E-Education Based On Macromedia Flash Case Study in Pekanbaru, Riau-Indonesia

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ABSTRACT

This study discusses the development of Macromedia Flash-based media in order to improve the ability to understand and apply the knowledge of recitation, especially on nun-dead and tanwin legal materials in Pekanbaru City. The instruments used were comprehension and application tests, interviews, and student questionnaire responses. The results showed that the level of validity of Macromedia flash based Al-Qur'an learning media on nun dead reading material and tanwin grade IV MIN students was declared highly valid with a percentage of 84.55% by technology experts and 93.89% by material experts, the level of practicality of instructional media Al-Qur'an Hadith based on macromedia flash on dead reading material and tanwin students in grade IV MIN is stated to be in a very practical category with a percentage of practicality level of 89% in small classes, 89.85% in limited classes, and 92.81% in classes Extent and Understanding and

explanation of dead and tanwin reading legal material is known that at the significance of 2 directions (2t-tailed) 0.000 <0.05 so there is a significant difference in the ability of posttest understanding and application of dead and tanwin reading law between control class students and experimental class students after using macromedia flash based learning media.

Keywords: E-Education, Macromedia Flash

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DOI: 10.5530/srp.2020.3.65

INTRODUCTION

Al-Qur'an learning is part of an effort to prepare students to understand, skillfully implement and practice the contents of the Qur'an through educational activities. Learning Al-Qur'an at Madrasah Ibtidaiyah aims that students are able to read, write, memorize, interpret, understand, and be skilled in carrying out the contents of the Al-Qur'an in Hadith in daily life to fear Allah SWT. The core of the piety is having good morals in personal, family, community, national and state life both properly and correctly. (Abdurrahman al-Nahlawi, 1989)

One of the materials taught at the madrasah ibtidaiyah is recitation material. This material is taught from grade one to grade six with material that varies according to the grade level. This can be seen in the fourth grade of madrasah ibtidaiyah students studying the law of reading death nun and tanwin namely izhar, ikhfa ', idgham, and iqlab. This knowledge is taught so that students can sound the reading law and tanwin properly and correctly according to the knowledge of recitation. Where there are rules that students must understand and apply after studying the law of death and tanwin.

Based on the writer's observation, the teacher has tried to provide this material with various efforts. The effort was carried out using the lecture, question and answer, discussion method. The media used in the form of print media, cards, and computer media by taking teaching material from the internet.

Seeing the importance of the law of reading dead and tanwin is understood and applied by students and the results of tests obtained by these students are not good, then one effort that can be done is to develop a learning media in reading the Qur'an through Macromedia Flash with a model direct learning.

Many studies have been conducted relating to the development of instructional media including: (Muhammad Ali, 2009; Rio Bagus Purnama, 2017; Andika Puspita Sari, 2018; Aji Arif Nugroho, Rizki Wahyu Yunian Putra, Fredi Ganda Putra, M. Syazali , 2017; Melani Safitri, 2013; Rubhan Masykur, Nofrizal Nofrizal, Muhamad Syazali, 2017; Farida Hasan Rahmaibu, Farid Ahmadi, Fitria Dwi Prasetyaningsih, 2016; Naniek Kusumawati, 2015) and others, but not discussing about death nun and tanwin.

THEORETICAL FOUNDATION

Media can be interpreted as an intermediary or delivery message from the sender to the recipient. Gagne stated that the media are various types of components in the student environment that can stimulate them to learn, meanwhile Briggs has an opinion that the media are all tools that can present messages and stimulate students to learn. (Arsyad, A 2002: 7; Sadiman, Arief. S. et al, 1993: 10; Asyti Febliza dan Zul Afdal, 2015: 3). The media can also be said as a tool that can be used for education such as radio, television, books, newspapers, magazines and so on. More specifically the media in the teaching and learning process tends to be interpreted as graphic, photographic, or electronic tools for capturing, processing, and rearranging visual or verbal information. (Nurhasnawati, 2011: 26; Hisyam Zaini et al, 2011: 3; Widodo et.al and Jasmadi: 2008: 38).

Media is not just a tool or material, but all other things that enable students to gain knowledge. This is what Gerlach and Ely media say: *a medium, conceived is any person, material, or event, that established condition which enable the learner to acquire knowledge, skill, and attitude.* (Heri Gunawan, 2012: 186).

Kemp and Dayton (Wina Sanjaya: 2010: 204), divides eight media contributions that are very important to the learning process. Among the contributions according to the two experts are as follows: (1) Submission of learning messages can be more standardized, (2) Learning can be more interesting, (3) Learning becomes more interactive, (4) Learning time can be shortened, (5) The quality of learning can be improved, (6) The learning process can take place whenever and wherever needed, (7) The positive attitude of students towards learning materials and the learning process can be improved, (8) The role of the teacher changes in a positive direction, meaning that the teacher does not place himself as the only source of learning. In addition, instructional media is explained by Asnawir and Basyiruddin Usman (2002:24); Sadiman Arief (1993:10); Sanaky, 2009:7).

According to Hamalik (1985: 63) said that there are four classifications of learning media, namely: (1) Visual tools that can be seen, for example blackboards, film strips, etc.; (2) Tools that are auditative or can only be heard, for example radios, Phonograph Records, transcription elicries, etc.; (3) Devices that can be seen and heard, for example films and television; and (4) Dramatization, role playing, sociodrama, puppet plays, etc.

Gagner Makes 7 types of media grouping, namely: Objects to be demonstrated, oral communication, printed images, still images, motion pictures, sound films, and machine learning. Scramm also groups media according to their coverage into three parts: mass media, group media, and individual media. According to Usman (2002: 18) The more advanced the development of society and the declaration of modern technology, the greater and heavier the challenges faced by teachers as educators and teachers in schools. Therefore teachers must have skills in choosing and using education and teaching media. In addition, it is necessary to practice practices that are continuous and systematic, both in the field of pre-service and in-service training.

Comprehension, this ability is generally given emphasis in the teaching and learning process. According to Supriyono (2010) "Here we are using the tern" comprehension to include those objectives, behaviors, or responses which represent an understanding of the literal message contained in a communication" Whereas Winkel takes from the Bloom taxon, a taxonomy developed to classify instructional goals. Bloom divides into 3 categories, which include one part of the cognitive aspects because in the cognitive domain there are aspects of knowledge, understanding, application, analysis, synthesis, and evaluation. This is in line with the opinion of Silversus. (Winkel, 1996: 245; Silversius, 1991: 43-44)

Comprehension students are asked to prove that he understands a simple relationship between facts or concepts. (Arikunto, 1995: 115; Sudjana, 1992: 24). According to Usman (2002), implementation is leading to activities, actions, actions, or the existence of a system mechanism. Implementation is not just an activity, but a planned activity and to achieve the objectives of the activity. (J.S Badudu and Sutan Mohammad Zain (2010:1487).

Implementation is practicing or pairing". Application can also be interpreted as implementation. (Lukman Ali, 2007: 104; Riant Nugroho, 2003: 158; Van Meter and Van Horn, 2008: 65). Elements of Implementation According to Wahab (2008: 45) "the application is an activity that has three important and absolute elements in carrying it out". The elements of implementation include: (1) The existence of a program that is implemented, (2) The existence of a target group, namely the target community and is expected to receive benefits from the program, (3) The existence of the implementation, both organizations or individuals responsible for managing, implementing as well as supervision of the implementation process.

Tajweed according to Akhmad Yassin Andy (2010: 1) is a form of masdar that comes from fi'il madhi jawwada which means to make it smart. The understanding of recitation according to Imam Dzarkasyi (1995: 6), Tajweed science is the knowledge of the rules and ways of reading the Qur'an as well as possible. According to Abdullah Asy'ari (1987: 7), Tajweed science is the science used to find out how to actually ring the letters correctly, both independent letters and letters in series. So the meaning of Tajweed science is the science of how to read the Qur'an appropriately, namely by issuing the sound of letters from the place of origin (makhraj) according to their nature and the consequences of the nature of the letter, knowing where to stop (waqf) and where must start reading again (ibtida ') (Ahmad Shams Madyan, 2008: 106). There are a number of Tajweed material discussed by MI students, one of which is the law of reading nun and tanwin which consists of five materials namely izhar, ikhfa ', idgham bighunnah, idgham bilaghunnah, and iqlab.

RESEARCH METHODOLOGY

This research was conducted in three MIN Pekanbaru city in the odd and even semester of the academic year 2018-2019. The research population is the whole (universum) of the object of research which can be all students of class IV MIN academic year 2018-2019 as shown in the following table:

Table 1. Research Population in Three MIN Pekanbaru City

No	MADRASAH NAME	CLASS	AMOUNT
1	MIN 1	IV A	38
		IV B	37
		IV C	36
		IV D	38
		IV E	38
2	MIN 2	IV A	26
		IV B	24

3	MIN 3	IV A	33
		IV B	29
		IV C	30
		IV D	31

The sample is part of the population (part or representative of the population under study).

Sampling in this study using simple random sampling technique. The random technique is done by lottery as shown in the following table:

1. The first draw is to determine the instrument trial class, then MIN 1 is chosen with class IV E,
2. The second lottery to determine small, limited and broad group trial classes. Based on the results of the lottery selected MIN 3. Students are selected by the teacher by proportional random sampling that represents the abilities of high, medium, and low grade IV c and IVd with a total of 6
3. The third lottery to determine the limited group trial class. Based on the draw, MIN 3 was chosen with class IV a

4. The fourth lottery to determine the broad group trial class. Based on the lottery selected MIN 3, MIN 2, and MIN 1
5. The fifth lottery is used to determine the experimental field test class, for MIN 1 selected IV d, MIN 2 IV b and MIN 3 IVd.
6. The sixth draw is used to determine the control field test class, based on the results of the selected draw MIN 1 IVa, MIN 2 IV a, and MIN 3 IV b

The design used in this study is the One-Group Pretest-Posttest Design. In this design, the class is given treatment by giving a pretest and posttest. The shape of the design is as follows:

Table 2. Design of Research

Pretest	Treatment	*Posttest*
O_1	X	O_2
O_3	-	O_4

Information:

X = Treatment in the experimental class

O_1 = Experimental class Pretest O_2 = Experiment class posttest

O_3 = Control class Pretest O_4 = Control class Posttest

The instruments used in this study are: (1) understanding and application tests; and questionnaire analysis of student responses to the media. Understanding tests are used to determine the level of understanding of the law of dead and tanwin students before given treatment and after given treatment. This test is in the form of an essay. While the application test is used to determine the level of ability to apply the law of non-death and tanwin students before treatment, while for the posttest, it is used to measure students' understanding and application of the law of nun death and tanwin after being given treatment using Macromedia Flash media.

Questionnaire given to respondents aims to obtain data about the development of learning media of Al-Qur'an Hadith based on macromedia flash on the recitation of students of class IV MI.

DISCUSSION

Validity Analysis of Macromedia Flash-based Learning Media on Legal Materials for Nun Dead and Tanwin Reading

The results of the analysis of the validity of technology experts on Macromedia flash-based learning media on legal material reading dead nun and tanwin said to be very valid in terms of technical and delivery of messages that is 84.55%. The results of the validity carried out by technologists on each component as quantitatively analyzed can be seen in the table below:

Table 3. The Validity of Technology Experts on Macromedia Flash-Based Learning Media on Legal Material Reading Dead Nun and Tanwin

No	Criteria	Indicator	Score Obtained	Maximum Score	Validation Value	Category
1	Technical Requirements	Opening Appearance Design	22	30	73.33	Valid
		Color Matching	52	60	86.67	Very Valid
		Display Suitability	35	45	77.78	Valid
		Ease of Directions	25	30	83.33	Very Valid
		Display Layout	24	30	80.00	Valid
		Display Size	26	30	86.67	Very Valid
2	Message Delivery	Media use	28	30	93.33	Very Valid
		Presentation of Material	40	45	88.89	Very Valid
		Language and Sentence	27	30	90.00	Very Valid

		Accuracy				
Amount			279	330		
Percentage of Ideality					84.55%	
Criteria					Very Valid	

Based on the calculation table, it appears that the overall percentage of the assessment of the three technology experts is very valid, because it is in the range of 80% to 100%. This means that learning media based on macromedia flash on the law of reading dead and tanwin is very valid.

Analysis of the Validity of Macromedia Flash-based Learning Media on Legal Materials for Dead and Tanwin Reading by Experts in Learning Materials

The results of the analysis of the validity of learning material experts on macromedia flash-based learning media on dead nun and tanwin legal reading material were stated to be very valid in terms of content quality, learning quality and interaction quality that is 95.28%. The results of the validity provided by the learning material experts on each component as analyzed quantitatively are shown in the following table:

Table 4. The Validity of Learning Material Experts on Macromedia Flash-Based Learning Media on Legal Reading Material Dead Nun and Tanwin

No	Criteria	Indicator	Earnings Score	Maximum Score	Validation Value	Category
1	Quality of Content	Material accuracy	115	120	95.83	Very Valid
		Quality of practice questions	85	90	94.44	Very Valid
		The correct use of language	28	30	93.33	Very Valid
2	Quality of learning	Clarity of learning objectives	58	60	96.67	Very Valid
		Clarity of learning flow	60	60	100.00	Very Valid
		Increased student interest and learning motivation	83	90	92.22	Very Valid
		The suitability of the media with the direct learning model	114	120	95.00	Very Valid
		The accuracy of feedback	28	30	93.33	Very Valid
3	Quality of Interaction	The ability to provide direct interaction between users and the media	57	60	95.00	Very Valid
		Readability of sentence text and animation	58	60	96.67	Very Valid
Amount			686	720		
Percentage of Ideality					95.28%	
Criteria					Very Valid	

Based on the description it appears that the learning media based on macromedia flash on dead nun and tanwin legal learning materials in terms of each indicator is categorized as very valid. This shows that the learning media based on macromedia flash on non-dead and tanwin legal material that was developed has been appropriate to be used in learning the Qur'anic Hadith.

Analysis of the Practicality of Media by Students
Practicality of Media by Small Groups

The results of the practicality analysis of learning media based on macromedia flash given to 6 grade IV MIN 3 Pekanbaru students were declared very practical with a percentage of 89.00%. The analysis results for each component are shown in the following table:

Table 5. Practicality of Media by Small Groups

No	Aspect	Indicator	Earnings Score	Maximum Score	Level Practicality	Level Practicality Whole	Criteria
1	Quality content and purpose	a. Clarity of purpose	54	60	90.00%	90.00%	Very Practical
		b. Material suitability	55	60	91.67%		
		c. Practice questions and feedback	80	90	88.33%		
2	Technical quality	a. Attractive appearance, and image clarity, color animation, sound and letters	106	120	88.33%	87.22%	Very Practical
		b. Language	51	60	85.00%		
3	Learning and instructional quality	a. Increased student interest and motivation	56	60	93.33%	89.52%	Very Practical
		b. Use of time	24	30	80.00%		
		c. Understanding the material and providing guidance in learning	108	120	90.00%		
Amount			534	600			
Percentage of Ideality			89.00%				
Category			Very practical				

Based on the calculation table, it appears that the percentage of practicality for learning media based on macromedia flash based on dead nun and tanwin legal materials is 89% with a very practical category, because it is in the range of 80% to 100%. Suggestions for improvement from students are used as material for improvement in the improvement of macromedia flash-based learning media on legal material for reading dead and tanwin.

Practicality of Media by Limited Groups
The results of the practicality analysis of learning media based on macromedia flash given to 33 fourth grade students of MIN 3 Pekanbaru were declared very practical with a percentage of 89.85%. The analysis results for each component are seen in the following table:

Table 6. Practicality of Media by Limited Groups

No	Aspect	Indicator	Earnings Score	Maximum Score	Level Practicality	Overall Practicality	Criteria
1	Quality of content and purpose	a. Clarity of purpose	308	330	93.34%	90.82%	Very Practical
		b. Material suitability	293	330	88.79%		
		c. Practice questions and feedback	448	495	90.50%		
2	Technical quality	a. Attractive appearance, and image clarity, color animation, sound and letters	590	660	67.12%	88.28%	Very Practical
		b. Language	284	330	86.06%		
3	Learning and instructional quality	a. Increased student interest and motivation	306	330	92.58%	90.22%	Very Practical
		b. Use of time	136	165	82.58%		
		c. Understanding the material and providing guidance in learning	600	660	90.91%		
Amount			2965	3300			
Percentage of Ideality			89.85%				
Criteria			Very Practical				

Based on the calculation table, it is clear that the percentage of practicality of learning media based on macromedia flash in legal material for reading dead nun and tanwin is very practical, because 89.84% is in the range of 80% to 100%.

Practicality of Media by Broad Groups
The results of the practicality analysis of learning media based on macromedia flash given to 93 fourth grade students of MIN 3 Pekanbaru were declared very practical with a percentage of 92.81%. The analysis results for each component are shown below.

Table 7. Practicality of Media by Broad Groups

No	Aspect	Indicator	Earnings Score	Maximum Score	Level Practicality	Overall Practicality	Criteria
1	Quality of content and purpose	a. Clarity of purpose	864	930	92.90%	92.17%	Very Practical
		b. Material suitability	852	930	91.61%		
		c. Practice questions and feedback	1284	1395	92.04%		
2	Technical quality	a. Attractive appearance, and image clarity, color animation, sound and letters	1717	1860	92.31%	92.58%	Very Practical
		b. Language	866	930	93.12%		
3	Learning and instructional quality	a. Increased student interest and motivation	880	930	94.62%	93.64%	Very Practical
		b. Use of time	429	465	92.25%		
		c. Understanding the material and providing guidance in learning	1739	1860	93.48%		
Amount			8631	9300			
Percentage of Ideality			92.81%				
Category			Very Practical				

Based on the calculation table, it is clear that the percentage of practicality of learning media based on macromedia flash in legal material for reading dead nun and tanwin is practical, because 92.81% is in the range of 80% to 100%.

Analysis of the Effectiveness of Developing Macromedia Flash-based Learning Media to Facilitate Understanding and Application of the Law of Nun Mati and Tanwin
The effectiveness of the development of macromedia flash-based media is obtained from differences in the results of tests of understanding and application of dead nun and tanwin legal material between control class students and experimental class students. Judging from the data on the results of tests of students' understanding and application of dead nun and tanwin legal material, it is found that there are significant and more effective differences between control class students and experimental class students after using macromedia flash based learning media. It is true what was stated by Hamalik in Arsyad's book that the media can increase student understanding. (Arsyad, 2010:15; Ahmadi, Fakhruddin, Trimurtini, & Khasanah, (2017:33-41).

CONCLUSION
Based on the analysis of the learning media of the Qur'an based on the Macromedia Flash based Hadith, it can be concluded that:
1. The level of validity of the Macromedia Flash-based Al-Qur'an Hadith learning media on dead nun and tanwin legal reading material is declared highly valid with a percentage of 84.55% by technology experts and 95.28% by material experts.
2. The practicality level of Macromedia Flash based Al-Qur'an Hadith learning media on dead nun and tanwin legal reading material is stated to be in a very practical category with a percentage of practicality level of 89.00% in small classes, 89.85% in limited classes, and 92.81% in broad class.
3. Understanding and explanation of dead and tanwin legal materials is known that at the significance of 2-way (2t-tailed) 0,000 <0.05 so there are significant differences using Macromedia Flash-based learning media.

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