

DIGITAL-BASED TEACHING MATERIAL LEARNING DESIGN THROUGH ANDROID APPLICATIONS IN AL ISLAM AND KEMUHAMADIYAHAN COURSES FOR NON-MUSLIM STUDENTS WITH COMMUNICATION BARRIERS AT THE STKIP MUHAMMADIYAH MANOKWARI WEST PAPUA CAMPUS

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ABSTRACT

The diversity of students in higher education, there are challenges in delivering teaching materials that respect differences, including in the Al Islam and Kemuhamediyan courses at the STKIP Muhammadiyah Manokwari Campus, West Papua. Non-Muslim students with communication barriers need an inclusive and accessible learning approach that enables them to learn the material effectively. The purpose of this study is to identify needs, design and measure the level of validity of Digital-Based Teaching Materials in courses. The model used in the development used by researchers is the model developed by Alessi and Trollip in Mawarni and Muhtadi (2017), several stages; First, the planning stage, the goal is to define the scope, identify student characteristics, create product guidelines and collect sources; Secondly, the design stage develops idea ideas, analysis of tasks and concepts and creation of initial descriptions of products; stages of development, product manufacturing and tests and revisions. The subjects in this study were 2 people from material validators and media validators, 22 non-Muslim students of STKIP Muhammadiyah Manokwari education, and 1 lecturer. The results of material validation are very well qualified and the results of media validation are good too. Practical trials are carried out on two target users, namely the responses of students and lecturers of the supervisory courses are of good qualifications. Based on this analysis, it is concluded that digital-based teaching materials with digital book products are valid and practical to be used in the learning process in the Al Islam and Kemuhamediyan courses at STKIP Muhammadiyah Manokwari.

Keywords: Development, Teaching Materials, Al Islam and Kemuhamediyan, Special Needs

INTRODUCTION

In the growing digital era, the use of information technology has changed the way we live our daily lives, and one of the most affected aspects is the world of education. Information

technology, especially through digital devices and internet access, has brought significant changes in how we learn, teach, and access information (Saputra et al., 2023). In the campus environment of STKIP Muhammadiyah Manokwari, there are non-Muslim students who take Al Islam and Kemuhammadiyah courses as part of the curriculum. However, some of these students face barriers in understanding and accessing learning materials due to language differences.

The specific language and terminology used in such courses can confuse non-Muslim students who are unfamiliar with Islamic terms. Incomprehension of these terms can affect their understanding of the material. The use of digital-based technology, especially Android applications, has opened up new opportunities in designing more inclusive learning (Fricitarani et al., 2023). The use of technology and digital media can reduce communication barriers that may arise due to language or cultural differences. Students can understand the material better through visual and audio media.

The use of information technology can act as an intermediary to overcome the complexity and vagueness of material that is difficult to handle with traditional learning methods. In addition, technology also presents various innovative features that are able to meet the needs of the learning process (Efendi, 2018). Previous research by (Fatmawati et al., 2021) concluded that the development of android application-based learning media is very feasible and effective to be used to improve student learning outcomes with an average final score reaching 85% of student completeness rate.

Another study by (Pratama & Sakti, 2020) obtained feasible conclusions with details, namely material experts by 92.8%, media experts by 87.8%, evaluation experts by 84%, and question experts by 88%. The results of student responses gave a positive response of 91.8% and caused a relatively high increase in learning outcomes, seen from the average Gain Score of 0.71 with classical posttest completeness of 90%. Therefore, it can be concluded that based on the results of the study, digital handout learning media can facilitate student understanding through appropriate media with positive responses and improved learning outcomes.

The novelty of this research is from the object of his research, namely al islam and kemuhammadiyah courses for non-Muslim students with communication barriers on the STKIP Muhammadiyah Manokwari West Papua campus which has never been studied before. The results of this study can make a real contribution to improving the quality of learning for non-Muslim students with communication barriers (Chen et al., 2019). The use of digital-based teaching materials that have been validated and tested for practicality will help students understand the material better (Darma et al., 2021). The purpose of this study is to identify needs, design and measure the level of validity of Digital-Based Teaching Materials in courses (Syafiril et al., 2022).

METHOD

The model used in the development used by researchers is the model developed by Alessi and Trollip in (Mawarni & Muhtadi, 2017), several stages; First, the planning stage, the goal is to define the scope, identify student characteristics, create product guidelines and collect sources; Secondly, the design stage develops idea ideas, analysis of tasks and concepts and creation of initial descriptions of products; stages of development, product

manufacturing and tests and revisions. The subjects in this study were 2 people from material validators and media validators, 22 non-Muslim students of STKIP Muhammadiyah Manokwari education, and 1 lecturer.

RESULTS AND DISCUSSION

The Assistive Technology Development Design (Assistive / Adaptive Technology) that will be produced aims to compile lecture materials with digital-based teaching materials for non-Muslim students with special needs. The design stage consists of a multimedia learning research and development model which is a description of the Alessi and Trollip models in (Mawarni & Muhtadi, 2017), in this development research adapts the following steps:

1. Planning

Determine the scope and identify the characteristics of students with special needs and collect these data (Table 1). Then Create product manufacturing guidelines and gather sources.

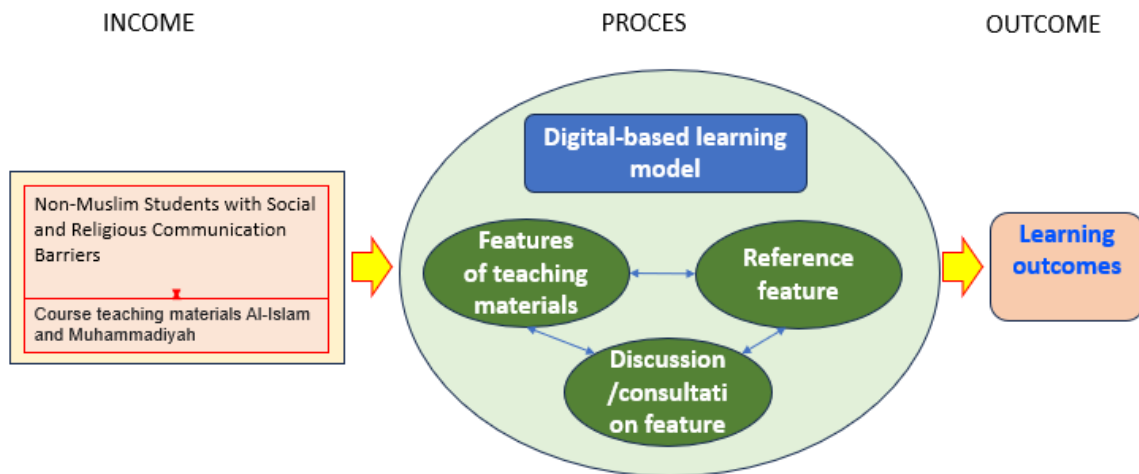
Table 1. Data on students of STKIP Muhammadiyah Manokwari Campus with special needs

No	Courses	Sum	Obstacles
		MBK	
1.	Primary School Teacher Education	6	Sluggish learning and emotion
2.	Language and Literature Education Indonesia	2	Slow learning
3.	English Language Education	2	Slow learning
4.	Pendidikan Biologi	9	Slow learning and communication disorders
5.	Mathematics Education	3	Slow learning
	Total	22	

This stage contains needs analysis, literature review, research objectives, identification and needs analysis. At this stage, researchers and teams develop a Multicultural AIK Semester Learning Plan (RPS) (Picture 2), collect teaching materials/materials with the AIK Lecturer team (Picture 3), conduct FGDs with the AIK Lecturer Team about approach strategies/strategies/learning methods, media used, and evaluation.

2. Design

This stage researchers compile teaching materials and tests, then make teaching material designs on smartphones with the help of media experts. The preparation of teaching materials was carried out preceded by an FGD by the AIK STKIP Muhammadiyah Lecturer teaching team (Figure 1). FGD teaching materials produce RPS AIK I Multicultural (Figure 2). In addition, there is a module used that reflects multicultural (Figure 3). Furthermore, FGD with media experts to make applications in accordance with the teaching materials that have been designed, so that they are appropriate and can be used by researchers.



The above is the Design Model of Digital-Based Teaching Materials Learning through Android Applications in AI-Islam and Kemuhammadiyah Courses for Non-Muslim Students with Communication Barriers at the STKIP Muh Manokwari Campus.



Figure 1 FGD of Teaching Material Compiler

RENCANA PEMBELAJARAN SEMESTER (RPS) PROGRAM STUDI BAHASA INDONESIA STKIP MUHAMMADIYAH MANOKWARI					
Identifikasi Mata Kuliah	NAMA AIK	KODE AIK	BOBOT (SKU)	SEMESTER	Revisi
Kelompok	AI – Islam Dan Kemuhmadiyah (AIK I Multicultural)		2	2	00
	Tipe Prasyarat RPS		Kelas Yang	Kategori	
Disusun	1. Dr. Dian Sulistyani, MA, Pd 2. Ananda, M Pd		Dr. Dian Sulistyani, MA, Pd NIDN. 0000000000	(Disetujui)	(MIDN)
Capaian Pembelajaran Lulusan (CPL) PRODI	Capaian Pembelajaran Lulusan (CPL) PRODI				
Capaian Pembelajaran Lulusan 1	Menunjukkan sikap positif yang bertanggung jawab dan toleran, serta menghormati keberagaman kebudayaan, etnik, suku, agama, dan ras.				
Capaian Pembelajaran Lulusan 2	Mampu menerapkan nilai-nilai keragaman dan toleransi dalam kehidupan sosial dan budaya.				
Capaian Pembelajaran Lulusan 3	Mampu menerapkan nilai-nilai keragaman dan toleransi dalam kehidupan sosial dan budaya.				
Capaian Pembelajaran Lulusan 4	Mampu menerapkan nilai-nilai keragaman dan toleransi dalam kehidupan sosial dan budaya.				

Figure 2. RPS AIK I Multicultural

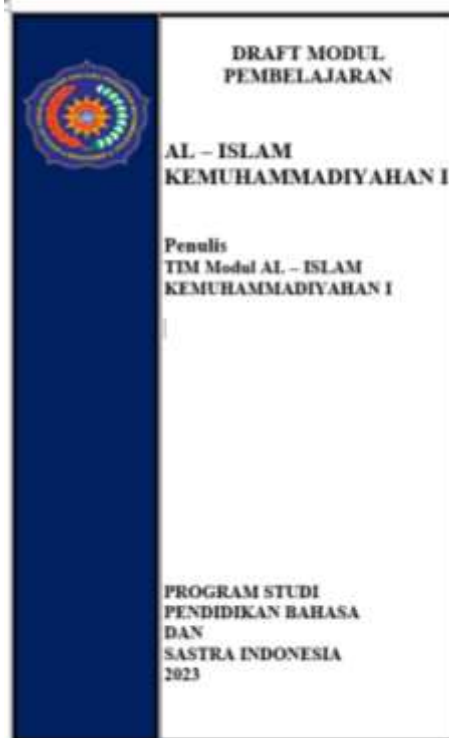


Figure 3. AIK I Multicultural Module

3. Development Stage

This stage contains the results of the Multicultural AIK material design from AIK Material experts (Nikmawati et al., 2023). In addition, validation from linguists and validation from learning design experts. Include teaching materials and product revisions. Figure 4 and Figure 5 are the results of design with media experts producing applications on the smartphone under the name AIK STKIP Muhammadiyah E – Learning (AIK MUM Learning).



Figure 4. Application Icon



Figure 5. Background Application

Figure 6. It is a guide in using the application for students so that it is easier to use the AIK MUM LEARNING Smartphone App.

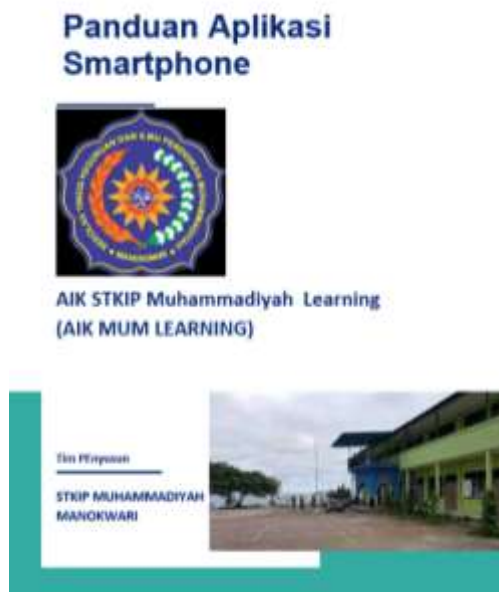


Figure 6. AIK MUM Learning Application Usage Guide

Figure 7 shows the contents of the application consisting of semester learning plans (RPS), modules and materials to be taught. This smartphone application can be accessed by students in the playstore in the future.

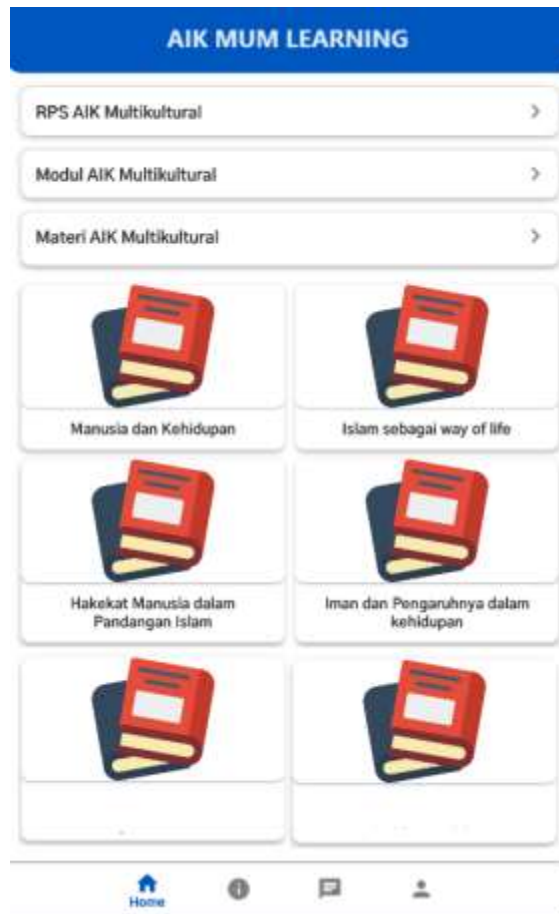


Figure 7 . Application Content Display



Figure 8. Socialization and application of AIK MUM Learning

AIK Multicultural course is a course that describes Muhammadiyah and science for Muslim and non-Muslim students (Mahmud, 2023). Learning consists of the material scope of God, man and life, will be studied actual and fundamental problems in people's lives from various dimensions thematically (Sporre, 2023). They are the True Nature of Man, Faith and Tawhid; Shirk, Superstition, Heresy and Khurafat, Pillars of Faith, These themes are derived from Islamic values derived from the Qur'an and as-Sunnah. Study materials of the subject matter include:

Islam as a way of life: a. Definition, Purpose, Function of Islam; b. Sources of Islamic Teachings; b. Scope of Islamic Teachings (God, man, nature, creation and salvation); c. Characteristics of Islamic Teachings

The nature of man in the Islamic view: a. Study of Human Nature, b. The Origin of Human Events; c. Human Potentials; d. Human weaknesses; e. The nature of human nature; f. Its advantages over Other Creatures.

Man and Life: a. The journey of human life from the realm of spirit to the hereafter; b. Various Orientations of Human Life; c. The Purpose and Function of Human Creation; d. Living Successfully in the View of the Qur'an.

Faith and Its Influence in Life: a. The Nature of Faith; b. Relationship of Faith, Science, and Charity; c. Characteristics and Traits of Believers; d. Things That Can Damage and Negate Faith.

Tawhid and its Urgency for Muslim Life; a. Understanding Tawhid; b. The meaning of the phrase *Laa ilaaha illa Allah* and its Consequences in Life; c. Tawhid as the foundation for all aspects of life; d. Allah's assurance for those who are monotheous is absolute

The concept of Aqidah in Islam: a. Understanding Aqidah and the Scope of Discussion of Aqidah; b. Sources and Functions of Aqidah; c. Principles of Islamic Aqidah

Shirk and its danger to man-1; a. The definition of shirk; b. Forms of shirk; c. The cause of shirk in humans; d. The Prophet's actions in counteracting shirk

Modern Age Shirk: a. Modern definition of shirk; b. forms of shirk in modern times; b. How to Overcome Shirk in Modern Times; c. The Danger of Shirk to Human Life

The results of material validation on digital-based learning through Android applications in Al Islam and Kemuhadiyah courses for non-Muslim students with communication barriers show excellent qualifications. This means that material compiled in digital format has passed a very high level of assessment and evaluation, and can be considered as quality material and in accordance with learning needs. In addition, the results of media validation also get good qualifications. This indicates that the media used in this learning meets the necessary standards and can be used effectively to support the learning process of non-Muslim students who face communication barriers at the STKIP Muhammadiyah Manokwari West Papua Campus. Thus, both the material and learning media have received a positive assessment in the validation stage. This illustrates that efforts in compiling and presenting digital-based learning materials have succeeded in achieving a high level of quality, and the media used has proven to be quite good in supporting the learning of non-Muslim students with communication barriers in the campus environment. Thus, the results of material and media validation provide confidence that this learning approach can provide significant

benefits in increasing student understanding and participation in Al Islam and Kemuhadiyah courses.

Practicality trials were carried out on two target groups of users, namely students and lecturers who taught the course (Hamzah et al., 2022). The results of the trial showed that the response from both user groups, both students and lecturers, was well qualified (Milawati et al., 2023). This means that both students and lecturers respond positively to the use of digital-based teaching materials with products in the form of digital books in the learning process of Al Islam and Kemuhadiyah courses within STKIP Muhammadiyah Manokwari. Based on the results of this analysis, it can be concluded that digital-based teaching materials that have been tested have been practically well received by users (Nurdin et al., 2023). They consider this teaching material as a valid and practical tool in supporting the learning process of the course (Calavia et al., 2023). Thus, the application of digital-based teaching materials is expected to provide significant benefits in improving the quality of student learning and understanding, as well as facilitating the teaching process for lecturers who teach the course.

CONCLUSION

The results of material validation that achieve "excellent" qualifications indicate that teaching materials prepared in digital-based teaching materials have received positive validation from experts or parties who have competence in the field. This shows that the material presented in the teaching materials has high accuracy and quality, so it is in accordance with learning standards and objectives. Meanwhile, the results of media validation that are in the "good" qualification also show that the use of media in teaching materials has received a positive assessment. Although not achieving the "excellent" level, a "good" qualification indicates that the media used in teaching materials are sufficiently effective in supporting the delivery of material to students. The results of practical trials conducted on two target users, namely students and lecturers of teaching courses, who are in "good" qualifications are also positive indications. This indicates that the response of both user groups to this digital-based teaching material is good, which means that the teaching material is practically used in the learning process of Al Islam and Kemuhadiyah courses at STKIP Muhammadiyah Manokwari.

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