Implementing Kahoot! for Japanese Language Learning in Indonesian High School

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A B S T R A K

Kahoot! adalah platform pembelajaran gamifikasi individu dan kolaboratif yang mendorong rasa ingin tahu, mempromosikan pembelajaran seumur hidup, dan membuat belajar menjadi menyenangkan. Mengingat banyaknya keuntungan menggunakan Kahoot! dalam pemerolehan bahasa, beberapa institusi akademik telah memasukkan gamifikasi untuk meningkatkan pengalaman belajar mereka. Namun, selalu ada masalah dan rintangan yang dihadapi selama penerapan teknologi. Penelitian ini bertujuan untuk menganalisis penerapan Kahoot! dalam pembelajaran bahasa Jepang yang dilakukan oleh guru, persepsi guru dan siswa SMA di Indonesia tentang penggunaan Kahoot! dan kendala yang mereka temui dalam menggunakan Kahoot! Penelitian ini dirancang sebagai penelitian kualitatif yang melibatkan satu guru bahasa Jepang dan 34 siswa di sebuah SMA negeri. Wawancara semi-terstruktur, observasi non-partisipatif, dan kuesioner campuran digunakan untuk mengumpulkan data. Penelitian ini mengungkap bahwa meskipun ada kekurangan tertentu dalam penerapan Kahoot! oleh guru. Persepsi guru serta siswa mengenai Kahoot! termasuk dalam kategori "sangat baik". Koneksi internet yang lambat diidentifikasi sebagai masalah utama yang membatasi mereka dalam menggunakan Kahoot! secara efektif. Kahoot! dapat menjadi pilihan yang layak untuk memotivasi siswa sekolah menengah untuk belajar bahasa Jepang, namun penggunaannya membutuhkan koneksi internet yang stabil untuk memastikan bahwa proses pembelajaran berlangsung dengan tepat.

A B S T R A C T

Kahoot! is an individual and collaborative gamified learning platform that encourages curiosity, promotes lifelong learning, and makes learning enjoyable. Given the numerous advantages of using Kahoot! in language acquisition, several academic institutions have included gamification to enhance their learning experience. However, there are always issues and hurdles encountered throughout technology deployment. The present study aimed to analyze how the teacher implements Kahoot! in Japanese learning, the Indonesian high school teachers and students' perceptions of using Kahoot! and the constraints they encountered in using Kahoot! The study was designed as qualitative research, enrolling one Japanese language teacher and 34 students in a state senior high school. Semi-structured interviews, non-participatory observation, and a mixed questionnaire were used to collect data. Despite specific problems in the teacher's implementation of Kahoot!, the research indicated that both the teacher and the students had an "excellent" impression of the platform, with a poor internet connection being recognized as the biggest stumbling block to their utilizing Kahoot! efficiently. While Kahoot! may be a realistic alternative for inspiring high school students to learn Japanese, it requires a solid internet connection to guarantee that the learning process runs well.

1. INTRODUCTION

The twenty-first century poses many changes in the essential skills that students have to master (Puspawati et al., 2021; Van Lar et al., 2020). The use of technology has become very democratized among teachers and students (Diamandis & Kotler, 2012; Hutapea & Suwastini, 2019). The ubiquitousness of mobile technology has made it possible for computer-assisted learning to keep flourishing (Arthana et al., 2018; Dantes et al., 2019; Indriyani et al., 2017). Researchers have also been experimenting with using technology to support second language acquisition and foreign language (Ariantini et al., 2021; Citrawati, Ni et al., 2021; Listiani et al., 2021; Suwastini et al., 2020; Suwastini, Ersani, et al., 2021; Suwastini, Marantika, et al., 2021; Utami et al., 2020; Wijaya et al., 2021). Language instructors and testing practitioners regard technology as appealing because it can assess second language learners' target language skills more efficiently and creatively than paper-based

examinations (Chung, 2017). However, using technology to assist learning has not been without a challenge other than technical problems (Puspitasari et al., 2021). There is the possibility of students being passive in e-learning. In language learning, technology can be facilitating, yet many students have been found to be very passive (Dwiyanti & Suwastini, 2021; Indriyani et al., 2017; Dantes et al. 2019; Setyawan et al., 2020). Games have been widely considered to create a more relaxed atmosphere that supports students' participation in language learning (Alkan & Mertol, 2019; Bavi, 2018; Kacetl & Klímová, 2019; Tatli, 2018). Millions of people play digital games in dozens of languages across various genres and titles (Francis, 2017; Novrialdy & Atyarizal, 2019; Sundus, 2018). Thus, computer-assisted language learning (CALL) researchers and L2 instructors have lately begun to investigate games as a potential second or foreign language (L2) teaching and learning (L2TL) resources (Alkan & Mertol, 2019; Amin & Hanna, 2020; Ng et al., 2020; Rosdiana & Sulistyawati, 2019). These researchers have long recognized the value of games in CALL and the similarities between game design and SLA principles and L2 pedagogical design. According to research on games in CALL, they can provide a safe environment for input, allow for player participation, foster negotiation and language interactions, and be pedagogically mediated to create a variety of competencies and literacies (Reinhardt, 2017).

With this development came along the trend of gamification. In academia and practice, the concept of gamification, defined as the implementation of game design features in non-game contexts" has garnered considerable attention. Kahoot! is one of the interactive learning platforms that employs gamification. It is a game-based learning platform that allows users to instantly create, share, and play trivia quizzes and learning games. Kahoot! works best when played in a group. A unique PIN is required to join a game. A large screen will be required for the game host. Players respond on their own devices, with questions displayed on a communal screen. Besides live games, the teacher can send Kahoot challenges, which players can do at their own time, such as homework or remote training. From brief pulse checks to formative evaluation and tracking class progress, Kahoot! can help teachers collect meaningful information and tailor instruction in every learning situation (Chiang, 2020; Licorish et al., 2018). As a game-based learning platform with the primary goal of gamification (increasing involvement and motivating users), Kahoot! appears to be a good fit for helping teachers in Indonesia deal with the unique characteristics of Indonesian pupils. Kahoot! makes it simple for anyone, whether a person or a company, to design, share, and play meaningful learning games. Kahoot! was founded in 2013 to become the world's most popular learning platform. Over 200 million games have been played on the Kahoot! platform in the last year, with over one billion players from 200 countries. The corporation is based in Norway but has offices in the United States, the United Kingdom, France, Finland, Denmark, and Spain.

Furthermore, for some schools and higher education institutions in Indonesia afflicted by the COVID-19 (coronavirus) outbreak, Kahoot! provides free access to all of its services. This free program is available to various schools from elementary to high school and colleges and universities. They are free to use the features of Kahoot Premium for online education (distance learning). Thus, students can continue their learning process amid the endemic coronavirus (Wang & Tahir, 2020). Kahoot! appears to be the learning platform of the future as it provides gamified learning space for both social and individual, involves play and curiosity, promotes lifelong learning and commits to make learning fun (Sabandar et al., 2018). The learning platform found by Morten Versvik, Johan Brand, and Jamie Brooker in 2012 can be played in person or virtually from any device with an available internet connection. Kahoot! emphasizes collaboration shown through the main options such as creating, sharing, assigning a challenge, and hosting live (Plump & LaRosa, 2017; Sabandar et al., 2018). A learning game can be made from scratch or modified from an existing game, i.e. using the question from questions bank and designing the game in different template. Later, the learning game can be played together, where the teacher can host the game. The teacher can also assign the game for the students to play it on their own. Furthermore, the share option allows game creators to share it widely among groups and colleagues.

Studies have been conducted on gamification in language acquisition, arguing gamification as enjoyable, dynamic, and relaxing way to learn various disciplines (Mada & Anharudin, 2019; Plump & LaRosa, 2017; Prieto et al., 2019), including learning English (Adnyani, Mardani, et al., 2019; Bicen & Kocakoyun, 2017; Plump & LaRosa, 2017; Wang & Tahir, 2020), and learning Japanese (Savana & Pradana, 2021; Susanto, 2018). Kahoot! is generally popular among university students since the game makes learning fun (Bicen & Kocakoyun, 2017; Plump & LaRosa, 2017). On the teachers' side, Kahoot! is favourable since it makes material adjustment based on students' understanding of tests possible (Bicen & Kocakoyun, 2017; Plump & LaRosa, 2017). Furthermore, anonymity while participating in quizzes reduces the pressure on students, which raises their participation. However, the users should be aware of the technical shortcomings in the form of slow internet connection.

As Kahoot! facilitates learning across disciplines, it can be specifically used to raise the motivation of Japanese language learners (Alizadeh, 2018; Sabandar et al., 2018; Savana & Pradana, 2021; Susanto, 2018). The language learners view taking tests through Kahoot! as more enjoyable, efficient, and engaging (Alizadeh, 2018). Compared to paper-based tests, the students prefer Kahoot! quizzes as they feel challenged. In terms of results, they like to get their score immediately, meaning they can recheck their understanding faster (Savana &

Pradana, 2021; Susanto, 2018). Nonetheless, the students reported that they felt reluctant to play Kahoot! due to its internet and battery consumption (Alizadeh, 2018). The need to reduce the competition among students while playing Kahoot! as the students may answer the question at a varying speed (Sabandar et al., 2018; Savana & Pradana, 2021; Susanto, 2018).

Considering the many benefits offered by the implementation of Kahoot! in language learning, many schools have implemented gamification to enrich their learning process. However, like every technology implementation, there are always problems and challenges faced during its implementation. Thus, the present study aimed to observe the implementation of Kahoot! in a Japanese language classroom. A preliminary interview conducted with the teacher revealed that Kahoot! was implemented in the Japanese language classroom to motivate the students to participate more during the teaching-learning process. The teacher admitted that in a traditional classroom usually conducted in the school, the teaching-learning process tended to be teacher-centred, and the students lacked interest. As a result, pupils become bored and engage in off-task behaviour such as talking to other students or accessing social media on their phones. After attending a course on learning media in May 2019, the instructor began using Kahoot! in her classroom (Adnyani, Adnyana, et al., 2019). Her goal in incorporating gamification into the classroom was to assess students' understanding of the material while increasing their engagement. Accordingly, the current study focused on analyzing how Kahoot! was implemented in a Japanese language classroom, the teacher and students' perspectives of Kahoot! in their Japanese language learning, and the problems they encountered throughout the implementation of Kahoot! The findings resulting in this observation can reveal more information on the implementation of Kahoot! for foreign language learning, especially in Japanese language learning. From the findings, teachers can be inspired to benefit from Kahoot!, while further studies can be conducted to answer the challenges that can contribute to better implementation of Kahoot! in the future.

2. METHOD

This study is a descriptive qualitative study. The participants in the study were one Japanese language teacher and 34 students from SMAN 3 Singaraja. Semi-structured interviews, non-participatory observation, and mixed questionnaires (which include both closed and open-ended questions) were used to collect data. Semi-structured interviews with the Japanese language teacher were held before and after the observation,. In May 2019, a non-participatory observation employing the observation guide instrument was carried out. Following the observation, students were given a questionnaire to fill out. The open-ended questionnaire is a free-form survey question that allows respondents to respond in open text format, allowing them to express themselves completely. The open-ended questionnaire attempted to elicit information from respondents on the limitations that the students face when utilizing Kahoot! User Experience Questionnaire (UEQ) was used to create the closed-ended questionnaire. The consistency and validity of the UEQ measures were tested in 11 usability tests with a total of 144 participants and an online survey with 722 people. These investigations revealed a high level of scale consistency (as judged by Cronbach's Alpha. The correlations revealed that the trend is as expected. Task completion time has a significant correlation (p.05) with perspicuity, efficiency, and dependability. Task completion duration is relatively weakly correlated with novelty and stimulation. This result can be interpreted as an indicator of the questionnaire's validity (Laugwitz et al., 2008).

Attractiveness, perspicuity, efficiency, dependability, stimulation, and novelty are all features of UEQ's content. In the closed-ended questionnaire, these six aspects were incarnated into 16 questions (5-point likert scale). The results was then calculated and converted using the conversion procedure (Nurkancana & Sunartana, 2002). The conversion formula score guidelines is presented in Table 1.

Table 1. Conversion Formulas Score

Score	Criteria
$X \geq Mi + 1.5\ Sdi$	Excellent
$Mi + 0.5\ Sdi \leq X \leq Mi + 1.5\ Sdi$	Good
$Mi - 0.5\ Sdi \leq X \leq Mi + 0.5\ Sdi$	Fair
$Mi - 1.5\ Sdi \leq X \leq Mi + 0.5\ Sdi$	Less Good
$X < Mi - 1.5\ Sdi$	Bad

3. RESULT AND DISCUSSION

Result

Results of the Observation

Overall, the implementation of Kahoot! At SMAN 3 Singaraja went well, based on the findings of the classroom observation. The quiz has ten questions, and 34 students are taking it. There are several vital points of

the teacher in implementing Kahoot in the classroom, namely: 1) In order to make the quiz more engaging, the teacher included some images. 2) The teacher has utilized an audio speaker to increase the sense of the quiz's intensity. 3) Before beginning the quiz, the teacher gave a quick overview of Kahoot! 4) The teacher has ensured that the quiz display is visible to the students. 5) The types of quiz questions are pretty varied (questions about completing Japanese particles, asking where objects are by displaying pictures, asking how to read kanji, asking the date, and filling in the appropriate verbs). However, some shortcomings can be evaluated; First, before the game started, the teacher did not explain the mechanism of using Kahoot in detail. For example, students did not know that the maximum points on Kahoot! could be obtained if the answer was correct and quickly answered. This shortcoming happened because the teacher did not explain the mechanism clearly. Hence, many students were confused about why they gained lower points than their friends, even though the answers were correct. Students were not explained that the best score in Kahoot! is based on the correctness of the answer and the speed in answering. Second, the teacher does not allow students to pay attention to the scoreboard, which displays three students' names with the best scores at the end of each question. The teacher also did not appreciate the three quiz participants with the best total score, which was displayed at the end of the quiz. Third, the duration of answering questions is too long, which is 90 seconds. Some students look bored because a new score will appear only when all participants have answered or time is up. As a result, students become noisy and disturb their friends who have not finished answering the quiz.

Results of the Questionnaire

Table 2 shows the findings of the instructor and student perceptions questionnaire.

Table 2. Teacher and Students' Perceptions

No.	Indicators	Teacher's perception	Students' Perception (34 people)	
			Total score	Average Students' score
A.	**Attractiveness**			
1	*Kahoot!'s* presentation is appealing	4	154	4.81
2	*Kahoot*! is fun to watch	5	164	4.82
3	I enjoy *Kahoot!*'s presentation	4	153	4.5
Average		**4,33**	**157**	**4.62**
B.	**Perspicuity**			
1	*Kahoot!* is suited for educational purposes	5	147	4.32
2	*Kahoot!* is easy to utilize	4	152	4.47
Average		**4,5**	**149,5**	**4.4**
C. Efficiency				
1	*Kahoot!* is effective	4	158	4.64
2	*Kahoot!* is simple and quick to play.	4	137	4.03
3	*Kahoot* is practicable	4	146	4.29
4	*Kahoot*! is systematized	4	155	4.55
Average		**4**	**149**	**4.38**
D. Dependence				
1	*Kahoot* game fulfilled my expectations for a good interactive learning media	4	150	4.41
2	By using *Kahoot*!, students can interact well during the learning process.	5	158	4.64
Average		**4,5**	**154**	**4.53**
E. Stimulation				
1	*Kahoot!* game is a lot of fun	5	140	4.11
2	*Kahoot*! game is entertaining	5	155	4.55
3	*Kahoot!* game is motivating	5	140	4.11
Average		**5**	**145**	**4.26**
F.Novelty				
1	*Kahoot*! game is imaginative	5	156	4.58
2	*Kahoot* game is trailblazing	5	157	4.61
Average		**5**	**156.5**	**4.60**
TOTAL		**72**	**2422**	**71.23**
Average in general		**4.5**	**151.37**	**4.46**

Teacher's and students' perception in Table 3 can be illustrated with the bar diagram as shown in Figure 1 and Figure 2.
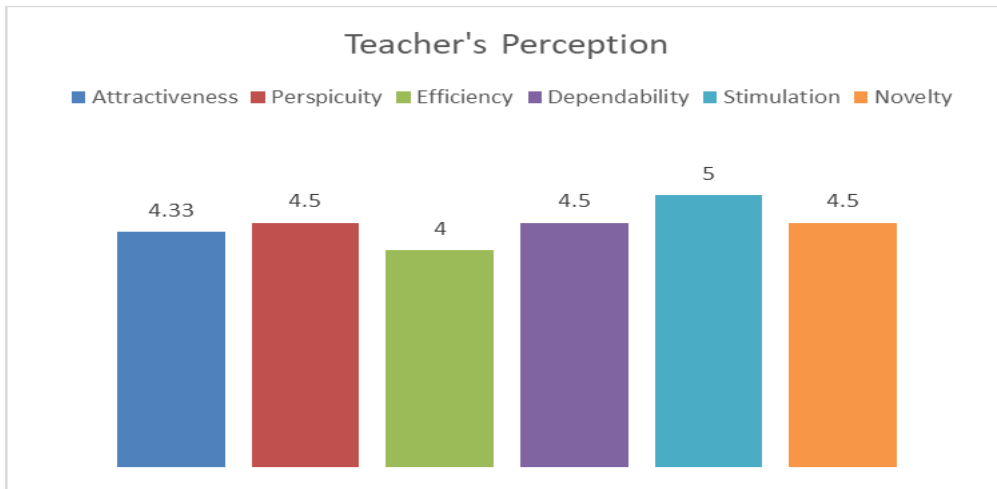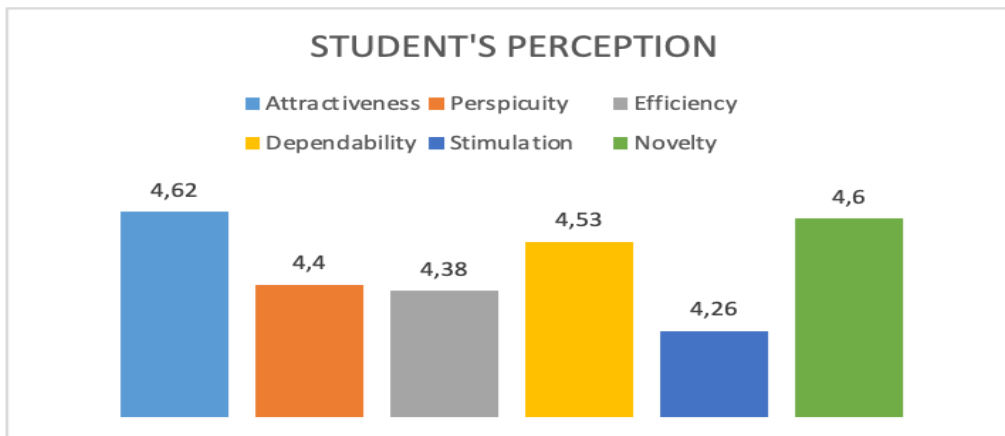

Figure 1. Teacher's Perception

Figure 2. Students' Perception

The results of the teacher and student surveys are computed and converted using the Nurkancana and Sunartana formula. The closed questionnaire's responses were transformed and then converted in accordance with Table 2. The results show that the conversion of teacher's perception is in the excellent category ($72 \geq 64$). The results of the conversion of Students' Perception is presented in Table 3.

Table 3. Conversion of Students' Perception

Aspect	Score of Appropriate Conversion	Criteria
Attractiveness	$X \geq Mi + \frac{1}{2} Sdi$ $157 \geq 102 + 17$ $157 \geq 119$	**Excellent**
Perspicuity	$X \geq Mi + \frac{1}{2} Sdi$ $149,5 \geq 102 + 17$ $149,5 \geq 119$	**Excellent**
Efficiency	$X \geq Mi + \frac{1}{2} Sdi$ $149 \geq 102 + 17$ $149 \geq 119$	**Excellent**
Dependability	$X \geq Mi + \frac{1}{2} Sdi$ $154 \geq 102 + 17$	**Excellent**

Aspect	Score of Appropriate Conversion	Criteria
Stimulation	154 ≥ 119 X ≥ Mi + ½ Sdi 145 ≥ 102 + 17 145 ≥ 119	**Excellent**
Novelty	X ≥ Mi + ½ Sdi 156,5 ≥ 102 + 17 156,5 ≥ 119	**Excellent**

The open-ended questionnaire tried to figure out the constraints encountered by the students in using Kahoot! The results are illustrated as Figure 3.
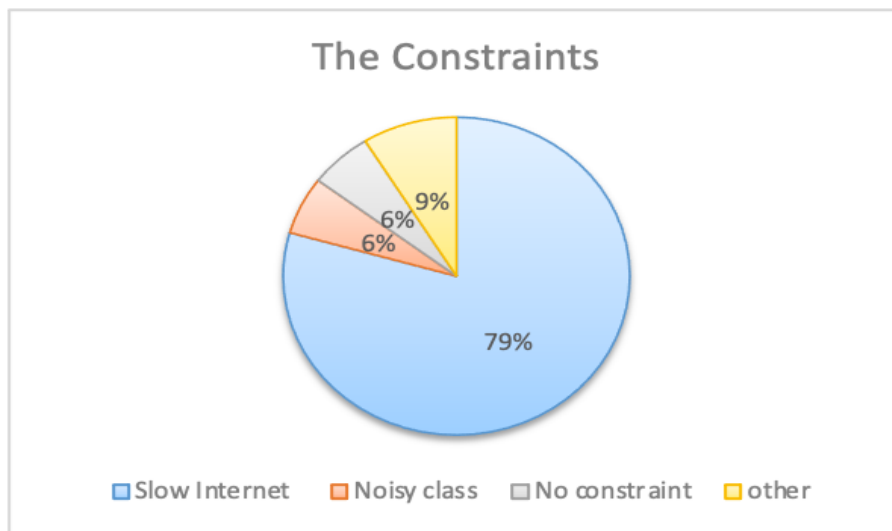

Figure 3. The Constraints

Results of the Interview

The teacher's everyday teaching tools include *e-kaado* (picture image card), *moji kaado* (letter card), music, video, and PowerPoint. The teacher had previously utilized Google Classroom, Google Forms, and other multimedia instructional resources. According to the teacher, Kahoot! is an enjoyable game to play and can help pupils become more engaged than on any other platform. Kahoot! also makes it easy for her to assess pupils' understanding of the material. When utilizing Kahoot! in the classroom, the teacher's primary concern is a sluggish internet connection. When the internet connection problem arose, the teacher had difficulty presenting the quiz, sometimes even using her internet quota. In addition, the students, who had problems with the internet when accessing quizzes, launched a protest and asked the whole class to wait until their internet connection returned to normal. The second problem is that the class becomes noisy and difficult to control. The students were very enthusiastic about taking quizzes and sometimes became very competitive with their friends.

Discussion

The observation revealed that the teacher still has some shortcomings in using Kahoot! in the classroom. Before the game started, the teacher had not explained the mechanism of using Kahoot in detail. The teacher also did not appreciate the participants with the best total score. In addition, the duration of answering questions is too long. This result is aligned with previous study recommendation for teachers who use the Kahoot application, especially in eliminating technical deficiencies of students and teachers to maximize effective and productive teaching using gamification methods (Bicen & Kocakoyun, 2017). According to the close-ended questionnaires' score conversions, both the teacher and the students positively affect Kahoot! This result aligns with previous studies regarding consumer satisfaction with Kahoot! (Adnyani, Mardani, et al., 2019; Plump & LaRosa, 2017). The "attractiveness" aspect of the students' impression received the highest score of 4,62 (out of 5). This result is consistent with other study, who stated that technology is appealing because it allows language teachers and testing practitioners to assess second language learners' target language abilities in more efficient and inventive ways than paper-based examinations can (Chung, 2017).

The stimulation aspect received the highest score of the six aspects from the teacher's perspective, with a 5 (out of 5). This result complies with the principal goal of gamification, which is the implementation of game design features in non-game contexts (Sailer & Homner, 2020). According to the results of an open-ended questionnaire to students and an interview with the teacher, the primary difficulty they face is a slow internet service (79 per cent). This finding is consistent with study who found that technical issues such as inconsistent internet connections are among the most common concerns identified by students (Wang & Tahir, 2020). As a recommendation, having a stable internet connection is critical. In many respects, a better internet connection will increase education quality by opening doors to instructional materials. Nevertheless, these results need to be interpreted with caution, and some limitations need to be considered. First, sample size restrictions. Future researchers will need to do the same research on a larger sample size to identify critical relationships or connections with more accurate results. Second, this study formulates goals and intent very broadly. Future studies may specify effective ways or methods for narrowing the formulation of goals and objectives to raise the study's level of focus.

4. CONCLUSION

Recent research on the implementation of Kahoot has provided a complete understanding of how the teacher implements Kahoot! in Japanese learning, how the Indonesian high school teacher and students perceive using Kahoot! and the constraints encountered by the students in using Kahoot! According to recent data, the teacher's use of Kahoot! still has certain flaws. The instructor and students' impressions of Kahoot! in the classroom are rated as "excellent," with the teacher and students' biggest obstacle being a slow internet service. However, the students' perceptions are not deeply analyzed as it is just investigated by using questionnaires. The more complete and accurate investigation involving a semi-structured interview with students and more extended hour observations will lead to a complete knowledge of the implementation of Kahoot! in Japanese learning. Once we have a clearer understanding of this matter, the researcher can take the next step to pursue further research in analyzing the effect of Kahoot! on Japanese learning in Indonesian High schools.

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