

WEB DEVELOPMENT FOR RESOURCE-BASED LEARNING MODEL IN ENGLISH LEARNING FOR 10TH GRADE

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Abstrak

Pengembangan teknologi dalam dunia pendidikan tidak dapat dipisahkan. Hal ini berhubungan dengan penggunaan media belajar sebagai sumber belajar. Pada era zaman ini, guru dan peserta didik diwajibkan untuk dapat memahami dan menggunakan teknologi sebagai salah satu media pembelajaran. Berkaitan dengan hal tersebut, penggunaan media pembelajaran yang terhubung dengan internet khususnya media pembelajaran berbasis web untuk peserta didik di kelas X MA. Tujuan penelitian ini adalah untuk menghasilkan produk media pembelajaran berbasis web dengan model *Resource Based Learning* dalam meningkatkan kemampuan belajar Bahasa Inggris. Model penelitian menggunakan model pengembangan Lee & Owens yang terdiri dari lima tahap: penilaian/analisis, desain, pengembangan, implementasi, dan evaluasi. Selanjutnya, setelah media dikembangkan, tahap berikutnya melalui proses validasi oleh para ahli, dan diuji ke peserta didik mengenai kemenarikan dan keefektifan media berbasis web. Hasil penelitian ini memenuhi kevalidan hasil analisis data dari ahli media, ahli materi dan meningkatnya hasil belajar peserta didik.

Kata Kunci: Media Pembelajaran Web; Model *Resource-Based Learning*; Hasil Belajar

Abstract

The development of technology in the world of education can not be separated. This is related to the use of learning media as a learning resource. In this era, teachers and students are required to be able to understand and use technology as a learning medium. In this regard, the use of learning media that is connected to the internet, especially web-based learning media for students in class X MA. The purpose of this research is to produce web-based learning media products with the resource-based learning model in improving English learning skills. This research uses the Lee & Owens development model, which consists of five stages: assessment/analysis, design, development, implementation, and evaluation. Furthermore, after this media is developed, the next stage goes through a validation process by experts and is tested to learners regarding the attractiveness and effectiveness of web-based online media. The result of this research has fulfilled the validity of data analysis from media experts and material experts and increased student learning outcomes.

Keyword: *Web Learning Media; Resource-Based Learning Model; Learning Outcomes*

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INTRODUCTION

The development of technology is currently developing very rapidly. This development occurs and has an impact on all groups and fields. The use of technology can facilitate human survival. Technology can be accessed by humans to solve a problem or dig up information quickly. In this case, technological advances to find science information have an impact on the field of education. The use of technology in learning can make students exercise control in learning (Syarif, 2012) This means that the use of information technology for students can help to explore knowledge in their learning activities. According to Miarso in (Salim, 2021), Technology is a man-made system that can present messages and process data more easily. In this regard, the development of science and technology cannot be separated. Thus, the use of technology in the teaching and learning process needs to be carried out continuously to keep up with the times and to help educators design materials for students in the present and the future.

In the learning paradigm in this era, students are more focused on analysis and emphasize the ability to find learning through various sources, formulate and solve problems, work together, and collaborate in solving existing problems. Along with the development of technology that has influenced the production of various innovations in learning, to achieve learning objectives, it refers more to and requires the assistance of the Kemendikbud student ability standards in (Wijaya et al., 2016) The development of technology has influenced the use of various types of media, as a tool in the learning process (Ardiansah, 2019).

Technology in education aims to make it easier for teachers to deliver material. However, on the other hand, the use of technology that is not optimal is certainly a problem that can hinder the learning process. For example, the use of web-based learning media (e-learning) in the language learning process cannot be said to be easy. The use of web media can be a problem for teachers if the use of the media is not optimal and is not appropriate for learning objectives. Placing learning materials online without being based on theory and delivery methods that are following web features will not solve learning problems (Wang, S. K., & Reeves, 2020). Furthermore, according to Marlina (n.d.), conventional learning methods that are not yet interactive are still based on textbooks. Many e-learning platform providers have not optimally provided features that can help students learn languages in a fun way. In this regard, continuous conventional learning can reduce students' motivation to learn and the use of e-learning web media that is less than optimal will make students feel confused in the learning process.

Based on observations made, in the learning process at one of the MA Batu schools. Many teachers still use conventional learning models. This model uses a lecture method which in its learning strategy is a discussion with the teacher only delivering material and introducing several of the various topics and opening questions and answers. This causes a monotonous teaching and learning process. The use of traditional learning methods where teaching materials are delivered verbally and non-verbally is still a common activity (Yusuf Raden Dimas, Putra Septian, Susilaningsih, 2020). In addition, another phenomenon at this MA Batu school is that the learning process using web-based e-learning media for teachers provided by the Ministry of Religion educational institution is not being maximized. Web-based e-learning media from the Ministry of Religion is mostly used by teachers in each learning material to do daily assignments and assessments of students in class and does not try to be used as a source of learning media for delivering material.

In this regard, educators need to innovate to create web-based online media as a learning resource that can help educators facilitate students in finding other information from learning materials. Of course, with this, the role of students is more independent in achieving goals. Web-

based learning can create more flexible learning, more abundant content, and a learning environment with a large class reach (Ding & Zhang, 2018). Thus, web-based online media must have a learning model that functions as a learning resource, namely the Resource Based Learning (RBL) model. Resource-based learning is a learning model that focuses on students (student-centered), which combines the design of learning resources, interactive media, and technology (Astra, 2007). In addition, Nasution in (Wahyuni, 2020) states that the Resource Based Learning (RBL) method is a learning method that confronts students with learning resources directly to provide more information about the material. Thus, to make learning meaningful, it is necessary to directly involve students in independent learning according to student behavior and abilities (Abdurrokhim et al., 2022).

From previous studies, it provides information on the success or failure of online English media to improve learning outcomes. Thus, it becomes a further reference in development research that uses online learning media with a web-assisted Resource Based Learning model to improve English skills in class 10th grade MA. According to (Mafulah & Hariyanto, n.d.) it states that online English learning media to improve students' vocabulary has a positive impact. Another study by Akmala et al., (2015) stated that the designed online learning media has run well. Another study, by Suharwati et al., (2016) stated that the Resource Based Learning model influences students' learning interests.

METHODS

The research method is the research and development method or Research and Development. Research and development aims to produce certain products and test the effectiveness of the product (Sugiyono, 2010). To be able to produce certain products, there needs to be a needs analysis, and it is necessary to test the effectiveness so that it can function in the wider community. Research and development is longitudinal or gradual.

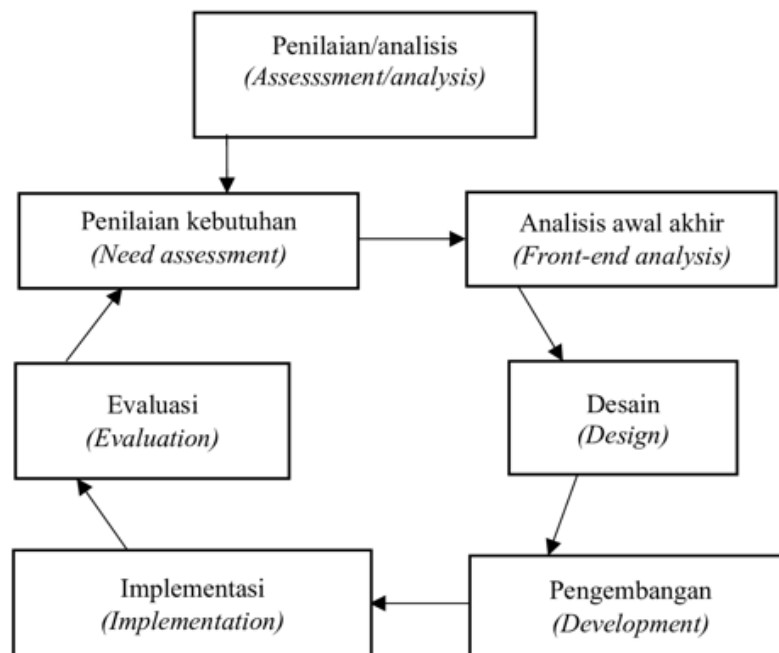


Figure 1. Lee & Owens Development Model, 2004

The research was designed to produce learning media using the Resource Based Learning model in the form of web-based online learning media. The development model is the model (Lee & Owens, 2004). The reason for choosing the model is because it is a model commonly used in development research. This development model is said to be a procedural model because the sequence of steps in the process is arranged systematically and each development step has an arranged sequence of development steps. The research and development procedure consists of five stages, namely; first, assessment/analysis which includes assessment or analysis of needs (need assessment), and initial final analysis (front-end analysis), second, design, third, development, fourth, implementation, and fifth, evaluation.

Two instruments for data collection. First, conducting observations by collecting data by observing ongoing activities at school. With these observations, user needs can be identified. In addition, observations are used to determine the initial conditions of learning. Second, the questionnaire instrument is used for product trial assessment, the questionnaire collects respondents' opinions regarding interactive teaching materials from three types of validation, namely media validation, material validation, and student responses. Before the questionnaire is tested, the questionnaire needs to be validated by experts. The questionnaire is also used to assess the level of attractiveness.

The subjects of the product trial were material experts, media experts, and students in the class. The criteria for a media expert are a master's degree and a higher degree in education. These criteria can be seen from the competition to master the field of educational development. The material expert is an English teacher from another MA school who has a master's degree and has the competence to assess material for lessons in learning media. Meanwhile, the students in this study as objects are class X MA students. Class X students because after nine years of education and entering the high school or MA level of education, students in class X are just starting to learn English more complexly. The data was collected using a questionnaire before and after treatment using the t-test.

The developer uses two types of data, namely qualitative and quantitative. Qualitative data comes from a questionnaire of criticism and suggestions from experts. Meanwhile, qualitative field data is obtained by researchers from criticism and suggestions from class X students. The quantitative data used comes from expert assessment points, teachers, and students. Data from the questionnaire is qualitative data then quantified using a scale (Likert, 1932). The Likert scale has five responses consisting of: strongly agree, quite agree, agree, disagree, and strongly disagree. Furthermore, it is analyzed using percentage calculations (Arikunto, 2003). Item scores for each answer to each question on the questionnaire.

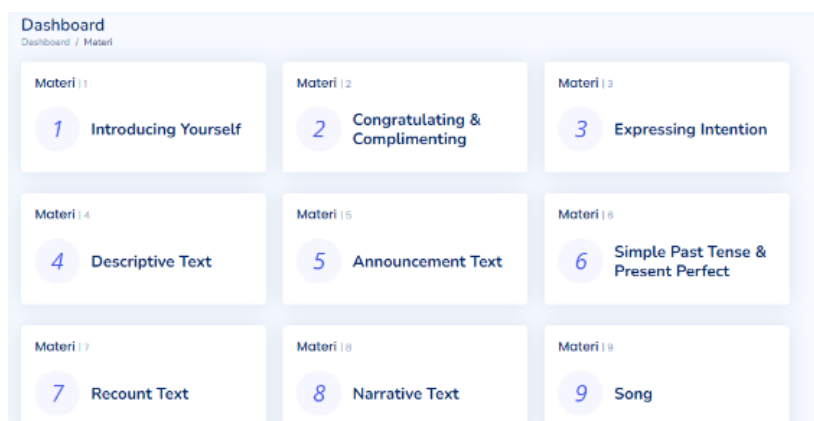


Figure 2. Login Page

RESULT

The results of media development from research using the Resource Based Learning learning model, namely "Fun English Learning", is a media for delivering materials and giving quizzes or tests that are carried out with the help of internet network access, wifi available at school. The following is a display of online learning media assisted by the web as presented figure 1.

This section displays the English materials to be learned. In this section, the teacher can explain the materials to be learned. Furthermore, the teacher conveys the learning objectives that must be achieved to students according to the selected material and conveys the indicators of achievement to be aimed for.

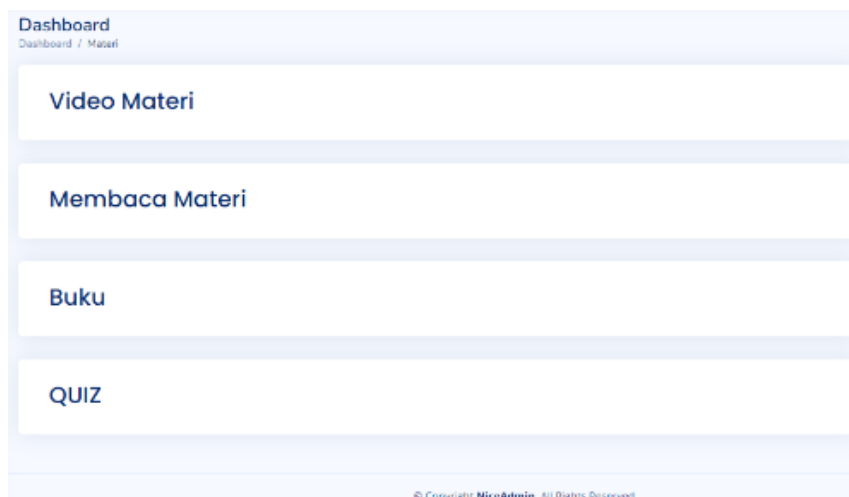


Figure 3. Media source page

This section displays the media sources used as learning media for students, before working on the quiz. The video section contains video media sources of the material to be studied, the reading material section is a source of reading texts, and the book section is online book media.

The results of data validation for the study are the results of validation of the level of interest from 2 validators, 1 from a lecturer in the Department of Learning Technology, State University of Malang, 1 from an English teacher at MA Bilingual Batu, and 16 student responses to validate the level of effectiveness of web-assisted media.

Data validation from the research on the development of web-based online learning media with the Resource Base Learning model called "Fun English Learning" for MA schools in Batu obtained validation results from expert media validators with a percentage value of web-based online learning media products reaching 95%. In other words, the media product is very valid and does not need to be revised. Furthermore, for the validation results from material expert validators with a percentage value of web-based online learning media products reaching 86%. In other words, the media product is very valid and does not need to be revised. Then, for the questionnaire response value from 16 students, the percentage value was around 95% which was measured using a Likert scale and can be stated as very valid. Meanwhile, for the level of effectiveness of web-assisted media, it is known that student responses are very active and highly motivated to carry out English learning.

In relation to this, the normality test is carried out as a prerequisite test to see whether learning outcomes are achieved, and the paired sample t-test is used to see whether there is a difference between the two. The following paragraph presents the results of the prerequisite tests and paired t-tests that have been carried out and are presented in tables 1 and 2.

Table 1. Normality Test of Learning Outcomes

Class	Shapiro-Wilk		
	Statistic	Df	Sig.
Pretest	.969	16	.814
Posttest	.923	16	.186

It is known from the table 1, that the results of the normality test of 16 students in the Shapiro-Wilk test for significance in the pre-test with a value of $0.814 > 0.05$. This means that the data is normally distributed. Furthermore, for significance in the post-test, namely with a value of $0.186 > 0.05$. Thus, it can be concluded that the value is normally distributed..

Tabel 2. Paired sample t-test

Pair	class	Paired Differences			
		Mean	Std. Deviation	df	Sig. (2-tailed)
Pair 1	Pretest - Posttest	-63.8750	13.55958	15	.000

Based on the test results presented in table 2, descriptively, the average paired differences is 63,875 with a standard deviation of 13.55958. This result can be interpreted that the average is superior to the post-test results than the pre-test, thus web development is able to improve learning outcomes.

The basis for making decisions is as follows: (a) if the Sig. (2-tailed) value is 0.05, then there is a difference between learning outcomes in the pre-test and post-test, (b) if the Sig. (2-tailed) value is 0.05, then there is no difference between learning outcomes in the pre-test and post-test.

From the paired sample t-test table above, it can be seen that the Sig. (2-tailed) value is 0.000 < 0.05. Thus, it can be concluded that there is a significant difference between the results of learning English before receiving treatment (pre-test) and after receiving treatment (post-test).

DISCUSSION

Parumbuan, (2017) states that the use of e-learning websites creates a technology-based learning environment that can present materials with various media such as text, data, audio, video, and animation. The development of e-learning, a web-based online learning media with a resource-based learning model, is closely related to the development of technology as a learning resource media that can be operated according to the needs of teachers and students..

Three components that can support online learning media are: learning models, instructional strategies and learning strategies, and online learning media. These three components must be made into a system designed in a learning model and applied to create instructional strategies and learning strategies and implement them in the application of learning technology (Dabbagh & Bannan-Ritland, 2005). More clearly, the purpose of online learning or e-learning is so that students can follow existing technological developments and get new learning models (Amri et al., 2022). According to Poulouva (2017) "Web application enables pupils to practice the discussed subject matter and teachers receive immediate feedback on pupil's performance". This means that the web application allows students to practice discussing material and teachers can receive direct feedback on student skills.

Learning models need to be considered in delivering web learning media, especially models that use media as a learning resource (resource based learning). According to Nasution in (Pajriah, 2019), Resource Based Learning is any form of learning that directly confronts students with learning resources individually or in groups and is not delivered using conventional methods. Resource Based Learning is a variety of tools and means that can be used by educators in the learning process as a communication intermediary in delivering the contents of the lesson material

(Nuur, 2018). Based on this, the use of web media with a resource based learning model can increase student interest and learning outcomes.

The results of the research on the development of web-assisted online learning media with the Resource Base Learning model called "Fun English Learning" for English material on expressions of congratulating and praising at MA Batu school obtained validation results from media expert validators with a percentage value of web-based online learning media products reaching 95%. Media experts responded to the media from 15 statements consisting of 3 aspects: design appearance, suitability of materials and media, and suitability of quizzes or tests. The answers obtained from media experts for web learning media were 11 statements answered strongly agree and 4 statements answered quite agree. In other words, the media product is very valid and does not need to be revised. Furthermore, the advice given by media experts is to optimize the visual, communication, and utilization aspects.

The results of the web media development research from the material expert validator with a percentage value of web-based online learning media products reached 86%. The material expert provided responses regarding the media from 10 questions consisting of 3 aspects: relevance, suitability of the material to the media, and ease of media. The answers obtained by the material expert were 4 questions answered strongly agree, 5 questions answered quite agree and 1 question answered agree. In other words, the media product is very valid and does not need to be revised. Furthermore, the advice given by the material expert is to pay more attention to diction to make it easier for students.

For the questionnaire response value of interest from 16 students obtained a percentage value of around 95%. This result is based on student responses obtained from 10 questions and consists of 2 aspects: ease of material and media, and student interest. Question item 1, it is known that 4 students answered easy to understand and 12 students answered very easy to understand. Question item 2, it is known that 9 students have answered happy, easy. 7 students answered very happy, very easy. Question item 3, it is known that 4 students answered quite enthusiastically, and 12 students answered enthusiastically. Question item 4, it is known that 15 students answered easy to understand, and 1 student answered easy to understand. Question item 5, 3 students answered quite interesting, 6 students answered interesting, and 7 students answered very interesting. Question item 6, it is known that 1 answered disagree, very easy, 1 student answered quite agree, easy, 11 students answered agree, not easy, and 3 students answered strongly agree, not easy. Question item 7, it is known that 6 students answered easy to understand, and 10 students answered very easy to understand. Question item 8, it is known that 15 students answered easy, and 1 student answered very easy. Question item 9, it is known that 12 students answered easy to understand, and 4 students answered very easy to understand. Question item 10, it is known that 1 student answered quite easy to understand, 5 students answered easy to understand, and 10 students answered very easy to understand. Thus, web learning media can be stated as very valid.

Previous research that is in line with this development research. (Mafulah & Hariyanto, n.d.) stated that online English learning media to improve students' vocabulary has a positive impact on student assessment. This is evidenced by the difference between the average pre-test and post-test scores. Respondents felt motivated and inspired to use Online media as a learning tool that can improve the development of their English language knowledge including vocabulary. However, these results cannot conclude this research positively, because the final result of the t-test value is still below the number in the t-table. So it can be concluded that the use of Online Media is less effective in improving English vocabulary in English Education students at Kanjuruhan University, Malang.

Akmala et al., (2015) stated that the designed online learning media has run well. The development of online media through the stages of analysis, design, development, implementation, and evaluation. Before the implementation stage, an expert assessment of the media has met the eligibility in terms of view, program, very good value with an average value of 4.45. The assessment of material experts reached an average of 4.00. Individual trials with different abilities reached an average of 3.7. Limited tests on five students with a value of 3.76 and field trials on thirty students reached an average of 3.69.

Other studies from previous research. According to Suhawati et al., (2016) stated that the Resource Based Learning model has an influence on students' learning interest with a sig.0.0007 <0.05 and the average interest of the experimental class is higher than the control class. Furthermore, student learning outcomes show a sig. t-test value of 0.032 <0.05 and the average gain score of the experimental class is higher than the control class.

Other studies that are in line with previous research. According to (Iqdami, 2016) "Resource-based learning offers considerable promise for educators in the field of Teaching and Learning English as a Foreign Language (TEFL). Resource-based learning offers definite promise for educators in teaching and learning English as a foreign language. In addition, according to (Angelica & Novitasari, 2020) "The Resource-based learning model (RBL) based on flashcards influenced the students' problem-solving abilities and learning motivation". This means that the resource-based learning model for flashcard media can influence students' abilities in solving problems and motivating them to learn.

CONCLUSION

Based on the results of the discussion above, it can be concluded that web learning media with the Resource Based Learning model for students in class X MA has been declared valid for use as a learning medium. This is based on the value of the media feasibility test from media experts, material experts, and student responses. Furthermore, this web learning media can improve student learning outcomes in English as seen from the pre-test and post-test values before and after receiving treatment. Suggestions for further development are expected to carry out the development stage with a more complete concept, selection of other materials, and addition of learning resources according to learning needs in the classroom. So, web learning media can be used more optimally.

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