

DEVELOPMENT OF E-LEARNING BASED TRAINING MODEL TO DEVELOP HUMAN RESOURCES OF LPK INSTRUCTORS IN THE DIGITAL ERA

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ABSTRACT

Web-based training through internet media makes it easy for various institutions and organizations to present material and provides facilities for downloading and uploading assignments. Training that uses internet media is called E-learning. The type of research used is research and development (RnD). This study aims to determine how to develop and use website-based E-learning in the Schematic Training Methodology for Designing Training Programs and to find out the extent of the feasibility of website-based E-learning on the Scheme Training Methodology for Designing Training Programs at the Merdeka Training Center, Blitar Regency. This development model uses Robert Maribe Branch's research and development model which consists of 5 stages of Analysis, Design, Development, Implementation, and Evaluation or often called ADDIE. Based on the results of the validation of the media expert test, it was declared fit for use, the results of data analysis from the material expert questionnaire obtained a percentage of 100%, which means that this product is very suitable for use, the material expert obtained a percentage of 100%, which means that this product is very suitable for use. . The training eligibility expert obtained a percentage of 96.4%, which means that this product is very suitable for use. Based on field trials conducted on 8 training participants, they received a very good response with a percentage of 91.8%, which means that this product is very suitable for use.

Keywords: E-Learning, Training Model, Human Resource Development, Instructor, Digital Era

INTRODUCTION

The influence of information and communication technology in the world of work, especially in the development of human resources (HR), is increasingly felt in line with the shift in employee development patterns through face-to-face training towards more open and media training. Along with the development of internet technology, E-learning began to be developed. The essence of E-learning is a conventional form of training that is expressed in digital format through internet technology. E-learning can be used in distance training or conventional training depending on its importance. Developing an E-learning model is not just presenting training material on the internet but needs to be considered logically and holds training principles. as well as a simple, personal, fast development design, and there is an online evaluation. Online evaluation helps employees not to be overwhelmed with work.

Training is a strategy as well as a solution for an organization or company or individual to create excellence and improve the quality of human resources both in terms of quantity and quality. The very rapid development of information technology is one of the reasons for organizations or companies to continue learning, by utilizing existing technological sophistication, the company's knowledge management system can be used efficiently and effectively.

Currently, in the world of training, electronic media, especially the internet, are very beneficial to find information and gain insight. The benefits of internet technology are also felt by all parties. Internet is a window to the world that can provide information and can be accessed by every level of society. Web-based training through internet media makes it easy for various institutions and organizations to present material and provides facilities for downloading and uploading assignments. Training that uses internet media is called E-learning. As developments occur, E-learning can be understood as a training process that utilizes information technology in the form of computers equipped with telecommunications facilities (internet, intranet, extranet) and multimedia (graphics, audio, video) as the main media in delivering material and interaction. between teacher and learner. E-learning is essentially a form of conventional training that is written in digital format and presented through information technology. There are several levels of E-learning including Computer Based Training (CBT), Learning Management Systems (LMS), and web-based e-learning applications.

Using E-learning can reduce training costs, enable learning at any time and in any place and provide a timely and more effective way of learning. E-learning is developed by companies to achieve certain goals. One of the goals is to develop employee quality to improve employee performance. Employee performance greatly determines company performance, so human resource development is very important for the progress of the company. The benchmarks that can be used to measure the results of human resource development include changes in performance, changes in personality and behavior, exams, assessments by development participants, and examinations by experts. For this reason, E-learning was built to provide benefits for both employees and the company.

For this reason, the Blitar Regency Job Training Center MERDEKA (BLK MERDEKA) realizes that human resource management is a very important factor in company activities, and companies are well aware that they need qualified employees, namely by conducting training.

LITERATURE REVIEW

The influence of information and communication technology in the world of work, especially in the development of human resources (HR), is increasingly felt in line with the shift in employee development patterns through face-to-face training towards more open and media training. Along with the development of internet technology, E-learning began to be developed. The essence of E-learning is a conventional form of training that is expressed in digital format through internet technology. E-learning can be used in distance training or conventional training depending on its importance. Developing an E-learning model is not just presenting training material on the internet but needs to be considered logically and holds training principles, as well as a simple, personal, fast development design, and there is an online evaluation. Online evaluation helps employees not to be overwhelmed with work.

A. *E-Learning*

E-learning is relatively new information technology in Indonesia. E-learning consists of two parts, namely "e" which stands for "electronic" and "learning". E-learning is a learning method that uses electronic media to support teaching and learning processes that combine all learning activities, both individually and in groups, synchronously or not. In simple terms, e-learning can be understood as a learning process that utilizes information technology in the form of computers equipped with telecommunications facilities (internet, intranet, extranet) and multimedia (graphics, audio, video) as the main media in delivering material and interactions between teachers and learners. In essence, e-learning is a learning process that utilizes electronic media, especially the internet.

E-learning methods are as follows according to Erma Susanti (Susanti, 2008): (a). Instructional Method Instructional method is a way of presenting material (describing, giving examples, giving exercises, and giving assignments); (b). Collaborative Learning Methods is a learning strategy in which learners with stratified variations work together in small groups towards one goal; (c). Synchronous Training is a training method where the training or learning process occurs at the same time when the teacher or tutor is providing material and the learner is learning. Synchronous e-learning training is mostly used at seminars or conferences; (d). Asynchronous Training means not at the same time. So a person can take training at a different time than the teacher or tutor providing the training; (e). Develop and expand new products and services.

The benefits obtained in learning through e-learning are: (a). Changes in the learning culture and improving the quality of learning for learners and teachers; (b). Changes in learning meetings that are not focused on meetings (face to face) and meetings are not limited by space and time through e-learning facilities; (c). The availability of learning materials in electronic media through an e-learning website that is easily accessible and developed by learners and possibly the community; (d). Questioning learning materials following the progress and development of science and technological advances; (e). Creating competitive positioning and enhancing brand image; (f). Improve the quality of learning and learner satisfaction and service quality; (g). Reduce operating costs and increase revenue; (h). Learners' interactivity increases, because there is no time limit for learning; (i). Learners become more responsible for their success (learner-oriented). teach him. The content is more varied and interactive, the display is more attractive.

B. *Website*

Is a collection of web pages associated with files that are related. On a website, there is a page known as the home page. The home page is a page that is first seen when someone visits a website. From the home page, visitors can click the hyperlink to move to other pages on the website (Umar & Yudhana, 2018). A website or site can be interpreted as a collection of pages that display information on text data, still or motion image data, animation data, sound, video, or a combination of all of them, both static and dynamic which form a series of interrelated buildings were each linked by network pages (hyperlinks). It is static if the content of website information is constant, rarely changes, and the information content is in the same direction as that of the website owner. It is dynamic if the content of website information changes and changes, and the information content is two-way interactive from the owner and website users.

C. *Human Resource Development*

Training and development are activities that aim to improve and develop employees' attitudes, behaviors, skills, and knowledge following the wishes of the company. The training and development process is carried out both for new employees so that they can carry out new assignments as well as for old employees to improve the quality of their current and future duties implementation. Carrying out training and development requires no small sacrifice, but the results are much greater. Work will be done faster and better, the damage will be minimized, waste will be reduced, equipment will be better used. These are all company / organizational benefits that can be obtained by carrying out training and development. Theoretically, the term training differs from the notion of development. Training is a short-term educational process for operational employees to systematically acquire technical operational skills. Meanwhile, development is an effort to improve the technical, theoretical, conceptual, and moral abilities of employees following the needs of the job/position through education and training. It can also be concluded that human resource development is an effort to provide education and training for employees to increase the ability in their field of work to achieve the goals set by the company/organization.

Benefits of Human Resource Quality Development It is said that the development of human resources is necessary, this absoluteness is reflected in the various benefits that can be drawn from all the results of this development. Both for companies/organizations, for employees, and the growth and maintenance of harmonious relationships between various workgroups in an organization. The benefits for the organization that can be obtained through the development program include: (1). Increased productivity of the organization's work as a whole, among others, is due to the absence of waste, accuracy in carrying out tasks, increased determination to achieve predetermined targets, and smooth coordination so that the organization operates as a unified and whole unit; (2). The realization of a harmonious working relationship between superiors and subordinates due to the delegation of authority, interaction based on mature attitudes, mutual respect, and opportunities for subordinates to think and act innovatively; (3). There is a decision-making process that is faster and more precise because it involves employees who are responsible for carrying out operational activities and are not just ordered by the managers; (4). Increase morale of all workforce in organizations with higher organizational commitment; (5). Encouraging openness in management through the application of a participatory managerial style; (6). Streamlining the running of effective communication which in turn expedites the process of formulating organizational and operational policies; (7). Functional conflict resolution whose impact is the flourishing of a sense of unity and a kinship atmosphere among members of the organization.

Apart from the benefits for the organization, the implementation of good human resource development is also beneficial for the members of the organization. Experience and research show there are several benefits for employees. Namely as follows: (1). Helping employees make better decisions; (2). Increase the ability of workers to solve various problems at hand; (3). The emergence of encouragement in workers to continue to improve their work abilities; (4). Increasing the ability of employees to deal with stress, frustration, and conflict, which in turn increases self-confidence; (5). Increased job satisfaction; (6). The greater the recognition of one's abilities. (7). The greater determination of workers to be more independent; (8). Reduces fear of facing new tasks in the future.

Another great benefit that can be obtained from implementing human resource development properly is in the context of growing and maintaining a harmonious relationship between members of the organization. This happens because: (1). The occurrence of an effective communication process; (2). There is a common perception of the tasks that must be completed; (3). The obedience of all parties to various normative provisions; (4). There is a good climate for the growth of all employees; (5) Making the organization a more enjoyable place to work.

D. LPK Instructors

Job Training Institute (LPK) A job training institute is a government agency, legal entity, or individual that meets the requirements to conduct job training. The purpose of a job training institute in carrying out training is to create better and more competitive human resources. Also to develop discipline and work productivity. It is also hoped that training will later improve and equip competencies to improve the abilities and welfare of workers. If the worker already has good skills, he will be able to compete healthily so that the results of his efforts will be rewarded according to the skills he has.

An instructor is a person who is in charge of teaching something and at the same time providing training and guidance; instructor; trainer; caregivers: a teacher is needed at the Vocational Training Center (BLK), both government and private, or what is commonly referred to as the Job Training Institute (LPK) and Community Work Training Center (BLKK) affiliated with the government, non-government, and other community religious organizations. To become an instructor who will train or teach on Competency-Based Training (CBT) must meet several requirements, including Have methodological competence and technical competence and Receive an assignment from the Head of the Training Institute through an assignment letter. Instructors who train on competency-based training can consist of instructors, PSM, experts, or other equivalent terms. Training institutions can bring in or utilize trainers or instructors from outside such as industry or companies following the required criteria and requirements as mentioned above.

The duties of trainers or instructors in the implementation of Competency-Based Training (CBT): (a). Helping trainees in planning the training process; (b). Guide participants through the training tasks described in the training; (c). Help to understand concepts and answer the questions of the trainees; (d). Help find additional sources of information needed by training participants; (e). Organize group learning activities if necessary; (f). Bring in an expert from work if needed; (g). Test / observe and collect evidence and make training progress records for each training participant; (h). Evaluating the achievement of individual competence of participants.

An Instructor / Trainer must have two competencies, namely Technical Competence and Training Methodology Competence. Technical Competence refers to specializations or skills that will be transformed into trainees. Meanwhile, methodological competence is related to Instructor's competence in delivering training. Both competencies must be applied comprehensively when conducting training so that the material presented will be easily absorbed and applied by the training participants. Training methodologies are strategies and methods used and implemented to achieve the objectives of the training curriculum. Integrity in this case is an individual level cohesiveness, namely about the interaction between the trainer and training participants, which in turn is expected to change behavior in the participants concerned after the training process is carried out. Three essential things need to be considered to training methodologies, namely training planning, training methods, and training media. The training plan is prepared based on a training curriculum that refers to the development of the participants' abilities (competencies). Training methods are methods and communication techniques used by trainers in presenting and implementing the learning process. Training media are various communication tools and techniques as a means of implementing the learning process, both by the trainer and by the participants.

The selection and use of learning communication methods and media need to consider the following: (a). Training objectives, both general goals and specific objectives that focus on changes in participant behavior; (b). The material to be delivered is in the form of subject matter arranged in Outlines of the learning program; (c). The time available is following a predetermined time allocation; (d). The ability of the trainer to use communication methods and media in the learning process; (e). The level of ability of the participants, especially the initial behavior.

The training method must be based on the concepts and principles of teaching and learning because basic training is to make it easy for trainees to carry out active learning activities. In this way of learning, participants try to formulate problems, find data and solve problems on their own.

RESEARCH METHOD

The method used in this is a research and development method. Research and development methods are research methods used to produce certain products and test the effectiveness of these products (Sugiono, 2016). To be able to produce certain products, research is used that is needs analysis and to test the effectiveness of these products, so that they can function in the wider community, research is needed to test the effectiveness of these products. So, research and development are longitudinal/gradual. With the progress of the times and the passage of time, the development of Human Resources leads to the use of technology by companies, in addition to being cheap and workers can continue to work effectively as usual. Therefore, researchers are trying to develop a human resource development media in the form of website-based E-Learning training media which hopefully can be accessed by anyone and whenever they want it is not limited by place and time.

The research method is a scientific method used by researchers to collect data obtained in their research. This study uses the ADDIE research method developed by Robert Maribe Branch. The function of the ADDIE model is to become a guide in building equipment and infrastructure for training media programs that are effective, dynamic, and support the performance of the training media itself. This model consists of five stages, namely Analysis, Design, Development, Implementation, and Evaluation which are presented in the figure below (Muruganatham, 2015).

This research was conducted in the research conducted at the Merdeka Training Center, which is located at Jalan Raya No. 150 Kesamben, Blitar Regency, East Java Province. The test consisting of 8 training participants according to the maximum capacity of Competency-Based Training (Kemnaker, 2014). Training participants who register are Private Job Training Institute (ILPS) Instructors spread across Java Island Province, with details: 4 people from LPK in East Java Province, 1 person from LPK in Central Java Province, 3 people from LPK in West Java Province.

Data collection techniques in this study consisted of interviews and questionnaires (questionnaires). A questionnaire in the form of a questionnaire is several written questions that are used to obtain information in the respondent on the meaning of reports about their personal or known matters. Questionnaires are used during the evaluation and testing of E-Learning training media. The data analysis technique used in this research is Percentage Quantitative Analysis as the basis for the preparation of the product being developed. Quantitative data were analyzed using simple quantitative techniques by calculating the percentage of answers to each question item given to the respondent. For data processing using the percentage formula:

$$Percentage = \frac{\Sigma \text{ score}}{\Sigma \text{ total score}} \times 100\%$$

The results of the data were analyzed using interpretation criteria. Interpretation is an interpretation of the results of the analysis of the respondent's data. As a guideline for interpretation, the criteria set out in the following table:

Table 1.1 Criteria for interpretation of Sugiono (2011)

Category	Percentage	Qualification
4	86% - 100%	Very Eligible
3	76% - 85%	Eligible
2	56% - 75%	Fairly Eligible
1	1% - 55%	Inadequate

Information: (a). If the media that is tested for due diligence reaches a percentage level of 86% - 100%, the media is classified as very qualified; (b). If the media that has been tested for due diligence reaches a percentage level of 76% - 85%, the media is classified as eligible; (c). If the media that is tested for due diligence reaches a percentage level of 56% - 75%, the media is classified as quite qualified; (d). If the media that is tested for due diligence reaches a percentage level of 1% - 55%, the media is classified as less qualified.

RESULTS AND DISCUSSION

a. Media Expert Trial Data

A media expert in training media development is a person who is competent in his field. The selection of media experts is based on the consideration that the person concerned has competence in his field. Media experts provide ratings, comments, and suggestions on this training media. The media expert appointed by the researcher to assess the design of this training media was Mr. Andi Basuki, S.Pd., M.Pd, the following will be presented a descriptive description of the results of research by media experts on the development of training media products, which are submitted using a questionnaire method.

The results of the media expert's validation on product development

NO	ASSESSMENT CRITERIA	SCORE
A.	Screen Design Effectiveness	
1.	Font size accuracy (can be read clearly)	4
2.	Correct font selection (can be read clearly)	4
3.	The composition of the writing color against the background color (background)	4
4.	The narrative is easy to understand	4
B.	Ease of Program Operation	
5.	Website-based training media is easy to operate	4
6.	The material in the website-based training media is presented systematically	4
C.	Consistency	
7.	Use consistent words, terms, and sentences	4
8.	Use a consistent layout	4
D.	Format	
9.	The page format is easy for users to use	4
10.	Column widths are easy for users to read	4
11.	The layout of the buttons and writing is easy to understand	4
E.	Navigation	
12.	Navigation to access the page presented is effectively used	4
13.	Effective entry and exit function	4
14.	Navigation function to material selection is effective	4
TOTALΣ		56

Looking at the questionnaire that is included in the form of 14 aspects that are assessed with a score between 1 to 4 assessment categories, then if 14 aspects are associated with 4 the ideal score obtained is 56.

$$\text{Percentage} = \frac{56}{56} \times 100\% = 100\%$$

If we match it with the feasibility table previously described, this development product is in the "Very Fair" qualification with a value between 86% - 100%, which means that this development product is considered very suitable for use in the field.

b. Material Expert Trial Data

Material experts in the development of training media are people who are competent in their fields. The selection of material experts is based on the consideration that the person concerned has competence in his field. Material experts provide ratings, comments, and suggestions on this training medium. The media expert appointed by the researcher to assess the design of this training media was Mrs. Siti Fatimah RAP Putri, S.Kom, the following will be presented a descriptive description of the results of the material expert's research on the development of this training media product, which is submitted using a questionnaire method.

The results of material expert validation on product development that have been revised

NO	ASSESSMENT CRITERIA	SCORE
1.	The content of the material in the website-based training media is following the syllabus in the curriculum	4
2.	The material in website-based training media is relevant to the training objectives	4
3.	The suitability of the material in the website based training media with the expected competencies	4
4.	The accuracy of the material in the website-based training media with Knowledge, Skill, Attitude	4
5.	The correctness of the material contained in the website-based training media based on Knowledge, Skill, Attitude	4

6.	The completeness of the material in the website-based training media about Instructor Methodology material	4
7.	Website-based training media contains knowledge following the competency unit	4
8.	Website-based training media contains motivation following the competency unit	4
9.	Completeness of material in website-based training	4
10.	The material on the website-based training media is described coherently	4
11.	The material in the website-based training media is easy to understand	4
12.	The website-based training media for the Instructor Methodology material is contextual to the training	4
13.	The material displayed in the website-based training media is easily applied by the training participants in solving problems	3
14.	The suitability of the applications displayed in the website-based training media with the material	3
15.	The appropriateness of the evaluation in the website-based training media with the material	3
16.	The use of website-based training media is following the learning abilities of the training participants	4
TOTALΣ		64

Seeing the questionnaire that is included in the form of 14 aspects that are assessed with a score between 1 to 4 assessment categories, then if 14 aspects are associated with 4 the ideal score obtained is 64.

$$Percentage = \frac{64}{64} \times 100\% = 100\%$$

If we match it with the feasibility table that was previously described, this development product is in the “Very Appropriate” qualification with a value between 86% - 100%, which means that this development product is considered very suitable for use in the field.

c. Training Feasibility Expert Trial Data

A training eligibility expert in the development of training media is a person who is competent in his field. The selection of a training eligibility expert is based on the consideration that the person concerned has competence in his field. The training eligibility expert provides ratings, comments, and suggestions on this training medium. The training feasibility expert appointed by the researcher to assess the feasibility of this training is Mr. Indra Mustika, the following will be presented a descriptive description of the results of research on the feasibility of training on the development products of this training media which are proposed using a questionnaire method.

The results of expert validation on the feasibility of training on product development

NO	ASSESSMENT CRITERIA	SCORE
A.	Training Media	
1.	This training media is effective and efficient to use in the Instructor Methodology material	4
2.	This training media can provide an understanding of the concept of the Instructor Methodology material	3
3.	The size and font used in the training media are easy to read	4
4.	Clarity of training objectives	4
5.	The level of conformity between the image and the material in the training media	4
6.	Clarity of assignments and exercises	4
7.	The use of training media is motivated by the training participants to attend the Instructor Methodology training	4
8.	The material in this training media is described in full	3
9.	The description of the material in this training media is easy to understand	4
10.	Systematic component of this training media	4
11.	This training media meets creative and dynamic criteria	4
B.	Benefit	
12.	The use of website-based training media helps the instructor methodology training process	4
13.	The use of website-based training media makes it easier for training participants to understand the material presented	4
14.	The use of website-based training media focuses attention on training participants to learn	4
TOTALΣ		54

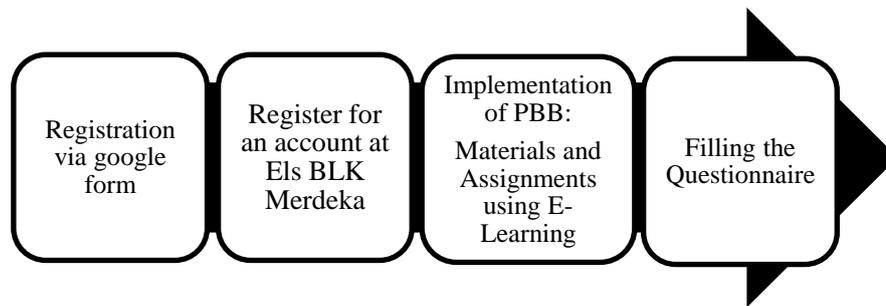
Looking at the questionnaire that is included in the form of 14 aspects that are assessed with a score between 1 to 4 assessment categories, then if 14 aspects are associated with 4 the ideal score obtained is 56.

$$\text{Percentage} = \frac{54}{56} \times 100\% = 96,4 \%$$

If we match it with the feasibility table previously described, this development product is in the “Very Appropriate” qualification with a value between 86% - 100%, which means that this development product is considered very suitable for use.

d. Implementation

Flow diagram of the trial implementation of the training participants:



The following will be presented a descriptive description of the results of the field test research on the product development of this training media which is proposed by the questionnaire method.

Field trial results

No	Assessment Criteria	Training Participants										Percentage (%)
		1	2	3	4	5	6	7	8	Σ	Σ. Xi	
1.	The font size used in the website-based training media is appropriate (easy to read).	4	3	4	3	4	4	3	4	29	32	90,6%
2.	The typeface used in the website-based training media is easy to read.	4	4	3	3	3	3	4	4	28	32	87,5%
3.	The color composition used in the website-based training media is appropriate.	4	4	3	3	3	3	4	4	28	32	87,5%
4.	I can easily operate website-based training media.	4	3	4	4	4	4	3	3	29	32	90,6%
5.	The button instructions presented are easy to use.	4	4	4	4	4	4	4	4	32	32	100%
6.	Easy-to-use login and logout button instructions.	4	4	4	4	4	4	4	4	32	32	100%
7.	The function of the button to the material selection is easy to use.	4	3	4	4	3	4	4	3	29	32	90,6%
8.	I can easily access the material using the buttons provided.	3	4	4	3	4	4	3	4	29	32	90,6%
9.	The use of website-based training media	4	4	3	4	4	3	4	4	30	32	93,7%

	makes it easier for me to learn.											
10.	Efficient data usage and can be accessed from a smartphone.	4	4	3	3	3	3	3	3	28	32	87,5%
TOTALΣ		39	37	36	35	36	36	36	36	294	320	91,8%

Based on the assessment data in the table above which was carried out to 8 Instructor Methodology Training Participants at the Merdeka Training Center, the website-based E-Learning training media used in Competency-Based Training has a very good response value. This can be seen from the average percentage given by the training participants, which is 91.8%. This number is between 86% -100%. so that the use of this training media is declared very suitable for use in the Instructor Methodology training and in general, this website-based E-Learning training media does not need to be revised again.

e. Evaluation

Appropriate or inappropriate use of website-based E-Learning training media is also determined by the training process that takes place when using this website-based E-Learning training media. During the training process, the participants seemed very enthusiastic about participating in the training. Starting from the features of web-based E-Learning training media for competency-based training, it has gone well. It can be accessed properly using a browser, google chrome, Mozilla Firefox, and the results of database testing show that all functional E-Learning training media have gone according to design. This E-Learning Training Media is designed to be well used by using a Personal Computer, Laptop, or Smartphone that is connected to the Internet. So with the results of the response of the training participants who are very enthusiastic and happy in training using website-based E-Learning training media, this media is said to be very suitable to be used in the training process every day and can be used for training with other vocations without the need to be revised again.

CONCLUSION

Based on the development process and the results of trials on E-Learning training media based on the Vocational website, the Instructor Methodology at the Merdeka Training Center, Blitar Regency, it can be concluded as follows:

1. This development model uses a research and development model owned by Robert Maribe Branch which consists of 5 stages of Analysis, Design, Development, Implementation, and Evaluation or often called ADDIE.
2. This Web-based E-Learning can be operated using a laptop, personal computer, or smartphone that is connected to the internet or online. Once connected, you can start using website-based E-Learning. Firstly, write it in the address bar or Google search engine, then type the link els.blkmerdeka.com and after opening it, you can access website-based E-Learning as needed.
3. Based on the results of the media expert's test validation it was declared fit for use, the results of data analysis from the material expert questionnaire obtained a percentage of 85.7%, which means this product is suitable for use with several notes that must be corrected. The material expert obtained a percentage of 95.3%, which means that this product is very suitable for use with several notes. The training eligibility expert obtained a percentage of 96.4%, which means that this product is very suitable for use without notes. Because there are still records for these products, the researchers made revisions and tested them again with the experts. Based on the Revised Test from material experts, the results are 100% and the Material Experts are 100%, which means that the product can be used and tested in the field. Based on field trials conducted on 8 training participants, they received a very good response with a percentage of 91.8%, which means that this product is very suitable for use.

REFERENCES

- Amri, I., Syuhendri & Ketang W. (2015). Pengembangan Media Pembelajaran E-Learning Berbasis Web Untuk Mata Kuliah Pendahuluan Fisika Inti. *Jurnal Inovasi Dan Pembelajaran Fisika* 2 (1)
- Anzaa, F., Achmad, L., & Arfah, S. (2019). Introduction of e-learning in the educational sector, Case study: Senior High Schools in DKI Jakarta. *ASEAN Journal of Community Engagement*, 3 (1). DOI <https://doi.org/10.7454/ajce.v3i1.149>
- Ariani, D. (2018). Komponen Pengembangan E-Learning. *Jurnal Pembelajaran Inovatif Prodi Teknologi Pendidikan FIP UNJ*. <http://journal.unj.ac.id/unj/index.php/jpi>. 58-64
- Ariyani, M. Y. (2012). Aplikasi E-Learning Berbasis Web Dengan Menggunakan Atutor. *UG Jurnal*, 6 (1)
- Asri, A.F., Imam. S. & Farhan, Y. (2016). Pengembangan Pembelajaran Berbasis E-Learning Pada Matakuliah Teknologi Motor Bensin. *Jurnal Pendidikan Teknik Mesin* 3 (2)
- Astuti, L., Yaya, W. & Diana. R. (2020). The Development of Web-Based Learning using Interactive Media for Science Learning on Levers in Human Body Topic. *Journal of Science Learning* 3 (2) 89-98. DOI: 10.17509/Jul.v3i2.19366
- Belina, P.E., Rizal.F. (2013). Perencanaan dan Implimentasi Aplikasi E-Learning Versi Mobile Berbasis Android. *Jurnal DTE FT USU*, 4 (3)
- Budiman, A., Ardian. A. & Ferry, M. (2019). Pengembangan Media Pembelajaran Berbasis E-Learning Pada SMK di Pontianak. *Jurnal Nasional Komputasi dan Teknologi Informasi* 2 (2). P-ISSN 2620-8342. E-ISSN 2621-3052
- Chairul A. (2017). *Teori- Teori Pendidikan*. Yogyakarta : Bangun Tepan.
- Chandrawati, S.R. (2010). Pemanfaatan E-Learning Dalam Pembelajaran. *Jurnal Cakrawala Kependidikan Universitas Tanjungpura*. Vol. 8 No. 2 / September
- Darmawan. D. (2014). *Pengembangan E-Learning Teori dan Desain*. Bandung : PT. Remaja Rosdakarya. (10)

- Deddy Award W. L. (2020). Pengantar Desain Grafis. Semarang: Universitas Dian Nuswantoro.
- Dr. Rusman, M.Pd. (2016). The Development of an E-Learning-Based Learning Service for MKDP Curriculum and Learning at the Indonesia University of Education. *Journal of Education and Practice* 7 (31). www.iiste.org. ISSN 2222-1735 (Paper). ISSN 2222-288X (Online)
- Hoerunnisa, A., Nunuk, S. & Agus, E. (2019). The Effectiveness Of The Use Of E-Learning In Multimedia Classes To Improve Vocational Students Learning Achievement And Motivation. *Jurnal Teknologi Pendidikan* 7 (2). <http://dx.doi.org/10.31800/jtp.kw.v7n2.p123--137>. Online ISSN: 2622-4283. Print ISSN: 2338-9184
- Kuntari E. M. (2017). Pendidikan Abad 21 Dan Implementasinya Pada Pembelajaran Disekolah Menengah Kejuruan (SMK) Untuk Paket Keahlian Desain Interior. http://www.academia.edu/28875193/Pendidika_Abad_21_Smk
- Lestari, A.S. (2019). The Development Of Web Learning Based On Project In The Learning Media Course At Iain Kendari. *Jurnal Pendidikan Islam* 5 (1) 39-52. DOI: 10.15575/jpi.v5i1.2909. <http://journal.uinsgd.ac.id/index.php/jpi>. p-ISSN: 2355-4339. e-ISSN: 2460-8149
- Muruganatham, G. (2015). Developing of E-content package by using ADDIE model. *International Journal of Applied Research*. (Online). (academia.edu).
- Nasution. (2012). *Teknologi Pendidikan*. Jakarta : Bumi Aksara.
- Noesgaard, S.S. & Rikke O. (2015). The Effectiveness of E-Learning An Explorative and Integrative Review of the Definitions, Methodologies, and Factors that Promote e-Learning Effectiveness. *The Electronic Journal of eLearning* 13 (4) 278-290. www.ejel.org
- Palandi, J.P., Siti A., Zusana E.P. (2017). Pengembangan Aplikasi Web E-Learning Untuk Pendidikan Anti Korupsi Menggunakan Moodle. *Jurnal Inovtek Polbeng - Seri Informatika* 2 (2). ISSN : 2527-9866
- Prakoso P. & Subuh, I. H. (2016). Pengembangan Media Pembelajaran E-Learning Berbasis Web Menggunakan Ucoz Untuk Meningkatkan Hasil Belajar Siswa Pada Mata Pelajaran Dasar Dan Pengukuran Listrik Di SMK Negeri 1 Nganjuk. *Jurnal Pendidikan Teknik Elektro* 5 (1) 7-13
- Rahayu, I. & Sukardi. (2020). The Development Of E-Modules Project-Based Learning for Students of Computer and Basic Networks at Vocational School. *Journal of Education Technology* 4 (4) PP. 398-403
- Rahmawati, F. (2016). E-Learning Implementation Its Opportunities and Drawbacks Perceived by EFL Students. *Journal of Foreign Language, Teaching & Learning* 1 (1)
- Rijayana, I. (2018). Aplikasi e-learning menggunakan tree view. *Jurnal ilmiah teknologi informasi terapan*, 4 (1)
- Romindo. (2017). Perancangan Aplikasi E-Learning Berbasis Web Pada SMA Padamu Negeri Medan. *Jurnal & Penelitian Teknik Informatika* 2 (2). e-ISSN : 2541-2019. p-ISSN : 2541-044X
- Shulamit, K., Elran, Y. (2011). Development of E-Learning environments combining learning skills and science and technology content for junior high school. *Procedia Social and Behavioral Sciences*, 11 (175–179). doi:10.1016/j.sbspro.2011.01.056
- Siteresmi. (2016). Penerapan konsep gamifikasi pada e-learning untuk pembelajaran animasi 3 dimensi. *Jurnal telematika*, 9 (1)
- Sudarsana I.K., et. al. (2019). The Implementation of The E-Learning Concept In Education. *Journal of Physics: Conference Series* 1363 012063. Doi:10.1088/1742-6596/1363/1/012063
- Sugiyono. (2016). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
- Sukmadinata, N. (2017). *Pengembangan Kurikulum*. Bandung: PT. Remaja Rosdakarya.
- Suryati, T., Suryana & Kusnendi. (2019). The Effect of E-Learning Based on Schoology and Student Interest to Metacognitive Thinking Skill of Vocational High School Students in Archival Subject. *International Journal of Research & Review* 6 (12). (www.ijrjournal.com)
- Susanti, E. (2008). Rancang Bangun Aplikasi E-learning. *Jurnal Teknologi Teknik Informatika, Fakultas Teknologi Industri Institut Sains & Teknologi AKPRIND*. Vol.1, No. 1
- Tambunan, H. (2013). Pengembangan Pembelajaran Berbasis Website Dalam Matakuliah Pengaturan Mesin Listrik. *Jurnal Cakrawala Pendidikan* 1
- Umar, R., Yudhana.A. (2018). Desain Antar Muka Sistem E-Learning Berbasis Web. *Jurnal Sistem Infomasi*, 2 (1), ISSN 2573-534
- Uslima, U. (2018). Contextual Learning module based on multiple representations: the influence on students concept understanding. *Jurnal Keguruan dan Ilmu Tarbiyah*, 3 (1): 11-20
- Wardoyo, C. (2016). Developing Learning Media Based on E-Learning on Accounting Subject for Senior High School Students. *Jurnal Dinamika Pendidikan* 11 (2). 84-93. DOI: 10.15294/DP.v11i2.8932. <http://journal.unnes.ac.id/nju/index.php/dp>
- Warsito, M.B., Haryono, Hari W. (2019). E-Learning Development Based on Schoology for Subject of Information and Communication Technology Grade VII using Flipped-Learning Approach. *Innovative Journal of Curriculum and Educational Technology* 8 (1):1–10. DOI <https://doi.org/10.15294/ijcet.v8i1.30113>. <https://journal.unnes.ac.id/sju/index.php/ujet/article/view/30113>
- Wassalam, O.J.F., Rusydi, U., & Anton, Y. (2017). Implementasi dan Pengembangan Sistem E-Learning Berbasis Web Pada Stimik Muhammadiyah Paguyangan. *Prosiding Seminar Nasional Multi Disiplin Ilmu & Call For Paper Unisbank Ke-3 (Sendi_U3)*. ISBN: 9-789-7936-449-93
- Wibowo, A.T., Isa, A. & Sunyoto, E.N. (2014). Pengembangan LMS (Learning Management System) Berbasis Web untuk Mengukur Pemahaman Konsep dan Karakter Siswa. *Scientific Journal of Informatics* 1 (2), <http://journal.unnes.ac.id/nju/index.php/sji> . e-ISSN 2460-0040. p-ISSN 2407-7658.

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