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Development of Web Media Based on Google Sites and Its Effect on Student Learning Motivation in Economics Lessons for Students of SMA Negeri 8 Malang

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Abstract The objectives of this study are to: 1) create and assess Google Sites web-based learning materials and their viability; and 2) ascertain the effect of Google Sites online media use on the learning motivation of SMA Negeri 8 Malang City 11th grade students. Using the Borg and Gall paradigm, research and development (R&D) is the methodology employed. The process of designing a product may be broken down into seven simple stages: 1) research and data collection; 2) product creation; 3) product validation; 4) restricted trials; 5) revision; 6) user trials; and 7) final product manufacturing.Qualitative descriptive analysis and quantitative analysis are the two data analysis techniques used in this study. The findings demonstrated that 1) the creation of Google Sites online educational resources utilising the Borg and Gall paradigm was awarded.
Keywords : Web Media Development, Google Sites, Learning Motivation, Economics Lessons

A. INTRODUCTION

Advances in information technology are developing rapidly at the moment. The great potential of advances in Information Technology to transform education, but there are difficulties in its implementation (Mukaromah, 2020; Putri & Citra, 2019). Especially in the context of economic learning, most teachers still rely on textbooks and traditional printed materials as the main source of learning. Access constraints to digital resources, such as e-books or online learning platforms, can limit the variety and depth of material that can be taught.

This phenomenon creates a difference between creative learning and conventional learning in the classroom. Students become bored and unmotivated in teaching and learning activities. Students who are bored with monotonous and non-interactive learning can negatively affect learning outcomes (Hanifa & Astuti, 2022). Proven from research conducted by Hasan et al. (2023) who mentioned that the use of renewable media is rarely used today to be one of the causes of decreased incentive for student learning.

The complexity of this problem was found through observations and interviews with economics teachers at SMA Negeri 8 Malang where there are still some teachers who rely on textbook media and traditional printed materials as the main source of learning. This condition practically causes the process of delivering material and discussion to be very limited. In learning, teachers deliver lessons in class while students are asked to record in a notebook what material the teacher has delivered in class. As a result, Learning results decline along with students' enthusiasm to study.

To address these issues, innovation and procedural improvement in education are required. Including instructors in the process of updating or improving the learning resources that are being utilised is one solution that might be considered. In response to these circumstances, researchers are eager to conduct learning studies using E-Learning technology as a substitute that may improve learning outcomes.. Setyoningsih (2015) According to Setyoningsih (2015), e-learning technology helps schools overcome current challenges and creates opportunities for a number of benefits,

including the best possible teaching and learning environment, seamless knowledge transfer, enhanced human resource quality, expert school management, accurate data and information, and the ability to share knowledge online.

The utilization of E-learning resources are beneficial on today's students. Proven in research conducted by Sugiarto (2017). His study's findings indicated that the average learning outcomes using e-learning media were greater than using conventional media. Studies that were carried out by Chen et al. (2010) also explained, there is a overall favourable correlation between using e-learning with student engagement and learning outcomes. Hignasari & Supriadi (2020) in their research revealed that the average value of learning outcomes increased after using e-learning media. Furthermore, Dewi (2020) in her research, e-learning development using the Google Sites platform can improve student learning success.

This study adds to the body of knowledge about the development and application of e-learning technologies in the classroom. That being said, the focus of this research's accomplishment is different. In an attempt to boost student learning motivation in economics classes, this research focuses more on the design of e-learning technologies. Google Sites was used in the construction of this e-learning system application. In addition, The Borg & Gall model is used in Research and Development (R&D) in this study. The outcomes of E-learning web design include economic material that is connected through an internet network concept in order to facilitate learning for both educators and learners to find information, exchange knowledge, and interact in discussing economic material. Furthermore, this study makes use of two classes as

This product is another way that distinguishes this study from previous studies. According to research conducted by Utami (2023) highlights the existence of display instructions that need to be made clearer so that students are not confused in accessing google sites, similar to this research conducted by Adzkiya & Suryaman (2021) says google sites must provide clear information on how to use Google Sites learning media because some students have difficulty accessing learning materials. So this research complements previous research in terms of instructions for using google sites so that students do not experience confusion in using google sites.

B. METHODS

Using the Borg & Gall (1989) approach, research and development (R&D) is the methodology employed. The phases of evolution were condensed into: Researching and gathering basic data;2) creating the product;3) validating the product;4) limited testing;5) revision;6) use trials; and 7) creating the finished product

Using a pretest-posttest control group design, a quasi-experimental approach is used to evaluate the product's impact on student learning motivation. The study subjects consisted of 60 students from class XI IPS SMA Negeri 8 Malang during the 2023–2024 academic year. The research subjects were selected using purposeful sampling, which produced two groups: a control group of thirty individuals and an experimental group of thirty.

This analysis is used to process data obtained through small group trials and field trials to students and the results of suggestions and improvements from experts. Percentage formula on each subject's answer with the following formula (Arikunto, 2002).

$$\text{percentation } (\%) = \frac{\sum(\text{overall questionnaire answer score})}{\text{N} \times \text{n} \times \text{highest value}} \times 100\%$$

Description :

N = Number of Respondents

n = Total number of questionnaire items

To be able to give meaning and make decisions, the following provisions are used

Table 1 percentage score Criteria

Achevement Rate (%)	Qualification	Description
≥ 86	Highly Effective	Feasible
≥ 71 – < 86	Effectibe	Feasible
≥ 56 – < 71	Effective Enough	Not Feasible
≥ 41 – < 56	Less Effective	Not Feasible
< 41	Very Less Effective	Not Feasible

Source : (Arikunto, 2002).

The following categories of data were employed in this investigation.: 1) Quantitative data collected through surveys from instructors, students, and validators; 2) Qualitative data collected from specialists in learning media design and economic materials. On the other hand, the analysis of criteria scores using a Likert scale of 1-4 is processed through descriptive quantitative analysis statistics. The subject responses were analysed using the percentage calculation. (Sugiyono, 2014).

A 25-item questionnaire based on indicators of learning motivation, including: (1) the presence of a desire and a desire to succeed; (2) the presence of needs and encouragement for learning; (3) the presence of hopes and ideals for the future; (4) the presence of rewards for learning; (5) the presence of engaging learning activities; and (6) the presence of a supportive learning environment, was used to collect data on the product's effect on student learning motivation (Uno, 2021).

Tabel 2. Learning Motivation Validity Test Result

Questions	T Count	T table	Conclusion
1	0.782	0.334	Valid
2	0.730	0.334	Valid
3	0.797	0.334	Valid
4	0.619	0.334	Valid
5	0.699	0.334	Valid
6	0.829	0.334	Valid
7	0.880	0.334	Valid
8	0.725	0.334	Valid
9	0.782	0.334	Valid
10	0.708	0.334	Valid
11	0.644	0.334	Valid
12	0.688	0.334	Valid
13	0.650	0.334	Valid
14	0.678	0.334	Valid

Table 1 indicates that the 14-question learning motivation tool is deemed acceptable as it satisfies the requirement that r count be bigger than r table, specifically 0.532. Additionally, because the learning motivation tool's alpha value is greater than 0.6, the study's dependability results are deemed reliable.

Table 3. Instrument Reliability Test Result

Cronbach's Alpha	N of Items
.932	14

The t test, homogeneity test, and normalcy test were employed in this study's data analysis. With a significance threshold of 0.05, the SPSS 23.0 for Windows programme helped with all data analysis for this research study.

C. RESULT & DISCUSSION

Figure 1 : data retrieval
Source Image : researcher data

Sixty students from SMA Negeri 8 Malang City's class XI participated in this study. They were divided into two groups: the experimental class and the control class.

The outcomes of creating educational materials based on Google Sites use the Borg & Gall (1989) in its stages. The first step is research and collecting initial data. This step is a fundamental step in the scientific method of research. At this stage, the researcher identifies the problem or question to be answered, and determines the method that will be used to obtain relevant data. Collecting preliminary data involves various techniques such as surveys, interviews, observations, or document analysis, all of which aim to obtain accurate and reliable information. The data collected at this stage will form the basis for further analysis, helping the researcher understand the context and variables at play in the problem under study. Thus, initial research and data collection is a very important foundation to ensure that the research results will be valid and reliable

The second step is Product Development which involves several steps, including concept design, testing and evaluation. This learning product development can be accessed at https://sites.google.com/view/edulearneconomic

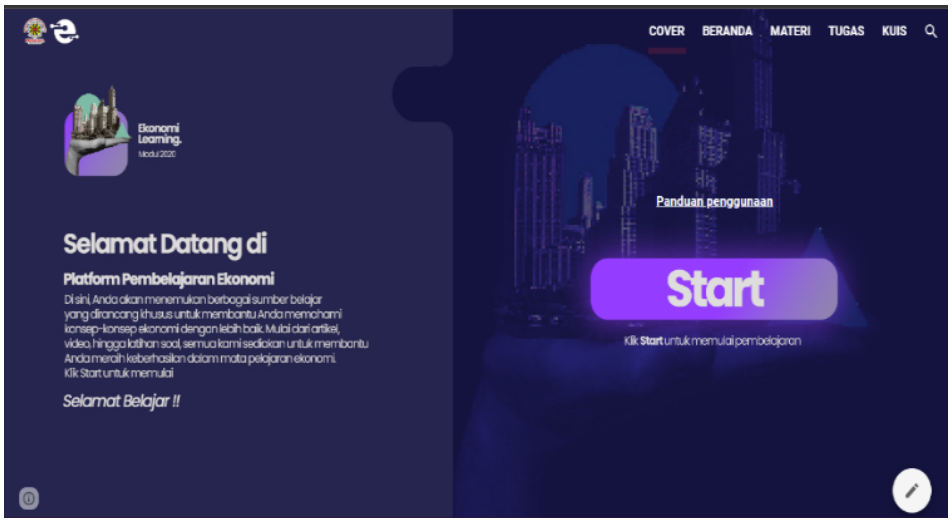

Figure 2 : initial display

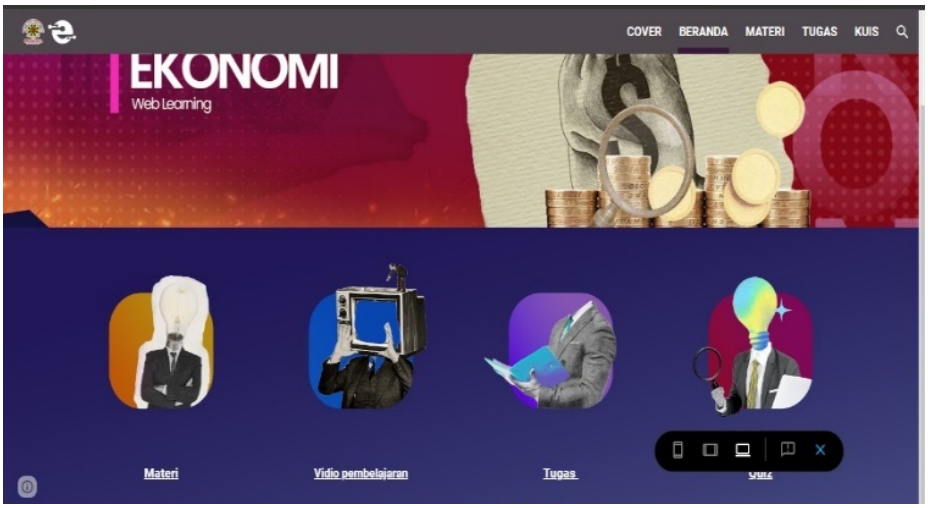

Figure 3 : menu display

The picture above is an initial display that shows the features of the features on google sites, before starting there is a usage guide feature to facilitate students' usage of Google Sites to the fullest

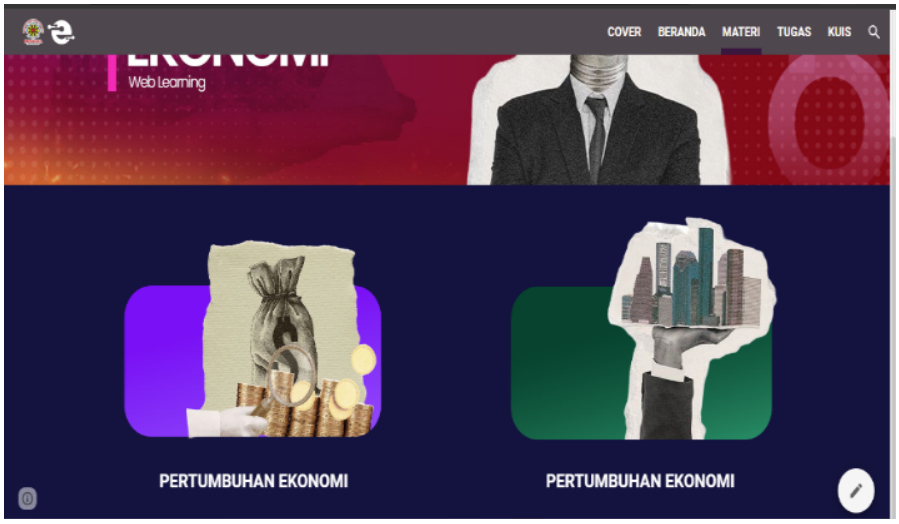

Figure 4 : material menu display

Figure 5 : material display of economic growth

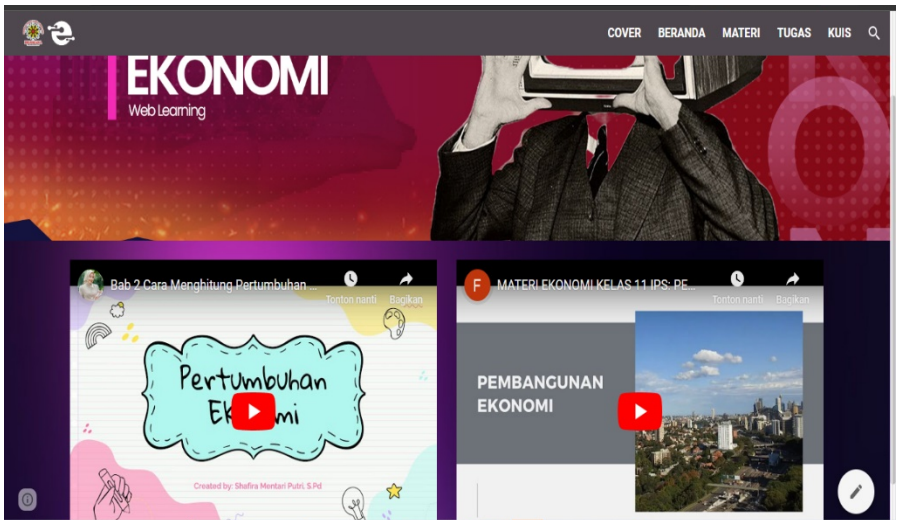

Figure 6 : learning media display

The picture above displays the material features which in this study use economic subjects on economic growth and economic development class XI, then there are learning media features as a complement and facilitate students' study of the content that has been delivered through learning videos

Figure 7 : task menu display

Figure 8 : economic growth assignment display

Figure 9 : quiz menu display

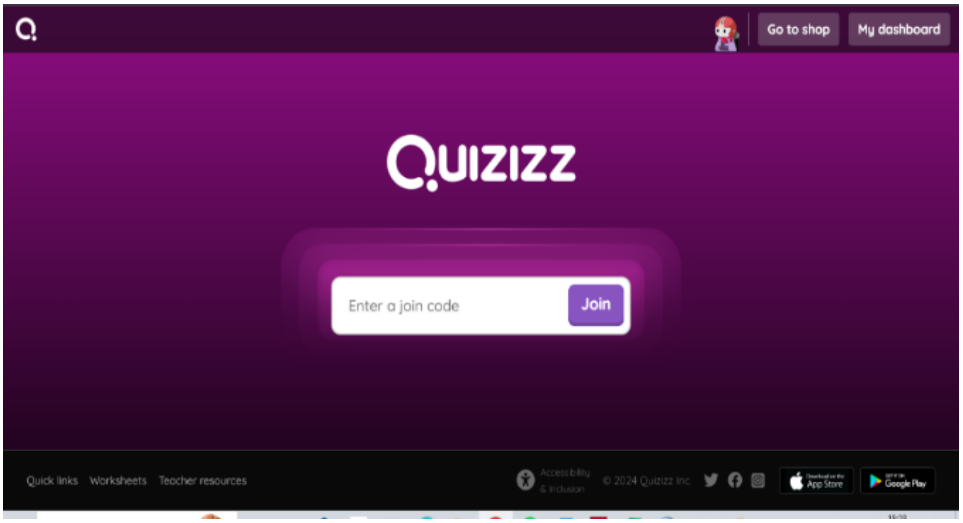

Figure 10 : economics quiz display

In the picture, it displays the task and quiz features as an evaluation of the learning that has been carried out, using prezi and quizizzes to make students more interactive because the media used varies.

The development of Google sites media products has been tested first, so that the product has undergone several revision processes for comments given by students and media experts. The product description above is the result of revisions from several comments given to researchers.

The third stage is product testing which is carried out to ensure that the product meets the desired quality and functionality standards. Product development is a stage that continues by conducting product validation to ensure that the design and functionality are in accordance with the identified needs. The validation stage is carried out to see The degree of viability of educational media. Experts in materials and media make up the design validation team, and Economics teachers and students. The instrument used is a questionnaire. The validation carried out results in an assessment of the feasibility of the product and product improvements (learning media).

Table 4 . data feasibility

No	Correspondent	Percentage (%)	Category					Conclusion
			HE	E	ME	LE	VLE	
1	Material Expert	95,00	√	-	-	-	-	Feasible
2	Media Expert	92,50	√	-	-	-	-	Feasible
3	Student	84,38	-	√	-	-	-	Feasible
4	Teacher	96,00	√	-	-	-	-	Feasible
	Average	91,97%	√	-	-	-	-	**Feasible**

Description :
HE : Highly Efective
E : Effective
ME : Moderately Effective
LE : Less Effective
VLE : Very Less Effective

It is possible to infer that online media goods built on Google sites have complied with the necessary criteria based on the outcomes of all recapitulations. The data indicates that online media products based on Google sites are in extremely effective qualities and are acceptable for use as learning media in economics class XI SMA Negeri 8 Malang. This is proven by the mean outcomes of professional verification and restricted trials of 91.97%.

After validation, The fourth step is a limited trial is conducted with a small number of users to identify any shortcomings or problems that may arise.. The fifth stage is revision to improve and perfect the product. The six stage is a broader trial of use is conducted to ensure that the product can function properly under various conditions and meet user expectations. Finally, after all revisions and adjustments are completed, the final product is created and prepared to aid in the learning of students. The seventh stage of the Borg and Gall development model is to make the final product to ensure that the product developed is effective enough and suitable for use by students.

Also, at SMA Negeri 8 Malang, product trials were carried out with 60 participants. Purpose sampling was used to form two groups: the experimental group, which has 30 participants, and the control group, which also has 30 participants was used to identify the research's actual topic. This study's objective is to directly get student feedback in order to enhance the data.

Examine how well Google Sites learning materials affect students' motivation to study in economics classes at SMA Negeri 8 Malang based on the findings of a hypothesis test. As a result, the researcher constructs the study hypothesis as follows:

H_0: At SMA Negeri 8 Malang, The incentive of kids to learn is the same for economics topics before and after using Google Sites learning resources.

H_A: At SMA Negeri 8 Malang, there are differences in student learning outcomes in economics subjects before and after using Google Sites learning resources.

Table 5. Paired Sample T-Test Results

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	EKSPERIMEN - KONTROL	9.94286	7.60009	1.28465	7.33214	12.55358	7.740	34	.000

Table 4.8's t test findings indicate a sig value of 0.000. This suggests that H0 is rejected, which leads to the conclusion that Students who use Google Sites-based learning tools differ from one another and those who do not in terms of raising student motivation. It has been demonstrated that learning media production tools based on Google Sites may effectively raise students' motivation to study.

Researchers discovered that learning materials based on Google Sites can stimulate students and boost their enthusiasm to study based on the findings of their investigation and observation. Compared to traditional teaching techniques that just rely on lectures and question-and-answer sessions, this type of media is seen to be more beneficial.

According to research by (Mahalasari, 2022), using these educational resources can help students see things differently and can speed up the learning process when combined with Google Sites. This is consistent with studies by (Erawati, 2022) and (Tarigan & Siagian, 2015), which indicate that educational media can increase students' motivation to study. The increased motivation caused by the learning media is expected to affect student achievementThis is consistent with studies carried out by (Adiputra & Mujiyati, 2017) stated that motivation gives strength to individuals to start activities. This study supports that of Aminah (2013), who found that student activities and learning motivation had an impact on learning outcomes..

This research is in line with the theory of keruct experience initiated by Edgar Gale. The theory states that learning media used during learning makes students more active in learning interactions (Wildah et al., 2023). Edgar Dale has presented a systematic formulation of the absorption of different learning styles. According to him, reading learning experiences can only absorb ten percent of what a person learns; hearing learning experiences can absorb twenty percent; seeing experiences can absorb thirty percent; participation and collaboration seventy percent; and simulation or real learning styles ninety percent (Sari, 2019).

Additionally, this study supports Allan Paivio's Dual-Coding Theory, which was introduced in 1971. According to the notion, exposing kids to verbal, oral, and virtual visuals in media might help them grasp and comprehend the content better. Using media in educational activities will also help kids remember things better. (Baharudin et al., 2021).

According to Jean Piaget's constructivism theory, students can actively participate in the educational process by utilising interactive technology, movies, and simulations. This aligns with constructivism's tenet that calls for students to actively participate in their education. (Bada & Olusegun, 2015; Kumar, 2019).

D. CONCLUSION

It has been determined that the creation of Google Sites as a learning tool for grade XI economics is viable based on the findings of feasibility testing, which includes validity, efficiency, and effectiveness tests. With an average score of 91.97%, the efficiency test, which was based on evaluations from media professionals, material specialists, and students, falls into the "very effective" category.

The creation of Google Sites has important advantages for raising student learning motivation in economics classes in addition to being a workable learning tool. The evaluation's findings, which show an increase in the pupils' pretest and posttest scores, support this. This is also indicated by the experimental test results sig value of 0.000 <0.050. One interpretation of this is that H0 is rejected, which leads to the conclusion that there is a difference between students who use Google Sites-based learning materials and those who do not. It has been demonstrated that Google Sites-based learning media development tools are successful in raising students' motivation for learning. Thus, it can be said that using Google Sites as a learning tool has a lot of potential to boost students' willingness to study.

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