

The Development on Material Aspect of Mobile Learning Media Laboratorium Tafsir Sains (Labtafsin)

Niken Sylvia Puspitasari^{1,*} Ahmad Fadly Rahman Akbar², Hanifah Amini³, Ahmad Shafwansyah⁴

^{1,2,3,4} University of Darussalam Gontor

* Email: nikensylviap@unida.gontor.ac.id

ABSTRACT

Scientific Interpretation is a way to study kauniyah verse by integrating the Qur'anic verse with the theory of Science. Along with the times, learning techniques and methods have shifted from the traditional pattern; teacher-center learning to technology-based learning that places students as the main learning. Mobile Learning is the fourth generation of the educational revolution starting with the invention of writing, the use of textbooks after the invention of book printing, to the monotonous urgency of education. The purpose of this research is to develop material aspects of previous LABTAFSIN application. In the beginning, the main reference book used is "The Qur'an and Modern Science" by Zakir Naik. After developing, the main reference books used is Tafsir Al-Ayat Al-Kauniyah fi Al-Qur'an al-Kariim by Zaghoul Raghieb Muhammad An-Najjar, and also other reference books related to scientific interpretation. This application provides images, videos and explanations of the verses concerned with the explanation of Science Interpretation. The method used was Research and Development with the ADDIE (Analyze, Design, Develop, Implement, Evaluate) model developed by Dick and Carry, the instrument used was a questionnaire aimed at media experts, material experts, and students. With three international languages (Indonesian, English, and Arabic) it is hoped that can help students in learning the Tafsir Ilmy. The test results obtained from media and material experts are LABTAFSIN mobile learning media can be used properly. The results of product trials on 10 students showed that the application was in good qualifications.

Keywords: *Labtafsin, Mobile Learning, Tafsir Ilmy.*

1. INTRODUCTION

Universities have an important role in education field. Islamization of Science is the mission of University of Darussalam Gontor to realize. In line with this, the Al-Qur'an and Tafsir Studies Program play an important role in the development of Tafsir Ilmy which emphasizes the learning of kauniyah verses by integrating Qur'anic verses with scientific theory. Al-Jumaili defines tafsir ilmy as an interpretation that talks about the terms of science contained in the Qur'an and try seriously to deduce various knowledge and philosophical perspectives from the terms of the Qur'an.

Along with the times, learning techniques and methods have shifted from the traditional pattern teacher-center learning to technology-based learning that places students as the main learning (student center). Mobile learning is the fourth generation of the educational

revolution starting with the invention of writing, the use of textbooks after the invention of book printing, to the stagnant urgency of education.[1] Along with the times, learning techniques and methods have shifted from the traditional teacher center pattern to technology-based learning that places students as the main learning (student center).

The purpose of this research is to develop the material aspect of previous Labtafsin mobile learning. In the beginning, the main reference book used is "The Qur'an and Modern Science, Compatible or Incompatible" by Zakir Naik. After developing, the main reference book used is Tafsir Al-Ayaat Al-Kauniyah fi Al-Qur'an Al-Kariim by Zaghoul Raghieb Muhammad An-Najjar, and also other reference book related to scientific interpretation.

Based on the result of previous research refers to the result of the validation of material expert, the material in

Labtafsin still needs improvement because the previous application used the main reference book “The Qur’an and Modern Science, Compatible or Incompatible” by Zakir Naik and it feels less specified. Therefore, it requires new references that have more authority over the worlds of interpretation.

2. CONCEPTUAL FOUNDATION

2.1. Tafsir Ilmy

In terms of terminology, Mustafa Muslim defines Tafsir is the knowledge that opens the sign of meaning of the verses of the Qur’an and describes the intentions and purposes of Allah from these verses according to human abilities. Then, ilmy are experimental sciences that can be proven through research, which are used as a tool for interpreting verses of the Qur’an [2].

According to Tanthawi Jauhari, Al-Qur’an has 750 verses that talk about various sciences and only 150 verses that speak about fiqh. Zaghoul Al-Najjar states that there are a thousand verses and hundreds of others that are indirectly related to the natural phenomenon [3].

Husain Al-Dhahabi defines that “tafsir ilmy” as an interpretation style that uses scientific nomenclature in interpreting the Qur’an, with an attempt to uncover the miracles associated with the new modern science from it [4]. Next, Al-Jumaili stated that “tafsir ilmy” is an interpretation that talks about scientific terms contained in the Qur’an and makes serious efforts to deduce various knowledge and philosophical views from these terms [3].

2.2. Mobile Learning

Mobile learning is one form of distant learning and an extension of e-learning applications that has invaded the world with the use of audio, visual, cognitive, cooperative and interactive means via the use of smart and digital electronic devices in an attempt to create a direct, dynamic, and ongoing learning environment, an environment that is constrained by spatial and temporal boundaries, leading to the eliminations of traditional classrooms, routines, and imitation [1]. Mobile learning is also defined as a facility or service that provides electronic information in general to learners and educational content that helps attain knowledge regardless of location and time [5].

The development of the telephone has continued to accelerate in recent years. This technology also continues to develop increasingly sophisticated, even the telephone is at low prices.

Mobile learning is a part of e-learning that provides wider opportunities for studying using mobile phones and also makes it easier for students to learn. Mobile learning can be distinguished from e-learning in terms of student mobility as users. Learning requires places where

students take advantage of the learning opportunities that are telephone technology provides. It is also a development of e-learning which is an application design for the management and distribution of educational and training materials through various electronic media, such as internet LAN, WAN, Broadband, wireles, and so on.

2.3. LABTAFSIN Apps

The LABTAFSIN (Laboratorium Tafsir Sains) Application is a Science Interpretation mobile learning media developed by lecturers of Al-Qur’an and Tafsir Studies with students. The main reference book used is “The Qur’an and Modern Science, Compatible or Incompatible?” by Zakir Naik. This application provides three languages (Indonesian, English, and Arabic). The application also provides a video feature as an explanation of the material.

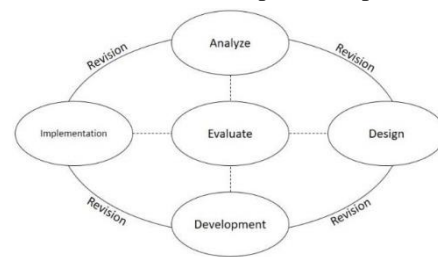
3. RESEARCH METHOD

The research method used in this research is the Research and Development (R&D). This research is producing certain products, and testing the effectiveness of these products. Development research is a systematic review of the design, development, and evaluation of programs, processes, and learning products that must meet the criteria of validity, practicality, and effectiveness [6].

3.1. Research Procedure

This research uses the research & development level 3 method stated by Sugiyono, with the ADDIE (Analysis-Design-Development-Implement-Evaluate) development model.

Figure 1 Research and Development steps for ADDIE



(Source: Gustafson, et al., 2002)

This research is to test and to investigate the development of an existing product, which is done starting from doubt about the product [7].

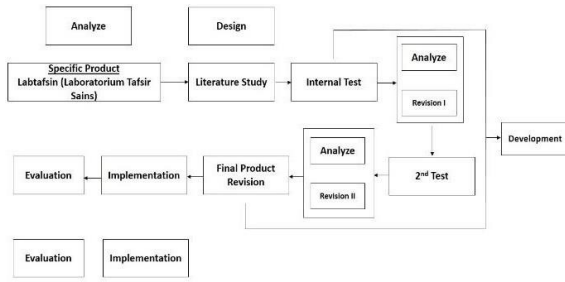


Figure 2 Steps for Research and Development of Labtafsin

3.1.1 Analysis Stage

The first phase in this research and development is product analysis by analyzing the Labtafsin application. The results of the analysis will be used as a reference for the development of this mobile learning.

3.1.2. Analysis Stage

In-depth literature review describes the product from the material, layout, color, and so on. The result from this stage is:

3.1.2.1. The Selection of Reference Books

In this stage, the author fixed the main reference books for providing the material. The selection of reference book is must be suitable to the purpose of study, user’s character, and the function of media.

3.1.2.2. The Selection of Figure in each theme

In this stage, the author fitted in the figure to the theme available.

3.1.3. Development Stage

The purpose of this stage is to produce the final product Labtafsin Application. The results from this stage are:

3.1.3.1. Validation from Expert

The result from the analysis and design stage is validated by the validator and the revision is used to improve the Labtafsin Application for producing the final Labtafsin Application.

3.1.3.2. Pre-test and Posttest

Pre-test and Posttest have done to 30 students chosen for trying the Labtafsin application and tested to look for the impact of this application to students’ knowledge of Tafsir Ilmy.

3.1.4. Evaluate

The evaluation stage is carried out in two stages, namely formative and summative. Formative evaluation is carried out after face to face while summative is carried out after all research activities have ended. Summative evaluation is carried out to measure the final competence of subjects in the development of instructional media. The results of the evaluation are used to provide feedback to the users of learning media.

4. RESULT AND DISCUSSION

4.1. Research Result

The first phase in this research and development is product analysis by analyzing the Labtafsin application. The results of the analysis will be used as a reference for the development of this mobile learning.

4.1.1 Product Identity

Table 1. Product Identity

No	Specifications	Description
1	Domain	labtafsinunida.id
2	Web Hosting	Webhosting IIX (Indonesia)
3	The storage capacity	1 Gb
4	Bandwith	24.99 MB / ∞
5	Platform’s Operating System	Android Studio
6	Web Server	Apache
7	Database	MySQL
8	Themes	Introduction, Astronomy, Physics, Hydrology, Geology, Oceanology, Botany, Biology, Animals, Medicine, Physiology, Embryology, General Science.



Figure 3 Splash Screen (Source: Personal doc. 2020)

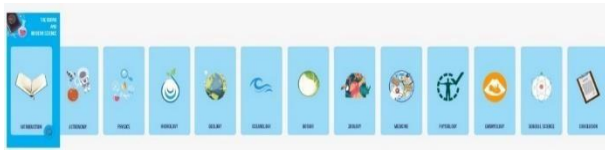


Figure 4 The Titles of The Labtafsir Application
(Source: Personal doc. 2020)



Figure 5 Material in 3 Language Arabic, English and Indonesian. (Source: Personal doc. 2020)

4.2. Data Analysis

4.2.1. Data Analysis of Validation by Expert

The result of the first validation from Material Expert is 67 with an average 3,7 to 9 indicators. The score is in a good qualification and can be used by using multiple revisions according to the suggestion.

There were several revisions from material experts in this first stage of validation, namely on several names of themes that had to be corrected, as well as inaccurate grammar.

In the second validation of the material expert got 77 score to 9 indicators point. Then, the average is 4,3 in very good qualification, and the developed product is suitable for use.

The results of the media expert's validation show that mobile learning is 'very good' with a value 68 and an average score of 4.2 against 15 indicators. In terms of display quality, it gets 'very good' results. Aspects of software engineering are in the qualifications of 'very good'. The feasibility aspect, it is a 'very good' qualification. Interface aspects are considered 'good'.

4.2.2. Data Analysis of Testing by Student

Testing the feasibility of this application is carried out in two stages, the first stage is to 15 female students and the second stage is to 30 female students along with the pre-test and post-test. The first stage of the feasibility test was carried out to get 'very good' results with a value 644 against 10 indicators got an average of 4.2 and the second to increase to 'very good' with a score 1322 against 10 indicators of 30 student with an average of 4.4. The

results of the pre-test are obtained an average value of 6.2 and an average post-test of 9.2. Therefore, the average delta is obtained -6, so it can be concluded that there is an increase in material knowledge in the Laboratorium Tafsir Sains Application.

The results of this research and development of mobile learning are in the form of a Laboratorium Tafsir Sains (Labtafsir) application, not all aspects get very good results, this means that there are advantages and disadvantages of the application.

The standard of assessment for product development is a score of 3 or good. Therefore, when the assessment of all aspects has reached a score of 3 or more, the product developed is suitable for use and dissemination.

5. CONCLUSION

The Mobile Learning was developed by “Research and Development” method with ADDIE (Analyze-Design-Development-Implement-Evaluate) model development. The validation is done to 2 material experts and a media expert, and tested to the student carried out in two stages. The first stage is to 15 female students and the second stage is to 30 female students and pre-test also post-test all in once. Based on the results of the research and development that has been done, it can be concluded: (1) The Mobile Learning Laboratorium Tafsir Sains (LABTAFSIN APPS) is in the form of an application on Android. Labtafsir was developed to help users get to know the kaunyah verses with the explanation of tafsir ilmy, as well as to increase their interest in studying natural phenomena with an Islamic perspective, (2) The final result of the validity of the LABTAFSIN mobile learning is in the good category, with a score of 4.5 from material and media experts, and a score of 4.4 from female students. The delta of both pre-test and post-test is -6.

ACKNOWLEDGMENTS

The authors express their gratitude to Al-qur’an and tafsir studies department which has facilitated the financing to join the conference. We would also like to thank to LPPM UNIDA and the various parties who have supported in preparing the data and providing critical reviews for the improvement of this paper.

REFERENCES

[1] T. A. Saleem, “Mobile Learning Technology : A New Step In,” vol. 34, no. 2. 2011.
 [2] U. Yulianto, “Al- Tafsîr Al-” Ilmî Antara Pengakuan Dan Penolakan,” *J. Khatulistiwa – J. Islam. Stud.*, 2011.

- [3] S. Z. Saleh, “Epistemologi Penafsiran Ilmiah al-Qur’an,” *TSAQAFAH*, 2011, doi: 10.21111/tsaqafah.v7i1.112.
- [4] A. Armainingsih, “Studi Tafsir Saintifik: Al-Jawahir Fi Tafsir Al-Qur’an Al-Karim Karya Syekh Tantawi Jauhari,” *J. At-Tibyan*, vol. 1, no. 1, pp. 94–117, 2016.
- [5] I. Aripin, “Konsep Dan Aplikasi Mobile Learning Dalam Pembelajaran Biologi,” *J. Bio Educ*, 2018.
- [6] A. Hamzah, *Metode Penelitian dan Pengembangan (Research and Developoment*. Batu: Literasi Nusantara, 2019.
- [7] R. N, *Sa’adah and Wahyu, Metode Penelitian R&D (Research and Development) Kajian Teoritis dan Aplikatif*. Batu: Literasi Nusantara, 2020.