

Development of Learning Media In The Form of Microsoft Team Applications in Digital Information and Communication System Learning

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Abstract: The purpose of this study was to determine (1) the feasibility of learning media in the form of Microsoft team applications in digital information and communication systems learning in class XI students of SMK Negeri 1 Idi; and (2) to determine the effectiveness of learning media in the form of Microsoft team applications in learning information systems and Digital Communication in Class XI Students of SMK Negeri 1 Idi. This type of research uses the R & D development model. The subjects of this study consisted of one material expert, one instructional media expert, one instructional design expert, and class XI students of SMK Negeri 1 Idi. The results showed: (1) the expert test of learning materials was very good (88%); (2) the expert test of learning media is very good (92.94%); (3) the expert test of very good learning design (97.35%); (4) E-Module Basic Learning Sewing Technology Based on Discovery Learning Learning Media in the form of Microsoft Team Applications in Digital Information and Communication Systems Learning is feasible to use; (4) there is a significant difference between the learning outcomes of students who use media and textbooks. This is indicated by the results of processing the data on the posttest results obtained by the price of $t_{count} = 10.691$, At a significant level ($\alpha = 0.05$) with dk 58 obtained $t_{table} = 1.167$ so that $t_{count} > t_{table}$ for practical results obtained price of $t_{count} = 11.023$, At significant level ($\alpha = 0.05$) with dk 58 obtained $t_{table} = 1.167$ so that $t_{count} > t_{table}$. The average effectiveness of learning outcomes in the use of Learning Media in the form of Microsoft Team Applications is 85%, while groups of students using textbooks are 68%. This data proves that the use of Learning Media in the form of Microsoft Team Applications is more effective than without using media.

Keywords: learning media, microsoft team, digital information and communication systems

1. INTRODUCTION

1.1 The Nature of Digital Information and Communication Systems Learning

The use of Information Technology and the internet is currently very developed in society, this is due to the use of technology which cannot be separated from people's lives who are facing the Industrial Revolution 4.0 era [1]. It can be said that one of the most important factors in the Industrial Revolution 4.0 is the emphasis on the digital revolution. This refers to the digital revolution due to the development of computer systems and file automation in all fields [2].

Technological developments also continue to increase along with increasing human needs, especially in the field of Education Especially in the daily learning process. With today's increasingly advanced technological developments, teachers and students can now seek material from anyone, anytime, anywhere Uhomoihi [3], thus requiring the readiness of teachers and schools to facilitate learning processes that are integrated with technology [4].

Teachers and schools have a big role in the application of technology in learning, teachers are not only to convey information to students but also facilitators so that students can develop their potential during learning. Teachers can create a quality learning process by providing meaningful learning experiences and can foster a student learning culture [5]. Facing the era of the industrial revolution 4.0, which

emphasizes the concept of independent learning, every educational institution is expected to have competitiveness and innovation that can collaborate so as not to be left behind. In the era of revolution 4.0, the education system is expected to be able to create students who have critical thinking skills and can solve problems, are creative and innovative as well as have the skills to communicate and collaborate [6].

The concept of independent learning is a response to the needs of the education system in the industrial revolution 4.0 era. Nadiem Makarin as the Minister of Education of the Republic of Indonesia, emphasized that independent learning is freedom of thought that starts with the teacher. Educating as a practice of freedom is a form of teaching and learning that is interesting and fun for teachers and students. In the practice of this freedom, both parties are players in contributing and sharing learning experiences [7]. Learners are not only taught information that they expect to recall and remember when asked, instead they learn to think critically in a non-conformist and unfettered way.

In the context of independent learning, educators or teachers must encourage students to work collaboratively and ask questions creatively about ideas and problems in various disciplines [8] [9]. As creative thinkers, they try to imagine and explore alternatives, and think in different ways. Such an approach is needed as a solid academic foundation to improve their intelligence, including "soft skills" such as understanding, empathy, and communication skills. The use

of different learning materials and various sources allows students with various learning styles to understand the information in the most effective way [10].

One way to work collaboratively teachers and students can use learning media such as Microsoft Teams. According to Ilag B.N. [11], Microsoft Teams is a communication platform that is integrated with Microsoft Office 365. This application provides meeting features, video conferencing, file storage, and access which is easy for the user. Users can create virtual classes and manage them like real classes anywhere, in this virtual class Students can exchange ideas with classmates and teachers [12]. These interactions are like online meetings, chatting, posting, and online assessment. Microsoft Teams also provides data security for application users [13]. The features and convenience provided by Microsoft Teams make this application very suitable when used as a medium for online learning [14].

Danker [15] states that in today's digital era, the learning process is more modern and student-centered (Student-Centered Approach). Ertmer & Ottenbreit [16] further stated that the teacher only acts as a motivator and facilitates students by utilizing existing internet technology as a way to access teaching materials and materials from anywhere, anytime, with anyone, and anything online or e-learning.

E-learning is a system that can facilitate learners to learn more widely, more and varied. Furthermore, according to Clark Aldrich, and Derek Stockley [17], e-learning is the use of computer technology and computer networks accompanied by the application of innovative learning models in the context of implementing learning activities that will provide broad access to students to knowledge so that they can acquire new skills.

Educational technology exists to mediate and enhance learning and student performance through the strategic design of learning processes and resources. Thus designing learning to meet student needs is an important effort that is expected to improve student learning outcomes [18].

The use of E-learning by using the Microsoft Teams application helps the learning process, one of which is in the Digital Information and Communication Systems or SIMDIG subject. According to Indahini, Sulton, and Husna [19] SIMKOMDIG is one of the subjects taught to SMK students. This subject is related to information and communication technology. For SMK students, this subject is a means of communicating their concepts and ideas through digital presentations. As a tool, the function of this course is to provide a skills mapping tool for students to use when needed.

According to McVey, M., Edmond, A., and Montgomery, D. [20], another advantage is that teachers can quickly communicate with students, share files and websites, create OneNote Class Notebooks, and distribute and grade assignments. Integrated OneNote Class Notebooks and end-to-end assignment management allow teachers to organize interactive lessons and provide effective, timely feedback. Educators can share teaching materials using Professional Learning Communities. Class Teams can be used to create collaborative classrooms, provide a virtual meeting platform, facilitate learning with assignments and feedback, and lead live calls with students.

General Principles Microsoft Teams is a collaboration program with application and file facilities, meetings, phone calls, chats, and conversations in the same space, where users can use any

device, so users can collaborate with other users with confidence. In other words, learning can be carried out effectively and efficiently because students are actively involved in learning [21].

1.2 The Nature of Microsoft Team Application Learning Media

The learning media are all tools and materials that can be used for educational purposes, such as radio, television, books, newspapers, magazines, and so on. Tools such as radio and television are used and programmed for education, so they are learning media. The National Education Association (NEA) defines media as all objects that can be manipulated, seen, heard, read, or discussed along with the instruments used for these learning activities [22].

Learning media is an integral part of the learning system. Many kinds of learning media can be used. Its use includes many benefits as well. The use of learning media must be based on the right selection. So that it can enlarge the meaning and function in supporting the effectiveness and efficiency of the learning process. Learning media can also be interpreted as anything that can be used to convey messages, and stimulate thoughts, feelings, attention, and willingness of students so that they can encourage the learning process. Forms of learning media are used to enhance the learning experience so that it becomes concrete [23].

According to the Educational Communication Technology Association learning media is everything that people use to convey messages. Meanwhile, according to Miarso, et al [24] stated that learning media is anything that can stimulate the teaching and learning process. Based on some of these descriptions, it can be concluded that learning media is a tool used to channel messages or information (learning material) as well as to stimulate students in the teaching and learning process to achieve the learning objectives that have been formulated.

Online learning media that have been used by teachers and teachers recently to deal with online teaching and learning processes due to the Covid-19 pandemic are very diverse. Of course, this learning media is used to convey material to students. In fact, it has been around for a long time, but it is still rare for schools or educational institutions to apply it in their learning process. Online learning media that is ready to be used for learning and teaching activities is Microsoft Teams for Education. This application is one of the online learning media designed in Microsoft 365.

Microsoft Teams itself is a chat/conversation-based platform that has very perfect features that can support file sharing, online meetings, and other features that are needed for communication. Having a very special team room is key to making creative decisions and communicating effectively among users with each other. The shared workspace platform makes work easier, especially in the world of education during this pandemic. In Hanung and Sutarna's notes, they explained that Microsoft Teams is an application made by Microsoft which is indeed designed as a package that has a complete program. This application is designed that way to make it easier for its users to access information flexibly that is not bound by time and place. This application also has the advantage of being able to collaborate with other software. The advantages of using Teams are getting more advantages in productivity and communication, more focus on work and school, higher transparency, promoting collaboration which is

good in digital workplaces/schools, and makes it easier for new team members to enter faster To increase speed [15].

1.3 The Essence of Project-Based Learning Strategy

Sanjaya [26] suggests that a learning strategy is a learning activity that must be carried out by teachers and students so that learning objectives can be achieved effectively and efficiently. According to Muhaimin in Riyanto [27] that learning is an effort to teach students to learn. Learning activities will involve students learning something effectively and efficiently. The strategy according to Slameto [28] is a plan regarding the utilization and use of existing potential and facilities to increase teacher effectiveness and efficiency.

According to Seels and Richey [29], said that learning strategies are specifications for choosing, and designing processes and activities in a lesson. Furthermore, quoting David's thoughts Sanjaya [30] strategy is defined as a plan, method, or activities designed to achieve a particular educational goal. So, thus the learning strategy can be interpreted as a plan that contains a series of activities designed to achieve certain educational goals.

Dick & Carrey [31], said that learning strategies usually explain the general components of a set of learning materials and procedures that will be used with other materials to produce certain learning outcomes from the learner. Furthermore, Dick & Carey also details the five components of learning strategies, namely: (1) pre-instructional activities, (2) presentation of information, (3) student participation, (4) tests, and (5) follow-up. Miarso [32] defines a learning strategy as a comprehensive approach to learning in the form of a general guideline and an activity framework that is translated from a philosophical or theoretical view of learning under certain conditions and set to achieve general goals. In contrast to the strategy components proposed by Dick and Carey, a learning strategy contains several components namely: (1) General objectives, (2) Learning Techniques, (3) Organizing teaching and learning activities which include organizing students, teachers, and education staff, (4) learning events, (5) learning sequence, (6) assessment, (7) management of learning activities in class (8) place and setting, and (9) time.

The learning strategy is a way of determining all aspects related to the achievement of learning or learning objectives, including the preparation of plans, implementation of learning activities, and assessment of learning processes and outcomes. The learning strategy applied by the teacher will depend on the approach used, while how to carry out the strategy can be determined by various learning methods. To carry out the teacher's learning method, the teacher can determine the techniques that are considered relevant to the method or use of the technique, each teacher has a different way from one another [33].

1.4 Project Based Learning

Project-based learning is a project-based learning method that involves students working in groups to compile a report, experiment, or another project [34]. Ministry of National Education [35] emphasized that structured project/task learning (Project-Based Learning) is a learning approach that requires comprehensive learning where the student learning environment (class) is designed so that students can carry out investigations of authentic problems including deepening the material of a subject matter, and perform other meaningful

tasks.

Project Based Learning is a learning approach that requires students to create a "bridge" that connects various subject matters. In this way, students can view knowledge holistically. More than that, Project Based Learning is an in-depth investigation of a real-world topic, and this will be valuable for student attention and effort. Project Based Learning is a learning approach that pays attention to understanding. Students explore, assess, interpret and synthesize information in a meaningful way. According to Cord et al [36], project-based learning is an innovative learning model or approach, which emphasizes contextual learning through complex activities. Project-based learning is the use of projects as a learning model. Projects put students in an active role, namely as problem solvers, decision-makers, researchers, and document makers.

Joel L Klein et. Al (Widyanti [37]) explained that project-based learning is a learning strategy that empowers students to acquire new knowledge and understanding based on their experiences through various presentations. The characteristics of project-based learning are that students investigate important ideas and ask questions, students find understanding in the process of investigating, according to their 4 needs and interests, produce products and think creatively, critically and skillfully investigate, conclude material, and connect with real-world problems. authentic and issues. Meanwhile, explains that in project-based learning, students plan and carry out investigations of several topics or themes that use cross-subjects or cross-materials. Thomas, et al, (Wena [38]) stated that Project Based Learning is a learning model that provides opportunities for teachers to manage learning in class by involving project work.

The problems of this research are: (1) Is the Microsoft team's media in developing digital information and communication systems appropriate to use in understanding the material for making e-books?; and (2) Is the Microsoft team's media on learning digital information and communication systems developed effectively used in understanding the material for making e-books?

2. METHOD

The R&D (Research and Development) model is the type of research used in this study. Gall, Gall & Borg [39] in their book entitled "Educational Research" says that R&D in education is an industry-based development model, where research findings are used to design learning products which are then systematically tested in the field, evaluated, and perfected until they are produced. a learning product that meets effective, efficient, and quality standards. This research will be conducted at Vocational High School (SMK) Negeri 1 Idi, at the Department of TKJ Class X.

Procedures and design of the Dick, Carey & Carey learning design model. Gall, Gall & Borg said that the stages of research and development in the realm of education are the stages contained in the model developed by Dick, Carey & Carey. The following are the 10 steps of the Gall, Gall & Borg model in research and development as shown in Figure 1 below:

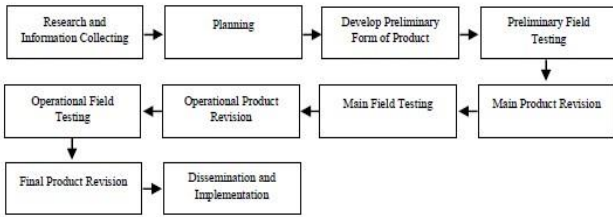


Figure 1. Gall, Gall & Borg Development Model

2.1 Data analysis technique

The data collected through the validation of the expert team (Learning Media) and material experts (SIMDIG) and the questionnaire given to students is data regarding the quality of learning media on the SIMDIG material that has been developed. This instrument for media expert and material expert validators is made on a Likert scale that has been given a score, as shown in Table 1 below:

Table 1. Criteria for Answering Instrument Validation Items with a Likert Scale Type

No.	Answer	Score
1.	Strongly Agree	5
2.	Agree	4
3.	Doubtful	3
4.	Disagree	2
5.	Strongly Disagree	1

Then the data is analyzed descriptively quantitatively, namely calculating the percentage of indicators for each category in the learning media that has been developed.

$$\text{Score Presentation} = \frac{\text{Jumlah indikator per kategori}}{\text{Jumlah Indikator Total Kategori}} \times 100\%$$

From the calculation using the formula above, the resulting number is in the form of a percent (%). The score classification is then converted into a classification in the form of a presentation, then interpreted with qualitative sentences listed in the table below:

1.

Table 2. Criteria for Indicator Presentation in SIMDIG Learning Media Materials That Have Been Developed

score	Criteria	intervals
A	Very good	$81\% \geq \text{score} \leq 100\%$
B	Well	$61\% \leq \text{score} < 80\%$
C	Currently	$41\% \leq \text{score} < 60\%$
D	Not good	$21\% \leq \text{score} < 40\%$
E	Very Less Good	$0\% \leq \text{score} < 20\%$

(Ridwan [42])

Knowing the final score uses the average analysis of the items concerned in the expert validation questionnaire, namely by calculating the eligibility value of the questionnaire for each aspect divided by the number of statements. The results of the percentage scores obtained from the study are interpreted in the following table criteria:

Table 3. Learning Media Feasibility Scale

No.	Answer (%)	Assessment Criteria
1.	81-100	Very Worth it
2.	61-80	Worthy
3.	41- 60	Decent Enough
4.	21-40	Less Eligible
5.	≤ 20	Very Inadequate

(Arikunto [43])

2.2 Product effectiveness test data analysis techniques

Data analysis in this study used quantitative analysis techniques on the data obtained were the results of student learning from classes that had taken the course Analyzing e-book creation without using media and classes that were taking the course Analyzing e-book creation using media. To see whether there is a significant difference between the learning outcomes of students who are taught using the media and without being taught using the media, a hypothesis test is carried out with the t-test.

Hypothesis testing

According to Sudjana (2013), the research hypotheses to be tested are:

$$H_0: \mu_1 = \mu_2$$

$$H_a: \mu_1 > \mu_2$$

Information :

H₁ = average student learning outcomes using the media

H₂ = the average percentage of student learning outcomes that do not use the media

H₀ = there is no difference in student learning outcomes using media and those who do not use media

H_a = there are differences in student learning outcomes using media and those who do not use media

To test the hypothesis, the two-party test formula is used:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \quad \text{[41]}$$

Where S is the root of the combined variance calculated by the formula:

$$S^2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}, \quad S = \sqrt{S^2}$$

The test criteria are accepted as H₀ if t_{count} > t_{table} is obtained from the t distribution list with dk = (n-1) with a significant level of $\alpha = 5\%$, the effective media is used.

3. RESULTS AND DISCUSSION

This research is a type of research and development using the borg and gall development model, so the product resulting from the implementation of this research is Information Systems and digital communication learning media in the form of the Microsoft Team application to improve students' digital information and communication system learning outcomes. The purpose of this development research is to (1) Know the Feasibility of Information Systems learning media and digital communication in the form of Microsoft team applications in improving students' digital information and communication systems learning outcomes. (2) Knowing the effectiveness of Information Systems learning media and digital communication in the form of Microsoft team

applications in improving students' digital information and communication systems learning outcomes.

The development of learning media, especially learning media for information systems and digital communication in the form of Microsoft team applications, in improving student learning outcomes is complementary to existing learning media. Making learning media is expected to be done with careful preparation and planning. Preparation and planning are arranged systematically and developed in accordance with the competence of the syllabus and RPP material for analyzing the manufacture of e-books so that the learning media becomes more effective which has been modified into an even simpler research design.

3.1 Hypothesis testing

Testing the feasibility of the product developed was analyzed from the feasibility validation from experts and the feasibility of testing it on students. The results of the expert feasibility validation trial are in Table 4

Table 4. Expert Feasibility Validation Test Results

No	Expert Assessment	Percentage	Criteria
1.	Learning Material Expert	88 %	Very Good
2.	Learning Media Expert	92,94%	Very Good
3.	Expert Learning model	97,35%	Very Good
Average		92,76%	Very Good

Based on Table 4 above, it can be concluded that learning media products are in the form of applications. The Microsoft team analyzing the creation of the e-book developed includes very good criteria, which means that the product is very feasible to use and can meet the needs of implementing learning to analyze the creation of e-books.

Table 5. Field Trial Results

No	Assessment Aspects	Percentage	Criteria
1.	Appearance	91,74	Very Good
2.	Presentation	92,44	Very Good
3.	language	92,22	Very Good
4.	graphics	93,33	Very Good
Average		92,43%	Very Good

In learning, there are many roles of the media used, including learning that will attract more students' attention so that it can generate motivation to learn and enable students to master learning objectives better. The role of the media in further learning is to make students do more learning activities, and other activities such as observing, doing, demonstrating, and so on.

3.2 Hypothesis Test of Product Effectiveness Developed

The results of the product effectiveness hypothesis test are known through the differences in the post-test results of control class students and experiments and practical results In Tables 4.38 and 4.38 it can be seen the results of the calculation of the hypothesis test.

Table 6. Calculation results of the post-test hypothesis test

Statistics	Class	
	Control	Experiment
N	30	30
Means	68	85
Sd	8,13	4,22
S ²	66,10	17,82
t _{count}	10,691	
t _{table}	1,167	
Status	H _a accepted	

Based on the research conducted, it was found that student learning outcomes in the experimental class that used learning media in the form of Microsoft Applications team analyzed the making of e-books with a fairly good category of 36.67%, while in the control class which did not use media (Control), it was found that the results tended to be learning 26.67% with less good category.

After going through several stages of validation and testing that have been described previously, the learning media in the form of Microsoft Information Systems and digital communication applications is feasible to use. This can be seen from the average rating in almost all stages showing very good results. Based on observations and studies during research, learning media in the form of Microsoft Information Systems and digital communication applications can increase student interest in studying digital information and communication systems subjects. This can be seen from the enthusiasm of students to use learning media in the form of Microsoft team applications and student learning outcomes are getting better than before.

The feasibility test of learning media in the form of Microsoft Information System Team Applications and digital communication can be seen from the validation results of material experts, model experts, and media experts, where the average validation of material experts is from material experts I of 4.41 while from material experts II of 4.88, the average result of model expert validation is from a model I expert of 4.87 while from model II expert is 4.85, and the average result of media expert validation is from media expert I of 4.77 and media expert II of 4.67. Evaluations from material experts, model experts, and media experts show that learning media in the form of Microsoft Information Systems and digital communication applications is in the very good category and is feasible to try out. In trials on students or users, the percentage results for the preliminary field test, main field test, and operational field test were 92.43%, meaning that learning media in the form of Microsoft Information System and digital communication team applications are also in the very good category. . For complete calculations, see the attachment

Furthermore, for the percentage of expert validation test results on learning media in the form of applications, the Microsoft team analyzing the creation of e-books found that the percentage of subject matter aspects was 94.44% in the very good category, the percentage of learning media aspects was 92.94% in the category very good, the average assessment of aspects of the learning model is 97.35% with a very good category. All aspects of the assessment with an average of 94.91% with a very good category.

The results of the feasibility assessment of learning media in the form of an application The Microsoft team analyzed the making of e-books in the overall trial and obtained in the display aspect an average score of 91.74% including the very good category, in the presentation aspect an average of 92.44

including the very category good, and linguistic aspects with an average of 92.22% with a very good category and graphical aspects with an average of 93.33%. The average results of the assessment of learning media in the form of applications The Microsoft team analyzed the creation of e-books at the overall trial stage of 92.43% and included them in the "Very Good" category

In the learning activities carried out by the teacher in the classroom, the most important result is the process, because it is the process that will determine whether the learning objectives will be achieved or not achieved. Achievement in the teaching and learning process is marked by a change in behavior. Changes in behavior both involve changes in knowledge (cognitive), and skills (psychomotor) as well as those involving values and attitudes (affective).

In the process of teaching and learning several factors influence the achievement of learning objectives including educators, students, environment, methods/techniques, and learning media. Arifin [44] says that the media, when understood in general, is human, material, or events that build conditions that enable students to acquire knowledge, skills, or attitudes. In this sense teachers, textbooks, and the school environment are media. More specifically, the notion of media in the teaching and learning process tends to mean graphic, photographic, or electronic tools for capturing, processing, and reconstructing visual and verbal information.

With the existence of learning media, oral and written traditions in the learning process can be enriched with various learning media. With the availability of learning media, educators can create various classroom situations, determine teaching methods to be used in different situations and create a healthy emotional climate among students. These learning tools/media can then help teachers bring the outside world into the classroom. Thus ideas that are abstract and foreign (remote) in nature become concrete and easily understood by students. If this learning tool/media can function properly and professionally, then the learning process will be able to run effectively.

In line with the Use of Multimedia as a New Educational Technology Tool—A Study. The results of the study suggest that multimedia can provide a better quality learning process, taking into account pedagogical interests, the use of media is the main potential for maximizing the process of achieving learning objectives.

The results of the post-data analysis of the learning outcomes of the control class that did not use learning media in the form of Microsoft application teams analyzing the creation of e-books can be stated that the average score of learning outcomes is 68.00 and the experimental class that uses learning media in the form of application Microsoft team analyzes making an e-book of 85.00 with a classical completeness of 100%.

Sadiman [45] argues that media is anything that can be used to channel messages from senders to recipients so that they can stimulate thoughts, feelings, concerns, and interests as well as students' attention in such a way that the learning process occurs. The media also has related software containing educational messages which are usually presented using the equipment.

Kemp and Dayton in Kustandi [46] suggest that learning media can fulfill three main functions if the media is used for individuals, groups, or groups that are large in number, namely in terms of: (1) motivating interest or action, (2) presenting information, and (3) giving instructions. To fulfill the

motivational function, learning media can be realized with drama or entertainment techniques. As for information purposes, learning media can be used to present information in front of a group of students. The content and form of the presentation are very general, serving as an introduction, report summary, or background knowledge. Presentations can also take the form of entertainment, drama, or motivational techniques.

Hamalik (in Arsyad [47]) also revealed that the use of learning media in the teaching and learning process can generate new desires and interests, generate motivation and stimulate learning activities, and even bring psychological influences on students. The selection of learning media must be adjusted to the material being taught and the conditions of the students. So it is hoped that the learning media can help students understand the concept of the material being taught, can create a learning atmosphere

The Use of Media for Effective Instruction its Importance: Some Consideration. The results of the study suggest that the media helps educators to transmit knowledge in an impressive way by diversifying classroom teaching and making learning more effective. Instructional media that provide teachers with powerful tools to make their teaching effective to achieve specific classroom goals.

4. CONCLUSIONS

After carrying out the process or stages of developing digital simulation and communication learning media in the form of a Microsoft team application, the following conclusions can be put forward; (1) Simulation learning media and digital communication in the form of a Microsoft team application developed on material for analyzing e-book creation at SMK Negeri 1 Idi are suitable for use; and (2) Simulation learning media and digital communication in the form of the Microsoft Team application which is used in analyzing material for making e-books at SMK Negeri 1 Idi is defective.

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