

## Development of Learning Media Based on Augmented Reality (AR) Instagram Filter in *Shokyu Hyoki 1*

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### Abstract

*This research aims to provide educational materials for Shokyu Hyoki 1 by utilizing augmented reality filters on Instagram. Utilizing the Sadiman paradigm for media creation. A structured questionnaire was utilized to gather data from 64 students in the class of 2023 enrolled in the Japanese Language Education program at the Faculty of Cultural Sciences, Universitas Brawijaya. The utilization of Augmented Reality (AR) learning tools through Instagram filters was determined to be effective and beneficial for teaching Shokyu Hyoki 1 content. The student response questionnaire shows a high level of approval for the creation of educational materials utilizing augmented reality Instagram filters, scoring 79.5%. This indicates that the media is successful in improving student comprehension and enthusiasm.*

**Keywords:** *Instagram Filters; Kanji; Learning Media*

### INTRODUCTION

Language is an integral part of human interaction. People carry out communication and social contact with the help of language (whether spoken, written, or sign language). Language is also seen as a mirror of personality because language is translated as a mirror of feelings, thoughts, and behavior (Wibowo et al., 2022). Sometimes, someone intelligent with great ideas must quit because he cannot convey his thoughts in good language. Therefore, if expressed in good language, others will only recognize and appreciate some ideas, suggestions, and intellectual work. This is what Anderson said in

(Tarigan, 2008) stating that the essence of language is a communication tool consisting of arbitrary and unique symbols built from customs and closely related to the local culture where they exist and continue to exist.

Changes in society's thinking and developments in science, technology, and communication directly influence current educational developments. As a result of developments in technology and communication, the rapid acquisition of information through electronic media such as television and the Internet can strongly impact educational progress (Maghfiroh, 2020). However, this technological sophistication must be managed so that it can be used to create quality education. In order for this quality education to be realized, of course, quality human resources are needed.

In general, spoken language processes much more than written language processes (Saepudin, 2018). Therefore, good management is needed so that information or things to be published can be communicated well. Moreover, when learning a foreign language, it is necessary to master the letters of the foreign language, which are completely different from your mother tongue, so that that communication can be successful. Apart from that, learning a foreign language, supported by a good learning environment, can improve the ability to learn a foreign language so that the learning goals you want to achieve are successful.

Sadiman (2009), emphasized that the learning environment, as a learning resource capable of transmitting messages, can help overcome obstacles in the teaching and learning process. These obstacles include different learning styles, interests, intelligence, sensory limitations, physical disabilities or geographical distance barriers, time distance and other obstacles that can be overcome with the help of the learning environment.

Apart from being able to be used to eliminate obstacles in teaching and learning, the learning environment is also expected to improve student learning outcomes. The reasons, according to Sudjana and Ahmad (2009), include: (1) Lessons attract more attention from students to increase learning

motivation, (2) Teaching materials have a clearer meaning so that students can understand and understand the purpose of teaching, (3) Teaching methods become more flexible, not just verbal communication, by saying the teacher's words so students do not stay energized, and teachers stay energized, and (4) Students are more involved in learning activities because they listen to the teacher's explanation and other activities such as observing, doing, demonstrating, etc.

From Sudjana and Ahmad's theory above, it can be concluded that the learning environment should be an attractive medium, arousing students' interest and motivation to participate in learning activities. One of the interesting media used in learning activities is game media. Heman Elia (Hasanah, 2021) states that learning through games can provide several benefits. First, what students learn is not only in the form of intellectual knowledge but when experienced, such experiences are more difficult to forget. Second, because of the fun and stimulating nature of games, the lessons taught can be received in a fun way. Thus, the possibility of students rejecting what is taught is minimized. Third, because games are fun, they can be played and, at the same time, stimulate students' interest in certain subjects. Well-designed games develop students' skills in a particular way because students enjoy them.

The games used in learning activities are not only games that can relieve students' boredom but also games that are created to acquire certain skills. Such games must be structured and designed so that the game can improve learning outcomes. When studying a foreign language, the skills students must master are reading, writing, listening, and speaking. Wright, (1981) states:

*Games can be found to give practice in all the skills (reading, writing, listening, and speaking), in all the stages of the teaching/learning sequence (presentation, repetition, recombination, composition) and for many situations and types of communication.*

Learners will be able to master these four skills well if they are supported by good mastery of letters, especially since the letters used differ from the native language. Therefore, to assist students in learning letters (basic *Kanji*), a learning media was developed as game media, providing students with direct learning experiences (Kustari, 2021). The game chosen as a learning medium is based on augmented reality with the help of Instagram filters.

Instagram is a social media that is very popular with the public. Instagram is a social media application that can be opened on a device, and its main task is to take or record photos or videos and upload them to user accounts, apply filters to photos, and share photos on various social media, including Instagram itself (Utami, 2015). In 2017, Instagram introduced innovation with the Instagram Stories (Insta-story) feature, which allows users to take and upload photos and videos in real-time with digital filters. However, uploaded photos and videos can only be seen by followers for 24 hours, although uploaders can still view them again from the archive menu. As a teacher, the distribution of students' own Instagram social media must be an innovation so that students do not get bored with the existing learning environment and only depend on textbooks but can also find the learning process enjoyable (Aryani & Murtiariyati, 2022).

As discussed in previous research by Puri Sinatrya and Singgih Utomo Aji, who studied "Effectiveness of the Instagram Social Media Online Learning Model in Class X Vocational Schools in 2020. This research concludes that learning in a flipped classroom using Instagram can improve student learning outcomes and provide new experiences for students (Sinatrya & Aji, 2022). part from that, Anggraini et al., (2021) also conducted research with the title "Development of Instagram-Based Educational Game Filters for Grade 5 Elementary School Science Content". Using the ADDIE research method concluded that developing a filter-based learning environment for learning games on Instagram is included in the very good category, and its use is very good. Research by Cholifah, (2023) in two vocational school level classes in

teaching and learning activities that used the Instagram story filter media found excellent learning results, the use of the Instagram story filter media was also found to be effective in mastering Mandarin transportation vocabulary. Janani and Nur (2023) using the Instagram application Math Quiz media provided positive research results where students had new experiences and innovations in the Al-Jabar Mathematics learning process.

Previous research regarding the development of Instagram filter media as a learning medium was mostly carried out at the school level (Cholifah, 2023; Janani & Nur, 2023; Sinatrya & Aji, 2020; Anggraini et al., 2021) even though language learning can be done at any level in this case, including college students. In line with that, if we refer to the results of the analysis of student needs (table 2), Brawijaya University found that 79.7% of students agreed that they needed innovation in learning Shokyu Hyoki 1 material. Students also felt satisfied if there were lecturers who taught using media. Students also need supporting media that can be entertaining, not boring, and learning can also be in the form of game media in the Shokyu Hyoki 1 course. Based on observations during lectures, students have difficulty learning Kanji letters so there is a need for understanding and enriching the material so that development Instagram filter media with augmented reality will motivate students to study independently with the aim of increasing the memorization of 1st semester FCS UB Japanese Language Education students.

## **METHOD**

This research uses the Sadiman model development method (Sadiman, 2009). Sadiman's development model, namely 1) Analyzing student needs and characteristics, 2) Formulating instructional objectives, 3) Formulating material points, 4) Developing success measuring tools, 5) Creating media, and 6) Carrying out limited trials and revisions. This research was conducted from 10 September to 14 October 2023. The population and sample in this research

were students of Japanese Language Education, Faculty of Cultural Sciences, Universitas Brawijaya, class of 2023, totaling 64 students from classes A, B and C who took the *Shokyu Hyoki* 1 course. The name of the development of this teaching material is the kanji renshuu. It describes the process of developing learning media and its quality in terms of validity, implementation of results, and effectiveness. Team of validators media are Izuka Tasuku, M.A. as an expert lecturer and native Japanese speaker, Dr. Putu Dian Danayanti Degeng, S.S. M. Pd. as a media expert lecturer from the Department of Language Education, Universitas Brawijaya. Results implementation data were obtained from observations of student activities, lecturers, and student final results. Effectiveness data was obtained from the results of student response questionnaires. This research uses a questionnaire technique to determine the media development process while determining the media quality using validation techniques and questionnaires. The score interpretation criteria are guided by the score interpretation criteria on a Likert scale as below (Riduwan, 2009):

Table 1. Score Interpretation Criteria (Riduwan, 2009)

PERCENTAGE	CRITERIA
0 % - 20 %	Very weak
21 % - 40 %	Weak
41 % - 60 %	Neutral
61 % - 80 %	Strong
81 % - 100 %	Very Strong

## RESULT AND DISCUSSION

In this section, the results of research regarding the media development process will be described. In developing *Kanji Renshuu* learning media based on Augmented Reality (AR) Instagram Filter, some steps or processes must be implemented to support the successful implementation of developing *Kanji*

*Renshuu* learning media based on Augmented Reality (AR) Instagram Filter. These steps are analysis of student needs and characteristics, formulation of objectives, formulation of material items, formulation of success measuring tools, product creation, and trials and revisions. The following describes each step required in developing *Kanji Renshuu* learning media based on Augmented Reality (AR) Instagram Filters based on Sadiman model.

### **Analyzing student needs and characteristics**

The first step is to analyze student needs and characteristics. This step is the first stage in the media development process. This step is carried out before development activities are carried out. At this stage, student needs can be identified in learning Japanese, especially in the *Shokyu Hyoki* 1 course. Student needs are sought using a research instrument in the form of a questionnaire. In this research, a questionnaire was distributed to 1st semester Japanese Language Education Study Program students at Universitas Brawijaya as respondents to find out the needs of 1st semester Japanese Language Education Study Program students at Universitas Brawijaya for a supporting media that could help students in Japanese language learning activities in the *Shokyu Hyoki* course. 1.

After being distributed to several students, the questionnaire was analyzed to obtain data indicating student need for supporting media. The data obtained from this stage is then considered in the next step. The following are the results of data analysis from the pre-research questionnaire.

The table 2 results from data processing from a pre-research questionnaire distributed to 66 1st semester Japanese Language Education Study Program students at Universitas Brawijaya or those taking the *Shokyu Hyoki* 1 course.

**Table 2.** Results of Pre-Research Questionnaire Data Processing

NO	QUESTIONS	ANSWERS			
		Strongly Disagree	Disagree	Agree	Strongly Agree
1	I find it difficult to learn <i>kanji</i> in the <i>Shokyu Hyoki</i> 1 course.	3	30	23	8
	<b>Percentage (%)</b>	4.7%	46.9%	35.9%	12,5%
2	The lecturer once taught using media in learning <i>kanji</i> in the <i>Shokyu Hyoki</i> 1 course.	3	12	32	17
	<b>Percentage (%)</b>	4.7%	18.8%	50%	26.6%
3	I experienced changes when the lecturer used media in explaining and assigning the <i>Shokyu Hyoki</i> 1 course.	7	22	25	10
	<b>Percentage (%)</b>	10.9%	34.4%	39.1%	15.6%
4	I need media that innovates in the <i>Shokyu Hyoki</i> 1 course.	0	13	26	25
	<b>Percentage (%)</b>	0%	20.3%	40.6%	39.1%
5	I need supporting media that is entertaining, not boring, and in the form of game media in the <i>Shokyu Hyoki</i> 1 course.	3	6	21	34
	<b>Percentage (%)</b>	4.7%	9.4%	32.8%	53.1%
6	It would be fun if lecture games used social media in the <i>Shokyu Hyoki</i> 1 course.	6	17	20	21
	<b>Percentage (%)</b>	9.4%	26.6%	31.3%	32.8%

Based on the description in table 2, it can be concluded that students are interested in the presence of media in *Shokyu Hyoki* 1; most students also stated that they enjoy learning if there is game media in *Shokyu Hyoki* 1. However, it cannot be denied that students also experience difficulties when learning *kanji*. For this reason, students stated that students needed supporting media when students were studying in the *Shokyu Hyoki* 1. If we look further, based on the results of the pre-research questionnaire, the supporting media that students need is media that is entertaining and exciting when used in lectures. Students also said they would be happier if they could learn using game media. From the analysis of student needs,

it is necessary to create a supporting media to reduce students' difficulties in practicing *Kanji* in *Shokyu Hyoki* 1. This supporting media is in the form of game media that is entertaining and exciting when used in *Shokyu Hyoki* 1.

### **Formulating instructional objectives**

A media used for a learning activity must have a goal that is expected to be achieved at the end of the learning activity. The game media developed is a medium to reduce students' difficulties in practicing *kanji* in the *Shokyu Hyoki* 1. This media was developed to help students practice *Kanji* in Chapters 1 to 7 in the *Shokyu Hyoki* 1 module. The *kanji* learned by students using the developed media can be implemented so that students can achieve the learning objectives set at the end of the learning activity.

### **Formulating material points**

After the objectives have been formulated, the next step is determining the material given to students. These material points are formulated by identifying the main materials that will be given to students. These material items are arranged systematically in table form. The results of the formulation of material points from Chapters 1 to 7 in the *Shokyu Hyoki* 1 module. The *kanji* used include: Chapter 1 (日、月、火、水、木、金、土、山、川、田), Chapter 2 (一、二、三、四、五、六、七、八、九、十、百、千、万、円), Chapter 3 (学、生、先、会、社、員、医、者、本、中、国、人), Chapter 4 (今、朝、昼、晚、時、分、半、午、前、後、休、毎、何), Chapter 5 (行、来、校、週、去、年、駅、電、車、自、転、動), Chapter 6 (高、安、大、小、新、古、青、白、赤、黒), Chapter 7 (上、下、父、母、子、手、好、主、肉、魚、食、飲、物)

These material points are conveyed to students through developed media. Grouping and selecting material items is a way for students to achieve predetermined learning objectives.

## Developing success measuring tools

In this section, the activity of developing *Kanji Renshuu* learning media based on Augmented Reality (AR) Instagram Filters is divided into two stages, namely the preparation and design stages. At this stage, the activity is to prepare a media concept, which will be realized in draft form at the design stage of *Kanji Renshuu* learning media based on an Augmented Reality (AR) Instagram Filter. The activity carried out is developing the concept and completeness of learning media.

At this design stage, the aim is to create an entertaining and exciting media draft. The draft design is created using the Meta Spark Studio AR engine at this stage and previously created an account on Instagram. Planning begins with creating a media display design, collecting material, compiling questions, and creating media with material from Chapters 1 – Chapter 7 in the *Shokyu Hyoki 1* module. The development of this media is based on input from material and media expert validators.



**Figure 1.** Results of *Kanji Renshuu* Media Development based on Augmented Reality (AR) Instagram Filter

## 5) Creating media

After the initial media draft has been created, the next step is carried out: media revision based on input from the validator. This revision aims to produce a media draft ready for limited trial activities. Media validation is carried out by two people, namely, a media expert and a material expert. Assessment is based on content and physical appearance aspects, as seen in Table 3.

**Table 3.** Validation Results from Material Experts and Media Experts

Assessment Aspects	Validator Assessment		Total score	Maximum Score	Validity Value (%)	Category
	Materials Expert	Medias Expert				
Contents	22	24	46	48	95.8	Very Valid
Physical Appearance	23	23	46	48	95.8	Very Valid
<b>Total</b>			92	96	95.8	Very Valid
<b>Average</b>			46	48	95.8	Very Valid

Table 3 shows that the content aspect of the validity value of material experts and media experts reached a score of 95.8% in the very valid category. Furthermore, regarding physical appearance, material experts and media experts obtained a score of 95.8% in the very valid category. So, *Kanji Renshuu* media based on an Augmented Reality (AR) Instagram Filter is suitable for use in *Shokyu Hyoki 1* course.

This is by the theory of media selection criteria put forward (Arsyad, 2013). The criteria for selecting good learning media must be appropriate to the purpose, practical, spacious, and durable, capable and skilled, and technical quality. So, the *Kanji Renshuu* learning media based on the Augmented Reality (AR) Instagram Filter has fulfilled the elements of good quality learning media.

### Carrying out limited trials and revisions

To find out the effectiveness of the results of this media development, a limited trial was carried out on 50 Japanese Language Education Study Program students at Universitas Brawijaya who were taking the *Shokyu Hyoki 1* course. The trial was carried out from 10 September 2023 to 14 October 2023. During the trial, students were asked to practice working on the *kanji* contained in the *Kanji Renshuu* learning media based on AR Filter Instagram. After that, students were asked to fill in a student response sheet with 15 statements consisting of 3 aspects: understanding, motivation, and

media effectiveness. The data on student responses after using *Kanji Renshuu* learning media based on an Augmented Reality (AR) Instagram Filter is described in table 4.

**Table 4.** Student Response Results After Using *Kanji Renshuu* Learning Media Based on Augmented Reality (AR) Instagram Filter

Assessment Aspects	Total score	Maximum Score	Validity Value (%)	Category
Understanding	964	1200	80.3	Strong
Motivation	628	800	78.5	Strong
Media Effectiveness	795	1000	79.5	Strong
Total	2387	3000	79.5	Strong
Average	795.67	1000	79.5	Strong

Suppose you look at the results of student responses. In that case, the *Kanji Renshuu* learning media based on an Augmented Reality (AR) Instagram Filter has met the criteria with a large percentage of student responses of 79.5%. When viewed based on the score interpretation criteria from (Riduwan, 2009), this large percentage is classified as a very strong response criterion. So, the *Kanji Renshuu* learning media based on the Augmented Reality (AR) Instagram Filter has proven effective and suitable for use in *Shokyu Hyoki 1*.

## CONCLUSION

This research shows that the *Kanji Renshuu* learning media has been successfully developed based on an Augmented Reality (AR) Instagram Filter. This learning media has high validity as assessed by experts, so it is very suitable to be used as a supporting medium for practicing *Kanji* letters. Moreover, this media is also effectively used in the *Shokyu Hyoki 1* course. The next suggestion is for lecturers and students to use it as an alternative media

in practicing *Kanji* letters. For the development of similar media for Japanese language learning or lecturing, it is also recommended that it be developed on other platforms to help lecturers and students understand *Kanji* material and Japanese in general.

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