

The Design of Bunpou Ninja for Japanese Language Learning

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ABSTRACT

Keywords:
learning media,
Japanese language,
game,
design thinking.

Japan's advancements in technology, tourism, and culture have gained global acclaim, attracting people from around the world to visit, work, and even live in the country. This trend is further highlighted by Japan's ongoing population decline, creating more opportunities for foreign nationals to find jobs and settle there. Upon visiting Japan, tourists and immigrants face a significant challenge in learning the Japanese language due to its complexity. One major challenge is the language's use of three distinct writing systems: hiragana, katakana, and kanji. The Japanese language is also known for its grammar difficulty. Despite the availability of many Japanese language learning resources in physical and digital formats, these resources often seem dull and lack engagement. In response to this problem, the Bunpou Ninja Game was designed using a design thinking methodology, incorporating insights from Japanese language learners and Japanese language teachers. Those insights were gathered through observation and interviews, and then the design thinking method was used to create this educational language learning medium. The main goal is to provide an effective solution tailored to Japanese language learners. The Bunpou Ninja's concept emphasizes interactivity, enjoyment, repetition, and practical application of the Japanese language. Lastly, subsequent gameplay tests of the Bunpou Ninja game were carried out to gather players' feedback. Feedback was then instrumental in refining and enhancing the overall gameplay experience. The addition of action cards and a point system are improvements to the gameplay experience.

INTRODUCTION

The role of Japan in advancing technological innovation and global cultures is acknowledged worldwide. Japan is one of the developed countries that is ranked the third in the Asian region with a per capita income of IDR 536.1 million and a GDP per capita of IDR 598.1 million (Syabriya, 2022). Japan is ranked 18th in the world (Wijayanti, 2023). Not only economically but also in terms of the mindset of its people, Japan is also admired by many tourists from various countries because it has many beautiful natural scenery locations. In 2021, Japan was ranked the first with a score of 5.2 for economic development in the tourism sector (Alifah, 2022). In addition, the presence of Japanese anime (Japanese cartoon animation) and Manga culture is also in great demand by many people from all over the country.

Namely, these things encourage many people from all over the country; one of which country is Indonesia, to travel to Japan. The favorite destination countries for Indonesians as of 2022 are Malaysia, Japan, and Saudi Arabia; they have the same number of respondents 14,29% (Mustika, 2022). In addition, based on the graph below, Japan is ranked the second as the most visited long-distance country choice by Indonesians in 2017.

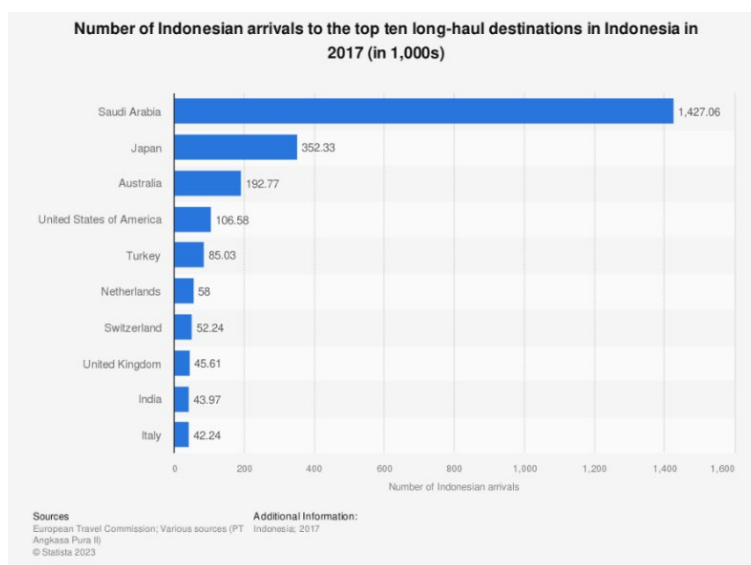


Figure 1. Statistics of Indonesian tourists going to Japan

Source: <https://www.statista.com/statistics/1066699/indonesia-arrivals-in-top-ten-long-haul-destinations/>

One of the major problems that both tourists and job seekers who want to go to Japan face today is limited communication due to language differences. This phenomenon happens because most Japanese people can only communicate in their native language. Therefore, tourists and jobseekers must adjust to the situation. They must learn the Japanese language. Not having this skill will make it very challenging for people who are not from Japan to survive, have relationships, appreciate the culture, and get a better experience when visiting or living in Japan.

The process of language learning by trying to remember a word or sentence alone will not be enough because learning a new language is more than just memorizing one letter or word at a time. The learning process is realized through daily usage of the topic that has been learned. This way, the learners' subconscious mind retains important information for later use.

This design is a new idea or innovation that seeks to create interactive learning media based on a card game combined with board game focused for beginners to make it easier for them to learn and practice Japanese, especially for learning grammar in the Japanese language. The grammar is unique and different from other languages. The design of this board game will focus on the basic introduction of the existence of Subjects, Predicates (verbs, adjectives), Objects, and Descriptions in the Japanese language that are written using 4 Japanese letter systems at once. Learning this will help players to understand and become familiar with the fundamental form of Japanese sentence structures. This game is an interactive and language learning tool that can inspire and help Japanese language learners to learn Japanese.

METHOD

The design of this learning media uses the Design Thinking method. Design Thinking is often referred to as human-centered design or HCD because the focus is decidedly on the human being (Lewrick et al., 2018). Design thinking, at its core, is a five-step problem-solving methodology centered on user-centric innovation (Ismail et al., 2023). The Design Thinking (DT) method consists of five stages, such as empathize, define, ideate, prototype, and testing.

The empathize stage is used to understand the teacher's and students' perspectives and needs when learning the Japanese language. Data was gathered using observation and interviews to establish needs. We conducted observation and interview to a Japanese language teacher and students from SMA Santo Carolus. Then based on the data established, we defined the problem and ideated a solution through gameplay design. We created a prototype and tested it on the 7 Japanese language learners.

RESULTS AND DISCUSSION

The Important of Learning 2nd Language

Learning a second language is important because it can expand social connections and relationships with more people, provide career or business opportunities abroad, and increase the brain's thinking power. With the ability to speak two languages, a person will have the opportunity to build a relationship with people abroad who can exchange ideas to improve themselves, or just to build relationships as a basis for getting a job and building an international business.

In this era of advanced technology, the scope of the search for work and educational knowledge is no longer limited to location and time, so several people throughout the world are now competing to get scholarships and job vacancies outside their country that are believed to be of higher quality and gain more experience that will better guarantee their future. Hence a second language learning becomes increasingly more important within the context of today's worldview.

There are three main things that are the focus in language learning based on behavioristic learning theory, namely (Yulianti, 2023):

- a. Repeated practice so that it becomes a habit
- b. Creating an active and conducive language environment; and
- c. Encouraging balanced language activities between theory and practice

As for language learning, it must prioritize mastery of the rules of language or grammar (Yulianti, 2023). This approach is consistent with JLPT N5 topics with covers basic grammar learning and vocabulary.

There are four mediational factors in learning a language. The factors which encompassed social agents, self-mediation, cultural artifacts, and learning environment (Li et al., 2021).

- a. Social agents refer to the important of agents such as teachers, peers, and friends
- b. Self-mediation refers to the behavior of murmuring to oneself during the language learning process
- c. Cultural artifacts refer to mediational resource both linguistic and non-linguistic resource that could promote language learning process
- d. Learning environment includes social environment where the language is learned.

Based on the theory above there are several key points for us that we will use to design our project, namely: we believe that repeated practice is important, creating an active learning environment will be beneficial for language learners, and balanced between theory and practice is a must. We recognize the importance of having agents such as peers, friends, and teachers, during the language learning process. Our next step is to find 'needs' of the teacher and student who learn Japanese language.

Empathize Stage: The Reality of Japanese Language Usage and Learning

According to a survey by The Japan Foundation, the Japanese language has been taught in 142 countries as of 2019. In addition, the survey also showed that the number of people studying Japanese in the world reached 3,985,6669 people as of 2019, an increase from 3,846,773 people in 2012. Indonesia contributed the 2nd largest with 706,603 people (Miyashita, 2020). These statistics prove that people studying the Japanese language will continue to grow, one of which is Indonesia, coupled with government programs and scholarships that make it easier to get jobs and continue their studies in Japan.

The Japanese language is one of the most challenging languages to learn in the world as well as Mandarin and Arabic (Suryaningtyas, 2023). One of the prominent reasons why learning Japanese is more arduous than learning other languages is because Japanese uses four types of letters with different writing systems, namely kanji (logographic), hiragana and katakana (moraic), and romaji (alphabetic) (Honda, 2020). Using four types of letters with different writing systems will make it difficult for anyone who wants to learn Japanese. This system does not include the unique and diverse forms of sentence structures. Although different, these forms have more or less the same meaning (LinguoID, 2023).

Empathize Stage: Teaching Japanese Language from Teacher's Perspective

Nowadays, the number of Japanese language learners is at odds with the number of Korean language learners. "In the past, the Chinese language was popular, but now the Korean language is booming. Now it all depends on the interest of the learner to learn which language." The main factor for someone to be interested in or learning Japanese is to continue their studies because of the technological advances of Japan. In addition, another factor is because of Japanese anime culture where those who are interested in illustration will tend to learn Japanese to continue their studies there. "Although, all other countries have their comic illustration styles. There is a distinct characteristic of the "Manga" style which is influenced by Japanese culture. This distinct style encourages people to be interested in learning Japanese style illustration (Rochmalika, 2024)."

At first, the Japanese language is easy to learn such as when saying greetings. "However, they start to ramp up difficulty when learning hiragana letters, then katakana which is different from hiragana. When studying both types of letters, students still need to reiterate them many times. At first, this method helps them remember before they can start learning kanji. In Japanese, kanji is similar to Chinese glyphs where it has tones to differentiate each meaning of kanji which sometimes makes someone apathetic to learn." The main challenge for someone learning the Japanese language is learning and remembering the letters. When learning Japanese, learning and remembering letters is a must. This is the first stage of learning the Japanese language then move gradually to a more advanced level. This first stage is like learning Korean and Mandarin. "That is why students have no choice but to learn to speak it first. If they go straight to learn glyphs sometimes, they are immediately lethargic. This means that students will find it easier to learn the Japanese language when they directly learn the verbs, greetings, or words that are used directly and can be applied. Learning a language is an interest and talent. At first, many people followed it, but after a while, many fell. The latter are those who like the language (Rochmalika, 2024)." It can be concluded that learning a language, especially one in the form of glyphs, is not an easy task and requires the intention and patience of the language learner.

The grammar in the Japanese language can also be classified as a language with the most challenging grammar because it uses a different grammatical order from Indonesian and English that uses the Subject + Verb + Object pattern. "The Chinese language has difficult letters and pronunciation, but the grammar is almost similar to Indonesian so even if you make mistakes, it may still be understood. But in the Japanese language, the grammar is difficult." Each teacher has their way but with the same system, namely repetition, to overcome the difficulty in learning Japanese hiragana and katakana letters. The teacher said something similar during the interview. They teach gradually every 5 letters by remembering the typical tone 'akasatanahamayarawa' first. "I usually learn it little by little 5 letters first. Let's memorize akasatanahamayarawa first, that's 46 letters. We learn the vowels first, for example, a means a, i, u, e, o. We will learn that when we have it, we will continue to ka, ki, ku, ke, ko, and so on. Then, each class will have an exercise where all the letters that have been gradually learned are combined like a and ka until they are memorized for 2 hours per session. "All of this is done repeatedly per 5 letters each session starting from how to write, pronounce, and the shape of the letters. Usually, the teacher will give reading questions where students must find the letters learned in the reading questions. These reading questions consist of greeting sentences or Japanese conversational expressions arranged randomly on a piece of paper. Students will later mark and write down how to read each letter in the reading questions.

We asked the Japanese language teacher for various kinds of learning media. He said, "For me, yes, if there are too many books (for learning). Then for conversation (learning), there are already many on YouTube. The (Flash) card is free, they are used to improvise. For example, if the card has a picture, we will be able to improve the use of tenses based on everything that has been learned by someone through books and YouTube (Rochmalika, 2024)." It can be said that the flashcard media is still relevant today depending on the concept and content of the purpose of the flash card.

The flashcard media can be a bridge for those who have learned through books and YouTube personally or in class. "Then, if from books, sometimes children are lazy, well, if from YouTube, they are happy but sometimes it is not in sync, for example, learning this but why is there no YouTube, so a tool is needed to bridge these two learning sources." Now, we understand that flashcards can be a bridge for Japanese language learners to develop their ability to remember and use Japanese. For beginners, flash cards can also be used as a tool to introduce them to Japanese and make them familiar with Japanese itself.

After a lengthy discussion with the Japanese language teacher, we concluded that in learning Japanese, supporting media plays an immense role in developing or accelerating the improvement of a person's Japanese language according to their respective goals. Various learning media, such as books are significant for structured learning materials. The internet,

particularly YouTube channels, helps learn conversations. Usually, flashcards were used to memorize letters and sentences in Japanese.

Empathize Stage: Learning Japanese Language from the Student's Perspective

The Japanese popular cultures, namely anime and manga; play a significant role in a person's desire to learn the Japanese language. "In my opinion, it's because of the culture, I think the culture is interesting and their pronunciation is also interesting, maybe because I also like watching anime and reading manga, so I have a (real) interest in learning the Japanese language."

The most common difficulty encountered is how grammar works in the Japanese language. "Maybe what is a bit difficult to master is sentence structure because when it comes to sentence structure, we also have to understand why the sentences are arranged like that. Hiragana and Katakana are quite easy because they can still be memorized." In overcoming these difficulties, Japanese language students prefer to memorize sentence patterns or how Japanese sentences work, "I try to memorize why the sentences are arranged like that while looking for my (own) references."

Our interview concludes that the learning media on how to arrange sentences in Japanese is still lacking and only relies on the presence of the internet. Although there are many media such as YouTube and Duolingo, but in the form of interactive physical media is still very lacking. Therefore, there is an opportunity to create interactive media for learning Japanese in physical and not non-physical form.

Define Stage: The Learning Media Design Concept

The Learning Media Goal

Based on the observation and interview above, we concluded that the most challenging part of Japanese language learning is learning vocabulary and understanding the basic grammar of Japanese language. We found that several mediums can be implemented within our project. Flashcards are a very good medium to learn new vocabularies. Meanwhile based on the student's perspective, usually they learn language by themselves through the internet. We saw an opportunity to incorporate a way of learning with friends and make it more fun. Hence, the goal of designing this learning media is to help beginners who want to learn Japanese, especially basic-level Japanese (JLPT N5). Not only letters and vocabulary, understanding sentence structure and grammar is also an important basic aspect for Japanese language learners.

By understanding the grammar structure and Japanese grammar, it is expected to build a good foundation or basis to facilitate the process of learning Japanese at the next level and if

possible, to at least understand one of the ways Japanese works so that it can help in the process of communicating with Japanese. In addition, this board game learning media is made to accommodate Japanese language learning classes, so that learning is not locked in one direction only, but also in two directions where someone can test their abilities with each other and learn from each other.

The focus of the design theme of this medium is to create a simple, interactive, and fun learning atmosphere where students can play while learning. The design of this board game is expected to change the perception of Japanese as challenging and confusing into a language that is fun and painless.

Ideation and Prototyping Stage: Bunpou Ninja

Bunpou Ninja was chosen as the name of the project to highlight the fun element of this learning media. In this learning media, the player plays as a ninja who experiences obstacles and challenges. The word Bunpou is Japanese (文法 bunpou) means grammar structure. Meanwhile, the word Ninja (忍者 Ninja) is a term for someone who is an expert and capable of fighting during the shogunate era. In becoming a ninja, a person must achieve a high level of expertise in all kinds of fighting that requires time, perseverance, and patience through training from the most basic to those that require high skills.

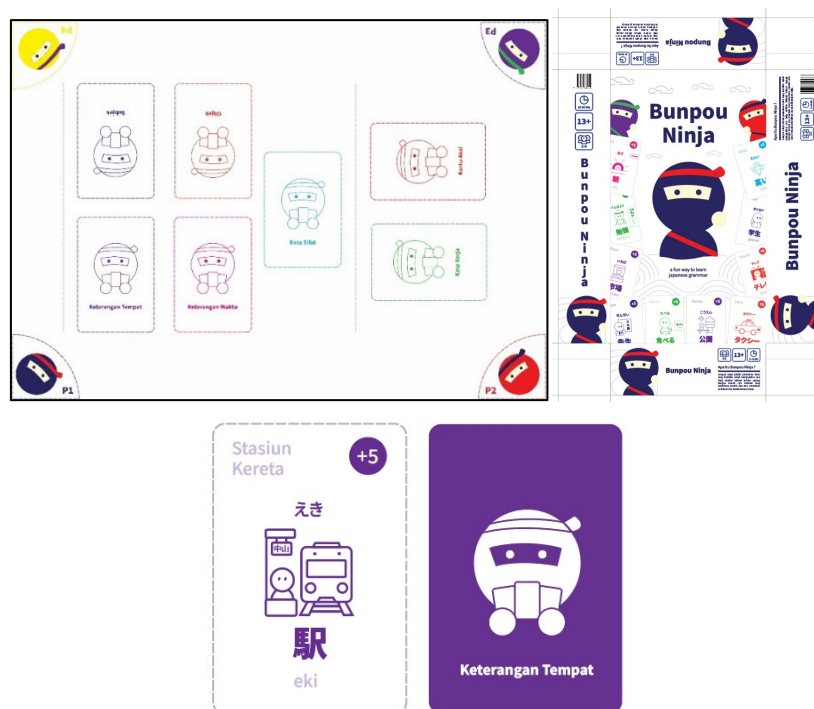


Figure 2. The final design of Bunpou Ninja (packaging, card, and board)

Source: Personal documentation

Bunpou Ninja designed as flashcards combined with a board. There are a few types of cards, such as subject cards, verb cards, adjective cards, object cards, adverb cards, and action cards. The game can be played by up to 4 players with a minimum of 2 players needed to play the game. The topic of the game covers mostly JLPT N5.

In summary, these are how the students play the game. Players pick cards from their respective card decks. Players need to arrange their card according to the basic language grammar that is provided with the board. Every card has points, so players can calculate their own sentence points. Player with the highest point in certain amount of time will be declared as the winner.

Testing Stage: Playtest Feedback & Results

Playtest was conducted to test how effective the role of this board game is in helping a beginner introduce and learn grammar in the Japanese language. Playtest will help the designer determine the gameplay. The playtest needs to be conducted periodically with the target audience to obtain appropriate suggestions and criticisms so that this learning media can get feedback. Feedback was used to meet the needs of the target audience. The playtest was conducted twice, namely in April and May 2024.

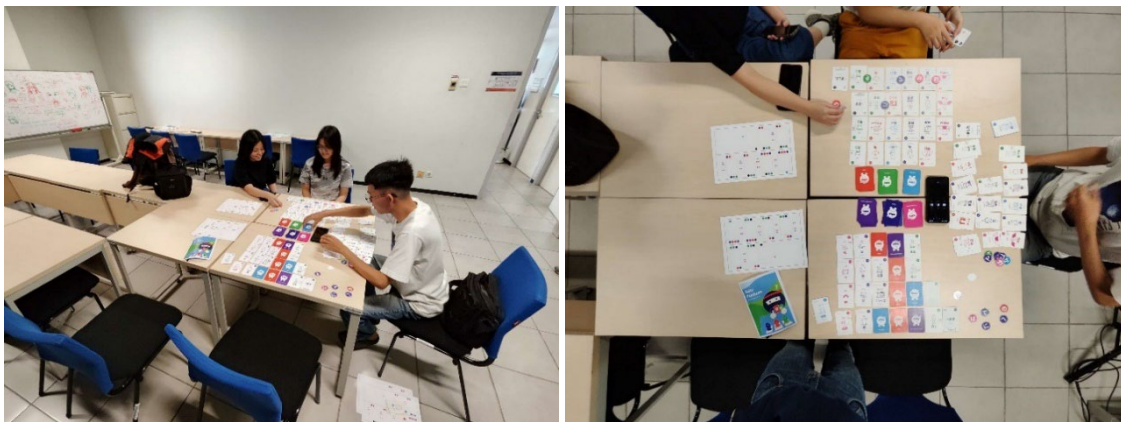


Figure 3. The first playtest

Source: Personal documentation

After the first playtest was completed, here is a collection of responses, suggestions, and input obtained from the target audience as follows:

- a. "Unique game idea, unfortunately, the gameplay is not fun because there is no punishment and reward system so there is no motivation to chase points."
- b. "The illustrations are good, but the gameplay needs to be overhauled again."
- c. "I think it can be used by people who don't understand Japanese, but it will be hard to adapt, especially using particles in Japanese grammar."



Figure 4. The 2nd playtest and final playtest

Source: Personal documentation

Based on the feedback, we tried to adjust a few gameplay mechanics such as having a point system as reward and punishment and did some balancing of the quantity of the card. The final playtest was conducted in April 2024. Here is a collection of responses, suggestions, and input obtained from the target audience as follows:

- a. Adding action cards adds a fun impression compared to the previous playtest (without action cards).
- b. If you follow the initial rules, the number of cards held by each player is incredibly large, so the feedback obtained was "limit the cards in each player's hand to only 10 maximum".
- c. The key to this game is in the use of verb cards. Whenever a player runs out or gets a verb card that does not match the other cards, without using a verb card then the players cannot make a complete sentence. Therefore, the input obtained was "the number of verb cards needs to be increased." Then some say that "it is better if the verb cards are not taken randomly but are used as key cards that can be taken and seen by all players each round."
- d. The guidebook is easier to understand, but a guide for using particle letters can be added.

The conclusion from playtests was that this learning medium is more fun to play, and has a unique playing style, but the complexity of how to play still needs to be simplified further. But overall, the learning media will help Japanese language learners to study the language better in a fun way than ever before.

CONCLUSION

In designing an interactive Japanese language learning media for beginners, it is necessary to pay attention to the topic that you want to convey. Japanese language learners can't rely on just one learning medium when learning a language. After all, each learning medium must have its advantages and disadvantages with themes and materials that are more prominent than other

materials. For beginners, trying various types of learning media and using them simultaneously are sometimes the best step to speed up their understanding and learning process of the language they want to learn, including the Japanese language. Currently, Japanese language learning media is no longer limited to schools or courses, textbooks, and flashcards, but also various other types of learning media such as videos and the presence of multiple applications on smartphones. Thus, the idea of designing variations in types of learning media can continue to be developed in new ways.

The design of the learning media titled Bunpou Ninja is based on using a combination of board game and flashcards and specific lesson topics. It is an interactive learning medium because students, especially beginners, are challenged to think and construct sentences while learning new vocabulary that is per the JLPT N5 level standards. Students are learning from each other's mistakes in a fun atmosphere. The Bunpou Ninja learning media is hoped to help accelerate the process of Japanese language learners, especially for beginners. Beginners of Japanese language learners need help to form a strong understanding of grammar pattern and basic vocabulary in Japanese language at the JLPT N5 level so that it can be a good foundation for the journey to higher JLPT levels (N4 or higher).

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