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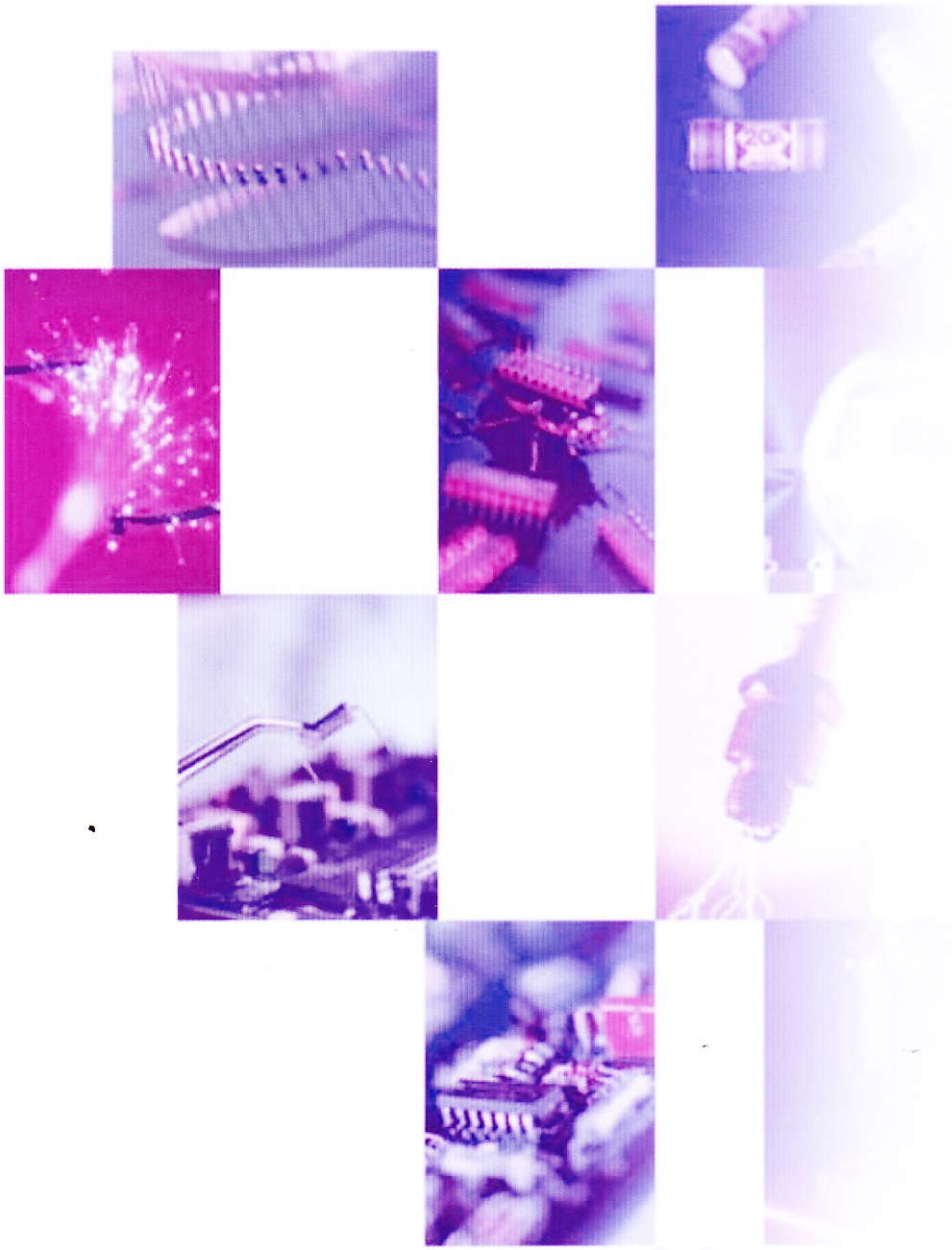

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Usage Effectiveness *Of E-Learning* Media Based On Joomdle Automotive Engineering Department Of Education Faculty Of Engineering Makassar State University

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ABSTRACT

This article aims to look at the effectiveness of the use of e-learning media using joomdle which is a combination between joomla and moodle. This article is the result of this study which uses the procedure of research and development (Research and Development *(*R & D*))*. Using the method of R & D Borg and Gall. This research instrument using observation sheet and questionnaire. Data were analyzed using descriptive statistics. The results showed that the resulting product has been qualified effectiveness and practicality in accordance with aspects of the look and content of the media aspects of e-learning are assessed.

Keywords: effectiveness, *e*-learning, joomdle

INTRODUCTION

Information technology (IT) is a critical resource for today's [1]. Implementation and usage of technology in the learning process today is considered ideal to accommodate the activities of learners in understanding abstract things as well as to increase the interest, motivation, and interest in learning. Information and communication technologies that exist already offers easiness in matters of education, especially as the use of the Internet as a media / learning tool.

The presence of the internet as a medium of learning can cover the limitations of learning systems that become obstacles that can bring limitations for teachers in managing learning. Generally, teachers have limitations in teaching students if the quantity of learners in large quantities, although there are many positive things that

can also be obtained and carried out from the teacher. Some of the limitations, of which the interaction is limited because generally classroom filled with many students. In the learning process, in addition to teaching grades, teachers also submit data and information. The presence of man-made technology as directed to facilitate human activities, including the activities of teachers and learners in learning.

Internet with a global network of very useful help and facilitate complete various tasks and other activities. Based on information and communication technology, the internet has narrowed the limits of space and time humans in performing its activities. In education, the use of internet technology can also be applied. For example, if a teacher was unable to attend the learners can collect tasks by using e-mail facilities. In addition, internet technology can also be used for distance learning system which is better known as e-learning. Various educational institutions using e-learning systems to improve the effectiveness and flexibility of learning. Achievement of this goal at least can be done through a medium that is packed with creative learning. One of them using e-learning media. The media e-learning is an educational system that is conducted online on a website.

Learning materials in e-learning system can be accessed anytime and anywhere by learners. Moreover, allowing the material can be renewed and enriched with a variety of learning resources by tutors. As a professional teacher should be able to use and exploit the medium of instruction are available. This is a challenge for teachers in the use of technology tools in the learning process.

Based on the writer's observation, the use of e-learning environments especially Makassar State University Department of Automotive Engineering Education, is still relatively small. This is due to the e-learning system is still new, in addition to lack of socialization on the application and the flexibility offered by this system. So the classical learning system with the lecture method, which allows data and information provided to learners not optimal, is still a large part of lecturers choice. In addition, the level of absorption of different learners on certain subjects that required a medium with a high communication value.

Media utilization of e-learning in the Department of Automotive Engineering Education is plagued by a lack of attractiveness of learners and teachers to take advantage of e-learning media that exist. In addition to its appearance, design and setting the theme is still underutilized by managers to increase the attractiveness of learners. Not only that, the limitations of the features of the web portals and web learning will become even more pronounced when separated. Therefore, to combine the features of both the web needs of other web will compile both features. One that can be used is joomdle.

Effectiveness means is effective, while effective is the influence, effect or result. The effectiveness of the media can be seen from the potential effects in the form of improved learning outcomes, attitudes, and motivation of learners, as well as providing benefits. Instructional media is expected to benefit, among others [2]:

(1) clarify the message that is not too verbalistis,
(2) to overcome the limitations of space, time, energy and power of the senses,
(3) excite learning, more direct interaction between students with learning

resources,
(4) allows the child to learn independently according to their talents and abilities of visual, auditory and kinesthetic and
(5) give the same stimuli, likening the experience and perceptions of the same cause.

Diverse learning media can be utilized in learning by considering various factors. Factors that should be considered in selecting instructional media, among others:
(1) the type of ability that will be achieved in accordance with the objectives,
(2) the usefulness of various types of instructional media itself,
(3) Capacity of teachers to use a type of instructional media and
(4) flexibility, durable, and comfort of the media is a learning media.

Opinion of e-learning effectiveness of instructional media as compared to other types of learning media for use in learning a particular learning materials.

1. *E-Learning*

Harley said one definition is quite acceptable many states of e-learning is a kind of learning that allows teaching materials to students using the internet, intranet or other computer network media [3, 11]. E - learning is the delivery of content via all electronic media, including the internet, intranets, extranets, satellite broadcast, audio/video tapes and interactive TV [4]. Through this *e-learning* faculty can manage the lecture material, *upload* lecture material, assign tasks to the student, the student receives a job, make a test, provide value, monitor the activity of students, cultivate student grades, interact with fellow students and faculty through discussion forums and chat, and so on [12]. On the other hand, students can access information and learning materials, interact with fellow students and faculty, collect duties lectures, take tests, see the achievement of learning outcomes, and so forth. Based on the various opinions on the above it can be concluded that e-learning is a learning system that utilizes information technology in the process of delivery of messages, information, and data to improve the flexibility and efficiency in the learning process [13].Despite the downturn in the economy at the start of the 21st century[5].

2. Joomdle

Joomdle is an extension, components, plug ins and modules that integrate CMS, joomla and Learning Management System (LMS) moodle [6, 7 and 8]. As with other extensions, Joomdle can be installed on any computer. Joomdle installed through the Joomla administrator (back end). If this has been done, the visitors (users) will be able to see content of both systems through a single interface [9, 10].

The main features provided by joomdle, as follows
(1) record entry (sign in) single from joomla to moodle,
(2) user units between the two platforms,
(3) linkage (linking) from joomla to moodle courses and content includes courses, teachers, news and events.

RESEARCH METHODS

This study is generally a R & D research aimed at developing e-elearning to produce a product that can improve the quality of learning, the model of development that is appropriate for this research is a model of research and development as follows:

(1) research and information collecting,
(2) planning,
(3) develop a preliminary form of the product,
(4) preliminary field testing (initial field trials),
(5) main product revision,
(6) main field testing,
(7) operational product revision,
(8) operations field testing,
(9) final product revision,
(10) dissemination and implementation [14].

Next ten steps above, in the conduct of research and development use only joomdle up on stage seven as simplified in accordance with the conditions of time, place, cost, power and usability practical in the field. Data collected by looking at student activities, activities of faculty and student response. The data were students and faculty activities and student responses were analyzed using descriptive statistics, including: the average, the frequency of each category of activity observed in all subjects, the percentage of each of the indicators of each meeting with a number of the frequency of all indicators at the meeting multiplied by 100%. The criteria are set to say that the students have a positive response to the guide book is more than 50% of the students gave a positive response to at least 70% of the aspect in question. Positive response of students to study if the student is said to have reached if responded positively to the guide book [15].

RESEARCH RESULT

1. Description Observations of Student Activities

The observation of student activity obtained using the observation sheet. Observations were made by two observers. Data were collected for 13 students with the consideration that the student. The procedure observation of the students is done every five minutes to fill out the observation sheet provided. Observation of student activities are presented in Table 1.

Table 1. Frequency of Student Activities

Type Activity	PI		P2		P3		P4		The Amount	%
	F	*%*	*F*	*%*	*F*	*%*	*F*	*%*		
1	58	24.79	58	24.79	63.5	27.14	64.5	27.56	244	26.07
2	22	9.40	22	9.40	21.5	9.18	18	7.69	83.5	8.92
3	22.5	9.62	22.5	9.62	15	6.41	20	8.54	80	8.55
4	29.5	12.61	29.5	12.61	29.5	12.60	25	10.68	113.5	12, 13
5	45	19.23	45	19.23	46	19.65	46	19.65	182	19.44
6	18.5	7.91	18.5	7.91	18	7.69	18	7.69	73	7.8
7	33.5	14.32	33.5	14.32	34.5	14.74	35	14.95	136.5	14.58
8	5	2, 14	5	2, 14	6	2.56	7.5	3.20	23.5	2.51
The Amount	234	100	234	100	234	100	234	100	936	100

Based on Table 1 shows (1) the activity of students in regard explanation as much as 244 times the lecturer or by 26.07%, (2) the activity of students in the material on the media attention as much as 83.5 times or 8.92 percent, (3) the student activity recorded as many as 80 times, or 8.55%, (4) the activity of the students in asking questions as much as 113.5 times or 12.13%, (5) the activity of students in solving exercises as much as 182 times or 19.44%, (6) student activity in answering questions / problems in media e-learning as much as 73 times or 7.8%, (7) the student activity in operating the media as much as 136.5 times or 14.58%, and (8) the activity of the students in conducting activities in outside of learning such as drowsiness, sleep, daydreaming, and so on as much as 23.5 times, or 2.51%. However, some categories of observations need to be used as consideration to revise the media used.

2. Description of Activities Lecturer Observations

The observation of the lecturer activity obtained using the observation sheet. Observations were made by two observers. Observations were made on the faculty during a learning process from opening to closing lecture. Procedures observation of lecturers do every five minutes by filling observation sheet provided. The observation of faculty activity is presented in Table 2.

Table 2. Frequency Activities Lecturer

Type Activity	PI		P2		P3		P4		The Amount	%
	F	%	F	%	F	%	F	%		
1	1	5.26	1	5.26	1	5.26	1	5.26	4	5.26
2	1	5.26	1	5.26	1	5.26	1	5.26	4	5.26
3	1	5.26	1	5.26	1	5.26	1	5.26	4	5.26
4	4	21.05	4	21.05	3	15.78	3	15.78	14	18.41
5	2	10.52	2	10.52	3	15.78	3	15.78	10	13.15
6	2	10.52	2	10.52	2	10.52	2	10.52	8	10.52
7	3	15.78	3	15.78	3	15.78	3	15.78	12	15.78
8	3	15.78	3	15.78	3	15.78	3	15.78	12	15.78
9	1	5.26	1	5.26	1	5.26	1	5.26	4	5.26
10	1	5.26	1	5.26	1	5.26	1	5.26	4	5.26
The Amount	19	100	19	100	19	100	19	100	76	100

Based on Table 2 shows

(1) lecturer activity in submitting a brief description as much as four times or 5.26%,
(2) the activity of lecturers convey the relevance of 4 times or 5.26%,
(3) the activity of the lecturer presents the objectives as much as 4 times or 5, 26%,
(4) the activity of the lecturer explain the material using the medium of e-learning as much as 14 times, or 18.41%,
(5) the activity or exercise the lecturer gives examples of using the medium of e-learning as much as 10 times, or 13.15%,
(6) shows a simulation lecturer activity as much as 8 times or 10.52%,
(7) the activity of lecturers open discussion through the medium of e-learning as much as 12 times, or 15.78%,
(8) the activity of the lecturer explain the material / giving an example without using the medium of e -learning as much as 12 times, or 15.78%,
(9) the activity of the lecturer in guiding / directing students as much as four times or 5.26%, and
(10) the activity of lecturers in giving feedback as much as four times or 5.26%.

3. Data Description Questionnaire Response Students

Field trials conducted with the involvement of the subject based on the results of the revision of the trial one-on-one, small group, observations of student activities, and observations of faculty activity. At the stage of field trials, researchers recruited 33 subjects to be tested separately. Outcome data were collected and analyzed questionnaires returned. The test was conducted on a program that was developed to determine the suitability of special purpose ie to see the response of students to the media developed from the aspect of appearance and content aspect. The results of the

analysis of field trials be input to revise the final product. Here are the results of field trials were carried out:

Table 3. Description of the Student Response Results of the use of e-learning media

No.	Indicator	On average	Criteria
1	Views	73.2	Positive
2	Contents	79.8	Positive

Based on Table 3, it is seen that the average student responses to aspects of e-learning media display is 73.2 and the average response of students to aspects of e-learning media content is 79.8. It can be concluded that the response of students to aspects of display media e-learning and student responses to aspects of e-learningmedia content is positive, though still in need of revision.

Table 4. Results of Analysis of Student Responses to the use of e-learning media

No.	Student Response	The Amount	Percentage (%)
1	Views	22	95.6
2	Contents	27	81.8

Based on Table 4, it is seen that the percentage of student responses to aspects of e-learning media display is 95.6% and the average response of students to aspects of e-learning media content is 81.8%. It can be concluded that the response of students to aspects of display media e-learning and student responses to aspects of e-learning media content is positive, though still in need of revision.

CONCLUSION

The resulting product has been qualified effectiveness and practicality in accordance with the terms effectiveness and practicality. This is evidenced percentage of student responses to aspects of e-learning media display is 95.6% and the average response of students to aspects ofe-learning media content is 81.8%. It can be concluded that the response of students to aspects of display media e-learning and student responses to aspects of e-learning media content is positive, though still in need of revision.

LITERATURE

[1] Pearlson, and Saunders. (2010). Managing and using information system a strategic approach 4th. Wiley: USA

[2] Sumiati & Asra. 2008. *Metode Pembelajaran.* Bandung: CV.Wacana Prima.

[3] WahonoRomi Satria. 2005.*Pengantar E-Learning dan Pengembangannya,* (*On ine*), (http://www.ilmukomputer.org/2008/11/25, diakses 6 April 2012).

[4] Urdan, Trace A & Weggen, Cornelia C. (2000). *Corporate E-learning: Exploring a New Frontier.*(*Online*), (http://www.astd.org, diakses pada 18 April 2012).

[5] Reynold, George, and Stair, Ralph. 2010. Principles of information system. Course Technology: USA.

[6] Triohardiyanto. 2010. *Cara Mengkolaburasi Joomla dan Moodle Menggunakan Joomdle.*(*Online*), (Triohardiyanto.blogspot.com/2010/03, diakses 18 April 2014).

[7] S'to. 2008. *Joomla 1.5: Dunianya Maya, Untungnya Nyata.* Jakarta: Jasakom.

[8] Lucky, Permana. 2011. *Mengelola Website Joomla 1.7 dengan 70 Ekstensi Terpopuler.* Jakarta: PT. Elex Media Komputindo.

[9] Ferri, Renaldo. 2009.*Moodle dan Fitur-Fiturnya,* (*Online*), (http://www.ilmukomputer.org/wp-content/uploads/2009/02/ferri-fiturmoodle, diakses 6 April 2012).

[10] Amiroh.2012. *Kupas Tuntas Membangun E-Learning dengan Learning Management System.* Sidoarjo:PT. Berkah Mandiri Globalindo.

[11] Triohardiyanto . 2010 . *InstalasiJoomdleR0 . 23 .* (*Online*), (Triohardiyanto.blogspot.com./2010/04/, diakses 18 April 2012)

[12] Mohammad, Nasirullah. 2007. *Manfaat E-Learning untuk Pendidikan,* (*Online*), (http://www.direktori.icttemanggung.org, diakses 6 April 2012).

[13] Murniyanti. 2005. *Hasil Penelitian Petar Shea Tentang Pendidikan*, (*Online*), (upi.edu/operator/upload/s_bio_054745_chapter1.pdf, diakses 5 April 2012).

[14] Borg, W. R., & Gall, M. D. 1983. *Educational Research.* New York: Longman.

[15] Nurdin. 2007. *Model Pembelajaran Matematika yang Menumbuhkembangkan Kemampuan Metakognitif untuk Menguasasi Bahan Ajar.* Disertasi: Universitas Negeri Surabaya.