This paper centers around the ideas of developing students' media literacy through integrating Japanese language learning and multimedia form. This media is utilized to facilitate Japanese irregular verbs (Doushi) learning on the basis of morphological changes. One of Japanese verb forms which is employed frequently are words which have suffix -te, for they are use ask, order and allow interlocutors to do something (-te kudasai); to show present activities (-te imasu), to give permission (-temo ii desu); and to show prohibitions (-tewa ikemasen). Preliminary study elucidated that students found these Doushi are problematic and complex; thus, additional learning media to learn autonomously is inevitable for students to practice outside the classroom tasks. Researchers attempt to achieve this by developing appropriate teaching media by using Macromedia Flash software based on ADDIE model research and design steps, including Analysis, Design, Development and Implementation, Evaluation. The media is called Kumori, which provides interactive and meaningful media for student self-directed learning. The findings shows that Kumori as the instructional media in learning Japanese vocabulary which follows steps of the ADDIE model in order to produce an effective and efficient instructional tool for language learning, can give positive impact to students' academic achievement. Therefore, adopting an appropriate instructional model must because it is a systematic process in developing proper instructional materials for an effective education and training program. Further, Kumori also expected to able to contribute and implicated in Japanese language teaching and learning.

KEYWORDS
ADDIE Model; Doushi; Interactive media; Japanese

INTRODUCTION

Japanese as a foreign language has been taught in universities for some years in Indonesia. Especially in Universitas Brawijaya, there are two study programs established to offer this foreign language, i.e. Japanese Language and Literature and Japanese Language Education. Increasing number of the students admissions every year indicates that learning Japanese is well in demand, as there is a growing influence of Japanese culture that spreads through Indonesia via print as well as electronic media. According to statistics from Japan Foundation (Jakarta Post, 2013), more than 800,000 Indonesian are currently studying Japanese language, mainly due
to the popularity of Japanese pop culture, anime, manga, and cuisine.

In the universities, the courses are not only related to language skills, but also to the literature and cultural aspects of the people, the users of language, as well as other supporting knowledge. Besides providing facilities, to support the teaching and learning process, teaching materials and teaching media are prepared. The Japanese study obliges students to learn Japanese vocabulary as the foundation before learning more about Japanese language further in depth. There are many assumptions placed on the students, particularly in relation to Japanese writing system which somehow challenging to the students when they are beginner. The description of basic spoken discourse is demanding for the students, for instance, for basic spoken tasks like directives mite kudasai (please see), kaitte kudasai (please write) and greetings like ohayoo gozaimasu (good morning); thus providing glossary about those discourses are ways to facilitate learning. Notwithstanding this, time constraint becomes another limitation for the teaching and learning process. Teaching and learning activities in the classroom need to be added with additional follow up activities to students. Because this additional exercise is done outside the class, interactive teaching media is indispensable.

To contextualize this problem, need analysis was administrated through interviews to one Indonesian lecturer and six students across different genders and different achievement levels. The similar results were revealed as follows: (1) students need to have enrichment, especially additional materials to learn outside the class; (2) the learning media should be interesting so that it motivate students to learn outside the class; (3) the materials should cover vocabulary learning as well as how to pronounce it; and (4) there should be several levels to achieve so that students will reach particular number of dictions.

Undergraduate students are considered young people who engage in activities outside campus hours for playing games, maintaining a webpage or explaining the use of social software to peers. Some research show various use of internet applications and games among youth (Eynon, 2010) as interactive media, technology being responsive to the user's actions. The need for interactive teaching media to enhance the success rate of teaching and learning process, especially for Japanese as a foreign language study in university is indispensable. Instructional media development should accommodate transformation of conventional learning methodologies into active teaching where students as a learning centre is facilitated compare to teachers central or learning resources. Meanwhile, today, Japanese lecturers face an unequalled challenge, namely bridging the gap between traditional teaching aimed at developing students' vocabulary and active learning which employed joyful and technology-based learning. Active learning which accommodates student-centred learning has demonstrated some important efficacies compared to conventional learning. Students' engagement in learning foreign language is reported increasing through using interactive learning media (Hung, Yang, Hwang, Chu, & Wang, 2018) because it reduces anxiety towards learning atmosphere (Simpson & Obdalova, 2014).

Therefore, Japanese lecturer should possess a balanced and well-planned curriculum with meaningful and relevant activities in order to motivate students to be active learners. Integrating interactive instructional media into Japanese classroom is one of effective and modern approaches in teaching and learning. The approach is according to concept of weaving media literacy development into the curriculum (Dvorghets & Shaturnaya, 2015).

As almost all foreign language learning processes are based on reading literacy skill, students are required to master vocabulary. Because vocabulary knowledge and conceptual knowledge are closely related to the success of language learners communication (Geske & Ozola, 2008), an interactive instructional media to enhance vocabulary mastery should be accommodated (Leu & Kinzer, 2003) so that students will be able to have positive academic performance through successful communication.

In learning Japanese vocabulary, especially Japanese irregular verbs (Doushi) students need to practice words which have suffix -te, for they are use ask, order and allow interlocutors to do something (-te kudasai); to show present activities (-te imasu), to give permission (-temo ii desu); and to show prohibitions (-tewa ikemasen). Preliminary study elucidated that students found these Doushi are problematic and complex; thus, additional learning media to learn autonomously is inevitable for students to practice outside the classroom tasks.

One of technologies that enhance vocabulary teaching is Japanese animations (anime). Anime is
Vocabulary teaching is beneficial especially when teaching of Japanese as a foreign language. Prohibitions give permission (tewa ikemasen); order and allow people to do something (te imasu); to show present activities (te imasu), to give permission (temo ii desu); and to show prohibitions (tewa ikemasen).

Learning foreign language as to Japanese is begun by learning its words. The core of the first, second, or foreign language acquisition is vocabulary learning (Thornbuty, 2002; Katwibun, 2014). Kritikou, Stavroulaki, Paradia, & Demestichas (2010) mention that there are two ways of learning a foreign language, namely (1) to understand the meaning of vocabulary (words), and (2) to know the grammar-related sentence structure which are bettering combination. Vocabulary mastery is important, for the construction of accurate sentences cannot be developed unless knowing appropriate vocabulary.

In Japanese language, vocabulary that becomes the focus is Doushi. A lot of practices are needed to use suffix -te, so that students know how to use it for several expressions like ask, order and allow people to do something (te kudasai); to show present activities (te imasu), to give permission (temo ii desu); and to show prohibitions (tewa ikemasen).

There are some positive effects of vocabulary teaching of Japanese as a foreign language. Vocabulary teaching is beneficial especially when students feel it is most needed, like when having listening, speaking, reading, and writing, where teaching occurs in the context of message-focused activities. Thus, vocabulary learning should be a part of meaningful learning activities before it comes to solely activity. This happens because when words come up with meaningful situations like in listening, speaking, reading, and writing, students will get easier to get the meaning, which stay longer in memory, however, sometimes simply doing rote learning, like memorizing is also needed because students might encounter situations when they need quick help which do not interrupt the activities too much.

### Instructional Media for Japanese Language Learning

Instructional media is one of important elements of the instructional system which motivate students to involve and be attracted to engage in Japanese teaching and learning activities. Instructional media should be tools to match learning objective and learning process which indirectly becomes bridges between the knowledge transferred by teachers and students' comprehension (Hung et al., 2018). Instructional media can be categorized into two, i.e. traditional technology media and high-end technology media (Uzunboylu & Koşucu, 2017), and also can be divided into types of activities, thinking processes, and visual keys based on Brown (2000).

Although computer-based instructional media as an aids in teaching and learning Japanese language is highly affected by many aspects like preferences in utilizing traditional and non-computer literacy, poor computer skill, and lack of computer training, a lot of research explain effectiveness of using computer-based instructional media as it can motivate students to learn Japanese language as it support students to improve language skills and gain information especially for Japanese environment and culture. Thus, choosing appropriate instructional media is a crucial point in order to produce an effective learning supports. Since there are many kinds of instructional media which can be used to facilitate instruction, including facilitating reading instruction, above all, the main purpose of the using of instructional media in language teaching is to enable the materials taught by the teacher to be absorbed optimally by the students. Because of the various kinds of media, the teacher should...
select the appropriate media for teaching so that the media can really facilitate the instruction.

**Anime: an Interactive Vocabulary Learning Media**

Because new Japanese vocabulary should not be ever presented either solely alone or by simple rote memorization, Decarrico (2001) suggested that vocabulary learning should be presented in enriched contexts that are plenary enough to give guiding clues to their meanings, whereas the learners should be given several exposures to the items they are learning. It is essential to provide exercises or activities included learning words in word association lists, emphasizing key words in texts. The playing of Japanese vocabulary games and computer programs that include the pronunciation sounds of the vocabulary, as well as any illustrations or pictures, provide opportunity to practice in a variety of contexts, of which spoken and written are recommended.

In relation to learning Japanese as a foreign language, previous research has confirmed the evident relationship between students' interest in anime (Japanese animation) and interest learning Japanese language (Manion, 2005; Abe, 2009). Abe (2009) mentioned that language teachers can expect that students enhance and improve their language competencies well by utilizing materials which they are already interested. Besides that, various interactive activities came from the use of anime as a teaching tool can make the classroom fun, creative and dynamic.

Therefore, anime appears to accommodate Japanese vocabulary learning through interactive instructional media. According to the Japanese Foundation, there were about 3.6 millions of people who studied Japanese abroad at Japanese educational organizations in 2015, distributed in 137 countries (Japan Foundation, 2015). The learners are requiring good materials for learning Japanese, especially for their vocabulary mastery for speaking and listening in Japanese.

As teaching media, anime, especially Kumori is needed because it is increasingly offering students a range of opportunities for vocabulary practice and learning over and above pencil and paper activities. One benefit over more traditional forms of vocabulary learning is that computers are "very patient about repetition and recycling” (Hirschel & Fritz, 2013). Secondly important benefit is that Kumori as interactive media can often provide instantaneous feedback (Sagarra & Zapata, 2008), though the benefits of such feedback versus delayed feedback are subject to some debate (Hattie & Timperley, 2007). Other noted benefits include giving students the ability to work independently and at their own pace with greater control over their own learning (Sagarra & Zapata, 2008).

Despite the growing popularity of interactive media like Kumori anime mediated vocabulary instruction (Horst, Cobb, & Nicolae, 2005), “empirical evidence of the benefits of computer assisted language learning is still scant” (Nakata 2008, p. 4). A number of claims for the superiority of this instructional media to pencil and paper learning remain speculative. Recent studies in vocabulary acquisition, however, demonstrate some promise for Kumori anime.

**METHODS**

**Research Design**

This study is classified into educational Research and Development (R&D). R&D is highly recommended to be conducted in educational setting to facilitate the educational development. Thus, the researcher produces educational products as the researcher’s contribution for the educational development. The products of this research are Japanese instructional media in the form of anime, namely Kumori for teaching vocabulary to students Japanese foreign language learning in the university.

**Research Procedures**

The present research procedures used in this research were adapted from the R&D model proposed Gall et al., (2003) However, because instructional media used is computer based, the development model used is based on ADDIE (Analysis, Design, Development and Implementation, Evaluation), as depicted in Figure 1.
As in Figure 1, in the analysis step, instructional problems and objectives, learning environment, students' schemata and skills are identified to develop blueprint for the whole instructional design process. Next, learning objective, assessment instrument, exercise, content, subject matter analysis, lesson planning, and media selection are prepared systematically and specifically in design step. In this step, orderly method of identifying, creating, and evaluating the media should be applied. Besides, each element of instructional design for the teaching media plan should be executed with attention and details. In development step, developing and creating content based on blueprint is carried out. The designer helped with storyboard and graphics for the teaching media, including preparing the narrator and back sound. Implementation step allow teaching media designer to facilitate lecturer and students in utilizing the product (the instructional media), this including training students for having registration and do the tasks. Accordingly, evaluation step which accommodates researchers to make betterment of the instructional media based on the feedback.

Research Instruments

The instruments used in this research were an observation sheet, an interview guide, and questionnaires. The observation sheet was the first instrument to collect the data in this research. The instrument was used to observe the instructional process in the classroom in the need analysis stage of this research. The interview guide was the second instrument to collect the data in this research. The instrument was used to investigate what the students' need in vocabulary instruction, especially related to the using of the instructional media. The data was necessary for the researcher in designing the appropriate instructional media for the students. The questionnaires were distributed to the content expert (covered the aspects of the materials and instructional), media expert (covered the aspects of the appearance and the development of the media), Japanese lecturers (covered the aspects of the materials and the instruction) and the students (covered materials, the instruction and the media).

Data Collection Technique

The data of this research were collected in three different times. Firstly, in the beginning of this research, the researcher conducted an interview with the teacher and class observation to get some information related to the students' needs in vocabulary instruction, especially related to the teaching of Doushi with suffix -te and the instructional media used. Next, after producing the media, the researcher asked for the assessment of the media from the Japanese teacher, the content expert, the media expert by distributing questionnaires for them. The last, after the media try-out, the researcher also distributed questionnaires to the students to get the students' opinion about the using of the media.

As choosing appropriate instructional model is pivotal aspect to create an effective instructional media prototype, so this article describes adaptation of ADDIE instructional model in designing and developing a special learning
Many instructional design models have been developed and used over the last few decades. Models differ in terms of the number of steps, the names of the steps, and the recommended sequence of functions. Survey of Instructional Development Models includes 18 models. Their list is not intended to be exhaustive; rather, it illustrates the various ways of implementing a system approach. Instructional design technology refers to the process and procedure to systematically develop an educational program. According to Reiser and Dempsey (2007), instructional design is a system of procedures for developing education and training programs in a consistent and reliable fashion, while Gagné, Wager, Golas, & Keller (2005) define it as the process of creating an instructional system. With both systematic and scientific processes, instructional system design is documentable, replicable in its general application and leads to predictable outcomes. It also requires creativity in identifying and solving instructional problems.

As the purpose of this paper is to describe systematic process proceeded in the designing and developing an interactive instructional media for Japanese vocabulary learning, the ADDIE process is described along with details that describe techniques utilized and finding revealed. Eventually, a discussion of results of learning experience shows how systematic method to design and develop instructional media influence experience of students as the end-users.

**RESULTS AND DISCUSSION**

Below are several results followed by discussions which are in sequences presented based on the stages that were followed.

**Need Analysis**

From the interview with Japanese lecturer and observation, both of them had good attitudes toward Japanese vocabulary instruction. However, they still needed more appropriate media, especially visual media, to facilitate the instructional process, especially for enrichment. Thus, the researcher decided to develop *Kanori*, the anime and computer based media to learn *Doushi* with suffix *-te*, which belonged to the audio visual media to facilitate the instructional process.

The researchers are divided into one designer and two educators. As the designer, the focus is on designing the media, while educators analyzed four factors, namely students, instructional goals, instructional analysis, and learning objectives. The first factor for analysis is the students. Here, there is a need for educators to explore students’ existing knowledge about Japanese language and the problem faced by students so that the educators can choose the areas that need to be focused on and the ways to overcome their problems in learning the language, particularly related to instructional media. Educators also need to identify the obvious goals for this product instruction. It is easier to develop a very effective instruction design when there is a clear goal. Thus, the main goal of this project is to facilitate students to learn Japanese language for vocabulary mastery purpose as the enrichment via interactive media in order to motivate them to learn. In addition, this learning tool should provide them with the opportunities to practice self-learning outside classroom wall in an interesting way. Instructional analysis is a very hard and complicated process. After the educators have identified the goals, educators will start to plan the important steps that need to be taken to achieve the goals. Therefore, in order to transform the class environment, the educators will list down all the important things that need to be embedded in the instructional media.

Learning objectives. This analysis tries to ensure what students should be able to do after the instruction completes. In order to analyze the learning objective and learning outcomes, the educators refer to the course outline for Japanese subject at the second semester.

**Design**

After obtaining the data from the need analysis and deciding the media that would be developed, the next process was instructional designing. This process aimed at creating an integrated teaching and learning system which can be used in the classroom. In this phase, the designers focused on the conceptual construction of the instructional media especially display (illustration), what it can do and how to use it in order to fulfill the students’ needs. This stage used the data collected from the analysis phase to acquire the related theories and instructional design models which explain how learning could be acquired. Three elements of design that educators should focus on
are learning contents, assessments and instructional strategy including teaching methods and website design.

This phase ensures that the contents are well designed to achieve the learning outcome. Based on the data collected in the analysis phase, the educators had designed learning content based on students' need as well as their opinions and suggestions. The learning content is related to sixty vocabulary related to the teaching and learning Japanese to learn Doushi with suffix -te. and fulfill the students' needs as depicted in Table 1.

Table 1. vocabulary related to the teaching and learning Japanese to learn Doushi with suffix -te

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In relation to assessment design, data which were collected from the previous step were used to design an effective assessment. However, educators should ensure that the assessment designed is strongly related to the field, content, and context. Furthermore, the assessment should be clear and easy to understand to avoid students' misunderstanding. After determining the learning content and assessment, the educators start to design the instructional strategy by combining various methods to help students understand vocabulary through word formation in development step.

Development

In this development step, the researcher, particularly the designer, designed the instructional media. In this step, the researcher transferring the material to the Kumori design. Kumori is instructional media which can be used individually by students who are learning Japanese language as a foreign language, especially to get supplementary exercises independently outside the classroom activities. Kumori provides anime with some characters who refer to students, they become narrators for explaining word formation to learn Doushi with suffix -te.

Here is the explanation of the design in details.

The opening page is as in Figure 2 shown a typical of a Japanese school building which welcome the students and prepare them to be ready for learning. It has opening song which is expected to increase learning enthusiastic.

![Figure 2. Opening page.](image)

Instruction page as in Figure 3 informs students about symbols and directions to do the exercises. The symbols are direct links to the next page, to go to menu section, explanation section, and test menu. A narrator is also guiding students by reading information about symbols and directions in Japanese language.
Students can select various activities in menu page (see Figure 4). In this page students can select either they are going to do exercise first or to read explanation. They can go back whenever they need to have explanation during doing their exercises in the test page. A different back sound is presented while the narrator by using Japanese language explains the buttons for explanation page and exercise page.

In explanation page (see Figure 5), students can find descriptions about the word formations, especially on how suffix -te is placed in every basic words especially verbs. In this page backsound is stopped so that students are expected to focus in reading the explanation well, and no narrator is available in reading word formation explanations. The word formation is explained written in Bahasa Indonesia to ease students in understanding Doushi.

This test menu page (see Figure 6) informs students about exercises. There is a green button as the link to vocabulary exercises. A narrator is also guiding students by reading information about button and directions to do the exercises in Japanese language.

### Implementation

The media design in the previous step was used as the guidance in producing the real media in this step. The researcher used some materials to create Kumori, by using Macromedia Flash software. After the media were reviewed by the Japanese lecturer and the experts, the researcher conducted the tryout of the media. As this implementation step involve delivering and distributing materials to the target students who were the second semester students. This step was also implemented in order to get the evaluation of the media, especially from the students as the audiences.

This instructional media, Kumori was field tested before it was distributed to students. This instructional media was uploaded and made available to students in the computer laboratory. In this step, the evaluation of the media was based on the data from the questionnaires distributed to the students. After trying out the media, Kumori, researcher asked the students about the use of the media using the questionnaires. The try out included 17 undergraduate students who are voluntarily in joining this pilot study, included 10 female and 7 male students. Then, there are several revision made as seen in Figure 8, based on the experts', students' and lecturer's feedback. This phase allows all materials to be tested to identify if they are well-functioning and appropriate for the intended audience.
Evaluation

The last step of the ADDIE method is evaluation. This step ensures that the instructional media designed could achieve the expected goals. Evaluation will be done throughout the implementation step with the aid of the lecturer who administer the evaluation survey among 17 students. This process is carried out to measure the effectiveness of the instructional media in helping the students to learn the Japanese language vocabulary, as well as for instructional improvement.

As the feedback compiled, slight revisions were made to ensure that students as users could comprehend what was being asked of them (instructions and directions). Nonetheless, some of the feedback refer to clarification of terms such as navigation, relevant, and visuals. The evaluation items are illustrated in the picture below.

From the assessments and responses from the content expert, media expert, Japanese lecturer and students, it can be concluded that *kumori* as the product of this research is feasible to apply for teaching Japanese vocabulary, especially *Doushi*, words which have suffix -te for university students. It implies that the instructional media is very good and feasible to use in the Japanese vocabulary instruction based on media expert, Japanese lecturer, and students' evaluations.

![Figure 8. Development Process of Kumori](image)

From the development of the instructional media above, *Kumori*, as instructional media fulfill this criteria because *Kumori* is in a form of anime, one of popular culture which is close to the students who keen on engaging with Japanese culture. *Kumori*, it can be said that recently, students spend most of their time engaging popular culture, so utilizing popular culture as one of options of educational teaching devices let lecturers to make more insightful time in teaching and learning process. Moreover, by observing students' learning habit outside the classroom in relation to their interest such as in popular culture, lecturers can somehow motivate students to engage in learning activities, since instructional media offers activities which are relevant to their interest. This opinion is strengthened by Alvermann and Hagood (2000, p.445) argument that a way to get students interested in school literacy practices and provides lecturers with insight into students' out of school lives is through exploring students' fandom of popular culture. Although using audio-visual popular culture texts, such as movie, drama, song, and cartoon in language teaching has become a common approach for language teachers, many of them might not be aware of using *anime* in the context of teaching Japanese as a foreign language.

By using *Kumori*, successful communication for independent learning can be encouraged by the lecturers. Besides focusing on vocabulary exercise of *Doushi* with suffix-te students are indirectly exposed with clear understanding not only of the lexicon, grammar, cultural patterns, but also the pragmatic background of the situation. Through *Kumori*, although it is presented once in the beginning part of the instructional media, students are given pictures which are illustrated by showing how context contributes to meaning in order to construct meaningful and effective communication in a foreign language. In the case of teaching and learning Japanese as a foreign language, *Kumori*, in the form of *anime* could be useful to help language lecturers and students to achieve these language teaching and learning purposes via introducing the ideas of using *anime* in a Japanese language classroom.

CONCLUSION

In conclusion, it is necessary for the Japanese lecturer to integrate *kumori* technology with the learning theory and pedagogy that impress Japanese learners’ individual needs in order to
guide the students' academic achievement to meet the final success. An appropriate instructional media should be well structured, filled with appropriate and innovative learning materials. The use of ADDIE instructional model presented in this paper is one of the ways to achieve an effective instruction. Kumori as the instructional media in learning Japanese vocabulary follows steps of the ADDIE model in order to produce an effective and efficient instructional tool for language learning which can give positive impact to students’ academic achievement. Therefore, adopting an appropriate instructional model must because it is a systematic process in developing proper instructional materials for an effective education and training program. ADDIE is a non-linear instructional process where the result of the formative evaluation of each phase may lead the instructional designer back to any previous phase. In other words, the instructional designer can come back to previous phases to validate the work. It provides a great flexibility and instructional designer can do any possible activities in every phase. Further product testing is important to identify the effectiveness of this media. Moreover, the instructional media should also be improved in order to motivate the students to learn especially for mastering vocabulary.

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