INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH AND ANALYSIS
ISSN(print): 2643-9840, ISSN(online): 2643-9875
Volume 06 Issue 04 April 2023
DOI: 10.47191/ijmra/v6-i4-42, Impact Factor: 7.022
Page No. 1717-1723

The Discourse of Development of E-Learning Platform in Vocational High Schools Case Study: SMK Negeri 1 Painan

Regy Anes[1], Faiza Rini [2], Irsyadunas[3] , Mulyadi[4], Heri Mulyono[5]
[1,2,3,5]Universitas PGRI Sumatera Barat
[4]Universitas Nurdin Hamzah
Corresponding Author: Faiza Rini

ABSTRACT: Everyone should prioritize their education extremely highly. A person's mindset can shift for the better due to it. E-learning makes it easier for teachers to provide learning materials and for students to access learning materials. The research objective revealed in this study was to develop e-learning with Moodle as a learning medium that can be done and accessed whenever and wherever. E-learning can be done and accessed whenever and wherever. Several kinds of studies on development. The end goal of development research is either the creation of brand-new items or the improvement of current ones. Developing, designing, and evaluating research are all part of the research process. This particular research utilized a total population of 65 students, of which only 30 were randomly selected to participate in the sample. According to the research findings, the validity of the moodle-based E-Learning Platform Validity Test based on material expert validation was determined to be 0.78 percent, while the validity of the test based on media validation was found to be 0.96 percent. Based on these findings, it is possible to conclude that the e-Learning platform might be implemented in vocational high schools.

KEYWORDS: Development, E-learning Platform, Vocational High Schools

INTRODUCTION

Everyone should make getting an education a very high priority in their lives. Because of it, a person's frame of mind could improve positively. To phrase this another way, both the Constitution of 1945 and the National Education Law state that is acquiring an education is necessary for the growth of a person who possesses a noble and dignified character. This is the case because education is fundamental to the development of a human being. Because of this, the education problem is a local concern whose repercussions are experienced nationally and, in the long run, define the course our nation's future will take (Suswanto:2017). To facilitate the education and learning process, computer technology and the internet provide opportunities and choices for those involved in the field. This is a natural consequence of the proliferation of ever-more sophisticated technological capabilities. One of the applications that the learning management system can support is known more popularly as "E-Learning," which stands for electronic learning. (Hidayatulah:2015). It is anticipated that using e-learning in the learning process will be an alternative to learning independence learning as it enables teaching students to seek and learn broad knowledge in the internet world. This is because using E-learning allows teaching students to seek and learn broad knowledge in the internet world. Students can express their originality while expanding their knowledge through e-learning (Irfan & Apriani:2017).

In preparation for the imminent transition of the educational system to digital universities in Indonesia, several of the country's institutions have begun implementing the mobile learning management system, commonly known as M-LMS. The utilization of various learning gadgets as extra tools to improve students' academic performance is feasible thanks to the advent of mobile learning management systems in educational environments. There is an almost unanimous consensus that M-LMS has a favorable impact on the instruction that takes place in the classroom. Establishing a centralized mobile learning platform based on a web browser will hasten the availability of information storage, the dissemination of information via peer collaboration, aand the participation in online courses throughout the entire learning community (Rini:2020). However, the teaching and learning process has only occurred between teachers and pupils during regular school hours; there has been no further connection outside those hours. Up until this moment, there has been no other link. Students who are unable to attend class will surely find that they are unable to keep up with the information that is offered in class as well as the subject that is covered

in class. Sometimes the information is communicated regarding the schedule of quizzes, daily assessments, or assignments, which can cause inefficiency in teaching and learning because it prevents proper effectiveness from being established.

Other times, the information that is communicated is about something completely different. As a direct consequence of the inquiry, resources such as the Internet are now available, although they have not been utilized to the extent they could have. Researchers are working to provide an alternative by producing E-Learning media that can deliver education to students in a manner that is more engaging and straightforward for them to access. This is done with the expectation that pupils would be inspired to study and perform admirably in terms of their ability to absorb what they are being taught. This way of instructing students is becoming increasingly popular in today's society. In the modern world, it is anticipated that instructors will be able to use various technological tools to improve their pupils' educational experiences (Rini:2018).

Instructing and being instructed do not call for a particular setting or period but rather for adaptability and the ability to take place anywhere and at any time. Rather than requiring a specific setting or period, instructing and being instructed calls for the ability to take place. Mobile technology is being integrated into educational institutions' classrooms and other learning settings worldwide because it is both evident and unavoidable (Kumar & Chand: 2019). The teaching and learning process does not require a particular time or place; rather, it requires flexibility and the capacity to take place at any location and at any time. The incorporation of mobile technology into the instructional practices of educational institutions worldwide is something that should come as no surprise and cannot be avoided. This has been made possible through the creation of a system that will digitize daily school activities such as the distribution of announcements, the management of subjects taken by students, the posting of upcoming events and reminders such as announced quizzes, tests, and assignments, all while maintaining output efficiencies that positively impact all of the system's users (Vincent:2019)

Learning management systems (LMS), which have become an integral component of the e-learning landscape, have played an increasingly important part in the expanding function of e-learning technologies in higher education. This is especially true of the LMS. Understanding the elements that influence the behavioral intents of students regarding the utilization of LMS is of the utmost relevance, as it is of the utmost need to get a knowledge of those factors. This study aims to analyze the criteria that students at vocational high schools use to predict whether they would enroll in the Portal Course. The findings of this research will be applied to vocational high schools. As a result of the rapid advancements in information and communication technology as well as the results of investments in technological infrastructure in schools, electronic learning, also known as e-learning, is becoming an increasingly important part of the teaching, and learning process across all educational levels, from primary education to higher and post-graduate education. This occurs across all educational levels, from primary to higher and post-graduate. The educational system in Turkey, like the educational systems in all developing nations, has received significant financial investment from a diverse range of institutions and organizations. In Turkey, this is the case. Increasing the overall quality of the online teaching and learning process by utilizing e-learning to increase its overall standard Learning management systems, also abbreviated as LMS, are one type of e-learning technologies that have been implemented in a variety of public and private universities to support either traditional classroom instruction or online instruction. These universities can teach students in traditional classrooms or online (Ozkan:2020). A learning management system called an LMS is a resource management system used in web-based learning media, also known as e-learning. Another name for a learning management system is an LMS. An example of a Web 2.0 application is a learning management system (LMS) such as Moodle or Blackboard. It combines many multimedia resources that may be utilized in various educational activities. Also, it serves as an online platform for group discussions, uploading content, and grading assignments (Cahyana:2021).

Students at SMK Negeri 1 Painan currently utilize several online services, such as Google Classroom, WhatsApp, and Zoom. Using so many different platforms makes it difficult for educational institutions to maintain accurate records of the activities linked with the learning process because there is neither an integrated, computerized, or medium to perform these functions. Therefore, E-Learning is highly suggested as a platform that may assist teachers and students in online and online learning. As a consequence of this, E-Learning comes highly recommended. Pupils have a low level of interest in learning due to the less attractive methods and media employed in the teaching and learning process at school and the restricted amount of face-to-face time between teachers and students throughout this process. The TKJ instructors teaching class X students at SMK Negeri 1 Painan have not utilized integrated e-learning in either online or online learning. Also, there is a limited face-to-face interaction between teachers and students during school teaching and learning. Because of this, implementing an e-learning platform in state vocational high schools is necessary to tap into the full extent of the potential offered by the educational experience.

RESEARCH METHODS

This study was carried out by students in the TKJ class X basic computer and network topics in the school year 2022/2023. The research location, which took place at SMK Negeri 1 Painan, can be found on Jln. Moh. Hatta in Painan, is described here. The time devoted to research was spent during the off semester of 2022–2023. An "informant," which refers to a person who is part of the research backdrop and is utilized to provide information on the circumstances and situations that are part of the research background, is the focus of the investigation.

The kind of research that was carried out fell under the category of development research. Development research aims to create new products or improve ones already on the market. This study's data collection and analysis processes utilized research and development methods. Research and development abbreviated as R&D and more commonly called "development," is a research approach or process robust enough to enhance teaching and learning practices. More specifically, it is necessary to do development research to find solutions to learning challenges associated with certain goods (Tegeh & Kirna:2013) The ADDIE model is the one that was employed for the research. The ADDIE Model, which is one of the systematic learning design models, was the development paradigm that was utilized in the process of developing this instructional content. The decision to go with this model was made after considering that it follows a systematic development process and is founded on the theoretical underpinnings of learning design. This model is set up programmatically, with a systematic sequence of activities, to solve learning problems related to learning resources that follow the learner's requirements and characteristics. This model is arranged programmatically with a systematic sequence of activities. This model consists of five steps, namely: (1) analysis, (2) design, (3) development, (4) implementation, and (5) evaluation. This model consists of these five steps: (1) analysis, (2) design, (3) development, (4) implementation, and (5) evaluation (Tegeh & Kirna, 2013: 16). The following image provides a visual representation of each level of the ADDIE Model:

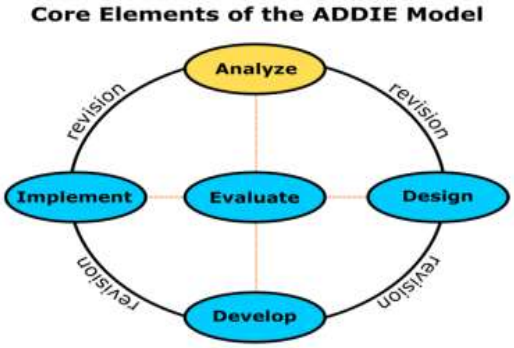

Figure 1. ADDIE Development Model

a. Analyze Find out what's causing the issues with the learning and the pre-planning that decides or thinks about the topic or course that will be taught.
b. Design Verification of the intended results or achievements (learning objectives), as well as the determination of the approach or strategy that will be used.
c. Develop, Create, and verify learning resources, as well as the development of necessary materials and supporting techniques.
d. Prepare the learning environment and implement learning by involving students Preparation of the learning environment and implementation of learning
e. Evaluate the overall quality of the product and the teaching process. (Hidayat, 2021:31)

In the course of this investigation, questionnaires were the instrument of choice for carrying out the various data collection procedures. A questionnaire featuring a group of questions. Data collection techniques known as questionnaires consist of posing questions to be answered by respondents and collecting their responses. For this study, it is required to obtain the data set by utilizing appropriate procedures and data sources that can be trusted. A questionnaire is a method for collecting data that provides respondents with either a list of questions or responses. The researchers produced and sent this questionnaire since they are interested in gathering information regarding the new kinds of media currently being developed. This questionnaire is presented directly to respondents to analyze the validity of learning materials, the practicality of the intended learning media for teachers, and the practicality of the developed learning media for students. This investigation was carried out to evaluate the validity of the E-Learning learning media developed using Moodle. This evaluation aimed to determine whether or not the proposed learning media was valid. The Likert scale will be evaluated during this study to determine how effectively

it functions. The Likert scale is the scale that is used the most commonly in questionnaires, and it is also the scale that is used the most frequently in research that is carried out in the form of surveys.

FINDING AND DISCUSSION

The Elearning Platform is the product produced as a result of this research. Researchers built it to be a tool that can be used in the learning process and an independent learning resource that students can use. This research resulted in the production of this product. Elearning Platform. The Research and Development (R&D) Process, founded on the ADDIE Development Model, is being applied to this Research and Development to facilitate its completion. The ADDIE model of product development is comprised of five major stages, which are as follows: First comes the analysis, then the design, then the development, then the implementation, and finally, the evaluation. At this stage of the analysis, it will analyze the needs and problems in materials, learning media, student learning conditions, and basic competencies used when designing learning media using a moodle-based e-learning platform, student learning conditions in class X. In addition, it will analyze the basic competencies used when designing learning media. In particular, it will concentrate on the teaching methods utilized in class X. Learning media is essential to assist teachers in presenting students with the necessary material. This is because students in TKJ are less focused on following the learning process. The first step in the process of developing a learning media product that is based on Moodle is called the Design Stage. The goal of this stage is to produce learning media customized to meet the needs of the students. This stage also serves as the initial design for producing a learning media product.

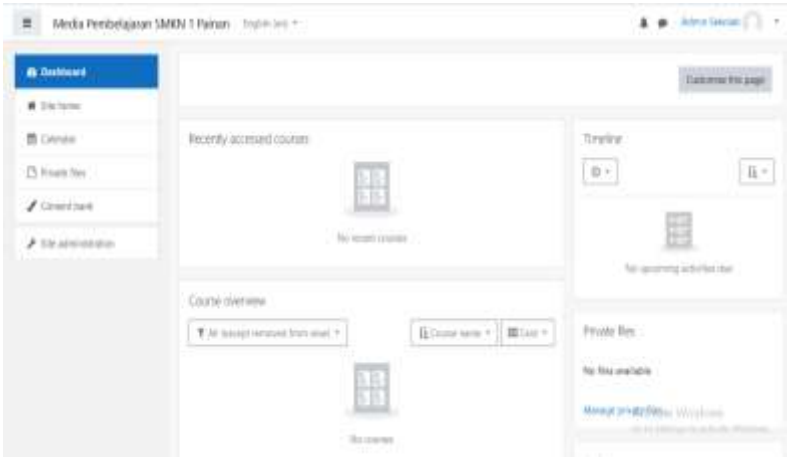

Figure 2. E-learning Dashboard Page

The home site page is a page that displays classes and subjects in E-learning. It can be seen in the following figures:

Figure 3. E-learning home site view

Following that, the process of developing the system was carried out. So, this very first glance develops into an intriguing very first perspective. Figure 1 shows the landing screen that users see when they access eLearning by putting in https://elearningsmkn1painan.com/moodle. After checking in to eLearning, users are taken to the dashboard page. This page may be viewed by clicking on the following link.

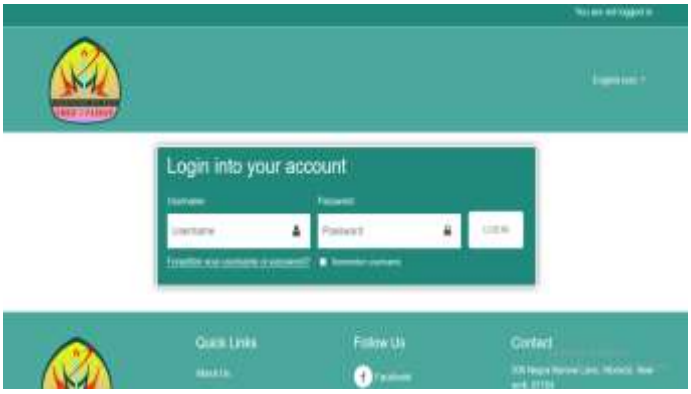

Figure 4. Initial View

This media aims to inquire about the perspectives of knowledgeable media professionals concerning the practicability of educational media. Evaluating e-learning is accomplished by first reviewing the moodle-based e-learning learning media, then delivering a validation questionnaire to the media. However, the questionnaire has many statements comprising three different indicators, namely Display, Interactivity Aspect, and Expediency Aspect. Two different media experts each carry out their independent validation of the learning media experts. The following is a list of the findings about the media's credibility, which may be found in the table below:

Table 1. Media Validity Results

No	Aspek Penilaian	Validator			Jumlah	Hasil Validitas	Kategori
		VI	V2	V3			
1.	Tampilan Media	3,71	3,85	3,14	10,71	0,714	Valid
2.	Kemudahan Penggunaan	3,5	4	4	11,5	0,766	Valid
	Total					1,48	
	Rata-rata					0,74	Valid

Source: Research Results, 2022 (Data processed)

According to the findings of the research on E-Learning learning media data, Media Display, and Ease of Use conducted by media expert validators, it was declared "valid" because the validity category on learning media 0.667 was declared "valid." In contrast, 0 – 0.666 was declared "invalid." This was based on the table presented earlier, which stated that the findings of media validation values of 0.704 were declared "valid" and suitable for use as learning media. This validation is carried out by looking at the content on the E-Learning learning media and then submitting a validation questionnaire to the content included on the learning media. This validation is being done to elicit subject matter specialists' feedback concerning the practicability of utilizing E-Learning pedagogical tools. Whereas the questionnaire contains several statements, each comprising two indicators, content (material) and instructive.

Table 2. Material Validity Results

No	Aspek Penilaian	Validator			Jumlah	Hasil Validitas	Kategori
		V1	V2	V3			
1.	Isi (Materi)	3,5	4	4	11,5	0,766	Valid
2.	Instruksional	3	3,5	3,25	9,75	0,628	Valid
Jumlah						1,394	
Rata-rata						0,697	Valid

Source: Research results, 2022 (Data processed)

The results of the material validation values of 0.697 are declared "valid," They are eligible for use as learning media. This is because the validity category of 0.667 is proclaimed "valid," while 0-0.666 is declared "invalid." These conclusions are based on the findings of an analysis of E-Learning learning media on the content (material), as well as the instructional features reviewed by material expert validators. The material expert validators carried out this analysis. Teachers of the Fundamentals of TKJ Expertise and students of Class X TKJ participate in this Practicality Test to determine whether this E-Learning learning medium is utilized in schools. This group is responsible for carrying out the Practicality Test since the objective is to establish whether or not the E-Learning learning medium is practical. Both the questionnaire for teachers and the questionnaire for students have several statements that are composed of a variety of various indicators. Also, both questionnaires contain several statements that are composed of a variety of different indicators. The consequences of the efforts made by the instructors and the students to be as realistic and applicable as possible are presented in the table that can be found below:

Table 3. Teacher Practicality

No	Practicality Aspects	(%)	Category
1.	Ease of Use	90	Very Practical
2.	Learning Time Efficiency	80	Very Practical
3.	Attraction	90	Very Practical
4.	Benefit	86,66	Very Practical
Average		86,66	Very Practical

Source: Research Results, 2022 (Data processed)

Therefore, the value obtained by the teacher is "Very Practical" because the Practicality category of 81-100% is stated to be "Very Practical". After all, in the table of practicality results, the teacher's response above has a percentage of 86.66% with the category "Very Practical" and is suitable for use as a learning medium. In addition, the value obtained by the teacher is "Very Practical" because the Practicality category of 81-100% is stated to be "Very Practical." In addition, the value that the instructor achieved is "Very Practical" because the Practicality category that was scored between 81 and 100% was claimed to be "Very Practical." To conduct an accurate analysis of how valuable the content of an e-learning course is, it is necessary to collect feedback from students in the form of their responses. After students have received information from absorbing various media, they are given questionnaires to fill out and asked to reflect on their experiences. The compiled findings are presented in the following table, which can be seen down below:

Table 4. Student Practicality

No	Practicality Aspects	(%)	Category
1.	Ease of Use	84,147	Very Practical
2.	Learning Time Efficiency	86,89	Very Practical
3.	Attraction	90,57	Very Practical
4.	Benefit	86,72	Very Practical
Average		87,08	Sangat Praktis

Source: Research Results, 2022 (Data processed)

It is conceivable to conclude that the E-Learning learning media that has been generated has an average student answer practicality score of 87.08%, which places it in the Very Practical category. This result is reachable because it is possible to draw this conclusion. This conclusion can be reached by examining the table of student replies about their practicality. The goal of this study is to develop an e-learning platform on the subject of fundamental expertise in TKJ for usage at SMKN 1 Painan, which is the intended audience for the findings of this study. The validation findings of the assessment of the entire e-module indicated that the average score with a valid category achieved 0.696 out of a possible 1.000 points by media experts. It is common knowledge that the findings of the validation of the material used for e-learning obtained an average score of 0.697 with a valid category. This information was gathered from the materials.

CONCLUSION

The information being provided pertains to a subject wholly unrelated to the topic at hand. As a direct result of the investigation, previously unavailable resources such as the Internet are now at the user's disposal; nevertheless, these resources have not

been utilized to the extent that they potentially could have been. Researchers are working to produce E-Learning material that can educate students in a manner that is more interesting to them and uncomplicated for them to access as a means of providing an alternative that researchers are currently working on. This is done with the hope that students will be encouraged to study and excel academically in terms of their capacity to retain the information they are being taught. This method of teaching students is gaining popularity in today's culture and is expected to continue doing so. It is reasonable to expect that in today's modern world, teachers will be able to make full use of a wide array of technical tools to enhance their students' educational experiences. According to the research findings, the E-learning Platform produced was deemed genuine by material experts 0.708% of the time and by media specialists 0.740% of the time. On the practicality test, 86.66 percent of teachers said that the established e-learning platform was extremely practical, while 87.08 percent of students said it was very practical. The findings of the validity and practicality tests indicate that the E-learning Platform at SMK Negeri 1 Painan should be developed.

REFERENCES

1) Añonuevo, X. R., Nocum, V., Ramiro, C., Baricanosa, R. V, & Prospero, M. R. (2019). Online Learning Management System in Multi-platform Devices. LPU-Lagura Journal of Engineering and Computer Studies, 4(2), 47–53.
2) Cahyana, U., Janah, F., & Budi, S. (2021). Development of Mobile Learning integrated with Learning Management System (LMS) on Buffer Solutions Topic. JTK (Jurnal Tadris Kimiya), 6(2), 156–166. https://doi.org/10.15575/jtk.v6i2.13936
3) Hidayat, F., & Muhamad, N. (2021). Model Addie (Analysis, Design, Development, Implementation and Evaluation) dalam Pembelajaran Pendidikan Agama Islam. JIPAI; Jurnal Inovasi Pendidikan Agama Islam, 1(1), 28–37. https://journal.uinsgd.ac.id/index.php/jipai
4) Hidayatulah, A., yushardi, Y., & Wahyuni, S. (2015). Pengembangan Bahan Ajar Berbasis Web Interaktif Dengan Aplikasi E-Learning Moodle Pada Pokok Bahasan Besaran Dan Satuan Di Sma. Jurnal Pembelajaran Fisika Universitas Jember, 4(2), 139047.
5) Irfan, P., & Apriani. (2017). Implementasi E-Learning Berbasis Website SMA Negeri di Kabupaten Lombok Utara. Konferensi Nasional Sistem & Informatika, 6.
6) Kumar, B. A., & Chand, S. S. (2019). Mobile learning adoption: A systematic review. Education and Information Technologies, 24(1), 471–487. https://doi.org/10.1007/s10639-018-9783-6
7) Ozkan, U. B., Cigdem, H., & Erdogan, T. (2020). Artificial neural network approach to predict LMS acceptance of vocational school students. Turkish Online Journal of Distance Education, 21(3), 156–169. https://doi.org/10.17718/TOJDE.762045
8) Rini, F., Julinus, N., Rizal, F., & Weay, A. L. (2018). Implementation of mobile learning management system (M-Lms) to improve the effectiveness of student's learning engagement. Journal of Advanced Research in Dynamical and Control Systems, 10(13 Special Issue), 857–865.
9) Rini, F., Mulyadi, R., Surya, J., & Louis, A. (2020). The Validity of Mobile Learning Management System (M-LMS) at University. Journal of Computational and Theoretical Nanoscience, 17(6), 2836–2842. https://doi.org/10.1166/jctn.2020.8948
10) Suswanto, H., Nidhom, A. M., Nur, A. B., Putra, R., & Hammad, J. A. H. (2017). Developing An LMS-Based Cross-Platform Web Application For Improving Vocational High School Students' Competitiveness In ASEAN Economic Community. Jurnal Pendidikan Sains, 5(3), 72–79. http://journal.um.ac.id/index.php/jps/
11) Tegeh, I. M., & Kirna, I. M. (2013). Pengembangan Bahan Ajar Metode Penelitian Pendidikan dengan ADDIE Model. Jurnal IKA, 11(1), 16. https://ejournal.undiksha.ac.id/index.php/IKA/article/view/1145