DEVELOPMENT OF A PRINTED HYPERTCONTENT MODULE FOR LEADERSHIP SUBJECTS

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Abstract: This research produces a printed module for hypertcontent leadership subjects. The methodology used is Research and Development (R & D) research, in its development this research uses the Rowntree model. Hypertcontent printed module combines hypertext, hypertmedia and hypertlink into one part that can enrich the content of the material in this print module, to be able to access material online using QR-Code. There are three stages in this research, namely (1) the planning stage, (2) the writing preparation stage, (3) the writing and editing stage (Rowntree, 1994). The results of the validation by the experts showed that the average material expert test was 3.43 and the media and instructional experts were 3.14. Furthermore, after repairing the product, an individual trial was carried out involving 3 respondents using the face to face method, the average was 3.39, and regarding to (Hake, 1998) the effectiveness test with the N-Gain score was obtained a score of 0.72 (72%), this means that the hypercontent print module developed very effective. The conclusion from the results of this study shows that the hypercontent print module is already good, thus the hypercontent print module for leadership subjects is suitable for learning at Fitrah Islamic World Academy Bogor High School.

Keywords: research and development, rowntree model, hypertcontent,

QR Code

Abstract: Penelitian ini menghasilkan modul cetak untuk mata pelajaran kepemimpinan hipertensi. Metodologi yang digunakan adalah penelitian Research and Development (R & D), dalam pengembangannya penelitian ini menggunakan model Rowntree. Modul cetak hypertcontent menggabungkan hypertext, hipertmedia dan hipertlink menjadi satu bagian yang dapat memperkaya konten materi pada modul cetak ini, untuk dapat mengakses materi secara online menggunakan QR-Code. Terdapat tiga tahapan dalam penelitian ini yaitu (1) tahap perencanaan, (2) tahap persiapan menulis, (3) tahap menulis dan mengedit (Rowntree, 1994). Hasil validasi ahli menunjukkan rata-rata tes ahli materi 3,43 dan ahli media dan pembelajaran 3,14. Selanjutnya setelah dilakukan perbaikan produk dilakukan uji coba individu dengan melibatkan 3 responden dengan metode tatap muka rata-rata 3,39, dan menurut (Hake, 1998) uji keefektifan dengan skor N-Gain diperoleh skor 0,72 (72%), ini berarti modul cetak hypercontent

dikembangkan dengan sangat efektif. Kesimpulan dari hasil penelitian ini menunjukkan bahwa modul hypercontent print sudah baik, sehingga modul hypercontent print mata pelajaran kepemimpinan cocok untuk pembelajaran di Fitrah Islamic World Academy Bogor High School.

Keywords: research and development, rowntree model, hypertcontent,

QR Code

INTRODUCTION

Very large and significant changes are expected to shape a very large workforce in the coming years as well. no doubt the adoption of the latest technology fields such as automation, Artificial Intelligent (AI) and the Internet of Things (IoT) have influenced the way people do their daily work. Technologies like this can take over some of the tasks that employees perform as part of their daily work, in some cases jobs can be completely replaced (Schwab, 2016) estimates in Industrial Revolution 4.0 that 47% of total jobs in the United States are at risk for their roles. taken over or automated over the next two decades.

In the release of the Economic Development Cooperation Organization (OECD) survey for the results of the 2018 Program for International Student Assessment (PISA) in Paris France, Indonesia's position is still far below the OECD average. To read with a score of 371 from the OECD average of 481, then for mathematics with a score of 379 below the OECD average of 487, then for science with a score of 389 below the OECD average of 489 (OECD, 2018).

Fitrah Islamic World Academy is an international standard boarding school based private Islamic school and is also an officially registered school as Cambridge International Examination School (CIE School) (*Cambridge International*, 2020) located in Ciseeng, Bogor Regency, by having one of the leading curricula, namely character development in a subject Leadership.

The FIWA school has the following vision and mission, vison of Fitrah Islamic World Academy will be a world model Islamic School that provides an Islamic, internationally recognized, inclusive, 21st Century education for young Muslim to be successful people in this life and the hereafter, And the mission of Fitrah Islamic World Academy will provide students with an international standard of education with the Al-Quran & As-Sunnah of Prophet Muhammad Shallahu Alaihi Wasallam in accordance with a conception of Salafush Shalih as the basis, which prepares them to become a great mother of future Ulamas, Leaders & Entrepreneurs.

Research on print and hypercontent modules has been carried out by many previous studies (Amin et al., 2020), as well as research (Prawiradilaga et al., 2018) other research conducted (Siang et al., 2017) shows that print modules for Religious education can also be used in learning activities at Middle Schools. The use of printed modules itself has been proven to make it easier for students to learn, as well as the time used more effectively and efficiently as in research conducted by (Westomi et al., 2018). Apart from that, a comparative study of the effectiveness of selflearning based on printed modules with conventional teaching methods on the achievement of physics lesson scores at Osun State Nigeria shows that it can improve learning outcomes in physics students (Olaniyi, 2019). Furthermore, from the literature search above, it can be concluded that there have been several studies using the hypercontent.

As for this study, the researcher developed a hypertensive print module for Leadership subjects for high school level, in this study the main product produced was a print module, but the content developed would also relate to various other types of content in the form of images, animation, video and audio using the QR Code system as a media access device in the android mobile phone application. The module developed not only focuses on the cognitive realm but also as a learning medium that can train critical thinking skills, namely by developing a print module combined with hypertcontent which can form a future Muslim leader.

The popularity and development of this QR code is very fast in line with the development of smart phones and has received tremendous acceptance throughout the world (Tiwari, 2016). From the description above, it shows that hypertcontent-based learning materials can be accessed online using a QR code, and can also be downloaded and then shared in the offline learning process.

Furthermore, how to make a QR Code, QR Code is a twodimensional machine-readable code. This is an optical label which contains information about the item attached / displayed

QR code uses four standard (i.e. numeric, alphanumeric) coding modes to store data efficiently and extensions can also be used. This QR code consists of black modules (square dots) arranged in a square grid on a white background, which can be read by an imaging device such as a camera on a smart phone.

Here are some steps for creating a QR code:

QR4Office	×
Enter the URL/text you'd like to encode:	^
Options Color: Background: Size: Error correction: Medium - 15%	
Preview Full size: 132 x 132 px https://www.youtube.com/watch?	4
v=_WpmqKdhw2s	~
Insert	
You can also right-click on the preview image and "Copy" → "Paste Special", or "Save Picture As" and insert it manually.	

Figure 1. How to Make a QR Code with the MS Word Application

Examples of Hypercontent Leadership for Time Management sections linked to *Youtube Channel.*



Source (*Time Management*, n.d.) <u>https://www.youtube.com/watch?v=_WpmqKdhw2s</u>

Hypertcontent is briefly a concept used to link or link one material to another material simultaneously in a particular digital technology program (Prawiradilaga et al., 2018). The concept of learning with hypertcontent material sources is in line with the development of the world of information technology, in this case online learning. Learning that is designed systematically with hypert content material is called hypert content-designed instruction (Simonson et al., 2005).

There are questions that arise in this research, namely (1) How to develop a hypertcontent printed module for Leadership subjects at SMA Fitrah Islamic World Academy Bogor? (2) What is the feasibility of a hypertcontent printed module for Leadership subjects at SMA Fitrah Islamic World Academy Bogor. ? (3). How is the effectiveness of the hypertcontent

printed module for the Leadership subject at SMA Fitrah Islamic World Academy Bogor?

Furthermore, answering these questions, the objectives to be achieved from the preparation of this research were determined as follows: (1) To produce hypertcontent printed module products for Leadership subjects at SMA Fitrah Islamic World Academy (FIWA) Bogor. (2) To test the feasibility of the resulting hypertcontent printed module for the Leadership subject at SMA Fitrah Islamic World Academy (FIWA) Bogor. (3) To test the effectiveness of the resulting hypertcontent printed modules for Leadership subjects at SMA Fitrah Islamic World Academy Bogor.

METHOD

This research was conducted at Fitrah Islamic World Academ Bogor Senior High School, Bogor, West Java, and this study aims to produce products for leadership subjects at Fitrah Islamic World Academy Bogor High School. This product is made in the form of a hypertcontent printed module that can be used by students as a means of independent learning.

This study with the population of this study were students of class XI SMA Fitrah Islamic World Academy Bogor, while the samples of this development research were 20 students of class XI SMA Fitrah Islamic World Academy Bogor.

The research approach method used in this research is the research and development method of Derek Rowntree's model (Rowntree, 1994). This method is used to develop and produce printed products. The product developed goes through several stages of testing to validate the product, which begins with expert trials, then a face-to-face trial product for 3 students and then trials with 20 students for the field trial stage to test the effectiveness of product use.

RESEARCH PROCEDURE

The research objective is to produce or develop a product, in this case the physical form of a hypertcontent printed module.

This research was conducted with a research and development approach (R&D). The approach used is a combination of research and development models from Borg and Gall (Borg & Meredith D. Gall, 2008) and the printed module development model used is the rowntree crane product development model Rowntree, 1994) as follows

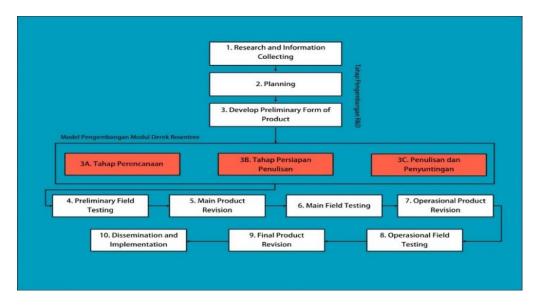


Figure 2. Hypercontent module development procedures

There are three stages in this research, namely (1) the planning stage, (2) the writing preparation stage, (3) the writing and editing stage (Rowntree, 1994), as in Figure 1 below.

Route m	ap for mate	rials preparation			
Stage 1 Planning	Profile your l	earners			
	Agree aims and	objectives			
Choose y	our media	Outline the content			
	Dian learnes				
	Plan learner s	support			
	+				
	Consider existing	g materials			
	ļ				
	gh up resources	and constraints			
Preparing For Writing	Ļ				
TO WITCH	Sequence you	ur ideas			
	Develop activities a	And a second sec			
Find examples Think graphics Decide on access devices					
	Decide on acces	ss devices			
	1				
	Consider physic	cal format			
	Ļ				
Stage 3 Writing &	Start your fir	st draft			
re-Writing	Ļ				
	mplete and edit	your first draft			
	Ļ				
	Write assessmer	nt material			
	ļ				
Pil	ot and improve y	our materials			

Figure 3. Hypercontent module development stages

RESULT

The results of the preliminary research show that students have a low average score for leadership subjects, namely 62.75, while the minimum completeness standard (KKM) in leadership subjects is 75. From these results it can be seen that the students of SMA Fitrah Islamic World Academy Bogor are still not fully understand and understand the material taught by teachers in leadership subjects. In addition, students do not have learning modules for subject matter taught and explained by the teacher, which helps students to more easily understand the material being taught.

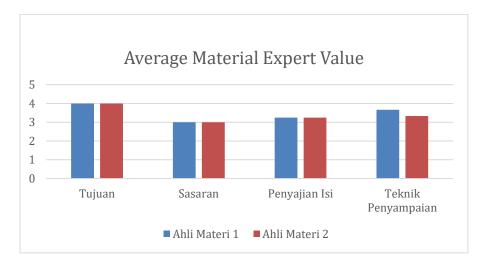
The results of the validation by the experts showed that the average material expert test was 3.43 and the media and instructional experts were 3.14. Furthermore, after repairing the product, an individual trial was carried out involving 3 respondents using the face to face method, the average was 3.39, and regarding to (Hake, 1998) the effectiveness test with the N-Gain score was obtained a score of 0.72 (72%), this means that the hypercontent print module developed very effective.

DISCUSSION

The development of a hypertcontent print module for leadership subjects at Fitrah Islamic World Academy Bogor High School uses the Derek Rownree model which includes 3 main stages, namely (a) planning, (b) writing preparation, (c) writing and editing. The results of the initial product design were then subjected to expert trials namely material experts and media experts. In the expert matterial trial, it gave an average value of 3.43. Day Based on the data obtained above, the hypertcontent print module for Leadership subjects received a final average score of 3.43. Thus, it can be concluded that the quality of the material from the printed module for Leadership subjects is said to be very good.

Aspecs	Average Expert Material 1	Average Expert Meterial 2
Aim	4.00	4.00
Target	3.00	3.00
Content Presentation	3.25	3,25
Delivery Technique	3.66	3.33

 Table 1. Material Expert Evaluation Score



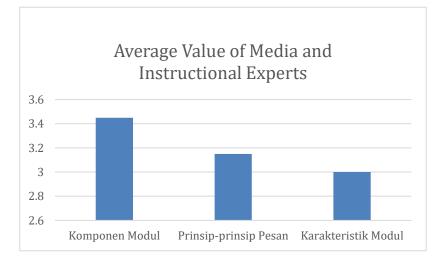
Graph 1. Average Value of Material Expert

Based on the data obtained above, the hypertcontent print module for Leadership subjects received a final average score assessment of 3.43. Thus, it can be concluded that the material quality of the printed module for Leadership subjects is said to be very good.

Furthermore, trials were conducted on instructional and media experts as follows:

Table 2. Evaluation Score of Media Experts (Module) and Instructional

Aspecs	Average Expert
Module Component	3.44
Principles of message	3.15
design	
Module Characteristic	3.00



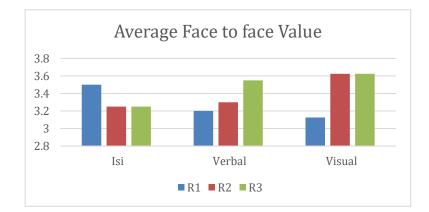
Graph 2. Average Score of Media and Instructional Experts

Based on the results of media experts, the hypertcontent leadership print

module got an average score of 3.14. Thus it can be concluded that presenting the module based on systemics, message design principles and module characteristics is said to be good.

Next, for the face to face test on 3 grade XI students of SMA Fitrah Islamic World Academy Bogor as follows,

Aspecs	Respondent 1 (R1)	Respondent 2 (R2)	Respondent 3 (R3)
Content	3.50	3.25	3.25
Verbal	3.20	3.30	3.55
Visual	3.12	3.62	3.62



Graph 3. Average Face to face Value

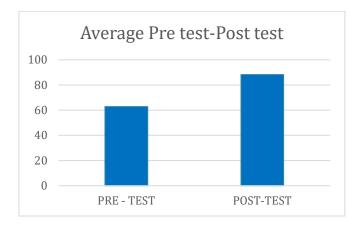
From the results of individual trials face to face for users, by getting a final average of 3.39, the results can be concluded that the results are very good.

EFFECTIVENESS OF THE RESULTING MODULE

After that, the printed hypertcontent module for leadership subjects was subjected to a field trial to measure its effectiveness. In this trial, conducting a pretest and posttest involving 20 students of grade XI. After students study this print module, the researcher gives a post test to see the increase in the ability and learning outcomes of grade XI students of SMA Fitrah Islamic World Academy.

Table 3. Face to Face Trial Score

Test Stages	Total Averages
Pre Test	62,75
Post Test	88,25



Graph 4. Average Pre test-Post test

Based on the results of the pre-post test, the class average score in the pretest was 62.75. The lowest score at the pre-test was 65, the average score at the post-test was 88.25, while the highest score obtained by the Santri during the post-test was 100. This shows that there is an increase in the learning outcomes of Santri after using the module, which is 25, 25.

Based on the table pre test - post test and t test, the following statistical descriptions are obtained,

Table 5.	Statistical	Descriptions
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Descriptive Statistics							
N Minimum Maximum Mean Std. Deviation							
Pre Test Grade XI	20	45.00	85.00	62.7500	11.63875		
Post Test Grade XI	20	80.00	100.00	88.2500	6.93485		
Valid N (listwise)	20						

Table 6. Normality Test

Tests of Normality								
		Kolmogo	orov-Si	mirnov ^a	Shap	iro-Wil	k	
	Code	Statistic	df	Sig.	Statistic	df	Sig.	
Hasil Test	1.00	.133	20	.200*	.959	20	.529	
Grade XI	2.00	.180	20	.087	.888	20	.025	

*. This is a lower bound of the true significance.

^aLilliefors Significance Correction

NORMALITY TEST REQUIREMENTS:

- a) If the significance value (sig)> 0.05 = 5%, then the data is normal distribution
- b) If the significance value (sig) <0.05 = 5%, then the data are not normally distorted.

Based on the results of the calculation of the Kolmogorov-Smirnov normality test above a significance value of more than 0.05, namely for the pre test = 0.20, while the significance value of the post test = 0.087, it can be said that

the data is normal or has a variant of data that is normally distributed and then the homogeneity test is carried out.

HOMOGENEITY TEST

The requirements for data are said to be homogeneous if:

- a) If the significance value is based on mean> 0.05 = 5%, then the data is Homogeneous.
- b) If the significance value is based on mean <0.05 = 5%, then the data is not homogeneous.

 Table 7. Homogeneity Test

Test of Homogeneity of Variances						
Hasil Pre Test						
Levene Statistic df1 df2 Sig.						
.404 4 15 .803						

From the results of the table above, the significance value is based on the mean of 0.803, and because it is greater than 0.05, the data has a homogeneous variant, then because the data is normal and homogeneous it qualifies for the t test (Hypothesis test) as follows.

SIGNIFICANCE TEST OF THE DIFFERENCE IN THE MEAN VALUE OF PRE TEST (X) AND POSTTEST (Y)

To be able to see the effectiveness of learning, it can be seen by comparing the cognitive results of the pre-test and post-test of the students from the difference in value or score gain.

The first step:

Hypothesis Formulation

H0 : $\mu 1 = \mu 2$

There is no difference between the results of the pre-test and the post-test by using this hypertcontent printed module in improving the learning outcomes of the XI grade students of SMA Fitrah Islamic World Academy. In short, it means that there is no effect.

H1 : µ1 ≠ µ2

There is a difference between the pre-test and post-test results by using this hypertcontent printed module in improving the learning outcomes of students in grade XI SMA Fitrah Islamic, this means there is an influence.

Second Step:

Real level and and table values

 α = 0.05 = 5% for a two-way test, then 0.05 / 2 = 0.025 = 2.5% t = n-1 = 20 -1 = 19

t table = 2,093 or - 2,093

Third step:

Testing Criteria:

Reject H0 if: t count> t table or t count <-t table Or: | t count |> t table

Fourth Step:

With the data from the pre-test and post-test results and using the help of the SPSS application (Statistics & Guide, n.d.), the following results were obtained:

Table 8. Statistics Test

TestPaired Samples Statistics						
Mean N Std. Deviation Std. Error Mea						
Pair 1	Hasil Pre Test	62.7500	20	11.63875	2.60250	
	Hasil Post Test	88.2500	20	6.93485	1.55068	

Paired Samples Correlations				
		Ν	Correlation	Sig.
Pair 1	Hasil Pre Test & Hasil Post Test	20	.959	.000

Paired Samples Test								
Paired Differences								
		Std.	Std. Error		nfidence I of the ence			Sig. (2-
M	ean D	Deviation	Mean	Lower	Upper	t	df	tailed)
Pair Hasil Pre -25.9 1 Test - Hasil Post Test	50000 5	5.35576	1.19759	-28.00657	-22.99343	-21.293	19	.000

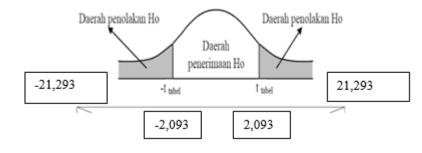


Figure 1. Reception Area Curve

From the table above, it is known that the two-way t test count = -21.293 and the t table value -2.093.

Because t count = -21,293 < -2,093 = t table, H0 is rejected. To see the level of effectiveness using the Gain Score method as follows:

Table 9. Gain criteria for the effectiveness test score

Value Gain (g)	Criteria
>= 0.7	High / Highly Effective
0.3 <= (<g) 0.7<="" <="" td=""><td>Moderate / Effective</td></g)>	Moderate / Effective
< 0.3	Low is Ineffective

Source (Hake, 1998)

No	Pre Test	Post Test	Difference		
1	75	95	20		
2	60	85	25		
3	60	85	25		
4	65	90	25		
5	55	85	30		
6	70	90	20		
7	45	80	35		
8	70	95	25		
9	65	90	25		
10	75	100	25		
11	60	85	25		
12	85	100	15		
13	80	100	20		
14	70	90	20		
15	55	85	30		
16	50	80	30		
17	70	90	20		
18	50	80	30		
19	50	80	30		
20	45	80	35		
Avarage	62.75	88.25			
	Difference Average		25.5		
	Standar	t Deviation	5.356		
	t Count		-21.293		
	t tabel		-2.093		
	Gain Score		0.72		
	Effectiveness Criteria		Very effective		

Table 10. Effectiveness Test with Gain Score

The results of the pre-test and post-test analysis and field studies show that the supporting tools for independent learning in the form of a hypertcontent printed module can be used to improve the management of independent learning both inside and outside the classroom. It is very effective to use with a Gain score of 0.72 (72%).

CONCLUTION

Based on the results of the research conducted, it was found that class XI students at the Fitrah Islamic World Academy Bogor needed a hypertension print module for leadership subjects as independent learning materials in the classroom and outside the classroom with guidance from teachers in the dormitory. With this hypercontent printed module, students can be motivated and can improve their learning outcomes for leadership subjects. The conclusions from the results of this study indicate that the hypercontent print module is good, so the hypercontent print module for the leadership course is:

- 1. The results of the feasibility test for using modules from the experts get an average score of 3.14 or the category module is quite good and suitable for use, while the face-to-face test results obtained a score of 3.39 or the module is categorized as Good and suitable for use.
- 2. Learning using the hypertension print module for leadership subjects independently can significantly improve student learning outcomes compared to the pre-test average score before using the module and the post-test average score of 88.25 after students use the module. hypercontent print for self-study.
- 3. Furthermore, to test the effectiveness of a gain value of 0.72, or in other words, the use of the hypertension print module for leadership subjects as an effective independent learning material for students at Fitrah Islamic World Academy High School.

The suggestion from the researcher is to be able to carry out further research to develop a hypertension print module to serve as a teacher guide so that learning objectives can be achieved, namely to become a Muslim leader. In addition, researchers suggest that this hypertension print module can be used by other schools at the high school level both public and private in Indonesia, especially Bogor.

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