KAHOOT! AND FOREIGN LANGUAGE LEARNING: A STUDY OF PERCEPTION IN A MILITARY CONTEXT

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Article Info	Abstract
	The formal and structured nature of the military environment, coupled with mission-oriented learning objectives, often results in foreign language learning being less appealing to soldiers. These conditions require pedagogical innovations that can improve learning effectiveness without neglecting military educational values and culture. This study aims to explore teachers' and students' perceptions of the use of the Kahoot! gamification platform and identify challenges in its implementation in foreign language learning at the Indonesian Army's General Military Education Center (Pusdikpengmilum). This study uses a qualitative case study approach. Data were collected through semi-structured interviews with five teachers and ten students, and reinforced with questionnaires as a triangulation technique. The results show that teachers and students have very positive perceptions of the use of Kahoot!. Based on the Technology Acceptance Model (TAM), Kahoot! is considered useful in increasing motivation, engagement, and understanding of material, as well as being easy to use in the learning process. However, the implementation of Kahoot! faces several challenges, including technical and infrastructure constraints such as internet instability, limited technological competence among some teachers, and pedagogical challenges in managing the dynamics of competition in the classroom. This study concludes that Kahoot! is a relevant and effective learning medium in a military environment. The implications of the study emphasize the importance of institutional support in the form of providing reliable technological infrastructure and ongoing training for teachers so that gamification-based learning innovations can be implemented optimally and sustainably.

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INTRODUCTION

Foreign language education in general plays a crucial role in the current era of globalization. Foreign language skills not only open doors to cross-cultural communication and diplomacy, but also enrich an individual's understanding of the world. In various sectors, foreign language proficiency has become an essential competency for international collaboration, global information access, and personal and professional development. Improving communication skills is urgently needed in various contexts, both academic, business, and social. In the military context, the importance of foreign language education has been recognized as a crucial capability to meet modern security challenges. In the Army, foreign language education plays a critical role in improving communication among soldiers. Siegel et al. (2024) state that this is not only necessary in the context of international military

to maintain good relations between countries, but it is also becoming increasingly important in growing multinational operations. Mastery of foreign languages allows for more effective coordination, accurate information exchange, and trust building among forces from different countries in peacekeeping missions, joint exercises, or disaster response (Walia & Kuptikbayeva, 2025).

However, foreign language teaching in the military environment has characteristics that are significantly different from those in the civilian education context. Military education takes place in a highly formal, hierarchical, and structured environment, with learning objectives oriented towards mission, discipline, and operational effectiveness. Limited training time, task pressure, and priorities on physical and tactical readiness often make foreign language learning perceived as less interesting and less relevant by learners (Ahmed et al., 2022). Unlike the civilian context, which tends to emphasize pedagogical flexibility and academic exploration, language learning in a military environment is required to be efficient, measurable, and directly applicable to task requirements.

This situation poses significant pedagogical challenges, particularly in maintaining student motivation and engagement. Formal, mission-oriented learning environments often limit the use of interactive and participatory learning methods. Therefore, an innovative approach is needed that can bridge the gap between the strict curriculum requirements and the psychological needs of students for an engaging and meaningful learning experience. Technology-based learning approaches and dynamic interactions are considered to have the potential to increase intrinsic motivation and material retention, without reducing the disciplinary values that are characteristic of military education (Balalle, 2024). In the specific context of the Indonesian National Army (TNI AD), this need becomes increasingly urgent along with the intensification of international cooperation. The TNI AD Education Institution has a vital role in preparing professional soldiers and civil servants, where mastery of foreign languages is one of the key competencies. The Center for Military and General Knowledge Education (Pusdikpengmilum) Kodiklatad, as an institution that has the main task of organizing language specialty development education (Pusdikpengmilum Kodiklatad, 2022), is at the forefront of answering this challenge. As an institution responsible for language education, Pusdikpengmilum must ensure that its curriculum is able to meet the operational needs of soldiers and civil servants in global missions.

However, Pusdikpengmilum is also faced with the same pedagogical challenge, namely how to maintain the motivation and involvement of students optimally. Curriculum adjustments that are relevant to the needs of the assignment alone are not enough if the delivery method fails to attract the interest of students. Thus, there is an urgent need for innovative teaching methods that can complement traditional approaches and bridge the gap between the needs of a strict curriculum and the psychological needs of students for a more interactive learning process.

Kahoot!, a game-based learning platform, is emerging as one of the potentially effective alternatives in addressing these issues. Kahoot! utilizing gamification methods that can increase learners' participation and motivation in the learning process (Christopoulos & Mystakidis, 2023). In foreign language teaching, Kahoot! allows learners to compete in interactive quizzes, which not only improve their cognitive abilities but also strengthen language understanding through fun play (Kaur & Nadarajan, 2020). Gamify through Kahoot! can increase the emotional engagement of learners, which is especially important in the context of learning in a disciplined environment such as military education.

However, the implementation of Kahoot! in military education the Army faces various challenges that need to be further analyzed. One of the main potential challenges is the perception of teachers and students towards the use of this technology in a more formal and structured context. Even though Kahoot! Widely known among educators in various sectors,

its application in military education may require certain adjustments related to specific pedagogical needs. These pedagogical needs include an emphasis on mission-oriented training, leadership development, and discipline, which may differ from general educational goals. The perception of the effectiveness and suitability of this technology is something that needs to be understood to optimize its use. Differences in perception can occur between students and teachers. Students may see Kahoot!! as a fun tool and reduces learning stress (Oktaviani, 2024), while teachers may be concerned about curriculum integration, classroom management, or potential distractions from the play aspect. They might also question the effectiveness of Kahoot! in teaching complex language skills compared to traditional methods.

A number of previous studies have demonstrated the effectiveness of Kahoot! in language teaching. A literature review conducted by Zhang and Yu (2021) found that the use of Kahoot! significantly influenced improvements in student learning outcomes, interaction, and collaboration. Similar findings were also reported by Putri (2019) through a literature review on the application of Kahoot! in English language learning, which showed that this medium was able to create a more enjoyable learning atmosphere and increase student participation. Globally, various studies have proven that the use of game-based media such as Kahoot! is an effective English learning strategy because it can increase student engagement and enjoyment in the teaching and learning process. This is reinforced by Afifah & Atmazaki (2024), who found that the application of the Team Tournament cooperative learning model supported by the Kahoot! application significantly improved student learning outcomes.

However, most of these studies still focus on the context of general education, especially in schools and universities, so that studies on the application of Kahoot! in military education environments, which have different cultural characteristics, structures, and learning objectives, are still relatively limited. To date, studies on the implementation and perception of Kahoot! in the context of military education are still very limited. In fact, military education has fundamentally different characteristics, marked by a hierarchical organizational culture, a strict learning structure, and pedagogical objectives that are mission- and discipline-oriented. There has not been much research specifically examining how gamification-based learning platforms are accepted, adapted, and implemented in such highly structured educational environments. In addition, research examining the perceptions of the two main stakeholders, namely teachers and students (soldiers), especially in Indonesian military educational institutions such as the Indonesian Armed Forces Education and Training Command (Pusdikpengmilum Kodiklatad), has yet to be found.

By filling this research gap, this study is unique in that it focuses on the integration of gamification in the context of mission-oriented military education in the Indonesian Army. Specifically, this study aims to answer two main questions: *(1) How do teachers and students perceive the use of Kahoot! in foreign language learning in Army military education? (2) What challenges do teachers face in implementing Kahoot! in foreign language learning in the Indonesian Army's military education environment?* By examining these two aspects, this study is expected to contribute theoretically to the development of gamification studies in non-civilian education contexts, as well as practically to the development of contextual, effective, and sustainable technology-based foreign language learning strategies in military education environments.

RESEARCH METHOD
Research Design
This study uses a qualitative method with a descriptive case study type, which aims to explore and understand the meaning of Kahoot! in a military education environment based on the perceptions and experiences of participants. This case study was conducted at the Indonesian Army Education and Training Command's Center for Military and General

Knowledge Education (Pusdikpengmilum), which was chosen because of its characteristics as a formal, hierarchical, and mission-oriented military educational institution. This approach helped researchers understand the phenomenon of gamification-based learning in specific and complex real-world conditions.

The selection of qualitative methods was based on the need to comprehensively capture the subjective meanings and perceptions of participants (Naeem et al., 2023). Quantitative data obtained through questionnaires was used in a limited manner as a triangulation technique to strengthen the qualitative findings. Although the findings of this study are not intended to be generalized widely due to the limitations of the case study context, the results are expected to provide in-depth contextual understanding and analytical contributions to the development of technology-based foreign language learning in the military education environment.

Research Participants

Research participants were selected using purposive sampling techniques, taking into account their direct involvement and real-life experience in using Kahoot! in foreign language learning, so that the data obtained was relevant and rich in information. The selection criteria included (1) active involvement in Kahoot!-based learning, (2) sufficient duration of Kahoot! use to allow for reflection on the experience, namely a minimum of two weeks, and (3) the participants' willingness to participate in interviews. Based on these criteria, the research participants consisted of two main groups from the Indonesian Army's Military and General Education Center (Pusdikpengmilum), namely five teachers from the Portuguese, Russian, German, English, and French language programs who had been using Kahoot! regularly for at least four weeks, and ten students from the same language programs who had been participating in Kahoot!-based learning for at least three weeks. In general, the teachers had varying levels of technological experience, ranging from basic use to being accustomed to utilizing digital learning platforms, while the students generally had initial experience in using digital devices, albeit with varying levels of technological literacy.

Instruments

The primary data collection process in this study used two main instruments, namely semi-structured interviews and questionnaires, which were designed to complement each other. Semi-structured interviews were conducted in depth with all research participants to explore their perceptions, experiences, and views on the use of Kahoot! in foreign language learning. The interview guide was compiled based on the research questions and conceptual framework, particularly the aspects of usefulness, ease of use, motivation, and implementation challenges. The questions were open-ended and flexible, allowing participants to express their views broadly. The interviews were conducted face-to-face at the Pusdikpengmilum Kodiklatad, with a duration of approximately 30–45 minutes per participant, and the entire interview process was recorded (with the participants' consent) to ensure data accuracy.

In addition to interviews, questionnaires were used as a supporting instrument to validate and reinforce qualitative findings through data triangulation. The questionnaires were designed in the form of closed questions with a dichotomous (yes/no) answer format in order to obtain simple quantitative data on the frequency of participants' perceptions and experiences. The questionnaire was developed based on previous literature findings and aligned with the main themes of the interviews. The key points measured through this checklist included: (a) perceptions of the effectiveness of Kahoot! in supporting foreign language learning, such as helping to remember vocabulary and understand material; (b) its impact on motivation and engagement in learning, for example, whether learning felt more interesting; (c) identification of technical and pedagogical challenges experienced during the

use of Kahoot!, including internet connection and classroom management issues; and (d) participants' overall satisfaction with the use of Kahoot!, as reflected in their willingness to continue using the platform in learning. Before use, the questionnaire was reviewed conceptually to ensure clarity and suitability of content with the research objectives. The triangulation process was carried out by comparing and confirming the results of interviews, questionnaire responses, and secondary data in the form of documentation and scientific journals, thereby increasing the credibility and validity of the research findings.

Data Analysis

Data analysis in this study was conducted systematically and tailored to the characteristics of each type of data. Qualitative data obtained from interview transcripts were analyzed using thematic analysis following the six phases proposed by Braun and Clarke (2006), as cited in (Zairul, 2025). The analysis process began with the data familiarization stage, in which the researcher read the interview transcripts repeatedly to understand the context and overall meaning of the data. Next, initial coding was carried out systematically by identifying units of meaning relevant to the research objectives, such as statements about the benefits of Kahoot!, ease of use, learning motivation, and technical and pedagogical challenges. Codes with similar meanings were then grouped and analyzed to find recurring patterns, which were further developed into initial themes. These themes were reviewed by comparing them to the overall data to ensure consistency and representativeness, then clearly defined and named. The final stage involved compiling a narrative report that analytically interpreted each theme, supported by direct quotes from participants to reinforce the credibility of the findings.

Meanwhile, quantitative data obtained from questionnaires with dichotomous (yes/no) answers were analyzed using simple descriptive statistics with the help of Microsoft Excel software. All questionnaire responses were first entered into a worksheet, with each row representing a participant and each column representing a question item. The frequency of "Yes" and "No" answers for each item was calculated using the COUNTIF function, then converted into percentages to clearly illustrate the participants' response trends. The results of this analysis were presented in tabular form to highlight the main findings. Qualitative and quantitative data were integrated through a triangulation process. Quantitative findings were used to confirm, reinforce, or provide additional perspectives on themes that emerged from the interview analysis. For example, the qualitative theme related to increased learning motivation was reinforced by the percentage of questionnaire responses that showed the participants' level of agreement with the statement. Thus, quantitative data was not treated as a stand-alone finding, but as supporting evidence that increased the validity and reliability of the qualitative interpretation.

Validity

To ensure the credibility and validity of the research findings, a data triangulation strategy was applied that referred to the Patton (2002) framework in (Abdalla et al., 2018), which affirmed that the validity of the study was strengthened by combining various sources and methods. Specifically, this study uses two types of triangulation. First, source triangulation is carried out by cross-checking and comparing information obtained from the teacher's perspective with information from the student's perspective. This aims to build a holistic picture and reduce bias from one point of view. Second, the triangulation method was applied by comparing the rich qualitative findings from the interviews with quantitative data from questionnaires whose calculations used Microsoft excel and juxtaposing them with the findings from the documentation study. The application of this double triangulation ensures that the conclusions drawn are not only profound but also robust and accountable.

Ethical Clearance

The ethical aspect of research is the main foundation in the implementation of this study. Before the research begins, the researcher has obtained official permission from the relevant agencies. In addition, all participants involved have given informed *consent* after receiving a full explanation of the research objectives and procedures. To maintain confidentiality and protect the identity of participants, researchers used initials instead of real names throughout the research report. These steps are taken to ensure that research runs in accordance with academic ethical principles and respects the privacy of each individual who contributes.

RESEARCH FINDINGS AND DISCUSSION
Research Findings

Based on data collected from interviews validated through questionnaires and filled out by teachers and students, the analysis shows that there is a positive and harmonious perception from both parties regarding the use of the Kahoot! in the process of learning a foreign language.

In general, Kahoot! It is considered to be a digital tool that is not only easy to use, but also very effective in increasing learning motivation, active involvement in the classroom, and understanding of the material. These findings indicate that Kahoot! successfully create an interactive and fun learning environment.

To provide a more detailed picture, here is a table of questionnaire results as a validation of the interview results which covers several categories/themes.

Table 1
Results of the Teacher and Student Perception Questionnaire

Category	Perspective	Questionnaire Statement	Yes (%)	No (%)
Convenience & Technical	Teacher	What is the Kahoot! Easy to learn and use?	100	0
	Learners	What is the process of joining into the game Kahoot! easy?	100	0
	Teacher	Do you rarely encounter significant technical issues?	66.7	33.3
	Learners	Are you having any technical issues while playing Kahoot!?	0	100
Motivation & Engagement	Teacher	What is the use of Kahoot! Increase students' motivation to learn?	100	0
	Learners	Do learn to use Kahoot! makes you more motivated?	100	0
	Teacher	Do learners become more actively participating?	100	0
	Learners	Do you feel more focused and engaged during Kahoot!?	100	0
Learning Effectiveness	Teacher	What is Kahoot!! effective to help remember vocabulary?	100	0
	Learners	What is Kahoot! Helpful in learning and remembering vocabulary?	100	0
	Teacher	What is Kahoot! effective for strengthening grammatical comprehension?	100	0
	Learners	Does difficult material feel easier to understand through Kahoot!?	100	0
Competition Atmosphere	Teacher	What a competitive atmosphere! Can it be managed properly?	100	0
	Learners	What is the element of competition in Kahoot! encourages you to study harder?	100	0
	Learners	What is the competition in Kahoot! is a healthy	100	0

Category	Perspective	Questionnaire Statement	Yes (%)	No (%)
		competition?		
Hope	Teacher	What is Kahoot! Is it a suitable tool for military education?	100	0
	Learners	Do you expect teachers to use Kahoot more often!?	100	0

Source: data processed by the author

Discussion
Perceptions of Teachers and Students in the Use of Kahoot!

According to Sarmadi et al., (2020), perception is a process when a person compiles and interprets information received through the five senses to understand the environment around him. This process is not always objective, but rather is influenced by various factors such as personal experiences, beliefs, social backgrounds, and certain situations that are being faced. In the context of learning a foreign language using Kahoot!, the way teachers and students interpret their experiences with this app will greatly affect how they respond to its use in the classroom. Do they feel Kahoot! easy to use, useful, or vice versa, all of which will have an impact on their involvement in the learning process. Therefore, understanding their perception is an important step to ensure that the use of Kahoot! really support the learning objectives.

Increased Motivation, Engagement, and Learning Atmosphere

The results of data analysis from interviews and questionnaires consistently show that both teachers and students have a very positive perception of the use of Kahoot!. This positive perception is especially evident in how Kahoot! It is considered to be able to increase motivation, engagement, and in general create a more dynamic and fun learning atmosphere. These aspects are central findings that highlight the direct impact of gamification implementation in a formal military education environment.

To understand more about how Kahoot! Influencing the learning atmosphere and dynamics, the researcher compiled interview questions and questionnaires that focused on three main aspects: motivation, active engagement, and learning atmosphere. These three aspects were chosen because previous studies have shown that motivation and active participation are key to success in gamification-based learning. Through questions that explore the personal experiences and reflective views of teachers and students, researchers hope to capture a more complete and in-depth perception. In addition, the question is also designed to explore whether there is a competitive and interactive element in Kahoot! Really able to build a spirit of learning in the classroom which generally takes place in a formal and structured atmosphere.

Key findings from the study show that Kahoot! significantly changes the learning atmosphere to be lively, fun, and healthily competitive. These results are in line with the research by Syafina et al. (2025), which states that Kahoot! contributes significantly to increasing learning motivation through interactive, innovative, and enjoyable evaluation methods. These findings are also reinforced by Kurniawan et al. (2024), who show that students gain various benefits from using Kahoot!, including easier understanding of lesson material, more engaging learning activities, and increased student learning motivation.

From the student's side, this motivational impact is felt directly. Elements of the game such as speed and *leaderboards* make them feel challenged and more excited. This is all the more significant given that the learners in this context are active soldiers who attend an intensive learning program for approximately 10 hours per day, from Monday to Saturday, and live in a dormitory environment. Learning that lasts for a long time and a highly structured environment tends to have the potential to lower motivation if not balanced with fun teaching methods. The presence of Kahoot! able to present different nuances that refresh

the routine. The atmosphere of the classroom that was previously formal turned into less rigid and interactive. This illustrates the argument of Alsawaier (2018) that effective gamification utilizes psychological triggers such as competition and a sense of accomplishment to encourage deeper *engagement*. This feeling is clearly illustrated in the statement of a student named DIN:

"...sesama siswa tuh jadi saling interaksi, jadi saling punya adrenalin buat ini nih apa nih ya, jadi pengen jadi yang terbaik semua kalau pake Kahoot! itu. Karena kan main Kahoot! tuh pake waktu ya bu ya, nah jadi lebih hidup suasananya kalau pake Kahoot! menurut saya." - DIN, Learner.

From the teacher's perspective, the positive impact on the classroom atmosphere directly increases the platform's *Perceived Usefulness*, which is a key predictor in the *Technology Acceptance Model* (TAM). Teachers view Kahoot! as a strategic tool for managing classroom energy and focus, especially in the context of intensive military education. The belief that Kahoot! can improve teaching performance and help achieve learning objectives reinforced by the statement of RP, a teacher:

"Ini sebenarnya adalah salah satu alat bantu yang sangat efektif, mengingat saat di pembelajaran di instansi militer ini kan memang pembelajarannya intensif... dengan munculnya game interaktif ini kita sangat dibantu, karena itu menjadi suatu warna yang bisa kita berikan kepada peserta didik, untuk bisa mengembalikan motivasi dan ketertarikannya pada materi pelajaran." - RP, teacher. Overall, these findings confirm the results of previous empirical research. This significant increase in motivation and engagement is consistent with studies by Yu et al. (2020) that found the positive effects of educational games on learners' learning outcomes and motivation, as well as research by Ye et al. (2024) that specifically proved that Kahoot! successfully increase student motivation and engagement significantly.

Effectiveness in Improving Material Understanding

The effectiveness of using Kahoot! in helping with the understanding of the material is not only seen in general, but is felt directly by all parties involved. Both teachers and students agree that this platform has a real positive impact on the learning process. These findings confirm that Kahoot! is not just an entertainment medium, but is really pedagogically useful, in accordance with the concept of *Perceived Usefulness* in the framework of *the Technology Acceptance Model* (TAM). From the survey results, it is clear that all teachers (100%) believe in Kahoot! effective for strengthening learners' understanding, especially in terms of remembering vocabulary and understanding grammatical structures. Similar responses came from students—10 out of 10 answered 'Yes' when asked if Kahoot! help them remember vocabulary and make difficult material easier to understand. This means that it's not just one or two students who are helped—all of them feel the same benefits, an indication that the effect is fairly evenly distributed in the classroom.

The teachers also emphasized that Kahoot! is perfect for quick *drill* sessions and rehearsals before exams. In a disciplined military classroom setting and long learning times, the use of such concise and efficient media is strategic. In fact, one of the teachers mentioned that students' formative evaluation scores increased by 20–30% after using Kahoot! several times, compared to the more passive conventional methods. Although this figure was not the main focus of the study, the statement suggests that there is a potential significant impact on students' academic performance. From the student side, many of them feel that learning with Kahoot! helps them remember the material more easily, not only because of its interactive format, but also because of the fun competitive atmosphere. With limited time to answer and their position on the ever-changing leaderboards, learners feel challenged to focus and think fast. One of them even said that this atmosphere of playing while learning creates a strong impression and is not easy to forget. This reinforces the idea that positive emotional experiences while learning, such as enthusiasm and excitement, can help strengthen

information retention in the long term, as affirmed by Yu et al. (2020) in their study on the influence of educational play on motivation and learning outcomes.

In contrast to students who generally give positive and direct assessments of the use of Kahoot!, teachers actually give more in-depth and nuanced assessments. That is, they don't just see Kahoot! in terms of surface benefits such as pleasure or ease of use, but also consider the pedagogical context, the functional suitability of the platform for learning objectives, and the potential long-term effects on learning quality. They don't necessarily embrace technology just because it looks attractive, but rather with a reflective and critical attitude based on their experience of managing classes in a highly disciplined and results-oriented military environment.

This nuanced assessment includes an awareness of Kahoot's limitations! as a learning tool. Some teachers say that even though Kahoot! Highly effective for formative evaluations, vocabulary quizzes, and grammatical comprehension reinforcement, the platform is not designed to develop productive skills such as speaking or writing. This is due to the multi-choice, time-limited nature of the platform, which tends to encourage rapid and superficial processing of information, rather than the exploration of meaning or the production of complex language. There is no space in Kahoot! for argument, discussion, or the drafting of ideas in long sentences that are essential in productive skills.

However, teachers also realize that receptive skills, such as reading and listening, are an important foundation for the development of productive skills. Without adequate vocabulary mastery, proper understanding of grammar, and familiarity with authentic language structures, learners will have difficulty producing language actively. This is in line with the findings of Fadilah & Habibah (2021), who stated that receptive skills play a role in enriching language input, which is then processed into language output in productive skills. Similarly, Krashen (1982), through the Input Hypothesis theory, as cited in Luo (2024), emphasizes that exposure to language that can be understood through receptive activities is a major prerequisite for the development of speaking and writing skills.

In this context, the teachers at the military institution placed Kahoot! as supporting material (additional material), not as the main method of learning. They use it strategically, especially to reinforce mastery of the material before an exam, review vocabulary after a new topic, or reactivate students' attention in the midst of a busy study routine. This critical attitude is in line with the findings of Elahmadieh (2021), who stated that teachers' perceptions of the suitability of tools for learning objectives are a key factor in the success of technology integration, especially in highly structured environments such as military education. AN, a teacher explained:

"Kalau misalnya untuk menurut saya sih untuk kosakata itu Kahoot! itu bisa sangat efektif karena bisa dipakai untuk drill cepat ya. Tapi kalau untuk belajar seperti struktur kalimat ataupun tata bahasa yang kompleks, itu Kahoot! juga bisa digunakan itu sebagai alat review kita, sebagai alat evaluasi cepat kita sih..." - AN, pengajar..." - AN, teacher. On the other hand, students feel the effectiveness of Kahoot! in terms of ease of material to remember. This is in line with the argument of Alsawaier (2018) who stated that successful gamification is able to create a more meaningful and engaging learning experience. The process of learning while playing is considered to increase the retention of important materials in memory, which has proven to be very helpful when facing formal exams. This experience was expressed by AB, a student: "Kalau saya lebih tertantang yang Kahoot!, lebih mudah menghafal dan dilupakannya juga susah, karena kan kita bersaing, terus kadang-kadang kita melihat teman kita yang tidak bisa, yang kita sendiri bisa, jadi kita kan selalu ingat terus sampai kapan, keseruannya itu, belajar sambil bermain." - AB, Student

Perceived *Ease of Use*

The final theme related to perception is ease of use, which is in line with the concept of *Perceived Ease of Use* (EU) from the *Technology Acceptance Model* (TAM). This concept refers to the belief that the use of a technology will be free from excessive effort. The findings of the study show a strong consensus from both groups of respondents regarding the ease of use of Kahoot!. This is reflected in the questionnaire data, where 100% of teachers feel that the platform is easy to learn and use, and 100% of students state that the process of joining and understanding the application is very easy. Teachers find the Kahoot! platform intuitive and easy to learn on your own. This convenience not only reduces cognitive load but also directly increases the platform's *Perceived Usefulness*, a relationship confirmed in a meta-analysis by Berdousis (2025). The feature to search and modify existing quizzes, for example, allows teachers to save significant preparation time, thus creating Kahoot! Not only is it easy but it is also more beneficial in their workflow.

Kahoot! is easy to self-learn because teachers don't need to go through formal training, tech workshops, or read lengthy technical guides just to get started with Kahoot!. Its simple and intuitive interface makes it easy for anyone to understand how it works just by browsing the site for a few minutes. Many teachers feel that it is enough to try just one or two times to be able to create their own quiz, choose questions from an existing question bank, or see a recap of student results. Even for those who were previously less familiar with digital technology, the initial experience of using Kahoot! It feels quite friendly and not intimidating. This is certainly an added value, especially in the context of military education which is very intensive and has little space for additional training. In a tight schedule and highly disciplined environment, the ability to learn independently and quickly becomes a necessity, not an option.

On the other hand, the benefits of Kahoot! The teaching workflow is also very felt. The process of preparing materials, which usually takes a long time, can now be done much more efficiently. Teachers don't have to structure questions from scratch or create complicated teaching materials—just find quizzes that are relevant to the topic, adjust them a little if necessary, and be ready to use in class. In practice, Kahoot! It is helpful for sessions such as weekly reviews, quick quizzes, or light evaluations before exams. Additionally, features like auto-scoring and instant feedback completely reduce administrative work. Teachers no longer need to manually recap grades or match answers one at a time. Time that was previously reserved for technical matters can be diverted to more strategic things: reflecting on student learning outcomes, identifying material that is still not understood, and adjusting teaching approaches in the future. In other words, Kahoot! Not only does it make teaching easier, but it also makes the process more organized and time-saving, two things that are crucial in a structured and targeted military education environment.

From the perspective of students, this ease is felt when they first interact. They consistently describe the process of joining and playing as an "easy" and "simple" experience. The procedure for joining the game is considered very intuitive and uncomplicated. This high perception of ease of use is an important factor that, according to the TAM framework, is a fundamental driver in the acceptance and behavioral intention to use a technology. When users don't feel overwhelmed by the technical aspects, they can focus more on the learning content and experience the benefits of the platform. However, behind the various advantages and perceived convenience, the implementation of Kahoot! It also presents a series of challenges that need to be identified.

Challenges in Kahoot Implementation!

The findings of the study show that in the implementation of Kahoot! There are various challenges. These challenges can be categorized into three main themes: technical and infrastructure, human resources, and pedagogical and cultural.

Technical and Infrastructure Challenges

Technical challenges are the most fundamental obstacles identified from interviews with all parties. Within the *framework of the Technology Acceptance Model* (TAM), these challenges function as external variables that significantly inhibit positive perceptions of technology. The main obstacle expressed by the teachers was the unstable quality of the internet connection, which directly undermines the *Perceived Ease of Use* and Perceived *Usefulness*. These findings are in line with research by Ye et al. (2024), which concluded that the successful implementation of gamification is highly dependent on contextual factors, especially access and quality of technology. When the internet connection is poor, the platform becomes difficult to operate (*low EU*) and fails to achieve learning objectives (*low U*), leading to frustration. This was confirmed by the students; From the results of the interviews, most of them cited the unstable internet network as the least aspect they liked most about the experience of using Kahoot!.

In addition to connections, the interview also revealed the lack of supporting facilities and the limited budget of the institution to access premium features as significant external constraints, as revealed by a lecturer named NB. For students, the direct impact of these technical obstacles is very felt. Experiences such as unrecorded answers or questions that arise late due to slow networking can instantly turn a learning experience that should be enjoyable into a source of disappointment, which can ultimately reduce their intention to use this technology in the future. Seeing this, education providers need to provide stronger support in terms of infrastructure and technical readiness, so that the use of learning technologies such as Kahoot! can run optimally. Without adequate institutional support, a learning experience that should be enjoyable can turn into frustration. This support is important not only to support technical fluency, but also to create an adaptive, modern, and inclusive learning ecosystem.

Human Resources (HR) Challenges

This challenge has to do with teacher readiness, which includes skills gaps and levels of acceptance of technology. Within the *framework of the Technology Acceptance Model* (TAM), these factors function as external variables that greatly influence an individual's perception of technology. Interviews reveal individual differences, such as *the generational gap*, where senior teachers tend to be more conservative. For this group, *Perceived Usefulness* may be low because they feel that traditional methods are sufficient, while *Perceived Ease of Use* may also be low due to lack of experience with new technologies.

These findings are very much in line with Elahmadieh (2021) research which underlines that in a structured environment, teacher perception is a key factor that determines the success of technology adoption. If some teachers do not see benefits or feel difficulties, then implementation at the institutional level will be hampered. In addition, organizational constraints such as time constraints due to the workload of other tasks are also obstacles. From the perspective of students, these HR challenges have a direct impact on their learning experience. They confirmed that the use of Kahoot! uneven and only applied by some teachers. This creates pedagogical inconsistencies that can lead to a decrease in enthusiasm for learning when it comes to switching from interactive sessions to more traditional and passive methods.

Pedagogical and Cultural Challenges

This final challenge relates to the integration of "casual" learning tools into a formal and highly structured institutional culture, which can raise pedagogical issues if competitive elements are not managed properly. Studies show that although competitive elements such as leaderboards and awards can increase engagement, they also have the potential to cause negative effects, such as feelings of incompetence or lack of autonomy among certain learners

when compared to their more accomplished peers, which in turn can reduce intrinsic motivation (Chen & Huang, 2024). A recent meta-analysis shows that the main challenges in gamification include a lack of feelings of competence and autonomy in gamified classrooms, which are important psychological factors for student motivation (Li et al., 2024).

This phenomenon is clearly expressed by one of the teachers, who shows a critical awareness of the psychological impact of the game mechanics. The condition puts teachers in a central position to manage classroom dynamics, a finding that is in line with Elahmadieh (2021) research on the crucial role of teacher perception and adaptation in applying technology in the military environment. Nonetheless, from the perspective of the learner, there is no fundamental contradiction between the relaxed atmosphere that Kahoot creates! with military discipline. Instead, they consider it a "proper interlude" that supports the language learning process, which they think does require a more relaxed atmosphere to be effective. However, they admit that there are difficulties when it comes to transitioning from the euphoria of the game back to a more serious mode of learning. This transition challenge underscores the importance of Alsawaier (2018) argument that the goal of gamification is not to create separate "entertainment", but rather to design a meaningful learning experience as a whole. Bridging the gap between "playtime" and "study time" is a major pedagogical task for teachers in the field.

Interestingly, the presence of Kahoot! in the classroom not only livens up the atmosphere, but also opens up new opportunities for those who have been almost unheard of. In an interview, one of the students said that his friend, who is usually at the bottom of the rankings and rarely talks in class, was actually able to win several times while playing Kahoot. "My friend, who usually has low test scores, often wins when playing Kahoot. So he became more enthusiastic about his studies," he said enthusiastically. Moments like these give a breath of fresh air to students who previously felt left behind. They can feel what it means to be successful, even if it's in a simple form, such as answering quickly, correctly, and appearing at the top of the *leaderboard*.

CONCLUSION

Based on the results and discussion, this study concludes that the use of Kahoot! in foreign language learning in the Army's educational environment is positively accepted by both teachers and students. Both groups of respondents viewed Kahoot! as an easy-to-use and useful learning medium for increasing motivation, learning engagement, and the effectiveness of foreign language material repetition, especially in receptive skills such as vocabulary and grammar, in line with the Technology Acceptance Model (TAM) framework which emphasizes the role of perceived usefulness and perceived ease of use in technology acceptance. However, this study also identified a number of challenges, particularly technical constraints in the form of limited and unstable internet connections, as well as pedagogical and human resource challenges, such as differences in technology literacy levels among teachers and difficulties in managing the dynamics of competition and the transition back to formal learning. These findings confirm that the successful implementation of Kahoot! is not only determined by the quality of the platform, but also by the readiness of the infrastructure and the pedagogical competence of the teachers.

Theoretically, this study expands the application of the Technology Acceptance Model (TAM) in the context of highly structured and mission-oriented military education by showing that external variables in the form of supporting conditions, particularly the availability and stability of technological infrastructure, play a crucial role in shaping perceptions of the usefulness and ease of use of Kahoot! These findings confirm that technology adoption in non-civilian environments is not only determined by system characteristics, but is also significantly influenced by institutional context and resource constraints. In practical terms, the results of this study recommend that Kodiklatad prioritize

the provision of reliable internet network infrastructure and organize ongoing digital pedagogy training for teachers to support effective gamification integration. Additionally, teachers are advised to use Kahoot! strategically as a tool to reinforce material and formative assessment, and to combine it with conventional learning methods to remain aligned with military discipline principles and educational effectiveness.

However, despite providing meaningful findings, this study has several limitations, including a relatively limited number of participants, a study scope that focuses only on one military educational institution, and the use of descriptive quantitative data that does not allow for causal conclusions to be drawn. In addition, the results of this study cannot be generalized to the entire context of military education in Indonesia, which has diverse characteristics and resources. Therefore, further research is recommended to use quantitative or experimental designs with a broader sample, apply a longitudinal approach to assess the sustainability of the impact of motivation, explore the application of gamification in the development of productive skills, and conduct comparative studies between military and civilian educational contexts to gain a more comprehensive understanding.

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INFORMED CONSENT STATEMENT

Participation in this study is entirely voluntary. By agreeing to take part, the participants acknowledge that they have been informed about the purpose, procedures, potential risks, and benefits of the study. Participants understand that their identity are kept confidential and that all information they provide are used solely for research purposes.

DATA AVAILABILITY STATEMENT

The data utilized in this study cannot be made publicly available due to strict adherence to privacy concerns and ethical obligations that safeguard participant confidentiality. This ensures compliance with ethical research standards and data protection regulations.

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