



## Designing Powtoon-Mediated Interactive Multimedia to Leverage Students' Learning Behavior in the Qur'an and Hadith

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### Abstrak

Penelitian ini bertujuan mendeskripsikan proses pengembangan, kualitas, penilaian dan perilaku belajar siswa terhadap multimedia interaktif al-Qur'an dan Hadis berbasis *Powtoon*. Penelitian ini menggunakan R&D (*Research and Development*) dengan teknik pengumpulan data validasi, angket dan observasi. Data yang diperoleh selanjutnya dianalisis menggunakan analisis isi dan analisis deskriptif. Hasil penelitian memaparkan beberapa poin penting desain multimedia interaktif ini. Pertama, tahapan pengembangan multimedia interaktif mencakup identifikasi potensi dan masalah pembelajaran al-Qur'an dan Hadis, pengumpulan materi pelajaran al-Qur'an Hadis kelas VII, pendesainan produk berdasarkan tujuan pembelajaran, validasi ahli materi dan ahli media terhadap hasil desain, revisi desain atas hasil validasi ahli, uji coba produk pada kelompok kecil, revisi produk, dan uji coba produk pada kelompok besar. Kedua, hasil validasi/penilaian ahli materi tahap pertama baik (82%), tahap kedua hasilnya sangat baik (92%), penilaian ahli media tahap pertama cukup baik (70%), dan tahap kedua hasilnya sangat baik (90%). Ketiga, hasil penilaian siswa kelompok kecil dan kelompok besar menunjukkan nilai yang baik. Penelitian ini mendemonstrasikan kontribusi pandangan praktis terhadap desain multimedia interaktif yang dimediasi *Powtoon*. Temuan studi terbaru ini juga mengilustrasikan bahwa perilaku belajar siswa menjadi lebih baik pada aspek sikap, kebiasaan, dan minat belajar.

**Kata Kunci:** Desain Multimedia Interaktif, Perilaku Belajar, *Powtoon*, al-Qur'an dan Hadis

### Abstract

*The present study aims to describe the process of development, quality, assessment, and students' learning behavior toward Powtoon-mediated interactive multimedia for the Qur'an and Hadith. Grounded in R&D (Research and Development), data were garnered through validation, questionnaire, as well as observation. The collected data*

*then were analyzed by using content analysis and descriptive analysis. Study findings expose that first, the stages of interactive multimedia design included identifying the potential and problems of learning the Qur'an and Hadith, collecting the lesson material of the Qur'an and Hadith for seventh graders of junior secondary school, designing products based on learning objectives, having the design validated by experts, revising the design on expert recommendations, managing a product trial on a small group, revising products, and carrying out a product trial on a large group. Second, the first assessment of the teaching media expert was considered good (82%), and the second one was considered very good (92%). Meanwhile, the first assessment of the teaching material expert was considered good enough (70%), and the second one was considered very good (90%). Lastly, the assessment of both small and large group was considered good. The study contributes to novel practical insights on the design of Powtoon-featured interactive multimedia as an endeavor to foster the students' learning behavior in the material. This study also demonstrates that the student learning behavior was leveraged, particularly in the aspects of attitudes, habits, as well as learning interest.*

**Keywords:** *Interactive Multimedia Design, Learning Behavior, Powtoon, Qur'an and Hadith*

## INTRODUCTION

Most of the Qur'an and Hadith learning among Islamic boarding schools has been using visual printed media only, such as books. This also happens in madrasah (Islamic center) under the auspices of *pesantren* foundation. This condition is deplorable, especially in today's technological era in which there is rapid development of media. Therefore, it is necessary for the educators to make the best use of the technology for the learning process, included in the learning of the Qur'an and Hadith.

Learning is stagnant when the adopted paradigm still contains the following aspects: 1) the role of teachers becoming the only source of knowledge 2) a strict learning schedule, 3) the learning is fully directed by the curriculum, 4) the tendency of making learning material as well as its theory as the basis of learning, 5) focusing on memorizing learning material, 6) engaging students to be competitive, 7) making class as the main focus 8) computers are seen more as objects, 9) dominating the use of static media 10) having limited communication, 11) having normative assessment. Therefore, the learning paradigm must undergo a transformation in order to be able to give such contribution to the society, and it must have the following values: 1) the teacher should be a facilitator; 2) there should be flexible schedule which is open as needed; 3) learning is directed by the learners themselves; 4) The learning should be problem-based, project-based, contextual, and reflective; 5) There should be learning design and

observation; 6) The learning should be creative; 7) There should be collaborative learning; 8) Focus on community; 9) The computer is used as a tool; 10) There should be dynamic media; and 11) There should be comprehensive performance assessment (Santyasa, 2011: 8–9).

According to Schade in Hoogeveen, multimedia improves sensory stimulation, particularly due to the inclusion of interactivity. Schade's research has shown that people, who read only, without using other media, are in the lowest memory (1%). This memory can be increased around 25% - 30% with the help of other learning media, such as television. Learning methods can be more interesting if it uses three-dimensional (3D). Schade's study has also revealed that the use of 3D can improve memory up to 60%. Multimedia can also display 3D concepts attractively, as far as the learning curriculum can be designed systematically, communicatively, and interactively throughout the learning process (Munir, 2012: 127–128).

The results of other research conducted by Mehrabian found aspects that improve someone's understanding in communicating. The result showed that verbal communication only provides 7% understanding level. Meanwhile, non-verbal or audio communication increases understanding up to 38%, and visual communication improves understanding up to 55% (Arifin et al., 2015: 2). These results illustrate that communication using multimedia is more effective because it provides better understanding when communicating.

There are also several studies related to interactive multimedia, such as the one conducted by Aziz entitled development of learning media for the Qur'an and Hadith based on auto-play media studio. The results showed that the learning media of the Qur'an and Hadith which based on Auto-play media studio is in line with the average analysis validation criteria table. Based on the expert's assessment of learning media, it was obtained that the average value was 3.9. The material expert's assessment obtained an average value of 4.8. The teacher's assessment of the Qur'an and Hadith subject got an average value of 4.8 and the assessment of the student's responses got an average value of 4.7 (Aziz, 2015).

Meanwhile the research conducted by Tumanggor & Sitompul produced interactive multimedia learning to read the Qur'an with the subject matter of the *makharijul huruf* for second graders ar-Raudhatul Hasanah boarding school Medan

in the form of a *compact disc* (CD) along with a manual book. This multimedia contains several components in the form of opening page as well as main menu (competence, material, exercises, tests, and profiles) (Tumanggor & Sitompul, 2016: 14).

Research in Powtoon media is also in a concern, as was done by Fitriyani regarding the development of Powtoon as a learning media on self-concept material. This research has a significant impact on the learning process (Fitriyani, 2019, p. 106). Likewise, the research conducted by Pangestu and Wafa who developed Powtoon media in the context of economic subjects, and its results were declared that it is feasible and could be used in the learning process (Pangestu & Wafa, 2018: 77–78). Other research shows that learning using Powtoon media has a positive influence and impact on student interest and learning outcomes (Ariyanto et al., 2018: 123).

Research in the transformation of students' learning behavior after the use of media in the learning process can be seen from a Research conducted by Zeptyani & Wiarta (2020: 69). It shows that there is an effect of the use of audio-visual media on students' learning behavior. Besides, the use of information technology and internet as learning media also has a significant impact on students' learning behavior (Abdullah, 2018: 51; Ricoida & Pibriana, 2016: 286) or insignificant (Haq, 2015: 242). The use of instructional media can also provide opportunities for teachers to analyze and assess students' learning behavior (Riza et al., 2017: 117). Furthermore, other researches revealed that multimedia development also provides opportunities for educators to innovate learning strategies (Nurdin, 2016: 63), as well as improve students' critical thinking competencies (Rosyadi, 2019: 78).

The above mentioned studies have produced products in the form of learning media and brought positive impact of using learning media on student behavior. However, no one has developed Powtoon-based learning media for the Qur'an and Hadith material and its impact on student learning behavior in class yet. Therefore it is urgent for this research to be carried out especially in the scope of religious education institutions, including *Madrasah Tsanawiyah* (Islamic junior secondary schools). To help this, researchers are interested in developing interactive multimedia based on Powtoon in the subject of the Qur'an and Hadith for seventh graders of junior secondary schools in Indonesia.

**DEVELOPMENT OF INTERACTIVE MULTIMEDIA**

The process of developing interactive multimedia in the Qur'an and Hadith learning for seventh graders of a private Islamic junior secondary school in Jember, East Java, Indonesia adapted to the model developed by Sugiyono. The process is described as follows (Sugiyono, 2012: 126).

**Potentials and Problems**

The first step taken by the researcher to develop interactive learning media was observing and analyzing potential and problems through observation and interviews. The results of observations show that the school has good potential in terms of providing facilities which can help teachers and students to use interactive multimedia, such as the availability of computer laboratories and projectors. Meanwhile, based on the interview result, it was found that there is lack of knowledge or competence of the teachers in utilizing technology as a medium of learning.

Based on these potentials and problems, the researcher analyzes that there is a need for interactive multimedia development that can provide benefits to the learning process, especially the Qur'an and Hadith learning. Therefore, the learning process can be transformed into more active and interactive, meaning that students' learning behavior will be better than before.

**Data Collection**

The second step is collecting the lesson material of the Qur'an and Hadith for seven graders of junior secondary school in Indonesia based on the main competence and basic competencies of the 2013 curriculum, the current national curriculum.

Table 1. Basic Competencies and Learning Experience

Basic Competencies	Learning Experience
3.1 Understanding the position of the Qur'an and Hadith as a guidance for human beings	By learning the Qur'an and Hadith as a life guidance, students will have following learning experience: 1. Being able to explain the meaning of the Qur'an and Hadith 2. Describing the special features of the Qur'an 3. Being able to explain the function of the Qur'an and Hadith
3.2 Understanding the contents of	By learning the concept of monotheism in the

<p>Surah al-Fatihah, an-Nas, al-Falaq, and al-Ikhlâs related to monotheism in the concept of Islam.</p>	<p>Qur'an, students will have following learning experience:</p> <ol style="list-style-type: none"> <li>1. Being able to explain the content of QS al-Fatihah</li> <li>2. Being able to explain the content of QS an-Nas</li> <li>3. Being able to explain the content of QS al-Falaq</li> <li>4. Being able to explain the content of QS al-Ikhlâs</li> </ol>
<p>3.3 Understanding the relevance of hadith related to the faith narrated by Ali ibn Abi Thalib from Ibn Majah, and the hadith narrated by Muslim from Umar ibn Khattab, from the hadith narrated by Muslim from Abu Hurairah, and the hadith about worship accepted by Allah the hadith narrated by al-Bazzar from adh-Dhahlaq, and hadith narrated by Muslim from Aisyah</p>	<p>By learning Hadith related to faith and worship, students will have following learning experience:</p> <ol style="list-style-type: none"> <li>1. Being able to explain the contents of Hadith related to faith</li> <li>2. Being able to explain the contents of Hadith related to worship</li> </ol>

Table 1 depicts that the materials learned by the seventh graders in the first semester can be categorized into several types, as stated by Reigeluth. They are facts, concept, principal, and procedure material. The first material containing the Qur'an and Hadith as life guidance can be included into the concept category. The second one containing the concept of *tauhid* in the Qur'an belongs to principle category, while the third one containing hadith related to Faith and Worship also belongs to principle category.

**Design of the Product**

The third step undertaken is designing products based on learning objectives with the help of Powtoon application. The interactive multimedia design is divided into three materials as informed in Figure 1, Figure 2, and Figure 3.



Figure 1. Cover of the First Material

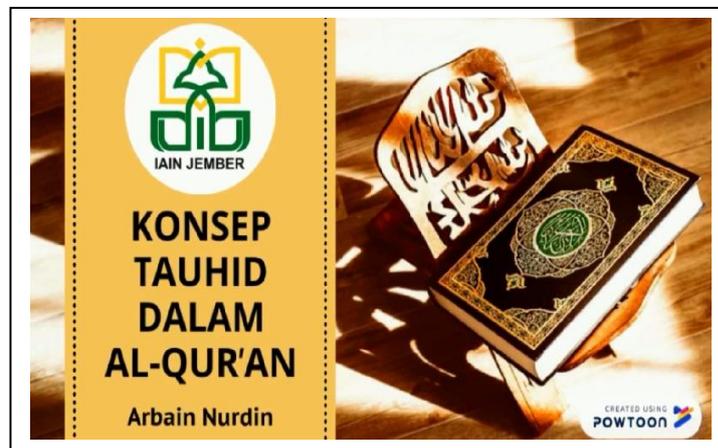


Figure 2. Cover of the Second Material



Figure 3. Cover of the Third Material

### **Design Validation**

The fourth step is having the design assessed by experts. It was conducted to see and assess whether the multimedia design is valid and appropriate with the aspects of learning media and learning materials. This step was carried out in two stages to make sure that the multimedia is ready to use in the learning process.

### **Design Revision**

The fifth step is revising the design on expert advice. The previous stage provides assessments and input for better design improvements, so that it becomes interactive, attractive and valid multimedia in terms of learning material as well as learning objectives.

### **Product Testing**

The sixth step is having a product trial on a small group of seventh graders of the Islamic junior high school Jember, Indonesia. It aims to see how students' respond in a small group of 5 students to the media.

### **Product Revision**

The seventh step is revising the product. After testing the products into small group of students, the product was revised. The students were volunteered to give some comments about the product.

### **Product Testing**

The eighth step is having the product trial on a large group. It was conducted to see students' response and assessment. It involved 15 students of seventh graders of Islamic junior high school Jember, East Java, Indonesia.

## **INTERACTIVE MULTIMEDIA QUALITY**

This section presents expert validation of the proposed design of Powtoon-mediated interactive multimedia. The expert assessment aims to identify the validity and quality of the interactive multimedia both the aspect of its material as well as its media.

### Assessment of the Material Expert

In the material aspects, the expert is NZ. She was chosen because she teaches Islamic Education Curriculum subject at a public Islamic higher education institution in Madura, East Java, Indonesia and has the ability to evaluate the curriculum used in the interactive multimedia for seventh graders of the junior high school in detail.

This step was done in two stages. The assessment results of the first stage can be seen in Table 2.

Table 2. Result of the First Stage of Material Expert Assessment

No.	Assessed Aspect	Score	Average	Category
1	Conformity of subject matter with sub-topics of discussion	5	100%	Very Good
2	Conformity of subject matter with material description	5	100%	Very Good
3	Validity of the content	4	80%	Good
4	Extent and depth of learning material	4	80%	Good
5	Clarity of material presentation	4	80%	Good
6	Clarity of the terms	4	80%	Good
7	Compatibility of images and learning material	4	80%	Good
8	Compatibility of assignments and learning material	3	60%	Not Good
9	System of material presentation	4	80%	Good
10	Clarity of language usage	4	80%	Good
Total		41		
Average			82%	Good

As documented in Table 2, the result indicates that most of the aspects assessed belong to good category. It is because the average score of the assessment is 82%. Based on the conversion table, when the score is around 80-90%, it will be categorized into good category. It means that the product can be used as learning media.

After revising the product, the expert had the second stage of assessment. The assessment results of the second stage can be seen in Table 3.

Table 3. Result of the Second Stage of Material Expert Assessment

No.	Assessed Aspect	Score	Average	Category
1	Conformity of subject matter with sub-topics of discussion	5	100%	Very Good
2	Conformity of subject matter with material description	5	100%	Very Good
3	Validity of the content	5	100%	Very Good

4	Extent and depth of learning material	4	80%	Good
5	Clarity of material presentation	4	80%	Good
6	Clarity of the terms	4	80%	Good
7	Compatibility of images and learning material	5	100%	Very Good
8	Compatibility of assignments and learning material	4	80%	Good
9	System of material presentation	5	100%	Very Good
10	Clarity of language usage	5	100%	Very Good
Total		46		
Average			92%	Very Good

Table 3 portrays that the interactive multimedia developed in the material aspect is ready and can be tested in the learning process. It is because most of the aspects are in very good category. It means that the interactive multimedia with this Powtoon media can be utilized and used in the learning process of the Qur'an and Hadith for seventh graders of junior high schools.

In the case of learning material, the interactive side of the product can be seen from its content consisting cognitive material in each basic competence. The learning material of the Qur'an and Hadith for seventh graders consists of *qathi*, *informative*, *interpretation*, and *transcendent* (Nurdin, 2018: 4–5). By doing so, it can affect students' learning styles assisted by interactive multimedia based on Powtoon, and as a result, the learning atmosphere will be more active and effective. In this case, the students are encouraged to have critical thinking both individually and in groups (Ivers & Barron, 2002: 3). It is in line with Harjono et al. (2015: 11) asserting that multimedia can have positive impact on students to learn in groups in various ways such as solving problems as well as constructing their knowledge with the help of multimedia.

### **Assessment of the Media Expert**

In this stage, the assessment was carried out by MU. She is a lecturer of informatics technology at a private university in Palembang, South Sulawesi, Indonesia. She was chosen because of her expertise in the field of information technology, and she is also actively conducting online learning media such as e-learning and so on. This assessment was aimed to see the quality and feasibility of the media developed by researchers to be tested and used in the learning process at madrasah or schools. This

step was done in two stages. The assessment results of the first stage can be noticed in Table 4.

Table 4. Results of the First Stage of Media Expert Assessment

No.	Assessed Aspect	Score	Average	Category
1	Conspicuousness of the cover design	4	80%	Good
2	Clarity of instructions for using the media	3	60%	Not Good
3	Support capability of the music or video	3	60%	Not Good
4	Accuracy of learning objectives	3	60%	Not Good
5	Compatibility of illustration images with the material presented	4	80%	Good
6	Animation	3	60%	Not Good
7	Quality of image display	4	80%	Good
8	Ease of use	3	60%	Not Good
9	Clarity of voice	4	80%	Good
10	Clarity of writing/text	4	80%	Good
Total		35		
Average			70%	Fairly good

Inspired by Table 4, in the first stage, the score still belongs to fairly good to the product. There are several points that still need to be revised especially on its animation, audio, and learning objectives. There are some comments suggested by the expert, including 1) It is better to add some instructions for using the media; 2) The music should be adjusted to the character of the subject; 3) The animation use should be appropriate with the age of the user.

After revising the media design, the second stage of the assessment was carried out. The assessment results of the second stage can be presented in Table 5:

Table 5. Results of the Second Stage of Media Expert Assessment

No.	Assessed Aspect	Score	Average	Category
1	Conspicuousness of the cover design	5	100%	Very good
2	Clarity of instructions for using the media	4	80%	good
3	Support capability of the music or video	4	80%	good
4	Accuracy of learning objectives	5	100%	Very good
5	Compatibility of illustration images with the material presented	4	80%	good
6	Animation	5	100%	Very good
7	Quality of image display	5	100%	good

8	Ease of use	4	80%	good
9	Clarity of voice	5	100%	Very good
10	Clarity of the text	4	80%	good
Total		45		
Average			90%	Very good

The second assessment in Table 5 elucidates that the developed interactive multimedia belongs to very good category in terms of the media aspect. This can be seen from the overall number of assessments is in the average of 90% which means very good. Therefore, the interactive multimedia is ready to be tested on seventh graders as multimedia users.

### PRODUCT TRIAL OF THE INTERACTIVE MULTIMEDIA

This step was conducted in two stages. The first stage of testing was with five students or called as small group trials. The following are the results of the responses of the seventh graders at private Islamic junior secondary school in Jember, East Java, Indonesia to interactive multimedia products.

#### Small-Scale Group Trials

Initiating the group trials, the Powtoon-based interactive multimedia were assessed regarding several aspect as crafted in Table 6.

Table 6. Assessment Results of Small Group

No.	Assessed Aspect	Score	Average	Category
1	Clarity of the learning objectives	25	100%	Very Good
2	Clarity of the material description	18	72%	Good Enough
3	Conspicuousness of the teaching media	19	76%	Good Enough
4	Accuracy of choosing the font and font size	16	64%	Not Good
5	Compatibility of the video with the content of the material	23	92%	Very Good
6	Support capability of the music or video	20	80%	Good
7	Animation	21	84%	Good
8	Compatibility of the pictures with the material	23	92%	Very Good
9	Clarity of the language use	23	92%	Very Good
10	Clarity of the text	23	92%	Very Good
Total		211		
Average			84,4	Good

Table 6 illuminates that the student's assessment was good. It can be seen from the total score was 211 with an average of 84.4% which belongs to good category. However, there were some notes suggested by the expert especially in the aspect of font and its size which was not clear enough.

### Large-Scale Group Trials

In this stage, the product trial was carried out on a larger scale or in large groups. There are 15 students involved and asked to give their respond about the product. In this case, as a multimedia developer, the teacher has an urgent role. The teacher did not only teach, but also guide and facilitate the students in using the media.

Moreover, the teacher can also be a partner in the learning process. In this case, with the help of learning media, the teacher and students can learn together by watching and listening to the subject matter that has been delivered or displayed in the form of Powtoon-based audio visuals. By doing so, the students will gain new knowledge through the multimedia developed by the teacher (Karo-karo & Rohani, 2018: 91). Therefore, the students' competence can increase although there is some complexity that arises when using multimedia in the learning process (Butcher & Powell, 2005: 69). The assessment results of students' response can be noticed in Table 7.

Table 7. Assessment Results of Students' Response in Large Group

No.	Assessed Aspect	Score	Average	Category
1	Clarity of the learning objectives	74	99%	Very Good
2	Clarity of the material description	62	83%	Good
3	Product features (color selection and background of the media)	66	88%	Good
4	Selection of font and font size	64	85%	Good
5	The compatibility of the video with the material	66	88%	Good
6	The suitability of the music as the support capability of the teaching media	66	88%	Good
7	The animation used helps in understanding the material	63	84%	Good
8	Compatibility of the pictures with the material	64	85%	Good
9	Clarity of the language use	69	92%	Very Good
10	Helping students to learn a lot	73	97%	Very Good
Total		667		
Average			89%	Good

Table 7 showcases that concerning student responses at the large group test stage, the students reveal positive response to the product. The average score is 89% meaning that it belongs to good category. Therefore, Powtoon-based interactive multimedia product is ready to use without any revision.

Likewise, informed by the observation result, there is also improvement on students' learning behavior. According to Akbar and Komaruddin, there are three aspects of students' learning behavior in the classroom, namely attitudes, habits, and learning interest (Zeptyani & Wiarta, 2020: 70). In the attitude aspect, students of Madrasah Tsanawiyah Nurul Ulum Sumber Kejayan Mayang Jember seem enthusiastic and enjoy the use of this multimedia in the learning process of the Qur'an and Hadith. It is because the teacher has not used such kind of interactive multimedia based on the Powtoon as a learning tool so far. Furthermore, in the habitual aspect, the observation result showed that students always ask the teacher to use interactive multimedia. Meanwhile, in the aspect of learning interest, students seem more interested in learning the Qur'an Hadith. It can be evidenced from the level of students' enthusiasm as well as attendance in the learning process.

## CONCLUSION

The present study elucidates the production steps of Powtoon-mediated interactive multimedia. First, the stages of interactive multimedia development include a. identifying the potential and problems of learning the Qur'an and Hadith, collecting the lesson material of the Qur'an and Hadith for seventh graders of junior high schools, designing products based on learning objectives, having the design validated by experts, revising the design on expert advice, carrying out a product trial on a small group, revising products, and managing a product trial on a large groups. Second, the first assessment of the teaching media expert was considered good (82%), and the second one was considered very good (92%). Meanwhile, the first assessment of the teaching material expert was considered good enough (70%), and the second one was considered very good (90%). Third, the assessment of both small and large group was considered good. It shows that there is improvement on student learning behavior especially in the aspects of attitudes, habits, as well as learning interest. Furthermore, the result of this

study is supposed to motivate all teachers, especially those who teach the Qur'an and Hadith to use even develop interactive teaching multimedia during the learning process.

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