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Development of Web-Based Learning Media on the material of "Ability and Willingness Expression".

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Abstract:
The study aims at determining the development of web-based learning media on the ability and willingness expression 8th-grade junior high school students. The sample taken is 8.1 for the sample of the research. The procedural model used represents the steps by Alessi and Trollip (2001): planning, design and development, and data analysis methodology for the feasibility of web-based products using the Likert scale. The results of this beta test are analyzed and used as input to improve the final product. The effectiveness test was carried out on students to determine the learning outcomes after using learning media products. The assessment score has obtained a value in the Very Good category from the comprehensive test. This web-based learning product is effectively used as a learning medium. The results of students' understanding tests on the Ability and Willingness Expression using Web-Based Learning Media can be seen from the results. Which showed an increase in learning outcomes from the pretest score to the post-test value or (N-Gain) score; of 0.71 with the category "very good". Thus, this web-based learning media can be used to help teachers' and students' teaching and learning activities in terms of ability and willingness.

Keywords: *Ability, Web-based learning media, Willingness*

1. INTRODUCTION

English is one of the international languages that is widely used on various occasions. In the world of education, English has also become one of the required lessons for students because of the need for technology and information widely used in English (Retnaningtyas, 2011).

English is taught as a foreign language in Indonesia in formal schools and applied as a compulsory subject in junior high school and high school. In schools, English is conducted in a teaching and learning process that includes four English skills: listening, speaking, reading and writing. So far, many students have faced some difficulties in studying this subject. As a result, some improvements in the teaching and learning of English are needed, as well as the use of learning media following learning materials.

Teachers use learning materials to encourage students to learn in a fun manner so, changes in behavior happen as an outcome of learning. Learning material is a well-organized set of whether written or oral material. They create opportunities that allow students to learn (Kusmana et al., 2020). While the needs of students become the center of study. Then, the main consideration is emphasizing appropriate

language learning materials. Materials should help learners feel comfortable to develop self-confidence and be relevant to student. In many schools, few teachers are able to properly teach students materials, but some are not. Because, material development is a practice process that has been prepared at school. Then, subconsciously it becomes a teaching a topic of great concern among English teachers (Nirwaty, 2020).

The availability of learning materials in schools in Indonesia designed by the 2013 Curriculum is still limited in terms of quantity and quality. In general, the learning materials available are only presented in textbooks developed based on an author's thoughts in interpreting the curriculum's basic competencies. In this study, the researcher presents the results of developing learning materials that can be presented digitally packaged using technology. These learning materials can be browsed via smartphones and students can re-explore teaching material outside the classroom (Kusmana et al., 2020).

The current learning paradigm is still very interesting for the world of education. Learning is evaluated as a measure of success in transferring knowledge through a certain process or stage of the learning activities. The development of information and communication technology has brought extraordinary changes in the development of the education world. With these developments, pedagogy has undergone learning methods, teaching, and learning processes (Istifaroh, 2021).

The learning process will be effective when the facilities are available, including learning resources (Dian Anggraeni & Kustijono, 2013), and the most widely used now is e-learning. E-learning is a technology used for education that contains learning materials that are packaged modernly. Today's learning activities cannot be separated from learning technology, one of them is a website (Shi & Heilongjiang da xue., 2004). Making a website is one of the most widely used e-learning methods. In this case, the researcher used the website as a media of learning for junior high school students in English learning materials. The website has many benefits, including ease of access, not requiring memory storage on the device, and attractive features and appearance.

In learning English for 8th grade students of junior high school, there is material on ability and willingness expression. Based on the interview conducted with the English teacher, it was found some problems in learning English. First, learning media used by the teachers were unvaried and unexciting, including textbooks and whiteboards. Due to incapability of the teacher in creating various learning media such as website, application, and audio visual media (Susanto & Ayu, 2017). Second, students faced difficulties in determining the appropriate modal ability and willingness expression because it is crucial and has the rule of using modal expression. Because of that, students also need to be more careful in making the sentence in modal ability and willingness expressions. When the students learn English most of them don't understand anything and have difficulty remembering a single word. (Pasaribu et al., 2021). It caused by the condition of the students that first time learn English in junior high school and they immediately learn grammar. So, many students have never known the basics of English. (Laoli, 2021). Besides, teachers

need a new atmosphere in teaching-learning modal ability and willingness expressions to make students easier to understand (Majid, 2020). The last, teacher teaching technique was not still combined with technology. There are so many techniques that teachers can apply in the class to stimulate students' participation in the learning process. One of them is using web-based learning media.

According to Sudarman (2019) Website learning technologies help educators a lot in carrying out their learning activities. Easy internet access and learning activities can also help students. Therefore, modules and worksheets can be used in e-learning to help students easily understand lessons, and students can learn anytime and anywhere (Hardianti et al., 2021). Web-based learning media is available with various attractive learning materials so that it can direct students to do real practice in the learning process. Causing the learning process more efficient and effective using media and E-learning. In addition, the learning process can be a more appealing ask, motivation, and enthusiasm for students in an independent study on learning English (Saputra et al., 2018).

Learning English in 8th grade of junior high school there is the material expression of ability and willingness. For ability the modal auxiliary can be used as "can, could, or be able", which has a difference in its use, “can” is used in the present tense, and “could” is for past tense, and “be able” is used in the future tense. Then, the modal auxiliary that can be used to show willingness are “will/would”, Will and would have something in common. The difference is that “Will” is used to form the present tense (Now) and “would” is used in the past tense. So that, this learning material can be displayed with an attractive appearance as well as explained on the website.

The Covid-19 pandemic has brought new normal learning challenges, and recognize that the current pandemic requires technology and the internet. The previous study by Origenes (2022) from the International Journal showed that Web-based learning modules (WLM) have a significant impact on the performance of students in General High School Chemistry 1 (SHS). Before using WLM, the students score was at average of (23.66), on the pretest. The hypothetical average showed that students using WLM had average of 48.42 at the post-test, 18.42 higher than the pre-test. In addition, WLM students achieved an average increase of 24.75 with a standard deviation of 4.21. This study found that significant average increase between pre- and post-testing in 11th grade general chemistry using WLM. The result showed significant improvement in student. The results suggest that WLM can be used as an excellent additional learning tool, allowing students to independently explore the material and the content of the modules.

The web-based learning environment measures effectiveness as an average choice for effective and efficient student learning. The second previous study was conducted by (Saputra et al., 2018). Entitled Development of Web-Based Learning Media in Vocational Secondary School. This study focuses on effective web development for the primary subjects of automotive electrical engineering at the SMK Negeri 1 Lintau Buo. This research uses a research and development (R&D) approach with a 4-D model (identification, design, development, and implementation). The results of this study :

(1) The validity of the web-based learning media was 85.99%, and the validity of the data was 87.7%.; (2) According to the teachers 'answers, the effectiveness of the web is 81.7%, and according to the student's answers, the real value is 88%. (3) Media websites are effective in improving student learning outcomes.

Based on the explanation above, there are some problems as follows; the learning media used by the teachers were unvaried and unexciting, such as textbooks and whiteboards. Then, many students got bored, and they faced difficulties in determining the appropriate modal ability and willingness expression in the class because they lacked understanding, and also teacher teaching techniques that still not combined with e-learning. Based on it, the researchers are interested in carrying out research with the title the development of web-based learning media on "ability and willingness expression".

2. METHOD

The researcher used the Research and Development (R&D) method to develop this Web-based learning media. In order to find out any significant effect of the development of web-based learning media on "ability and willingness expression" for 8th-grade students of junior high school.

In this study, the population of this research was the eighth grades students of Islamic Junior High Schools in Pekanbaru in the academic year 2022. To choose the sample, the researcher used random sampling to get 8.1, consisting of 36 students. The researcher used tests consisting of pretest and post-test as the instrument of research for gathering the data accurately.

Product trial is part of the development stage carried out by only three stages: alpha testing, beta testing, and effectiveness testing. Media and material experts conducted the alpha test. Then, the beta test was conducted on the 8th class of junior high school students to determine students' opinions regarding the quality of the web-based learning media. The results of this beta test were analyzed and used as input for final product improvement. The effectiveness test was carried out on students to find improvement in learning outcomes after using learning media products. Data analysis techniques for the feasibility of learning multimedia products using its Likert scale. The resulting score is converted to the value with a scale of 5, dividing the expected value on a five scale or five qualifications. Scale 5 in research and development, namely 5 = very good, 4 = good, 3 = quite good, 2 = not good, and 1 = very less. To know the quality product of good development from material and media aspects, and students towards product development, then from the original data in the form of scores, converted into qualitative data by five scales (Niah & Ismaniati, 2015). And to change the score to a scale of five, presented in Table 1.

Table 1. *Five scales score conversion*

Formula	Calculation	Criteria
X>Xi + 1,8 SBi	X > 4,21	Very good
Xi+0.6 SBi<X≤Xi+1,8 SBi	3,40<X≤4,21	Good
Xi+0.6 SBi<X≤Xi+0,6 SBi	2,60< X ≤3,40	Quite good
Xi-1,8 SBi < X ≤Xi-0,6 SBi	1,79< X ≤2,60	Not good
X>Xi – 1,8 SBi	X≤1,79	Very less

While the data analysis technique is to see the effectiveness of using the product developed by looking at the gain score and pass percentage of students. Gain scores aims to determining the effectiveness of web-based learning in the mastery modal

ability and willingness expression recognised in the test scores of student learning outcomes (Asih & Nilakusmawati., 2017). Learning by using the developed product calculated by the N-gain formula, which is define based on the average gain score (g) is the ratio of the gain score.

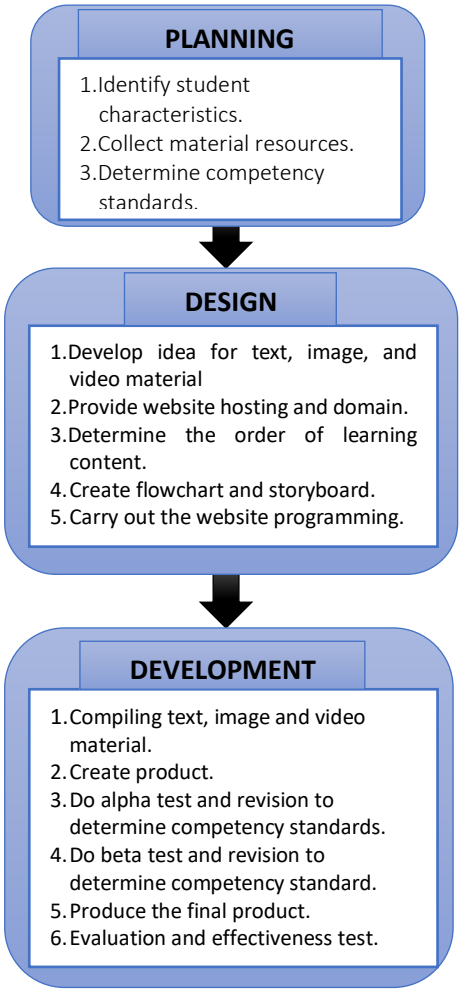
This value is then interpreted into the Gain value classification table (Hake, 1998) which is presented in Table 2 .

Table 2. *Gain value interpretation*

Score (g)	Classification
(N-gain) ≥ 0,7	High
0,7 > (N-gain) ≥ 0,3	Middle
(N-gain) < 0,3	Low

The procedural model used refers to the steps that have been developed by (Alessi & Trollip, 2001) that is: planning, design, and development. The procedure for developing web-based learning media in this study can be explained as presented in Figure 1.

Figure 1: *Procedure developing web-based learning media*



3. FINDINGS AND DISCUSSION

This research was carried out eight grade students of Islamic Junior High Schools in Pekanbaru in the academic year 2022, where the number of students is 36, consisting of 16 male and 20 female students. The following are the research finding on the Development of Web-Based Learning Media on "Ability and Willingness Expression".

Instruments Validation Results

Media Validation by Expert

Validation was carried out to determine the quality of teaching materials in terms of the media aspect. Two aspects were assessed, namely aspects of appearance with a total of 10 items and programming aspects of 7 items. Assessment using a 5 scales questionnaire. Results media expert assessment can be seen at Table 3.

Table 3. *Average Score of Media Validation by Expert*

Aspects of assessment	Score (g)	Classification
Content	4,20	Good
Programming	4,57	Very Good
Average	4,38	Very good

Based on the results of media expert validation with aspects of content and programming, it can be concluded that web-based learning media on "ability and willingness expression" gets an average value (4.38) which is categorized as "very good".

The following is an overview of Web-based Learning Media on "ability and willingness expression".

Figure 2: *Overview of media*

Material Validation by Expert

Implementation of validation by providing product development results to the validator to assess each aspect and provide an assessment by filling out the Likert scale that has been provided. Including aspects of learning and material aspects. Elements assessed include elements of the feasibility of teaching materials with a total of 4 points of assessment and aspects of learning as many as 8 points. Validation is done by providing web-based learning media, which results from development assessed by material experts. The following is the result of verification by a material expert.

Table 4. *Average score of material validation by expert.*

Aspects of assessment	Score (g)	Classification
Learning	5,00	Very Good
Material	4,25	Very Good
Average	4,60	Very good

The data obtained from material expert validation with learning and material aspects can be concluded that web-based learning media on "ability and willingness expression" get an average value (4.60) categorized as "Very good".

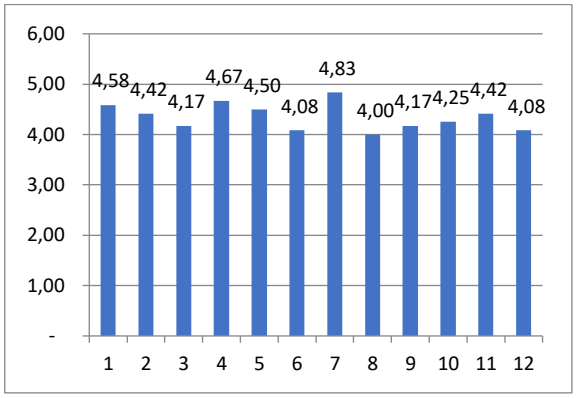
Beta test For Students

Beta testing aims to gather the information that can be used to repair the product in the next revision. Amount students in the beta test amounted to 36 students. The beta test is done by showing product development results to students on each monitor to be studied, and then students are asked to provide feedback about the quality product from display or media presentation and learn about the convenience the material presented.

There are 12 assessment items that overall get excellent ratings, namely five aspects of interest, four aspects of the material, and three aspects of language. In detail, aspects of interest are (a) attractive website appearance, (b) increased enthusiasm in learning with the website, (c) website can reduce boredom in learning, (d) increase mastery of the material, (e) illustrations that increase interest in learning. While the details of the material aspects are: (a) delivery of material related to daily life, (b) delivery of material that is easy to understand, (c) presentation of material that helps to discuss with friends, (d) there is an evaluation test of material understanding. Also, aspects of language include (a) the sentences used are easy to understand, (b) the language used is simple, (c) the letters used are simple and easy to read.

Visually, the overall appearance of students' assessments on the beta test of the developed web-based learning media on the material of ability and willingness is presented in Figure 3.

Figure 3: *Beta Score*



The data obtained from student responses to the development of web-based learning media was then converted into a scale of 5. The results of the beta test data on the aspects of interesting, material, and language showed that the average score of 4,32 was categorized as "very good."

Product Effectiveness Test Results

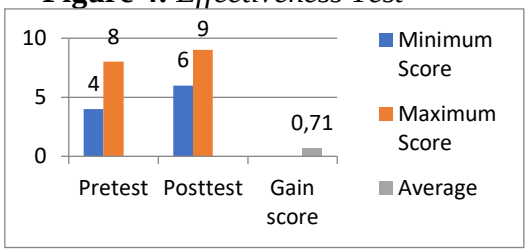
The effectiveness test was conducted to define the effectiveness of the resulting product development in web-based learning media on “ability and willingness expression” by looking at the increase in gain score and completeness of student learning. Completeness of student learning is seen before and after using web-based learning media. The results of students following pretest and post-test totaling 36 students, known as the highest value, the lowest value, pretest-posttest mean and difference (N-Gain score). The data are presented in Table 5.

Table 5. *Pretest-Posttest Mean and Difference (N-Gain score).*

Scores	Pre test	Post test	Index Gain	Classification
Minimum	4	6	0,33	middle
Maximum	8	9	0,60	middle
Total	215	283	10,47	high
Average	5,9	7,9	0,71	high

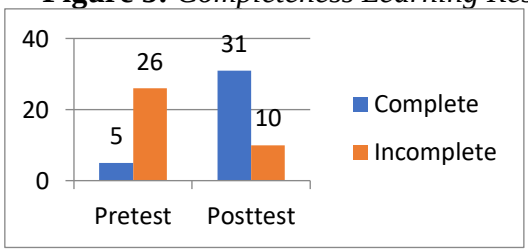
The difference in the value of the pre- test post-test N-gain scores is visually presented in Figure 4.

Figure 4: *Effectiveness Test*



Based on Figure 4, it can be seen that the gain score is 0.71. The value is based on the classification of the gain value in the middle classification. Meanwhile, student learning completeness refers to the minimum completeness criteria for English subjects at Islamic Junior High Schools, namely 75.

Figure 5: *Completeness Learning Result*



In the pretest, before students use web-based learning product, 5 students are declared complete, while 26 students are declared incomplete. The results of the post-test or after students use web-based learning product, 31 students are declared complete, while students who are declared incomplete there are 10 students. The completeness of the student learning at the time of pretest and post-test can be presented in Figure 5.

Discussion

Based on the result that there is an influence of the web-based learning media on “ability and willingness expression” for junior high school students. We can see web-based learning media help teachers carry out learning activities. Easy internet access and learning activities can also help students. In E-learning. The learning process can be more efficient and effective. Furthermore, the learning process can be an attractive demand, motivation and passion for students to study independently. The tools in the form of modules are put on the website. It helps students to understand lessons easily and helps students to learn anytime and anywhere(Sudarman et al., 2019). Web-based learning media can be equipped with various learning materials to engage students in the learning process.

Web-based learning media on "ability and willingness expression" was developed through several stages: planning, design, development, validation, and revision to produce a final product(Alessi & Trollip, 2001). The purpose of this study is to determine the feasibility and effectiveness of web-based learning media on "ability and willingness expression", which was developed in learning English for junior high school students.

The final form of the product developed is a website that can be accessed via a browser. Web-based learning media was developed using WordPress and designed using the Elementor plugin. Web-based learning media on "ability and willingness expression" contains content for English subjects that discuss ability and willingness expression. This web-based learning media generally consists of a home page, instructions, menus, materials, Vocabulary, quizzes, and profiles.

The development of this learning product is based on the 2013 curriculum, which is being applied to the research school. It is intended that the developed media products can continue to be useful for students at the school. Besides that, the media is designed to be used independently or together, which can help students easily understand the material presented well.

4. CONCLUSION

Based on the results of research and development of web-based learning media on “ability and willingness expression”, it is concluded that: First, this product is suitable for use in learning based on the assessment of material experts, media experts, and students in terms of the feasibility material, learning, display, and programming aspects. The assessment score obtained a value in the Very Well category from the overall feasibility test. Second, this English web-based learning media can effectively be used to learn. This can be seen from the results of students' tests in their understanding of ability and willingness expression using web-based learning media on “ability and willingness expression”, which shows an increase in learning outcomes from pretest scores to post-test scores or (N-Gain) scores of 0.71 with the category "very good.".

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