

Ayu Putri Seruni - Development of Japanese Language Learning Media Android Application based on Mobile Assisted Language Learning

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DEVELOPMENT OF JAPANESE LANGUAGE LEARNING MEDIA ANDROID APPLICATION BASED ON MOBILE ASSISTED LANGUAGE LEARNING

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²¹ **Abstract:** Mobile Assisted Language Learning is familiar to language learners who are easier to use in learning anywhere and anytime. The large use of language applications makes application development from the Education sector. The purpose of this study is to develop Japanese language learning media using the Bimi Japan android application and analyze the feasibility level of the Mobile Assisted Language Learning-based android application. Bimi Japan is designed according to the needs of high school language learning that is tested in high schools and high school teachers. The development of this application is based on the frame work of Mobile Assisted Language Learning. This type of research is research development Research and Development (R&D) using the ADDIE model which consists of five stages, 1) Analyzing, 2) Design, 3) Development, 4) Implementation and 5) Evaluation. This research instrument is in the form of a questionnaire used for the feasibility test of the Bimi Japan application. The research results obtained from the assessment of two material experts were rated as excellent and two media experts were rated as excellent. Based on the results of this study, the Bimi Japan application as an Android application based on Mobile Assisted Language Learning is included in the category of very good and worthy of use.

¹ **Keywords:** Japanese Learning Media, Android Apps, Mobile Assisted Language Learning

INTRODUCTION

¹ Mobile Assisted Language Learning (MALL) created by Chinnery in Arvinitis (2020) ³⁴ says mobile devices can be used as pedagogical tools for language learning. Although, mobile assisted language learning has been applied for a long time in the 90s, from the concept of computer assisted language learning. The concept of computers becoming a mobile technology that has the characteristics of practicality can be carried anywhere, is currently developing rapidly. Over the past 15 years, the use of mobile technology has significantly increased, with mobile-internet devices exceeding the number of traditional desktop and laptop computers (Pegrum, 2014). Mobile Technology is now used in various sectors, one of which is the second language learning sector. The growing ubiquity of mobile technologies, such as smartphones and tablets, has affected the way people study and learn a second language (L2) (e.g., Kukulska-Hulme *et al.*, 2017). Currently we can see various kinds of foreign language learning applications that develop through mobile technology and there are many users because they have practicality and can be used by anyone using the internet, provides one of the few systematic investigations into the effectiveness of a widely used commercial language learning app (Loewen, Shawn *et al.*, 2019). The development of

Language learning applications has an advantage to both parties between application makers and learners.

The main advantage of MALL is that it allows students to create their own learning framework in terms of time, place and how they will use online information and learning materials with the consequence that their education is self-sufficient (Burston, 2013). Independent learning is carried out outside of formal learning. Arvanitis said more and more learners are learning foreign languages outside of formal and digital classroom-based education (Arvanitis, 2019). This significantly affects the research and implementation studies of MALL and leads us to better explore and understand the needs of learners/users.

In addition, Rosman (2008) defines m-learning as using mobile technologies (such as mobile phones and handheld computers) to improve the learning process and involves the delivery of digital content to wireless mobile phones connected to work and education. Apparently, the development of mobile learning has replaced its association with e-learning by being available in almost all locations and times (Kukulska-Hulme & Traxler, 2005). The mall concept can be seen as a process of learner participation in language learning activities and language use, integrated into m-learning (Cakmak, 2019) With emerging technologies and more and more multimedia software and mobile applications, learning is becoming more authentic, context-aware, and ubiquitous, in other words, mobile (Cakmak, 2019) Another review study is also claims that MALL mostly occurs in the local community of students or their campuses (Shadiev, 2019) In other words, the learning media used as per local needs.

The creation of mobile education based on (Andamsari, 2016), goes through several stages, namely making material maps, outlines of media contents, material distribution and designing media creation visually. Therefore, the design of learning media for android applications requires several stages from analyzing needs, designing concept maps, making an outline of media content, making material jabs to designing media creation visually. The problem of developing Japanese language learning according to the development of mobile assisted language learning must be tested whether it has feasibility or not. This review study aims to address the following research questions:

1. How to design Japanese learning media in the form of applications through stages 1) Analysis, 2) Design, 3 Development, 4) Implementation and 5) Evaluation?
2. Does the Bimi Japan app have user eligibility for learners?

METHODS

This research uses the Research and Development (R&D) development method with the ADDIE model which consists of five stages, namely 1) Analysis, 2) Design, 3 Development, 4) Implementation and 5) Evaluation. The purpose of using the R&D research method is to obtain products in the form of Android-based Japanese learning media from the Computer Assisted Language Learning course.

Respondents of the Research

Respondents of the research are High School Level Japanese Teachers, Japanese Language Lecturers, Media Experts and 40 High School Level Students.

Research Variables

The variable of this research is the development of Japanese learning media, namely Bimi Japan, which has been validated by learning media experts.

Instruments

Questionnaires from students, teachers, lecturers and experts regarding learning using the Bimi Japan application media were analyzed using the following calculations

Table 1. Scoring

Criterion	Score
Excellent	5
Good	4
Enough	3
Less	2

Calculates the overall average value and each component of the assessment by the formula:

$$\bar{x} = \frac{\sum x}{n}$$

Information:

\bar{x} = Average score of each initializing component

$\sum x$ = Number of scores of each scoring component

n = Number of validators

Converts the average score of each component in the form of quantitative data into qualitative. The average score of each component compared to the ideal scoring score with a scale of 5 score conversions can be seen in Table 2.

Table 2. Conversion of quantitative data into qualitative data with a scale of 5

Score	Category	Score	
		Account	Result
5	Excellent	$X > 3 + (1.8 \times 0.67)$	$X > 4.2$
4	Good	$3 + (0.6 \times 0.67) < X \leq 3 + (1.8 \times 0.67)$	$3.4 < X \leq 4.2$
3	Good Enough	$3 + (0.6 \times 0.67) < X \leq 3 + (0.6 \times 0.67)$	$2.6 < X \leq 3.4$
2	Not Good Enough	$3 - (1.8 \times 0.67) < X \leq 3 - (0.6 \times 0.67)$	$1.8 < X \leq 2.6$
1	Very Lacking Good	$X \leq 3 - (1.8 \times 0.67)$	$X \leq 1.8$

(Source: Eko Putro Widoyoko, 2009: 238)

Data Analysis Techniques

Analysis Stage

The process of collecting information data by analyzing the needs of Japanese learning in several high schools with interviews with teachers, then discussed in class.

Design Stage

Product design in accordance with the ²⁷ analysis that has been carried out, the steps of the design stages are as follows:

- a. Create a concept map based on the curriculum that matches the high school level
- b. Create a Media Content Outline that includes themes, indicators, subject matter, evaluation and sources
- c. Create a Material Scale that includes material descriptions and visual displays
- d. Designing learning media in digital form

Development Phase

Development of media testing in accordance with the design that has been made. After the ²⁸ ation of learning media has been completed, it has been validated by validators, namely material experts and media experts. The validation process is carried out by 4 validators, namely material expert lecturers, material expert teachers and media experts.

Implementation Phase

The implementation of this study used a limited-scale implementation in schools with 40 students. The learning design used was tested using the experiment method (single One Shot Case Study).

Evaluation Stage

The next stage is an evaluation to revise the implementation results so that it can produce a final product.

RESULTS

The results of the research are in accordance with ¹⁰ 5 stages of research, namely: 1) Analysis, 2) Design, 3) Development, 4) Implementation and 5) Evaluation.

Analysis Stage

Needs analysis

Observations and interviews conducted with teachers at SMAN 2 Pandeglang. Japanese language learning is in demand by students at SMAN 2 Pandeglang, but teachers have difficulty in preparing various learning media that students are interested in according to the digital generation. The learning materials needed are related to the material of basic Japanese daily activities.

Based on the results of observations, schools need more fun learning media for students that can be learned anywhere and anytime. Digital learning media that suits the current generation so that they are more enthusiastic about learning Japanese

Design Stage

After conducting a needs analysis, planning stages are made with the steps of the design stages as follows:

Create a Concept Map

Analyze the high school RPP from the needs analysis and choose learning materials. The concept map takes two basic Japanese learning materials needed in communicating.

Outline the Contents of the Media

Designing an Outline of Media Content in accordance with the Learning Implementation Design and concept maps that have been made that include themes, indicators, subject matter, evaluation and sources.

Making Material Jabaran

Designing material jabaran that is more in-depth than the content of the Media Content Outline and preparing images, icons support the content of the material jabaran which includes material descriptions and visual displays.

Designing Learning Media in Digital Form

The design of the learning media uses a simple design from the beginning of the surface to the end, which is given to a third party for its manufacture.

Development Phase

The development process after Bimi Japan learning media has been well designed in digital form, the learning media is validated by validators. The validation process is carried out by 4 validators, namely material expert lecturers, material expert teachers and media experts.

Material Expert Validation

8 Validation was carried out by two material experts, namely Japanese language lecturer Uhamka and PTQ Al-Azhar teacher Ummuh Suwannah. Validation carried out by material experts is by collecting material feasibility 18 assessments of bimi Japan applications. Feasibility assessment by a material expert 1. Material expert 2 assessment I obtained an average score of 4.6 categories is excellent and 24 material experts 2 obtained an average score of 4.4 categories is excellent. From the two material experts, an average value of 4.5 was 12 obtained with an excellent category. The results of the validity test by the material expert can be presented in the following table:

Table. 3 Material validation test results

No.	Validators	Average	Category
1	Material Expert 1	4,6	Excellent
2	Material Expert 2	4,4	Excellent
Overall Average		4,5	Excellent

Media Expert Validation

Media expert validation was carried out by two graduate media experts. Media feasibility assessment by media expert 1 obtained an average score of 4.3 excellent category and media expert 2 obtained an average score of 4.1 good category. From the two assessments, an average score 4.2 with a good category was obtained. The results of the validity test by media experts can be presented in the following table:

Table 4. Media validation test results

No.	Validators	Average	Category
1	Media Expert 1	4,3	Excellent
2	Media Expert 2	4,1	Good
Overall Average		4,2	Good

Based on the validation results from material experts, the Bimi Japan application is very good to use for the high school level or beginner level Japanese language learners, the validation results from media experts, visually good and easy to use for learners. The Bimi Japan app is worth using for Japanese language learners.

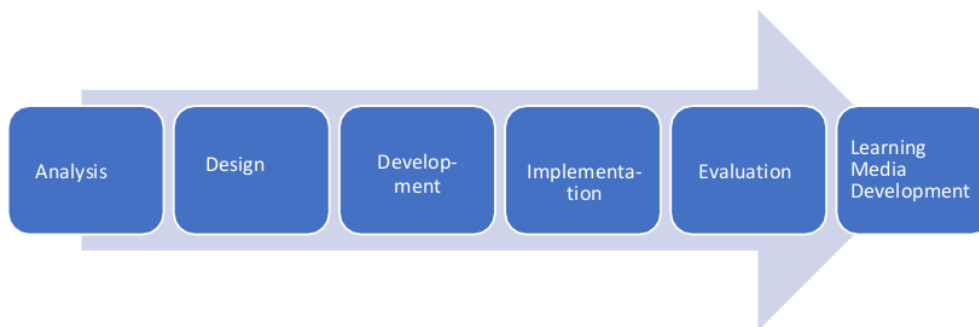
Implementation Phase

The implementation of this study used a wide-scale implementation in schools with 40 students at PTQ Al Azhar Ummuh Suwanah with 20 male students and 20 female students. The learning design of the Bimi Japan application used was tested on students. Students responded to the use of the Bimi Japan application learning media. The responses from 40 students had an average score of 4.5 which means they fall into the excellent category.

Students are very enthusiastic in the use of learning media Bimi Japan application, the application is very easy to use for novice learners, they can learn hobby and dream material accompanied by vocabulary, sentence patterns and exercises so that they can learn by themselves anywhere and anytime. The disadvantage of the Bimi Japan application learning media for them is that there is little material, covering two designed themes.

Evaluation Stage

Evaluation based on the overall stages is to revise the product in the Exercises section, so that more Exercises and learning media of the Bimi Japan application can be used for high school level Japanese language learners or beginner general learners.



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Figure 1. Stages of the Development of Japanese Language Learning Media Android Application based on Mobile Assisted Language Learning

DISCUSSION

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The development of Japanese learning media based on mobile assisted language learning has gone through five stages. Mobile Assisted Language Learning for second Language learners involves students 1) creating their own learning framework, according to (Burstson, 2013). And more and more learners are learning foreign languages beyond formal and digital classroom-based education (Arvanitis, 2019). Bimi Japan application, can be usedn outside of formal education. Five stages in making Bimi Japan learning media, 1) Analysis, researchers conduct needs analysis through interviews with teachers at the high school level, to analyze the difficulties of learners in learning Japanese, learning materials Japanese is most needed in media making, how 10) to learn indicators and the design of learning implementation at the high school level. The results of the analysis were developed to create a learning media design. 2) Design, making learning media designs through several stages in accordance with the direction of Pustekkom, namely making concept maps based on needs analysis, designing an outline of content media consisting of determining the theme, material and indicators of each material. Then, the design of the material is based on the outline of the media content, so that it can determine the visual design of the design from the beginning to the end of the learning media. 3 Development, After the design is completed, the next stage is validation of material experts and media experts until they get eligibility for the use of application learning media Bimi Japan based on mobile assisted language learning, 4) Implementation, Wide-scale testing by providing teaching using the Japanese Bimi application to high school students to get their opinion on learning Japanese using the Bimi Japan application and 5) Evaluation, from all the stages that have been passed, re-evaluated regarding the feasibility and trial use of the Bimi Japan application which can be concluded the Bimi Japan application in accordance with the principles mobile assisted language learning and is worth using for Japanese learners at the high school or beginner level.

CONCLUSION

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Based on five stages 1) Analysis, 2) Design, 3 Development, 4) Implementation and 5) Evaluation, the development of Japanese language learning media in the form of an android application, namely Bimi Japan, is suitable for use in high school level Japanese learning or entry level. Learning using the Bimi Japan application helps students in independent and

autonomous learning, so that students can learn Japanese anywhere and anytime and without using the internet. Learning Japanese using Japanese Bimi with the stages of learning vocabulary, sentence patterns and exercises helps students evaluate the learning that has been learned.

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BIO STATEMENT

Rita Agustina Karnawati is the Head of the Japanese Language Education Study Program, FKIP UHAMKA, and Ayu Putri Seruni is the Secretary of the Japanese Language Education Study Program, FKIP UHAMKA. Both are in charge of running existing programs, such as training, seminars, workshops, and research. They are also active in writing articles in sinta journals or in international proceedings.

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