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Development of the Comic Strip Creator Application as a Comic-Based Arabic Language Learning Media in Madrasah Tsanawiyah

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ABSTRACT

Application-based learning media is mandatory in delivering learning materials, so that the learning atmosphere is favored by students. Especially in learning Arabic, many students do not like it. For this reason, teachers need to renew the learning process, for example by utilizing comic media in delivering learning materials. The purpose of this research is to develop Comic Strip Creator application as Arabic learning media. The method used in this research is the research and development method (Research and Development) using the borg and gall model, the steps are as follows: (1) Potential and problems, (2) Data collection, (3) Product design, (4) Design validation, (5) Design revision, (6) Product trial, (7) Product revision, (8) Usage trial, (9) Product revision and (10) Mass product. The results of this study explain that Comic Strip Creator can be used as Arabic language learning media and can improve student achievement. The conclusion of this study explains that the Comic Strip Creator application can provide new innovations in learning, especially Arabic language learning. The limitation of this study is that researchers only conducted research on the Comic Strip Creator application in Arabic language learning, of course the results were not so satisfactory. Researchers hope to other learning researchers.

Keywords: *Comic-Based, Comic Strip, Learning Media*

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INTRODUCTION

The history of this technology begins with the human mind which aims to

simplify a job (Zhu et al., 2019). Technology has been known by humans since thousands of years ago, but in a different form and not as modern as what we encounter today (Wu & Zhang, 2020). Technology has been known by humans since thousands of years ago, but in a different form and not as modern as what we encounter today (Tao et al., 2018). Technology can also be interpreted as a method that rationally leads to the characteristics of efficiency in every human activity (Yuan et al., 2019). Technology is a sophisticated tool that has existed since entering the 21st century which can be used in everyday life as a whole (Caiati et al., 2020). The use of technology starts with human resources which eventually turns into simple tools (H. Li, 2018). Some of the technological developments that exist today include printing presses, telephones, computers, mobile phones, and so on.

Significantly, the term 'technology' has changed over the past 200 years; in English, the term is not commonly used to refer to the study or depiction of applied art (Kumar et al., 2021). Technology is also called the application and development of various systems or equipment to solve a problem faced by humans in everyday life (Chen et al., 2020). With the development of technology in this day and age (Dawood et al., 2020), can make humans think more advanced (Begeny et al., 2020), and with the development of this technology can also make humans have science and experience (Tyagi & Subramony, 2018). Knowledge and experiences that are communicated to others are also called information or messages (Théry et al., 2018). This technology aims to maintain social life (Mazza et al., 2020), peace, and complete a job, and educate the human mind.

Communication is a delivery of messages, news, information to others (Shi et al., 2020). According to some expert opinions, communication can be interpreted as follows, the first, namely according to Jenis and Kelly that communication is a process in which a person conveys a message with words that aim to shape the behavior of others (O'Connor et al., 2020). Second, according to Berelson and Stainer, which they reveal that communication is a process for conveying information through symbols such as pictures, numbers, words, and others (Feldgarden et al., 2019). The third is Gode, he said that communication is a process that is owned by someone to be owned by two or more people (Fornes et al., 2019). Communication consists of two forms, namely verbal communication and nonverbal communication (Huang et al., 2019). Verbal communication is communication that is done verbally (Troeger et al., 2018). Meanwhile, nonverbal communication is a sign language that is carried out by gestures or by means of certain attitudes (Adams et al., 2018), such as a shake of the head and a shrug of the shoulders.

According to the Big Indonesian Dictionary (Alamsyah et al., 2020), komik merupakan sebuah cerita yang berkombinasikan dengan gambar-gambar yang sesuai dengan alur cerita yang akan diceritakan baik itu pada majalah maupun surat kabar (Herman, 2018). In 2005, Shadely in Mariyanah said that comics are a form of a series of images that in each box contains the contents of a story, in the picture using speech balloons equipped with a narrative explaining the story (Mamoshina et al., 2018).

From several opinions about comics, it can be concluded that comics are a series of images that explain the storyline equipped with text explaining the story ("To Bridge Sustainability Research, Primary Education, and Creativity," 2020). According to Trino's opinion in Mariyanah, Comics can be divided into two parts, namely, comic strips and comic books.

The comic strip creator application is an application that is a type of comic strip that is published weekly or daily which is arranged horizontally or vertically from several panels (Pagès, 2019). The first Comic Strip creator was published in 1930, a comic by Kho Wang Gie in the Sin Po newspaper (Araújo et al., 2020). According to Comic Strip in Factmonster, comics are a combination of stories or cartoon images (Frémont et al., 2018). The arrangement consists of illustrated stories with multiple characters using multiple running panels (Danish et al., 2020). According to the Ohio State University Cartoon Research Library, it is a series or as a picture combined with words (Traverso et al., 2018) . Comic Strip Creator has been around since ancient Egyptian times in the 19th century.

Comic Strip Creator can be divided into two parts (De Dobbeleer, 2021), Among them, the first is the Newspaper comic strip is a comic strip that was first published in a newspaper, this comic strip first appeared in 20th century America (Lee et al., 2020). Newspaper comic strips are divided into two parts: Daily strips and Sunday strips (Nagano et al., 2018). The second is Daily strips are newspaper comis strips that are published every Monday to Saturday (Peng et al., 2019). Daily strips were invented in the early 20th century and were published in color (Sherman et al., 2019). The third is Sunday strips (Legay & Burton, 2022), published during the second war due to the lack of paper, the size of Sunday strips began to shrink (Bastin et al., 2019). At that time, over time, comic strips became smaller because of the cost of printing that used many colors (Buswell et al., 2018). This Comic Strip only focuses on one conversation such as responses to certain events. Comic strips are very easy to find in newspapers, magazines, and so on.

According to (J. Li & Pu, 2019) He stated that the results of the research showed that the use of comic strip learning media at MAS Aisyiah Binjai was in the good category, student learning outcomes in class X fiqh subjects were in the very good category, and based on the results of data analysis obtained and proven by the independent group t-test analysis technique, the results of t-count> t-thick (5.944826>1.994437) which means H0 is rejected and means that there is a difference in learning outcomes in the experimental class using comic strip learning media. With the title "The Effect of Using Comic Strip Media on Student Learning Outcomes in Fiqh Subjects at MAS Aisyiah Binjai". According to (James et al., 2018) He said that the use of comic strip media had a very significant effect on the ability to write Japanese transactional text about the location of objects in class XII SMA PGRI 3 Padang 2018/2019. With the title "The Effect of Using Comic Strips on the Ability to Write Japanese Transactional Texts in XII Class Students of PGRI 3 Padang Academic Year 2018/2019". The difference between this research and previous

research is that this research can provide new innovations in learning, while previous research provides less innovation.

The reason for researchers in conducting this research is to examine how the development of the use of comic strips. By using comic strip media, researchers expect students to more easily understand the lesson. The use of comic strip media provides meaningful benefits so it should be considered by teachers to utilize comic strip media. The purpose of this comic strip media is as a tool or media to make it easier for students to understand lessons, especially Arabic-based lessons. With the formation of learning media, students can choose the media to be used according to their characteristics. Based on the explanation above, it is necessary to take an action to overcome the problems in learning, so researchers developed an Arabic-based Comic Strip media as a media guide for students' Arabic language learning.

RESEARCH METHODOLOGY

The comic strip creator learning media developed in accordance with the procedures in research that applies the Borg and Gall model (Divayana et al., 2020), in his book "Education Research", explains that in education the industry-based development model finds results that are used to design learning (L. D. Xu et al., 2018). In the development of the Borg and Gall model, there are several steps that must be taken by researchers to get the results designed beforehand have the feasibility to be used (Q. Xu et al., 2020). The steps or procedures for developing this model are generally known as the R&D cycle. (Y. Wang et al., 2020), Among them are reviewing previous studies related to the module to be developed, correcting previous research (C. Wang et al., 2020), and development is carried out with objectivity (McAllister-Williams et al., 2020). These steps have the aim of expanding the product and testing the product to achieve the goal.

This procedure explains the steps that must be taken by researchers to obtain a product that is in accordance with the product development carried out (Balduzzi et al., 2019). The following are the development steps using the Borg & Gall model.

Table 1. Stages and Steps of Research

Stage	**Step**	Activity
Potential and problems	1	Lack of innovation makes it difficult to develop insights.
Data collection	2	Before designing the product to be studied, researchers must first collect data to overcome the problems faced.
Product design	3	Researchers can create a product design that will be researched. The steps in doing this design are: - Conduct interviews with specific teachers. - Determine the type of media development to be studied.

		• - Then make media that is in accordance with the material.
Design validation	4	This is an attempt to design products rationally. The step is to discuss with teaching material experts for validators to provide input both from advantages and disadvantages.
Design revision	5	Improve input or criticism of designs that have been discussed with teaching material experts.
Product trial	6	The trial was conducted by two users, namely: - Teacher testing: the teacher can provide feedback on media development. • - Student trials: researchers as observers and record the strengths and weaknesses of the students.
Product revision	7	Researchers can evaluate the results of the first trial.

The place and time of the research was conducted in Madrasah Tsanawiyah which was conducted in October 2022. The subjects and objects of this research are material, media, and language validators, including teachers and students. The method used in this research is qualitative method. The object of this research is a feasibility of comic strip creator learning media to measure students' potential in Arabic. The data collection technique is done by observation. Researchers are not at the place of observation but researchers examine structured students learning at school and at home by analyzing the conditions before and after. And the material feasibility test is done by distributing questionnaires to students, the purpose of distributing this questionnaire is to find out the response of students in the development of learning media.

RESULT AND DISCUSSION

The result of this research is to develop comic strip creator application media as learning media to achieve the objectives of Arabic language learning. The process of developing this media is done by analyzing students by conducting online interviews with the teacher concerned. Then proceed with the selection of materials, media and learning methods that are in accordance with the needs in learning, by making observations through filling out questionnaires or questionnaires to students and teachers. Furthermore, after knowing the methods, media and materials that are suitable for use in learning, researchers carry out the process of making comic strip creator application media by designing the media first. After that, the comic strip creator application was assessed in terms of media by media experts, then in terms of language

by Arabic language teachers and in terms of material by Arabic language teachers. Furthermore, researchers conducted media trials to students as a result of observations to find out whether the media was suitable for learning. The results of the assessment of the comic strip creator application in Arabic language learning are as follows:

Table 1 Media Feasibility Validation Sheet

The results of the test of media feasibility by media experts, the purpose of this validation is to find out the assessment of media experts about the shortcomings of the comic creator application made by researchers as Arabic learning media. Researchers observed this media assessment using a questionnaire, also distributed to students. The purpose of this media is to increase the knowledge of Arabic vocabulary for students, as well as to create a pleasant teaching and learning atmosphere. The purpose of this assessment is to determine the feasibility of this media used in Arabic language learning media at Madrasah Tsanawiyah school. To find out the results of the assessment of the media, the researcher attaches the media feasibility validation data from the results of the questionnaire that has been filled in the table below.

Table 2.Media Feasibility Validation Sheet

No	Assessment aspect	Strongly agree	agree	Disagree	Strongly disagree	Criteria
1	The comic strip application is very effective in improving students' ability to understand Arabic language.	50%	40%	10%	-	Strongly agree
2	Educators and students are helped by using the comic strip application.	38,7%	51,6%	9,7%	-	agree
3	The language in the comic strip is structured	35,5%	48,4%	16,1%	-	agree
4	The comic strip media application is in accordance with existing procedures in general	51,6%	32,3%	9,7%-	-	Strongly agree
5	The comic strip	38,7%	38,7%	16,1%	6,5%	agree

	media application has many benefits					
6	It is easier to understand Arabic by using the comic strip application	40%	40%	13,3%	6,7%	Agree
7	The comic strip application is very suitable for the madrasah tsanawiyah level	36,7%	50%	6,7%	6,7%	agree
8	Comic strip creator motivation in learning	41,9%	48,4%	3,2%	6,5%	Agree
9	Comic strip application is very effective in Arabic language development	41,9%	41,9%	9,7%	6,5%	Strongly agree
10	Cpmic strip has uniqueness in the presentation of material	61,3%	32,3%	6,5%	-	Strongly agree

Description:
Ss=strongly agree
S = agree
TS= disagree
STS = strongly disagree

From the observation data using a questionnaire on the assessment of the media, there are percentage results from 31 respondents, namely the highest percentage result is 61.3% as a strongly agree category (Ss). The second highest percentage result is 51.6% as a strongly agree category (ST). The third highest percentage is 50% as a strongly agree (SS) category, and the last or lowest percentage result is 9.7% as a disagree (TS) category. Based on the results of the data from the questionnaire that has been filled in by media experts and students, the level of quality of comic creator media is included in the agreed category. So the conclusion proposed by the media expert on comic strip creator media says that the media is feasible to be developed or tested in Arabic language learning media at Madrasah Tsanawiyah.

Language Feasibility Validation Sheet

Assessment of the feasibility of language validation, researchers conducted a trial using a questionnaire to linguists, namely to Arabic language teachers as material to find out the shortcomings in the comic creator application in the language section. Also carried out an assessment from students about the language used by researchers, whether it can be understood by students or not. For this reason, researchers can find out the language that is suitable for use in the media. The purpose of this assessment is to make it easier for researchers to make suitable media for learning Arabic, also to make it easier for students to know Arabic vocabulary and can help teachers in the teaching and learning process. To find out the results of the assessment of the language, the researcher attached the media feasibility validation data from the results of the questionnaire that had been filled in the table below.

Table 3. Language Feasibility Validation Sheet

N0	Assessment aspect	Strongly agree	agree	Disagree	Strongly disagree	Criteria
1	The language presented is very easy for students to understand	73,3%	23,3%	3,3%	-	Strongly agree
2	Comic strip creator uses good and correct language	33,3%	66,7%		-	agree
3	Using spelling in accordance with the general	63,3%	33,3%	3,3%	-	Strongly agree
4	Comic strips present effective language	43,3%	53,3%	3,3%	-	agree
5	Students can read clearly the comic strip creator material	50%	50%	-	-	agree
6	Language fixity in comic strip creator	43,3%	53,3%	3,3%	-	Agree

7	Comic strips have the provision of language terms	60%	30%	10%	-	Strongly agree
8	Using the provision of language commands	36,7%	50%	13,3	-	Agree
9	The material in the comic strip creator uses language that is appropriate for students' social development.	56,7%	40%	3,3%	-	Strongly agree
10	Comic strips provide language that is often used	50%	46,7%	3,3%	-	Strongly agree

Description:
Strongly agree (SS)
Agree (S)
Disagree (TS)
Strongly disagree (ST)

Through observation data using a questionnaire on the assessment of language, there are percentage results from 30 respondents, namely the highest percentage result is 84.8% as a category of agree (S). The second highest percentage result is 63.6% as a strongly agree category (ST). The third highest percentage is 6.1% as a category of disagree (TS), and the last or lowest percentage result is 0% as a category of strongly disagree (STS). Based on the results of the data from the questionnaire that has been filled in by linguists and students, the level of quality of the comic creator application media is included in the agreed category. So the conclusion proposed by the linguist on the comic creator application media says that the media is feasible to be developed or tested in Arabic language learning media at Madrasah Tsanawiyah school of education.

Material Feasibility Validation Sheet

Assessment of the feasibility of material validation, researchers conducted a trial using a questionnaire to material experts, namely to Arabic language teachers as material to find out the shortcomings of the comic strip creator application media in the material section

in accordance with Arabic language learning teaching materials. also conducted an assessment of students about the material used by researchers, whether it can be understood by students or not. The purpose of the research is to facilitate researchers in making suitable media in Arabic language learning and can help teachers in the teaching and learning process. to find out the results of the assessment of the material, the researcher attaches the material feasibility validation data from the results of the questionnaire that has been filled in the table below.

Table 4. Material Feasibility Validation

N0	Assessment aspect	Strongly agree	agree	Disagree	Strongly disagree	Criteria
1	Comic strip creators provide material that is easy to understand	72,7%	27,3%	-	-	Strongly agree
2	The material provided is in accordance with the teaching material	51,5%	45,5%	3%	-	agree
3	Students can add insight from the material	75,8%	21,2%	3%	-	Strongly agree
4	Students speak fluent Arabic because of the material	68,8%	31,3%	-	-	Strongly agree
5	Students can draw conclusions from the material	57,6%	42,4%	-	-	Strongly agree
6	Comic strip material has its own uniqueness	66,7%	33,3%	-	-	Strongly agree
7	With the comic strip students can foster high enthusiasm	69,7%	30,3%	-	-	Strongly agree
8	Students can be motivated by the material	60,6%	39,4%	-	-	Strongly agree

9	The material designed is in accordance with procedures in general	75,8%	24,2%	-	-	Strongly agree
10	Comic strip creators describe material that is considered easy to reach by madrasah tsanawiyah students	60,6%	34,6%	3%	-	Strongly agree

Description:
ST = strongly agree
S = agree
TS = disagree
STS = strongly disagree

Through observation data using a questionnaire on the assessment of the material, there are percentage results from 33 respondents, namely the highest percentage result is 75.8% as a category of strongly agree (ST).The second highest percentage result is 75.8% as a category of strongly agree (ST).The third highest percentage is 69.7% as a category of strongly agree. Based on the results of the data from the questionnaire that has been filled in by material experts and students, the level of quality of the comic strip creator application media is included in the agreed category, so the conclusion proposed by the material expert on the media is feasible to be developed or tested in Arabic language learning media at Madrasah Tsanawiyah.

In the picture above is an example of a comic strip creator, this media was developed by researchers to help students in adding Arabic vocabulary at Madrasah Tsanawiyah Also to create a teaching and learning atmosphere that is more fun and not boring because the learning made is a new atmosphere by using electronics or the internet as a learning medium. In addition, it also helps teachers in creating teaching materials that are in accordance with the method or learning style desired by students. The comic strip creator application can be used in learning media both in Islamic religious education, mathematics, and Arabic language subjects. by using this media, the objectives of Arabic language learning can be achieved well because students can add their insights to the material being taught.

This study uses the borg and gall model developed by researchers in this study using the development model of Heinich, Molenda and Russell in his book entitled (Instructional Technology and Media) published in 1980. And developed by other authors who changed to

(Instructional Technology and Media for Learning) in terms of changes in the title, and the structure of the book. In the development of this study, researchers used a model developed by these researchers, namely by applying this model. That is a learning model that has a meaning that means convincing. That is, convincing whether the media made is appropriate to be used as a method, material and teaching material for learning Arabic. This model is one of the currently developing models used in learning media in accordance with technological developments.

This model consists of seven components or steps which are a description of the abbreviation of the model's name, namely borg and gal. As stages to apply in learning media, namely as follows: 1) potential and problems, 2) data collection 3) product design 4) design validation, 5) design revision 6) product trial 7,. This model is very suitable for use in learning Arabic to make it easier for teachers to evaluate students, also to make it easier for students to understand or know Arabic learning material and to create a pleasant atmosphere for students.

The comic strip creator application is one of the online learning media that has developed recently, along with the development of technology. Comic strip creator is a comic strip creator learning media that provides a variety of interesting features so that students in learning do not feel bored and after answering the quiz students will get an E-certificate with the scores and predicates obtained so that students feel rewarded for the results they have tried. For this reason, students feel happy in learning, and the teaching and learning process can run effectively. In addition, this media can help teachers.

The results of the development of this study are to use the comic strip creator application as Arabic learning media to improve students' abilities and interests and make it easier for teachers to teach and also implement the learning process well so that Arabic language learning goes well. the components or steps used in this study are references from the Heinich, Molenda and Russell development model, also developed by other authors. Furthermore, this media development uses the brag and galy model which has several components or steps as stages in developing the media that have been created. components or steps in this model there are Seven stages, for more details the researcher will explain the components or steps in this study. there is a description of the components or steps in this study which are as follows:

First, the potential and problems in this development research are based on the results of a needs analysis conducted by researchers at Madrasah Tsanawiyah. The form of potential and problems obtained in this research is the lack of innovation in the learning process, which has an impact on students who dislike the comic stip learning process and from the lack of student interest in the learning process independently.

Second, data collection before designing the product to be developed, researchers must collect data in accordance with what is needed to overcome the problems that exist in madrasah tsanawiyah. The data is used as material for the design of certain products that can overcome existing problems, this process is carried out by observing and interviewing teachers about the lack of innovation in the student learning process, which causes no student

interest in learning about comic strips. This information is used for consideration of the development of Comic Strip Creator application media.

Third, based on the results of the analysis, the next step is for researchers to design the product to be developed. The resulting product is comic strip creator media. The comic design developed by the researcher was carried out in several stages, namely Interviewing Madrasah Tsanawiyah teachers to analyze needs so that they can determine the product to be developed so that learning objectives can be achieved, determining the type of media development that is in accordance with comic strip creator, making media that is in accordance with the material so that teachers are easier in delivering material and easily understood by students.

Fourth, the design validation step, design validation is a process for assessing product design rationally. The steps in validating this media design are interacting with teaching material experts, material experts and elementary school learning experts as. Researchers asked teachers as validators to assess and provide input both in the form of input on the strengths and weaknesses of these developments. The results of the assessment given by experts will be used as a basis for improving and refining the development of teaching materials to match the products expected by researchers.

]Fifth, design revision, design revision is carried out after input from experts. All input, criticisms, suggestions and recommendations from experts and experienced teachers are recorded and used as a basis for improving the design of the products developed. Products that receive validation from validators will be able to know their weaknesses, these weaknesses are then tried to be reduced by improving the design. After the product is revised and gets a good predicate or is said to be valid, the developed product can be continued at the next stage, namely product trials.

Sixth, this trial stage is carried out after improvements by experts, which aims to see the effectiveness of the products developed. This product will be tested by two users, namely teachers and students. The first trial is a trial of the teacher or expert, this trial is carried out by asking the teacher to provide input and from this input it can be used as a consideration for product improvement. The second trial is to students, in this trial the researcher separates students according to the mindset of each student, during the trial the researcher can make observations about student responses to product trials. Students were also given a trial in filling out a questionnaire.

Seventh, namely, product revision, in this step receiving responses regarding qualitative information about the product developed, this revision is carried out after the test results have been given, both trials to teachers or teaching experts and students. Researchers can make improvements to the weaknesses of previously developed products.

CONCLUSION

Based on the results of the research and discussion that has been described, it can be concluded that this research produces comic strip creator application learning media as an online learning media that is applied in Islamic religious education, mathematics and Arabic language subjects. Research applies this media to Arabic language learning to increase

vocabulary in early childhood education. In addition, as teaching material for teachers so that the teaching and learning process can run effectively. From the observation results of the questionnaire that has been distributed to 33 responders on the feasibility of material validation, the feasibility of language validation and the feasibility of media validation, getting the highest data results of 84.8% with the category agree (S). So it can be concluded that the comic sAtrip creator application platform as Arabic learning media is feasible to be applied or used in learning Arabic at Madrasah Tsanawiyah schools.

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