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Development of Google Sites Web-Based Multimedia Learning in the Arts and Culture Subject for Class X TKJ 2 UPT SMK Negeri 2 Sidenreng Rappang

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A B S T R A C T

This advancement investigate points to create a item within the shape of Google Destinations Web Learning Mixed media for the Expressions and Culture subject lesson X TKJ 2 UPT SMK Negeri 2 Sidenreng Rappang. The investigate strategy utilized is the Investigate and Advancement (R&D) improvement show with the 4D advancement demonstrate which has been created by Thiagarajan, Semmel and Semmel (1974) which incorporates four stages, to be specific: Characterize which incorporates the beginning last investigation steps, understudy Investigation , concept investigation, and detailing of learning targets; Plan or arranging which incorporates the steps of planning tests, selecting media, selecting instructing fabric groups, and making starting plans; Create or improvement which incorporates item improvement steps, master evaluation, improvement trials, and item modifications. Information collection strategies utilize perception, interviews, surveys and tests which are at that point analyzed quantitatively distinctly; Spread or spread which incorporates the steps of disseminating media. The appraisal comes about appear that the advancement of Google Destinations Web Learning mixed media is evaluated as exceptionally substantial and exceptionally viable. These comes about were gotten from media and fabric master approval, instructor reactions, and reactions from course X TKJ 2 UPT SMK Negeri 2 Sidrap students.

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INTRODUCTION

Education is a process of changing the attitudes and behaviors of individuals or groups of people that essentially guide humans in their daily lives correctly (Safitri et al., 2022). Therefore, the role of education is very important because education is the key to creating quality human resources.According to the Ministry of Education and Culture, the general definition of education is conscious and planned efforts to create a learning environment with evaluation systems for children and/or students by actively developing the existing abilities of individuals to develop spiritual knowledge, self-control, intelligence potential, personality values, morals, and skills (Ministry of Education and Culture, 2021).

Another problem often encountered in the world of education is the weakness of the learning process. In the teaching and learning process, students mostly learn theory. Classroom learning focuses more on the ability of children to understand the subject matter. However, the theory learned by students lacks practical application in everyday life. Generally, the conventional teaching methods applied by teachers are unable to capture students' attention, as these methods tend to not involve students actively in the learning process. This results in students having a shallow understanding of the subject matter. In the teaching and learning process, the presence of teachers is expected to develop students' potential and creativity. This way, students can have knowledge not only in theory but also in its practical application for future development in the changing times.

LITERATURE REVIEW

According to (Usman M 2021) in (Muhammad Takdir et al., 2023), another factor that causes the ineffectiveness of learning is the lack of utilization of multimedia in the learning process, and teachers feel pressured by the limited time they have to teach. For productive learning, suitable and fulfilling media that contain moving elements are necessary so that the teaching process can be well observed. The lack of motivation and attention from students indicates that there are barriers in the learning process, which disrupts the information that should be received by students. Educators must be able to design, develop, and utilize existing learning media to support the learning process. This is in accordance with Law No. 14 of 2005, which states that every teacher must be able to utilize technology for the purpose of educational development. In the field of education, there are many software programs that can be used as learning media. The appropriate use of technology as learning media will result in effective and efficient teaching and learning activities.

Ideally, in teaching and learning activities, especially in the subject of Arts and Culture, it is advisable to use learning media that present various interesting content. This aims to create a different atmosphere and change students' perception of Arts and Culture learning. The use of learning media brings positive impacts for educators, as through these media, educators have the opportunity to improve teaching methods, which in turn can enhance students' overall learning engagement. According to (Usman M 2021), another factor that causes the ineffectiveness of learning is the lack of utilization of

multimedia in the learning process, and teachers feel pressured by the limited time they have. To achieve effective learning, suitable media that align with students' characteristics, the learning material to be delivered, and the supporting environment and facilities are needed. With good learning tools, students will be guided to enhance their learning motivation (Syamsunir et al., 2020).

Based on these opinions, it can be concluded that media in learning is very important in education and facilitates teachers in delivering learning materials and interacting with students. One innovation in technological development is web-based learning. Republic of Indonesia Law No. 20 of 2003 concerning the National Education System, Article 15 states that types of education include general education, vocational education, academic education, professional education, vocational education, and religious education. Vocational education, in this case, Vocational High School (SMK), is one of the schools that aims to prepare students to directly enter the workforce with the skills provided by the school. Graduates of SMK are more prepared for work because they have been equipped with sufficient knowledge and skills. The realization of work-ready students in SMK is inseparable from the role of the curriculum, teachers, and learning models. Based on observations at the research site, in this case, at UPT SMK Negeri 2 Sidrap, specifically in class X TKJ 2 for the subject of Arts and Culture, the researcher observed the teaching and learning process in the classroom. The teaching and learning activities are still not effective as they still use conventional methods/lecture methods. The results of interviews and observations with teachers and students indicate that the teaching of Arts and Culture still uses lecture methods and utilizes WhatsApp as a learning medium. The students admitted that they have difficulty understanding the material presented by the teacher, which is due to the lack of creativity from the educators in delivering the learning material, resulting in students being less motivated to participate in the learning process.

The student also admitted that the teaching method used by the teacher tends to be more lecture-based without any variation, which makes the students feel bored and uncomfortable in the classroom. The conclusion drawn from the interview results is that this can potentially have a negative impact on the learning process, resulting in learning outcomes that do not meet the educational objectives stated in the lesson plans and syllabus. Therefore, the researcher suggests a solution to use a web-based media learning software for the Art and Culture subject in class X TKJ 2. The software or web site used to develop this media is Google Sites. The reason for using Google Sites is that it allows users to collaborate using Sites. This web-based multimedia can be used as a learning tool for students and as a teaching multimedia for educators in the teaching and learning process.

METHODOLOGY

The type of research used in this research on the development of web-based learning media using Google Sites is Research and Development (R&D) with the 4D model (Define, Design, Develop, and Disseminate). The objective of

this research is to produce a valid and practical web-based multimedia learning using Google Sites for UPT SMK Negeri 2 Sidrap. The research and development (R&D) model consists of 4D stages: Define, which includes initial and final analysis, student analysis, task analysis, concept analysis, and formulation of learning objectives; Design, which includes test preparation, media selection, selection of teaching materials format, and initial design; Develop, which includes product development, expert assessment, development testing, and product revision. Data collection in this research uses observation, interviews, and questionnaires, which are then analyzed descriptively and quantitatively. Disseminate, which includes media dissemination (Thiagarajana, 1974). This research was conducted at UPT SMK Negeri 2 Sidrap, located at Jenderal Ahmad Yani No.01, Pancarijang District, Sidenreng Rappang Regency, and South Sulawesi Province. The object of this research is the Web-Based Multimedia learning using Google Sites for Art and Culture subject in UPT SMK Negeri 2 Sidrap in the odd semester of the academic year 2023/2024. The subjects of this research are four validators consisting of 1 instrument expert, 1 subject matter expert, 1 media expert, 1 Art and Culture subject teacher, and 25 students from class X TKJ 2 at UPT SMK Negeri 2 Sidrap to assess the practicality level of the developed product. Data analysis in this research uses the percentage formula (Tegeh et al., 2014).

$$P = \frac{\sum x}{SMI} x100\%$$

Table 1. Determining Validity or Feasibility

Percentage	Description
85.01% - 100%	Very Feasible
70.01% - 85%	Feasible
50.01% - 70%	Moderately Feasible
01.00% - 50.00%	Not Feasible

Source: Akbar, 2013

Table 2. Determining Practicality

Validity Criteria	Category	Description
81.00% - 100.00%	Very Practical	Can be used without any improvements
61.00% - 80.00%	Practical	Can be used with minor improvements
41.00% - 60.00%	Less Practical	Not recommended for use as it requires major improvements
21.00% - 40.00%	Not Practical	Should not be used
00.00% - 20.00%	Not at all Practical	Cannot be used

Source: Wandani & Nasution, 2017

RESULTS AND DISCUSSION

The results of this study are within the frame of a Web-based Interactive media Learning Google Destinations item agreeing to the 4D advancement demonstrate. The strategy for creating the Google Destinations Web-based Mixed media learning media employments the 4D improvement show, to be specific:

(1)Characterize or definition, counting introductory and last investigation, understudy examination, errand examination, concept investigation, and detailing of learning goals; (2) Plan or plan, counting test planning, media choice, arrange choice, and beginning plan; (3) Create or improvement, counting item advancement, master approval, advancement testing, and item amendment; (4) Spread or dispersal, point by point action plan carried out in creating the Google Locales Web-based Mixed media Learning. The taking after are the investigate stages with the 4D advancement demonstrate.

Define Arrange (Approach) Within the Beginning and Last Investigation arrange, the analyst watched the X TKJ 2 UPT SMK Negeri 2 Sidrap lesson and met the Vital and the instructor who taught Essential Programming, in arrange to recognize the essential issues within the prepare of learning Expressions and Culture. Based on the beginning perception, the fundamental issues found within the school are that the learning handle is still conducted utilizing address strategies, the arrangement of worksheets, and the restrictions and utilize of course readings. Within the Understudy Examination organize, the analyst watched and met the understudies of lesson X TKJ 2 UPT SMK Negeri 2 Sidrap to discover out their learning exercises and characteristics. Based on the perception and meet comes about, it is by and large found that the understudies of course X TKJ 2 UPT SMK Negeri 2 Sidrap overwhelmingly select the audio-visual learning fashion within the learning prepare. Within the Errand Investigation arrange, the analyst analyzed the assignments within the form of essential competencies or pointers that will be created and utilized within the learning handle. Within the Concept Analysis stage, the analyst analysed the concepts or materials that will be taught within the learning prepare. This concept investigation is carried out to select, decide, plan, and organize the concepts or materials to be taught. Within the Detailing of Destinations stage, the purpose of this step is to decide the learning targets defined from the concept investigation and assignment investigation arranged based on the essential competencies and centred competencies as well as the most learning materials. Based on the concept examination and assignment examination, learning targets comprising of cognitive perspectives can be defined.

Design Stage (design), In the Test Preparation stage, the test preparation activities are based on the formulated objectives and task analysis. The tests prepared for Basic Programming material are multiple-choice tests. In the Media Selection stage, the researcher selects the media used in presenting the learning materials in order to clarify and attract students' attention according to their interests and motivations. Based on the student interviews, task analysis, concept analysis, and learning facilities owned by the students of class X TKJ 2

UPT SMK Negeri 2 Sidrap, the selected and used media are tests, images, audio, and animations that will be packaged in the Google Sites Web-based Multimedia Learning and the researcher uses Whatsapp Group as a means of communication to share the Google Sites Web-based Multimedia Learning in the form of links so that students can access the Google Sites Web-based Multimedia Learning. In the Format Selection stage, the researcher determines the learning strategies, learning resources, and learning media formats that will be used in the Google Sites Web-based Multimedia Learning. When designing the learning strategy or Lesson Plan (RPP), the researcher selects a format that is in accordance with the guidelines. In the Initial Design stage, the researcher designs and creates an initial design or product of the Google Sites Web-based Multimedia Learning based on the analysis of the learning materials based on the learning objectives, test preparation, media selection, and format selection, which will then be validated by instrument validators, media experts, and material experts.

Develop Stage (Development), In this stage, the researcher produces the final product by combining all aspects of the initial design into the Google Sites Web-based Multimedia Learning. The following are the initial displays of the Google Sites Web-based Multimedia Learning.

Figure 1. Home Page of the Google Sites Web-based Multimedia Learning

Figure 2. Menu Page of the Google Sites Web-based Multimedia Learning Materials

After the media expert validator tests the product developed by the researcher, the researcher then provides a questionnaire to assess the product in order to determine the validity of the Google Sites Web-based Multimedia Learning. The maximum score for each indicator is 5. The total score for all indicators is 95. The following is the assessment details from the media expert validator.

Table 3. Media Expert Validation Questionnaire Scores

No.	Indicator	Assessment Score				
		1	2	3	4	5
	Appearance					
1	Clarity of text or writing					✓
2	Color selection and composition accuracy					✓
3	Consistency of button placement					✓
4	Image display quality					✓
5	Animation image display quality				✓	
6	Animation presentation				✓	
7	Screen display					✓
8	Accuracy of language usage					✓
9	Background color consistency with text					✓
	Programming					
1	Clarity of navigation					✓
2	Consistency of button usage					✓
3	Ease of use					✓
4	Text efficiency				✓	
5	Image efficiency					✓
6	Program speed				✓	

7	Media animation					✓
8	Animation settings				✓	
9	Ease of selecting presentation menus					✓
10	Ease of use					✓
	Total Score	90 90: 95 = 0.94 X 100% = 94% (Very Valid)				

Based on the obtained assessment score above, it can be concluded that the score obtained is 90. Based on the formula (Tegeh et al., 2014), the assessment score of 90 divided by the maximum score of 95 multiplied by 100% = 94% (very valid). So, the multimedia expert validation for the Google Sites Web Learning Multimedia product is classified as very valid, because the final percentage value is in the range of 85.01% - 100.00%.

After the material expert validator tested the product developed by the researcher, the researcher then provided a questionnaire to assess whether the product is valid or not. The maximum score for each indicator is 5. The total score for all indicators is 50, with the following assessment details from the material expert validator.

Table 4. Material Expert Validation Questionnaire Scores

No.	**Indicator**	**Assessment Score**				
		1	**2**	**3**	**4**	**5**
	Material/Content					
1	Material is in accordance with the learning objectives					✓
2	Material is in accordance with the measured indicators					✓
3	Accuracy of data and facts					✓
4	Use of images, audio, and animation					
5	Use of communicative language					✓
6	Use of clear and easily understandable sentences					✓
	Evaluation					
7	Exercise questions are in accordance with the learning objectives					✓
8	The questions presented/displayed consist of easy, medium, and difficult level questions.					✓
9	Weighted questions					✓
10	The questions are easy to understand.					✓
	Total Score	49 49: 50 = 0.98 X 100% = 98% (Very Valid)				

Based on the obtained assessment score above, it can be concluded that the score obtained is 49. Based on the formula (Tegeh et al., 2014), the score of "49" divided by the maximum score of 50 = 0.98 multiplied by 100% = 98% (Very valid). So, for the validation of subject matter experts on the Web-based

Google Sites Learning Multimedia product, it falls into the category of very valid, as the final score percentage is in the range of 85.01% - 100.00%.

Development of Web-based Google Sites Learning Multimedia, In this research and development, a product or learning multimedia in the form of Web-based Google Sites Learning Multimedia has been produced, which can be used in the learning process for the subject of Arts and Culture. In developing this Web-based Google Sites Learning Multimedia, the development procedure used is the 4D development model, which consists of four stages: (1) Define, which includes initial and final analysis, student analysis, task analysis, concept analysis, and formulation of learning objectives; (2) Design, which includes test preparation, media selection, format selection, and initial design; (3) Develop, which includes product development, expert validation, development testing, and product revision; (4) Disseminate or distribution.

Validity Level of Web-based Google Sites Learning Multimedia, The validity level obtained is based on the assessment results from instrument validators, media experts, and subject matter experts. The instrument validation results show that the instruments can be used, with the media aspect assessment instrument obtaining a score of 94%, the material aspect assessment instrument obtaining a score of 94%, the teacher response assessment instrument obtaining a score of 94%, and the student response assessment instrument obtaining a score of 94%. All of these instruments fall into the "very valid" category.

Practicality Level of Web-based Google Sites Learning Multimedia, The practicality level of the produced product is obtained from the analysis of questionnaires on teacher and student responses. The assessment results of teacher and student responses to the Web-based Google Sites Learning Multimedia are "Very Practical" to use. Based on the teacher's response, a score of 95% with the category "Very Practical" is obtained. The student's response results in a score of 92% with the category "Very Practical". Therefore, it can be concluded that the Web-based Google Sites Learning Multimedia is considered very practical.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this research and development, several conclusions can be drawn as follows: The result of this development research is the Web-based Google Sites Learning Multimedia. This development research uses the 4D development model, which consists of four stages: (1) Define stage, which includes initial and final analysis, student analysis, task analysis, concept analysis, and formulation of learning objectives; (2) Design stage, which includes test preparation, media selection, format selection, and initial design; (3) Develop stage, which consists of product development, expert assessment, development testing, and product revision; and (4) Disseminate or distribution to the students of class X TKJ 2 UPT SMK Negeri 2 Sidrap.

Based on the assessment results from instrument validators, it is shown that the instruments can be used. The media aspect assessment instrument obtains a score of 94%, the material aspect assessment instrument obtains a

score of 94%, the teacher response assessment instrument obtains a score of 91%, and the student response assessment instrument obtains a score of 94%. All of these instruments fall into the "very valid" category. The assessment results from media experts and subject matter experts conclude that the validity level of the Web-based Google Sites Learning Multimedia is already very valid, with a score of 96%, indicating that the validity of the developed Web-based Google Sites Learning Multimedia falls into the "Very Valid" category. Based on the teacher's response, a score of 95% with the category "Very Practical" is obtained. Additionally, the student's response results in a score of 92% with the category "Very Practical".

FURTHER STUDY

This research still has limitations so further research on the topic is still needed "Development of Google Sites Web-Based Multimedia Learning in the Arts and Culture Subject for Class X TKJ 2 UPT SMK Negeri 2 Sidenreng Rappang."

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