeting policies have been issues such as both DPT-DIKTI grant and routine budget for all study programs. In addition, workshop and training on LMS have also been implemented. Numbers of courses registered on LMS, however, are only the names meaning teachers or lecturers have not utilized all the menus provided on LMS.

The LMS utilization as one of the learning tools in supporting the learning process are still far from our expectations. Based on the data, lecturers in average utilize LMS only for saving lists of reading references and submitting students' assignments.

There are only small numbers of courses that utilize all the menus on LMS. Below is the data of registered courses on LMS until 2014:



According to the above table, the research questions come up as follow:

- Why has LMS not been utilized as a compulsory tool in learning and teaching process?
- Why do most of the Lecturers not utilize all menus of LMS?
- Goals
- This action research is intended to change academic culture from not getting used to getting used to. It's realized that technology in learning is not the only one tool to be utilized. However, LMS is considered one of the best tools in supporting the learning process. Therefore, this action research in detail is done to:
  - Utilize LMS as a tool system to enhance learning quality
  - Internalize Learning Management System (LMS) to increase learning quality at Selected Study Program at Hasanuddin University
  - LMS to support Ministry of Education and Culture's decision on Distance Learning under the Law number 24, 2012

- Support research finding of faculty of Forestry to reduce cutting trees through paperless

This action research has a variety of effects and Benefits are as follow:

- The benefits for the team itself that learn to make changes through action research. With this method, the team Unhas ARP team gain knowledge and experience (skill) in changing colleagues' mindset and attitude at Unhas Lecturers Neighborhood.
- The benefit for the university is changing attitude from several lecturers that LMS is needed. It is hoped that changing attitude may affect other lecturers who are not involved in this action research project.

## METHODOLOGY

The performance indicator of this action research is the creation of academic culture in utilizing learning technology, namely LMS. One of the instruments to measure the academic culture is LMS acceptance among lecturers and students. The measure is about online questionnaire, using *Technology Acceptance Model* (Davis, 1989). F.D Davis was the first person who developed *Technology Acceptance Model* (TAM). This model was installed on LMS thus lecturers and students could simply click and fill out the questionnaires. This questionnaire also supports the one issued by LKPP at the end of semester.

TAM was chose as it can explain the attitudes of Information and Communication Technology (ICT) users which consists of *belief, attitude, intention, and user behavior relationship*. Shortly, TAM can express ICT acceptance of users in certain dimensions easily.

Two indicators of TAM are *usefulness* and *ease of use* which will explain user personality. TAM model has 5 models of construct such as *Perceived Ease of Use, Perceived Usefulness, Attitude Toward Using, Behavioral Intention to Use* dan *Actual System Usage* (Kumar Sharma Sujeet, Jyoti Kumar Chandel, 2013). This action research embraced four models except Actual System Usage.

Another method used to collect data was Focus Group Discussion (FGD). FGD allow ARP team members to collect data from a variety of perspectives at the university.

### Location

The research location was at Hasanuddin University in which LMS server also is located. Lecturers and students are also parts of the university. Respondent at the beginning the research, there were only respondents from two study programs, Arabic and Fishery Resources Utilization.

However, in the middle of research process, respondents varied from almost all study programs. Numbers of respondents filling out the questionnaire from May to September 2015 were totally 711 respondents consisted of 59 lecturers and 652 students.

### **Data Collection**

Data collection techniques were done in several ways, which Focus Group Discussion (FGD), Interview and Survey. FGD was carried out and attended by Rector, Vice Rectors, both Dean Faculty of Letters and Dean Faculty of Marine Sciences and Fishery as well as lecturers from both study programs.

Moreover, FGD was also carried out for lecturers involving in the research.

### **Data Analysis**

Data gained from FGD and survey uses TAM model and then is analyzed. Data collected was reduced and made into units and orders. Grouping data into units is to ease the team to list data as needed.

### **Implementation Phases**

This action research was carried out since end of 2013 and will last in October 2015. Several activities have been done as follow:

- **Major Activity in 2013**
  - During the year of 2013, there were three activities done as planned. Those activities were periodic meetings with university and faculty leaders. In addition, meetings also were done by ARP team members and lecturers involving in the research.
  - The next activity was disseminating Ministry of Education and Culture regulation number 24 in 2012 about distance learning. This action research was also spread through social media such as Facebook.
  - Besides, there was also an evaluation on three components of e-learning such as software, hardware and brain ware that was periodically implemented. Challenges found in the implementation many times happened such as a lecturer that forgot the password should have got faster services. In this phase, the policy on LMS utilization was proposed to Rector.
- **Major Activities in 2014**
  - The policy by Rector in 2013 was issued. Guideline book for LMS utilization was published for 2014 fiscal year. With the book, all study programs could implement trainings and workshops on LMS. As a result, courses registered on LMS increased high enough. However, after looking up, some courses had no names; curriculum codes even courses without lecturers were found. This situation leads to LMS data cleaning. The technical barriers on uploading courses on LMS can be understood as a result of workshops. The cleaning must have been done.
  - The workshops and trainings implementation resulted from uploading files as references of courses. In this process, it was found that lecturers encountered obstacles and challenges for example the power were suddenly off which did not enable them to access LMS.

Therefore, LMS off-line was needed to enable those lecturers utilize LMS. The off-line LMS was installed into a flash disk application.

- **Major Activities in 2015**
  - In 2015, the action research has reached data collection phase. The collection aimed to measure the acceptance of LMS by lecturers and students. TAM model was chosen and implemented previously even though its price was quite expensive.
  - In addition, LMS was proposed to LKPP (The Institute of Educational Development Studies) to be one of the subjects or materials taught in training of Applied Approach (AA), a training to increase lecturers' capacity building. This fact makes LMS sustainable and will continuously taught in the training which is a compulsory training for any lecturer wishing to be promoted to the next rank/level of employment such as *Asisten Ahli* (Permanent Lecturer), *Lektor* (Assistant Professor) *Lektor Kepala* (Associate Professor) and *Guru Besar* (Professor).

## **MAJOR FINDINGS AND ANALYSIS**

The action research implemented for almost two years has found several findings such as:

- Policies that determined changes in academic culture,
- respondents increased,
- A very high level of LMS acceptance as learning tools,
- changes in academic culture in utilizing LMS to increase learning quality.

### **Policies That Determined Changes in Academic Culture**

Since LMS was initiated in 2009 and began to be launched its utilizations at the university through a variety of different programs and grants, few lecturers take benefits from it. Lecturers utilize it only for saving reading materials/references and submitting students' assignment. The instructions from the university leadership to increase learning quality were not implemented by lecturers.

As a matter of fact, the existence of LMS which is neat and complete enough was not maximized. Along with this issue, the action research done by Unhas ARP team members with the support of USAID HELM and DIKTI is to change the lack lecturers' motivation in utilizing LMS. The action research focused on changing academic culture of the university in order to utilize LMS familiarly in their teaching and learning process. HELM supports, directs and monitors the ARP team members to reach the targets of this action research which is to change academic culture in relation to LMS utilization.

In 2013, several actions were done to guard changes in academic culture which has been explained in phases above especially important meetings with all leaders at the university, beginning from Rector, Vice Rectors, Deans, etc.

The meetings resulted from policy making such as Rector's decision in LMS utilization. To follow up this decision, the guideline book was established and became all study programs' references. This book contains all issues related to PPKPS (Program of Capacity Building for Study Programs) in 2014.

In the book it was clearly stated that all study programs had to carry out workshops or trainings on LMS as a learning tool. This policy was followed up by another policy run by LKPP in relation to LMS utilization in 2015.

	A	B	C	D	E	F	H	J	K	L	M	N	O	P	Q	R	S	T
1	Timestamp	Nama Lengkap	1. The use of LMS is completely easy to learn	2. It is very easy to do any activity required by LMS	3. LMS is easy to operate	4. The menu can improve users' skill in using LMS through its available menu	5. Lecturers prepare their teaching materials earlier and / Students finish their assignment fast	6. Lecturers' performances in the learning are more increased / Learning styles of students are more directed	7. LMS is useful and helpful in supporting teaching and learning process	8. LMS efficiently support teaching and learning process	9. Menus and instructional positions are very consistent on LMS	10. Menu for file storages is easily found on LMS	11. Services for users are responded fast	12. Feedbacks are available on LMS	13. I access LMS every day	14. I proudly utilize LMS as a learning media	15. I always share LMS benefits with my friends	16. I tell lecturers / students from other study programs (higher education) about LMS
2	3/3/15 21:33	Najmudin H Abd Safa	5	5	5	5	5	5	5	5	5	5	4	4	4	5	5	5
3	3/3/15 22:28	A. Ais Prayogi	4	4	4	4	4	4	4	4	3	4	4	2	4	4	4	4
4	3/4/15 10:35	Najamuddin	5	5	5	5	4	5	4	4	3	4	1	4	4	4	4	4
5	3/4/15 11:37	A.Aulia Hardina Hakim	4	4	4	3	5	5	4	4	3	3	3	4	3	3	3	3
6	3/4/15 11:55		5	3	4	3	2	2	3	3	3	4	3	4	2	3	3	4
7	3/4/15 16:20	KASMAN ABDULLAH	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	4

This year, LKPP design LMS Grant for Textbook Writing. All lecturers are requested to upload reading references/materials to LMS on the weekly basis. By the end of the semester, courses uploaded on LMS will have 14 numbers of listed reading materials. Hence, lecturers will get familiar the LMS utilization.

This policy was a smart step of ARP Team members. It can be clearly seen that policy from university leadership influences very much in academic culture. At least, lecturers who never experience and pay attentions to LMS utilization as supportive learning tool, they have to utilize LMS systematically.

Indirectly, those lecturers who never touch LMS can feel the benefits in supporting and increasing teaching and learning quality.

Numbers of lecturers, particularly senior lecturers stated their apologetic feeling for being so much late in embracing this LMS. They even said that prior to the workshop; they assumed LMS was a burden. However, after the workshop they realized the benefits of it. Nevertheless, numbers of courses on LMS do not yet utilize all menus on LMS.

	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S
35	6/23/15 9:39		3	3	3	4	Mahasisw a	3	2	2	4	3	2	2	2	4	3	3
36	6/25/15 12:48	YUNI ANDRYA NIA	5	5	5	5	Mahasisw a	5	5	5	5	5	5	5	5	4	5	4
37	7/7/15 9:59	HAMRI	5	4	5	3	Mahasisw a	3	3	5	4	3	4	3	5	2	4	2
38	7/19/15 7:38	Muhamm ad Erdin	1	1	5	5	Mahasisw a	5	3	3	3	5	5	5	5	3	3	3
39	8/2/15 21:03	risal	5	4	4	5	Mahasisw a	5	5	4	5	4	5	5	4	4	5	1
40	8/5/15 10:45	yayu yunita	3	4	4	3	Mahasisw a	4	4	5	5	3	4	2	4	2	3	3
41	8/13/15 16:30	Andi ummul khaer	5	4	4	5	Mahasisw a	5	5	5	5	5	4	5	5	4	5	4
42	8/14/15 13:55		3	1	2	1	Mahasisw a	2	1	1	1	1	3	3	3	2	2	1
43	8/18/15 8:45	samriati candra runa	4	4	4	4	Mahasisw a	3	4	4	4	4	4	4	4	3	4	3
44		<b>Average</b>	<b>4.07</b>	<b>3.76</b>	<b>4.01</b>	<b>3.74</b>		<b>3.65</b>	<b>3.63</b>	<b>4.03</b>	<b>3.89</b>	<b>3.67</b>	<b>3.91</b>	<b>3.46</b>	<b>3.82</b>	<b>2.98</b>	<b>3.95</b>	<b>3.31</b>
45																		
46																		
47																		
48						UNHAS												
49					Students	27,000		652										
50					Lectures	1,672		59										
51					TOTAL PARTICIPANTS:			711										
52																		

### Number of Respondents Increased

As mentioned earlier, numbers of respondent came from two study programs, both Arabic and Fishery Resources Utilization.

However, as Rector's policy was issued, numbers of respondents increased and almost represented all study programs at the university.

There were 711 respondents totally which 59 were lecturers and 652 were students. Below is list of respondent who filled out the questionnaire:



Numbers of respondents were collected since Mei until end of August 2015. Based on the respondents' percentage, it shows an ideal number as known that filling out the online questionnaire was not a compulsory.

This number will remain increased The ARP team decided to stop the survey by the end of October 2015. Closing the survey does not mean deleting the questionnaire from LMS system.

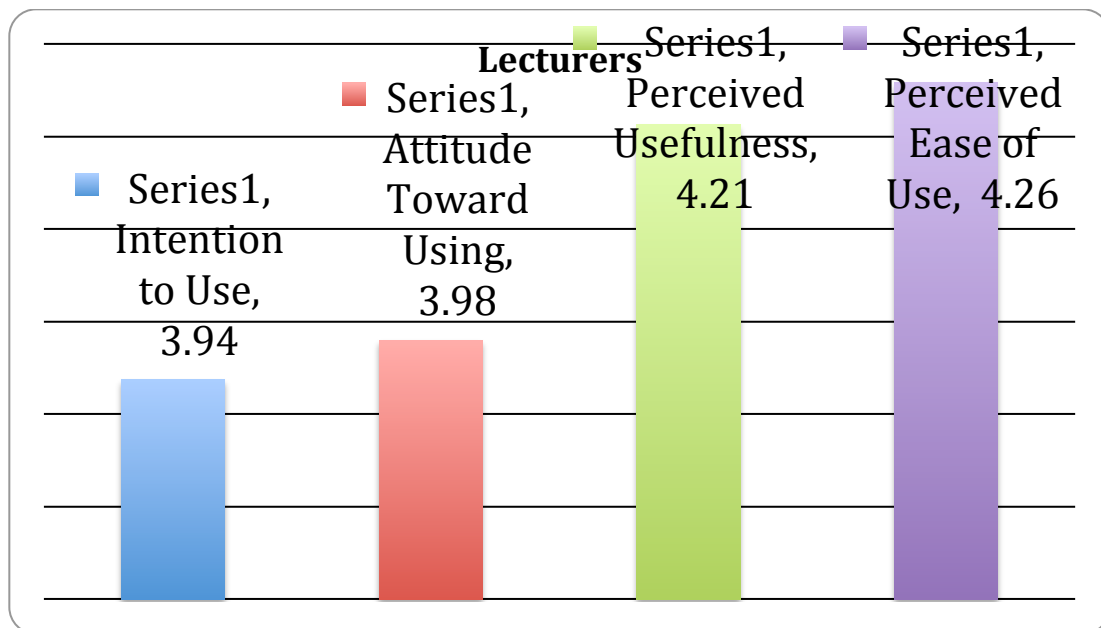
The closing is related to action research project done so far. Online data generated by lecturers and students will be continuously collected to evaluate the LMS sustainability.

**A Very High LMS Acceptance as Learning Tool**

According to the online survey which was based on TAM model, it can be concluded that LMS is well accepted by lecturers and students at the university.

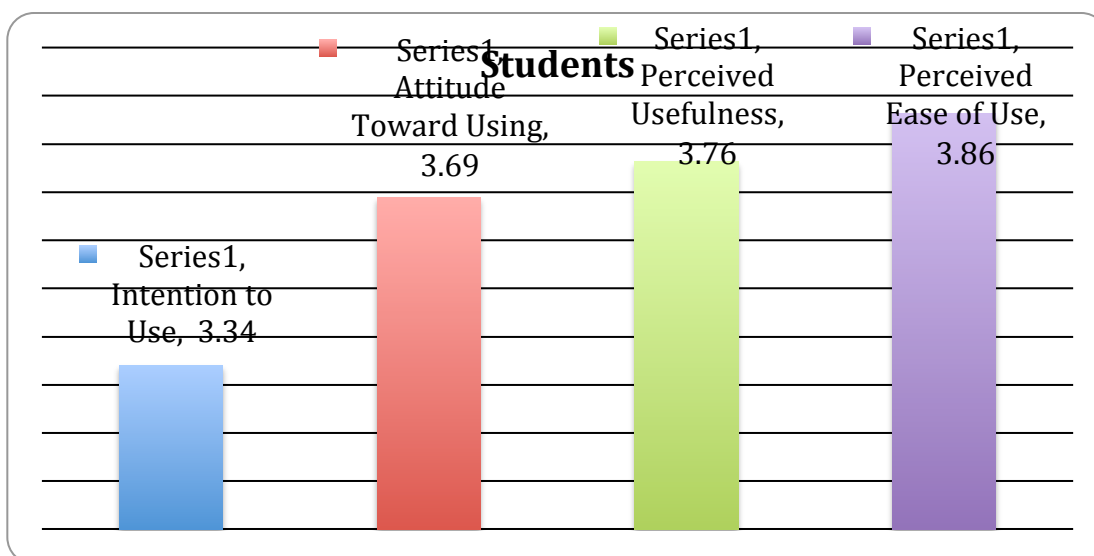
Ranges (scales) of answers are Strongly Disagree (1), Disagree (2), Less Agree (3), Agree (4) and Strongly Agree (5).

Below are the survey results of LMS acceptance by respondents filling out online questionnaire. First, survey of lecturers:



Meanwhile, survey of students LMS acceptance as follow:

Based on the table above, 3 scales (Attitude Towards Using, Perceived Usefulness and Perceived Ease of Use) show that LMS as a learning tool is well accepted among the lecturers and students at the university. This acceptance should be maintained to sustain LMS utilization



### **Change in Academic Culture in Utilizing LMS to Increase Learning Quality**

Fellow lecturers have participated in the workshops/trainings reported that LMS was very useful in the learning process management. This statement is along with the increase numbers of courses registered on LMS from time to time. It cannot be denied that there several study programs many not show any increase in numbers of courses but the utilization of all menus has been maximized especially in Arabic Study Program.

The increase of LMS utilization can be marked by utilizing all menus especially for those traveling lecturers around the country. Those lecturers at the same time were assigned by the state to assess or review other higher education institutions. Maximizing the menus has been increased especially at the Arabic Study Program where journals have been linked to LMS and save the file of video on the demands.

The maximum utilization of LMS menus cause several lecturers with multi tasks or responsibility can still run the long distance class. Menu of document is maximized as well as menu of Forum where all LMS users can discuss directly (synchronous) with other users in his/her groups or to the entire users of the course. By utilizing LMS this way, the learning process can be maintain with the mixing teaching methods that is called blended learning nowadays.

### **Lessons Learned and Best Practices**

Several important lessons learned and best practices that were gained from this ARP as follow:

- Active listening which means listening and responding inputs, feedback, suggestions or constructive critiques as well as questions from LMS users. Based on the survey, users suggested the addition in bandwidth capacity. Moreover, the power that is often off during the learning process was also a feedback that needs to be addressed to enable users to access without any technical barriers.

- This action research affects the service of persons in charge in university e-learning division. For almost two years of this research leads to LMS software step by step evaluation. This evaluation is not only focusing on software but also hardware and brain ware (lecturers and students)
- Evidently, changes in academic culture can be done from study programs even from any course. This can be understood that not all lecturers were born in the era of Computer and Information Technology which develops so fast.
- Changes in academic culture can be accelerated by showing attitude and support from the higher education institution leadership.

## CONCLUSION

### Summary

Arabic Department is considered the most unique one at Hasanuddin University. This study program (SP) in general rarely catches people attention for long time. It became people's center of attention when getting accredited with "A" by BAN-PT. The strength of this SP is utilizing Learning Management System (LMS) as a tool in learning process. In addition, another study program involved in this research is Fishery Resources Utilization which is along with Arabic study program to be pilot projects.

Several teachers, however, engage in many multi tasks both in local and national activities. As a result, the class may be left behind by those travelling teachers. In addition, based the regulation issued by the Ministry of Education and Culture (MoEC) in 2012 about Distance Learning may give broad chances of those teachers to grab. This SP also is among 10 PSs conducting distance learning in Indonesia in 2012. Other important point, LMS is technologically and environmentally friendly as less paper is used.

Other issue lying is LMS at Hasanuddin University is utilized as complementary in learning process and not a compulsory for teachers. Consequently, many teachers who have basically been trained do not seem to be very motivated. On top of that, to avoid those types of teachers, Rector's Letter of Decision (LoD) is urgently needed.

In regard to this need, several activities have been conducted to internalize Learning Management System (LMS) in order to increase learning quality at Selected Study Program at Hasanuddin University.

Those activities are: presentation in front of USAID regarding the achievement of action research, evaluation and conducting assessment in regard to the quality of Learning Management System (LMS), dissemination through social media, a series of Workshops on LMS, data cleaning and backing up, uploading courses on LMS, monthly meeting and survey on students' satisfaction in utilizing LMS

A Survey has been conducted by using Technology Acceptance Model (TAM). This TAM consists of Perceived Ease of Use (PEU), Perceived Usefulness (PU), Attitude toward Using (AtU), and Behavioral Intention to Use (BIU).

Scales used is liker ranging from 1 to 5. Surveys show that Perceived Ease of Use reaches 4.33; Perceived Usefulness reaches 4,18; Attitude Toward Using reaches 4,22; and Behavioral Intention to Use reaches 3,86. These percentages indicate a high student's satisfaction especially in the first three constructs. For that reason, technological variables are not the problems.

The researchers most likely conclude that the policy from the leaders has to be strict, not only do support the LMS utilization but also issue the decision letter stating that LMS is a compulsory learning tool to support the learning process at Hasanuddin University.

### **Recommendation**

There are several recommendations needed for further development and management such as;

- **Monitoring and Evaluation (Moneyv) on LMS Utilization is needed which allow Moneyv members to monitor the performances of lecturers dealing with LMS,**
- **Collecting data periodically, data on LMS will continuously on the daily basis, thus ARP team members need to collect it periodically,**
- **Continuous Reward giving also plays significant role to maintain lecturers motivation and 4) Making LMS is a part of the requirements for lecturers' promotion.**

### **BIODATA and CONTACT ADDRESSES of the AUTHOR**



**Yusring SANUSI BASO** is presently a Ph.D student. He completed his undergraduate in Sept, 1993 at Arabic Studies, Faculty of the Cultural Sciences at the Hasanuddin University, Indonesia. He received Master of Applied Linguistics from The University of Newcastle, Australia in Dec, 2003.

Currently he is a head of Computer Lab of Media and Design of this faculty

**Yusring SANUSI BASO**

**Hasanuddin University Arabic Department, INDONESIA  
Perumahan Dosen Unhas Tamalanrea Blok AB 34, Makassar  
Sulawesi Selatan, Indonesia, 90245, INDONESIA  
Email: [yusring@unhas.ac.id](mailto:yusring@unhas.ac.id)**

### **REFERENCES**

**Courville, K. (2011). Technology and its use in Education: Present Roles and Future Prospects. *Recovery School District Technology Summit*, pp. 1-19. Louisiana: Baton Rouge, Louisiana.**

**Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13 (3), pp. 319-340.**

**Hembrooke, H. (2003). The Laptop and the Lecture: The Effects of Multitasking in Learning Environments. *Journal of Computing in Higher Education*, 15 (1), 46-64.**

**Kumar Sharma Sujeet, Jyoti Kumar Chandel. (2013). Technology Acceptance Model for the Use of Learning Through Websites Among Students in Oman. *International Arab Journal of Technology*, 3 (1), pp. 44-49.**

**Meyer, S. (2014, April). Technology Enabled Learning Excellence. *Essentials*, 1 (4), pp. 7-21.**

**Natali, D. J. (2014). *Millennial Community College Student: Understanding Their Natural Use of Technology For Learning*. Colorado State University, School of Education. Colorado: Fort Collins, Colorado.**

**Woodcock, S., Sisco, A. & Eady, M. (2015). The learning experience: Training teachers using online synchronous environments. *Journal of Educational Research and Practice*, 5 (1), pp. 21-34.**