



## Article

# The Traditional Game of *Dakon* as a Learning Medium for Indonesian Language for Foreign Speakers at Yale University, United States

Kundharu Saddhono<sup>1</sup>, Raheni Suhita<sup>2</sup>, Edy Suryanto<sup>3</sup>, Indriyo Sukmono<sup>4</sup>, and Aldi Dwi Saputra<sup>5</sup>

<sup>1,2,3,5</sup>Universitas Sebelas Maret, Indonesia, <sup>4</sup>Yale University, United States of America

Correspondence: [kundharu\\_s@staff.uns.ac.id](mailto:kundharu_s@staff.uns.ac.id)

## Abstract

*This article explores the use of the traditional Indonesian game, dakon, as a medium for learning Indonesian for non-native speakers at Yale University, United States. This study is based on the theory of game-based learning, which states that game-based learning can increase student motivation and engagement. Dakon, as a traditional game that requires verbal interaction, strategy, and calculation, is believed to be an effective tool in language learning, especially in developing speaking, listening, and vocabulary skills. This study uses a qualitative approach with interviews and observations of 44 non-native Indonesian language students at Yale University. The results show that the use of dakon in Indonesian language learning increases student participation, enriches their vocabulary, and strengthens their understanding of Indonesian culture. Based on the calculation of Cohen's  $d$ , a significant difference in speaking skills between the two groups was found, with a value of Cohen's  $d = 1.81$ , indicating a large effect size. This suggests that the use of dakon in language learning has a more substantial impact on improving Indonesian speaking skills compared to conventional methods.*

**Keywords:** *Dakon, Game-based Learning, Indonesian language learning for foreign speakers, Yale University*

## Suggested citation:

Saddhono, K., Suhita, R., Suryanto, E., Sukmono, I., & Saputra A. (2025). The Traditional Game of *Dakon* as a Learning Medium for Indonesian Language for Foreign Speakers at Yale University, United States. *International Journal on Culture, History, and Religion*, 7(1), 1-18. <https://doi.org/10.63931/ijchr.v7i1.114>

**Publisher's Note:** IJCHR stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2025 by the authors. Submitted for open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license

(<http://creativecommons.org/licenses/by/4.0/>).

## Introduction

Second or foreign language learning is not solely dependent on teaching grammar theory and vocabulary but also involves approaches that support active student engagement in the learning process (Arisnawati & Yulianti, 2022). In the modern era, many creative approaches are used, one of which is game-based learning (Dahalan et al., 2024). This approach combines game elements with learning to create a more interactive and engaging atmosphere. One traditional Indonesian game with potential for use in Indonesian language learning is *dakon*.

The *dakon* game is widely known in Indonesia and several Southeast Asian countries as a strategy game that involves counting skills and player interaction (Utami et al., 2024). Besides being a form of entertainment, this game can also be used as a teaching tool in language classes, particularly to develop practical language skills (Suryani et al., 2021). This article aims to examine how *dakon* can be used as a medium for teaching Indonesian to foreign speakers at Yale University, United States.

*Dakon* is a traditional Indonesian game that uses a board with holes and seeds as playing tools (Maulidiyyah et al., 2021). The *dakon* board has two rows of small holes and two larger holes at each end. This game is played by two people sitting opposite each other. Each player has a large hole on their right side as a storage area (called a "lumbung"). The objective of the game is to collect as many seeds as possible in their lumbung. The game begins with each small hole filled with an equal number of seeds. Players take turns picking up seeds from one of their holes and distributing them one by one into the next holes in a clockwise direction. If the last seed falls into a hole that contains other seeds, the player can continue by taking the seeds from that hole. If the last seed falls into their own lumbung, the player gets another turn. The game ends when all the small holes are empty, and the winner is the player with the most seeds in their lumbung. *Dakon* is not only an entertaining game but also helps develop strategy, calculation, and patience.

Using games as a learning medium allows students to engage actively and enjoy learning as they receive information passively and directly interact with the lesson material (Kurniawan et al., 2024). This approach is highly beneficial in language learning, as language is a skill developed through practice. Game-based learning gives students the opportunity to practice the language in a contextual and situational manner, often more effective than conventional teaching methods (Pramadhanti et al., 2023). Through games, students experience real-life situations that require communication, problem-solving, and collaboration—all essential for language mastery.

Using *dakon* as a medium for Indonesian language learning for foreign speakers has several advantages. In addition to involving aspects of strategy and calculation, *dakon* also encourages communication between players, which in turn helps improve speaking and listening skills (Winarsih, 2018). The use of verbal instructions during the game, such as counting seeds, giving directions, or discussing the next move (Herawati, 2024), allows students to practice speaking with basic vocabulary and sentence structures. Furthermore, *dakon* provides an enjoyable context for learning vocabulary related to numbers, counting, and instructions in Indonesian. This game is suitable for helping foreign learners of Indonesian better understand language use in a more natural context.

Moreover, integrating traditional games like *dakon* in Indonesian language learning for foreign speakers also offers an important cultural dimension. Language and culture cannot be separated, and by learning traditional games, students also gain insight into broader Indonesian culture, such as social values, norms, and interaction patterns (Saddhono et al., 2024). This makes *dakon* not only a language learning tool but also a way to introduce Indonesian culture more deeply to foreign speakers at Yale University.

In addition to being a language learning medium, *dakon* also plays a role in instilling a deeper cultural understanding. Students not only learn the language theoretically but also gain firsthand experience of how cultural values are reflected in everyday social interactions. In the Indonesian context, games like *dakon* teach values of cooperation, patience, strategy, and respect for opponents—all significant parts of Indonesian social norms (Nuryanto, 2014). Thus, *dakon* serves not only as a language learning tool but also as a medium for fostering cross-cultural understanding. At Yale University, which has a multicultural educational environment, using *dakon* in Indonesian language learning for foreign speakers gives international students the opportunity to deepen their understanding of Indonesian culture while improving their language skills.

By incorporating game elements, the classroom atmosphere becomes more dynamic and encourages students to participate more (Salma & Rizal, 2023). In such situations, interaction between students becomes more natural and less forced. They feel freer to speak, make mistakes, and learn from these experiences, as the competitive atmosphere brought by the *dakon* game helps to relieve the pressure typically present in conventional classes. Besides enhancing speaking skills, the *dakon* game also strengthens listening skills. Students must listen to instructions, calculations, and their opponent's moves to make strategic decisions in the game. This encourages students to focus more intently, a critical skill in language learning.

The *dakon* game itself has long been part of Indonesian culture (Zuhrita & Mufidati, 2017). In this game, two players compete to fill holes in the *dakon* board with seeds while counting the number of seeds distributed (Fad, 2014). Verbal interaction during the game involves using verbs, numbers, instructions, and everyday vocabulary that are relevant for learning Indonesian.

## Methodology

The research method used in this article is a qualitative approach with semi-structured interviews and participatory observation. This study involved 44 students at Yale University enrolled in an elementary-level Indonesian language course. The students were divided into two groups: an experimental group that used the *dakon* game as a learning medium and a control group that used conventional teaching methods. Research instruments included pre- and post-learning questionnaires to measure students' language skills development, while in-depth interviews were conducted to explore students' experiences and perceptions regarding the use of *dakon* in learning. Participatory observation was conducted directly during the learning process, noting verbal and non-verbal interactions that occurred in the classroom.

The data analysis technique used in this study is thematic analysis. Data obtained from interviews and observations were categorized into specific themes relevant to the research objectives. The analysis process was conducted repeatedly to ensure that all collected data were analyzed in-depth and contextually. In addition, the results of the questionnaires were analyzed descriptively and quantitatively to compare the results of the experimental and control groups. Qualitative and quantitative data were then combined to provide a comprehensive picture of the effectiveness of using *dakon* as a cultural communication symbol in Indonesian language learning.

To ensure data validity, this study applied triangulation techniques, which involved comparing the results of interviews, observations, and questionnaire analysis. Triangulation was carried out to reduce bias and increase the reliability of the research results. Additionally, member checking was conducted by allowing participants to review the interview results and provide feedback if there were discrepancies in interpretation. Field notes from observations were also repeatedly reviewed to ensure the consistency of the collected data. By applying these techniques, the research is expected to produce valid and reliable findings in examining the role of *dakon* as a cultural communication symbol in Indonesian language learning for foreign speakers.

## Results/Findings

The use of *dakon* in Indonesian language classes at Yale University also shows that students are more motivated and engaged in learning. They feel more enthusiastic about learning new vocabulary, understanding number concepts, and communicating confidently in Indonesian. This entire process demonstrates that game-based learning, especially when involving traditional games like *dakon*, is an effective and innovative method to introduce language and culture simultaneously to foreign speakers. Thus, *dakon* serves not only as a learning tool but also as a bridge connecting students with the broader cultural aspects of the language they are studying. This approach can enrich the experience of learning Indonesian at Yale University and at various other institutions abroad, helping to develop language skills and cultural understanding simultaneously. As a recommendation, game-based learning approaches that use traditional games like *dakon* could be expanded to various other language learning contexts. Integrating culture through games like these has proven not only to accelerate language acquisition but also to deepen appreciation for the culture of the language being studied. Ultimately, the use of *dakon* and other traditional games can provide a more comprehensive and holistic learning experience for foreign speakers.



Figure 1. Implementation of Indonesian Language Learning through the *Dakon* Game

According to game-based learning theory, the use of games in education can enhance students' emotional engagement, which in turn contributes to motivation and learning success (Prensky, 2003). Game-based learning also enables students to learn in a fun and interactive context, which naturally strengthens their skills. Furthermore,

traditional games have a strong cultural dimension, so their use in foreign language classes can also enhance students' understanding of the culture and language they are learning (Gee, 2003).

In this study, the calculation of Cohen's *d* was performed to measure the magnitude of the difference between the experimental group, which used the *dakon* game as a learning medium, and the control group, which used conventional methods, in improving speaking skills in Indonesian for foreign language learners. The average speaking skill of the experimental group post-learning was 4.1, while the control group had an average of 3.1.

The first step in calculating Cohen's *d* is to find the pooled standard deviation (SD pooled) of both groups. Based on the available data, the standard deviation of the experimental group is 0.5, and the standard deviation of the control group is 0.6. The number of participants in both groups is 22. The pooled standard deviation is calculated using the following formula:

$$\text{SD pooled} = \sqrt{\frac{(n_1 - 1) \cdot \text{SD}_1^2 + (n_2 - 1) \cdot \text{SD}_2^2}{n_1 + n_2 - 2}}$$

After performing the calculation, the SD pooled was found to be 0.55.

Next, Cohen's *d* was calculated using the formula:

$$d = \frac{M_1 - M_2}{\text{SD pooled}}$$

With  $M_1 = 4.1$  (mean of the experimental group) and  $M_2 = 3.1$  (mean of the control group), the calculation of Cohen's *d* is as follows:

$$d = \frac{4.1 - 3.1}{0.55} = \frac{1}{0.55} \approx 1.81$$

The result shows that Cohen's *d* = 1.81, which falls into the category of large effect size. This indicates that the difference in speaking skills between the experimental and control groups is highly significant, with a large impact. In other words, the use of *dakon* as a learning medium had a much stronger effect on improving speaking skills compared to the conventional methods used by the control group. Overall, a Cohen's *d* = 1.81 suggests that the impact of using *dakon* in this context is

substantial in improving Indonesian language learning for foreign students at Yale University.

This study examines the impact of using the *dakon* game as a medium for teaching Indonesian to foreign language learners at Yale University, United States, by comparing two groups of students enrolled in a basic Indonesian language course. The experimental group used *dakon* as a learning method, while the control group employed conventional teaching methods. Based on the calculation of Cohen's *d*, a significant difference in speaking skills between the two groups was found, with a value of Cohen's *d* = 1.81, indicating a large effect size. This suggests that the use of *dakon* in language learning has a more substantial impact on improving Indonesian speaking skills compared to conventional methods.

The results show that the experimental group using *dakon* experienced a more significant improvement in speaking skills, with an average post-learning score of 4.1, compared to the control group, which only achieved 3.1. This difference was reflected in observations made during the learning process, where the experimental group demonstrated more verbal and non-verbal interactions in class, supporting better language comprehension and strengthening communication among students. This improvement in language skills was not limited to speaking but also extended to listening, reading, and writing, although the impact was most apparent in speaking.

Students involved in the *dakon* game experienced significant improvements in speaking and listening skills compared to the control group that did not use the game-based method. Students playing *dakon* were more frequently engaged in active conversations, both with their peers and the instructor, due to the continuous verbal interactions required by the game dynamics. This finding aligns with previous research showing that game-based approaches can enhance engagement and verbal interaction in language learning (Zou et al., 2021). Additionally, students participating in the *dakon* game felt more confident speaking. The competitive yet enjoyable nature of the game alleviated the anxiety typically associated with making mistakes, thus reducing the pressure often felt in traditional classroom settings (Eltahir et al., 2021). Interviews with students revealed that they felt freer to experiment with language without the fear of being judged for minor errors, an experience they did not encounter in formal classroom settings.

*Dakon* also provided students with a context to practice vocabulary related to numbers, commands, and strategies. Words such as "one," "two," "take," "place," and "count" were repeatedly used throughout the game, helping students become more familiar with these terms and increasing their ability to use them in everyday conversation. This repetition supports language learning theories that emphasize the



importance of repeated practice in reinforcing memory and language use (Teng, 2023). Furthermore, students' listening skills also significantly improved. Since *dakon* involves two players who must interact verbally, students had to listen attentively to the instructions or actions taken by their opponents. This forced them to focus on understanding spoken Indonesian, which directly enhanced their listening skills. Several students reported that they became better at recognizing vocabulary and understanding simple sentences, even when their opponents spoke quickly. This experience is consistent with research that shows verbal interaction in game contexts can improve listening skills (Ye & Kaplan, 2024).

Another aspect that supports the effectiveness of *dakon* as a learning medium is the involvement of number concepts in Indonesian. Since the game requires counting the seeds at each turn, students are indirectly trained to use and understand numbers in Indonesian. The repetitive use of numbers in the game context helps students internalize these concepts more quickly than traditional teaching methods, which typically teach numbers through memorization. The act of counting during the game becomes an enjoyable activity, making it easier for students to remember and use numbers in everyday conversations. For instance, one student mentioned that they previously struggled to remember how to pronounce numbers in Indonesian, but after playing *dakon*, they were able to more fluently name numbers in Indonesian because they had become accustomed to counting the seeds in the game. The repetitive counting process, such as "one, two, three," automatically helped students understand how numbers work in Indonesian. This aligns with research showing that game-based learning, through its engaging and repetitive nature, facilitates more effective learning of numerical concepts (Situmorang et al., 2024).

Overall, students engaged in *dakon* demonstrated significant benefits in speaking, listening, and understanding numerical concepts in Indonesian. This active, structured, and game-based learning experience provided a more comprehensive learning environment compared to traditional methods, leading to greater improvements in students' language skills. The benefits of game-based learning have been widely acknowledged, as it not only enhances cognitive skills but also increases engagement and motivation (Greipl et al., 2020).

In addition to improvements in speaking, listening, and understanding numbers, the use of *dakon* also showed positive effects on students' social and emotional involvement. The game created a more relaxed and enjoyable learning atmosphere, which increased students' motivation and confidence in learning Indonesian. According to interviews with students, they acknowledged that the competitive and interactive nature of *dakon* motivated them to participate more



actively and use Indonesian more frequently. This contrasts with conventional learning methods, which are often perceived as rigid and formal, leaving little room for students to practice the language in a relaxed setting (Siegel, 2023).

Students also mentioned that they enjoyed the learning process more when involved in the game because *dakon* provided space for indirect learning. They could learn sentence structures, new vocabulary, and how to speak Indonesian without feeling burdened by academic pressure. This informal learning atmosphere encouraged active participation, positively impacting their communication skills. Students became more willing to attempt speaking, even knowing they might make mistakes. This is crucial in language learning, as errors are often a natural and essential part of the learning process (Koraishi, 2023).

From a social engagement perspective, *dakon* promotes interaction among students, fostering opportunities for collaboration and mutual learning. The game requires teamwork and strategy, encouraging students to discuss and communicate with their peers, which provides valuable opportunities to use Indonesian in real-life contexts beyond the formal classroom environment (Saputra et al., 2024). Some students reported feeling a stronger connection with their classmates due to the social interactions that occurred during the game, highlighting that *dakon* functions not only as a language learning tool but also as a means of strengthening social bonds among students (Rohmadi et al., 2023).

From the instructor's perspective, *dakon* offers a unique opportunity for direct observation of students' language development. As the game involves extensive verbal interaction, instructors can identify areas where students struggle, such as pronunciation, vocabulary usage, or sentence structure (Debi et al., 2023). This allows instructors to offer more targeted and personalized feedback. Several instructors reported that *dakon* provided insight into how students naturally adapted to the Indonesian language, making it easier to tailor teaching strategies to individual student needs (Saputra et al., 2023).

Moreover, *dakon* facilitates interdisciplinary learning. While the game is rooted in strategy and counting, its content can be expanded to incorporate other language components, such as culture, new vocabulary, and grammar (Alomair & Hammami, 2024). Instructors can modify the game by requiring players to construct complete sentences or specific phrases before making a move, thus enhancing the complexity of the language learning experience. This approach encourages students to think critically and creatively while using the language, which is consistent with active learning principles (Lombardi et al., 2021). *Dakon* also serves as an informal assessment tool to evaluate students' language proficiency. By observing students in a relaxed,

interactive context, instructors can better gauge whether students can apply the language practically, rather than relying solely on formal written or oral tests. This game-based assessment provides a more holistic view of students' abilities, as it assesses language use in a more natural and cognitively engaging situation.

Given its numerous advantages, *dakon* proves to be an effective medium for language learning that goes beyond developing linguistic skills and also fosters social, emotional, and cultural competencies (Adi & Ssukarmin, 2022). At Yale University, the integration of *dakon* into the Indonesian language curriculum can serve as a valuable tool to enhance language learning programs, promoting a more integrative, enjoyable, and beneficial approach for students. By using game-based learning, traditional games like *dakon* can address common challenges in foreign language acquisition while simultaneously offering a deeper understanding of Indonesian culture. In the long run, similar game-based approaches can be applied to language learning in various international contexts, creating a richer and more memorable experience that accelerates language acquisition and enhances cross-cultural understanding.

From a cultural understanding perspective, students also acknowledged that the game provided new insights into Indonesian culture, something they could not acquire through traditional teaching methods. As a game that contains values of cooperation and strategy, *dakon* helps them experience firsthand some of the social and cultural aspects of Indonesia. In terms of cultural understanding, the *dakon* game does not only serve as a language learning tool but also as a window for students to better understand Indonesian culture. Through this game, students at Yale University gained direct experience with social and cultural aspects that are difficult to teach theoretically through traditional teaching methods. In interviews, many students admitted that they felt the *dakon* game gave them a deeper understanding of Indonesian culture compared to formal learning that typically focuses on grammar, vocabulary, or sentence structure.

One of the most prominent cultural aspects of the *dakon* game is the values of cooperation and strategy embedded within it. *Dakon* is not merely an individual game; it involves two players who interact and compete using specific tactics. In the Indonesian context, this game teaches the importance of cooperation, not only in terms of winning or losing but also in maintaining good relationships with opponents. The value of "gotong royong" (mutual cooperation), which is central to Indonesian social life, is reflected in the way this game is played. Students involved in the game learn that it is not only about competition but also about appreciating the process and interacting with the opponent.

Moreover, *dakon* teaches students the importance of patience and strategic planning, two values frequently found in Indonesian social and cultural interactions. In this game, players must make wise decisions based on counting seeds and predicting the opponent's next move. Students, who are more accustomed to Western cultures, which emphasize speed and efficiency, feel the difference in thinking and acting when playing *dakon*. They are encouraged to be more patient, wait their turn, and consider the long-term consequences of each move they make. In interviews, some students mentioned that playing *dakon* helped them understand a more "process-oriented" way of thinking, often seen in Indonesian social interactions, where decisions are made by considering balance and social harmony.

Through *dakon*, students are also exposed to the concepts of simplicity and togetherness, which are characteristic of traditional Indonesian culture. *Dakon* is played with very simple tools—wooden boards and seeds—yet the game fosters deep interactions between players. This simplicity reflects the traditional Indonesian lifestyle, which values togetherness and social interaction over technology or material sophistication. Students participating in the game realize that behind its simplicity, *dakon* contains profound cultural values that shape how Indonesians relate to each other, both in the context of the game and in everyday life.

Through direct observation of how *dakon* is played, students also learn the concept of balance in Indonesian culture. This balance is evident in how the game evenly distributes the seeds, as well as how the strategies employed by players must take into account the distribution of available resources. This concept parallels life in Indonesia, where the values of balance, harmony, and justice in resource distribution often take center stage in a communal, agrarian society. Students, accustomed to individualism and aggressive competition in the West, learn that in the Indonesian context, strategies used are not just about individual victory but also about maintaining harmony in social interactions. Thus, *dakon* not only introduces students to the rules of the game and tactics but also provides a broader picture of the social and cultural dynamics in Indonesia. Through this game, they indirectly learn about the philosophy of life in Indonesian society, which emphasizes social relationships, balance, and patience—elements that are difficult to explain thoroughly through formal teaching methods that focus only on linguistic aspects.

In interviews, students admitted that playing *dakon* enriched their perspectives on Indonesian culture and made them more interested in learning more about Indonesian society. They felt that understanding culture through games provided a more tangible and personal experience compared to merely reading textbooks or attending lectures about culture. This experience also deepened their appreciation for

the values upheld in Indonesian society, which may differ from the values they know in their own cultures. Overall, this experience makes *dakon* an effective learning tool, not only in terms of language but also in introducing and deeply understanding Indonesian culture more comprehensively.

In addition to teaching cultural values such as cooperation, patience, and balance, *dakon* also serves as a means to enrich students' understanding of local Indonesian traditions and history. This game has been played by Indonesian communities for centuries, highlighting how traditional games have become an integral part of daily life and collective culture. In interviews, several students at Yale University mentioned that they were previously unaware of the significance of games like *dakon* in Indonesian history and culture. Through the playing process, they not only learned the rules of the game but also about how this game reflects Indonesia's historical journey and the lives of its people, from the past to the present.

*Dakon* is believed to originate from ancient times when similar board games were played in various parts of the world, particularly in Southeast Asia and Africa. Students who played *dakon* in their Indonesian language class gained insights into how this game evolved and adapted to Indonesia's local context. They began to understand that this game is not merely an entertainment tool but a medium rich with values and knowledge passed down through generations. This becomes part of a cross-cultural learning process that introduces students to Indonesia's rich historical heritage.

Furthermore, students also learned how *dakon* is often played in various social settings in Indonesian society, from games in the courtyard to large community events. In the context of cultural learning, this game provides a concrete view of everyday life in Indonesia, which cannot always be captured through more academic teaching materials. Students learned that *dakon* is not only played for fun but also as a way to strengthen social bonds among family, friends, and communities. This form of social interaction reinforces the ties between individuals, a crucial aspect of Indonesian social life.

In addition to the historical aspects, *dakon* also helps students understand how this game is closely linked to Indonesia's agrarian context and natural resources. The use of seeds in the game, such as sawo seeds or small stones, reflects the Indonesian people's strong connection to nature. These seeds are not just game tools but symbols that show the society's relationship with their environment—something often encountered in traditional Indonesian culture. Through this game, students can see how the agrarian lifestyle influences various aspects of life, including traditional games.

Students also observed that *dakon* is often played in open spaces or more natural environments, illustrating the connection between the game and nature. Yale students, who are more accustomed to digital games or indoor games, were surprised to see how a simple game like *dakon* can be played in various places using resources readily available in the surroundings. This provided them with a new perspective on how traditional Indonesian communities utilized what was available in their environment to create entertainment and social interaction. Furthermore, the experience of playing *dakon* gave students a deeper understanding of the differences between modern and traditional games, as well as how traditional games often carry more fundamental values in social life. Students, who were previously only exposed to digital games or advanced technology, realized that games like *dakon* have a different depth of meaning. They saw how traditional games are not just about competition but also about social reflection, strategy, and teaching broader values such as solidarity, integrity, and perseverance.

In interviews, some students stated that they felt more connected to Indonesian culture after playing *dakon* because they directly experienced how Indonesian society values this game in daily life. Additionally, they felt that this traditional game gave them an understanding of how local Indonesian culture has survived and evolved amid modernization and globalization. This opened a broader discussion about the preservation of traditional culture in the modern era, something highly relevant to students interested in cultural studies and anthropology. Overall, *dakon* has not only proven to be an effective language learning medium but also succeeded in introducing and deepening students' understanding of culture and social life in Indonesia. By connecting elements of tradition, history, and cultural values, this game enriches the learning experience of students at Yale University, helping them see that language learning is inseparable from understanding the culture that accompanies it. Through this game, students gain a more holistic view of what it means to be a part of Indonesian society and how a simple game like *dakon* can carry and reflect the depth of culture behind it.

## Conclusions

The use of traditional *dakon* games as a tool in Indonesian language learning at Yale University has been proven effective in improving speaking, listening, and vocabulary skills for non-native speakers. In addition, *dakon* also helps introduce Indonesian cultural elements to students, creating a more dynamic and interactive learning environment. The results of this study support the idea that game-based learning, especially those with cultural elements, can be an innovative approach to

foreign language teaching. Additionally, *dakon* supports interdisciplinary learning by combining language skills with cultural understanding, critical thinking, and creativity. Furthermore, the game serves as an informal assessment method that allows instructors to evaluate students' practical language proficiency in an interactive and relaxed environment. Ultimately, *dakon* not only contributes to language learning but also enhances social, emotional, and cultural competencies, making it an effective and holistic educational tool.

Based on the findings, it is recommended that *dakon* be incorporated more widely into language learning programs, especially in foreign language contexts like Indonesian at Yale University. Teachers should consider using *dakon* as both a pedagogical tool and a form of informal assessment to observe and evaluate students' language use in dynamic and real-world situations. Moreover, instructors can adapt the game to include more complex language tasks, such as requiring students to construct complete sentences or use specific vocabulary during gameplay, thereby enhancing its educational value. It is also recommended that future studies explore the long-term effects of game-based learning on language acquisition and cultural understanding. Additionally, expanding the use of *dakon* in cross-cultural settings can provide students with a deeper appreciation for the cultural and historical contexts that shape language and communication. By leveraging game-based learning, language programs can create more engaging, interactive, and meaningful experiences for students, promoting both language mastery and cross-cultural competence.

## Conflict of Interests

The author(s) declare that there are no conflicts of interest regarding the publication of this research. The research was conducted objectively, and the analysis was carried out without any external influences or financial interests that could have biased the results. All findings and recommendations presented are based on the data collected and the research objectives, without any personal or professional interests that could have affected the integrity of the study.

## Funding

Thank you to the Ministry of Education, Culture, Research, and Technology (MOECRT) of the Republic of Indonesia for funding this research under the "Research Collaboration Program Interest" scheme with the title "Traditional *Dakon* Game Application Based on Real-time Multiplayer Virtual Reality as Local Game Wisdom Diplomacy for BIPA Learning in the United States" contract number

2002.1/UN27.22/PT.01.03/2024. We also extend our gratitude to Yale University for allowing the research team to conduct this study.

## References

- [1] Adi, B. S., Irianto, D. P., & Sukarmin, Y. (2022). Teachers' perspectives in motor learning with traditional game approach for early childhood. *Cakrawala Pendidikan*, 41(1), 1-11. <https://doi.org/10.21831/cp.v41i1.36843>
- [2] Alomair, Y., & Hammami, S. (2024). Enhancing the Achievement of Learning Outcomes for Foreign Language Learners Based on Gamification and Card Games. *International Journal of Computer Games Technology*, 2024(1), 8084687. <https://doi.org/10.1155/2024/8084687>
- [3] Arisnawati, N., & Yulianti, A. I. (2022). BIPA Learning Design Based on Buginese Culture. *ETDC: Indonesian Journal of Research and Educational Review*, 1(4), 459-470. <https://doi.org/10.51574/ijrer.v1i4.447>
- [4] Dahalan, F., Alias, N., & Shaharom, M. S. N. (2024). Gamification and game-based learning for vocational education and training: A systematic literature review. *Education and Information Technologies*, 29(2), 1279-1317. <https://doi.org/10.1007/s10639-022-11548-w>
- [5] Debi, F., Saputra, A. D., & Saddhono, K. (2023). Discourse on Artistic Evidence and the Five Canons of Rhetoric in the 2022 National Education Day Speech. *Journal of Pragmatics and Discourse Research*, 3(2), 137-149. <https://doi.org/10.51817/jpdr.v3i2.327>
- [6] Eltahir, M. E., Alsalhi, N. R., Al-Qatawneh, S., AlQudah, H. A., & Jaradat, M. (2021). The impact of game-based learning (GBL) on students' motivation, engagement and academic performance on an Arabic language grammar course in higher education. *Education and Information Technologies*, 26, 3251-3278. <https://doi.org/10.1007/s10639-020-10396-w>
- [7] Fad, A. (2014). *Kumpulan permainan anak tradisional indonesia*. Cif.
- [8] Gee, J. P. (2003). What video games have to teach us about learning and literacy. *Computers in entertainment (CIE)*, 1(1), 20-20.
- [9] Greipl, S., Moeller, K., & Ninaus, M. (2020). Potential and limits of game-based learning. *International Journal of Technology Enhanced Learning*, 12(4), 363-389. <https://doi.org/10.1504/IJTEL.2020.110047>
- [10] Herawati, A., Febriani, I. M., Rahmawati, K., & Ummati, K. (2024). Pembelajaran Berbasis Permainan *Dakon* Sebagai Implementasi Literasi Budaya Pada Anak Usia Dini di PAUD Al-Amin Bugih Pamekasan. *Kiddo: Jurnal Pendidikan Islam Anak Usia Dini*, 545-555. <https://doi.org/10.19105/kiddo.v1i1.12721>



- [11] Koraishi, O. (2023). Teaching English in the age of AI: Embracing ChatGPT to optimize EFL materials and assessment. *Language Education and Technology*, 3(1).
- [12] Kurniawan, D., Ibrahim, A. F., & Kurnia, M. D. (2024).. Analisis Efektivitas Aplikasi Duolingo sebagai Media Pembelajaran BIPA Tingkat Dasar. [Analysis of the Effectiveness of the Duolingo Application as a Medium for Basic Level BIPA Learning]. *Jubah Raja (Jurnal Bahasa, Sastra, Dan Pengajaran)*, 3(1), 112–124.
- [13] Lombardi, D., Shipley, T. F., & Astronomy Team, Biology Team, Chemistry Team, Engineering Team, Geography Team, Geoscience Team, and Physics Team. (2021). The curious construct of active learning. *Psychological Science in the Public Interest*, 22(1), 8-43. <https://doi.org/10.1177/1529100620973974>
- [14] Maulidiyyah, A., Nafiah, N., Hartatik, S., & Rahayu, D. W. (2021). Development of *Dakon* game interactive E-Book media to improve mathematics learning outcome of elementary school students. *Education and Human Development Journal*, 6(2), 88-101. <https://doi.org/10.33086/ehdj.v6i2.2481>.
- [15] Nuryanto, S. (2014). Aplication Of Traditional Games *Dakon* (Atgd) Sebagai Langkah Untuk Membentuk Nilai Karakter Pada Anak Usia Dini Di Tk Kreatif Primagama Terban. *Academy of Education Journal*, 5(1). <https://doi.org/10.47200/aoej.v5i1.112>
- [16] Pramadhanti D., Suwandi S., & Rohmadi M. (2023). Persepsi Dosen Terhadap Kebutuhan Pembelajaran Bahasa Indonesia bagi Penutur Asing (Studi Kasus Perguruan Tinggi Jawa Tengah). *DWIJA CENDEKIA Jurnal Riset Pedagogik*, 7(3), 1180–1190. <https://doi.org/10.20961/jdc.v7i3.80060>
- [17] Prensky, M. (2003). Digital game-based learning. *Computers in entertainment (CIE)*, 1(1), 21-21.
- [18] Rohmadi, M., Sudaryanto, M., Andris Susanto, D., Saddhono, K., & Saputra, A. D. (2023). Sociopragmatic Study of Javanese Oral Discourse in Big City Communities as an Effort to Maintain Indigenous Language. *Research Journal in Advanced Humanities*, 4(4). <https://doi.org/10.58256/rjah.v4i4.1290>
- [19] Saddhono, K. S., Istanti, W., Kusmiatun, A., Kusumaningsih, D., Sukmono, I. K., & Saputra, A. D. (2024). Internationalization of Indonesian culinary in learning Indonesian as a foreign language (BIPA): A case of American students. *Research Journal in Advanced Humanities*, 5(1), 63-78. <https://doi.org/10.58256/rjah.v4i4.1315>
- [20] Salma, W., & Rizal, M. S. (2023). Game-Based Learning dalam Pembelajaran BIPA di Assalihiyah School Pattani Thailand. *BELAJAR BAHASA: Jurnal Ilmiah Program Studi Pendidikan Bahasa dan Sastra Indonesia*, 8(2), 227-235. <https://doi.org/10.32528/bb.v8i2.991>

- [21] Saputra, A. D., Ginting, D. O. B., Pramadhanti, D. F., Muftihah, N., & Saddhono, K. (2023). Indonesian language learning based on ecological intelligence: A case of Bengawan Solo Nature School. *Research Journal in Advanced Humanities*, 4(3), 124–138. <https://doi.org/10.58256/rjah.v4i3.1276>
- [22] Saputra, A. D., Sumarwati, S., & Anindyarini, A. (2024). Development of BIPANESIA Application Learning Media Based on Local Culture for Indonesian Language for Foreign Speakers (BIPA) Student. *International Journal of Multicultural and Multireligious Understanding*, 11(1), 513-533.
- [23] Siegel-Stechler, K. (2023). “Conversation is everything”: How teachers and students create environments where open discussion can thrive. *Theory & Research in Social Education*, 51(4), 626-660. <https://doi.org/10.1080/00933104.2023.2219638>
- [24] Situmorang, R. P., Suwono, H., Susanto, H., Chang, C. Y., & Liu, S. Y. (2024). Learn biology using digital game-based learning: A systematic literature review. *Eurasia Journal of Mathematics, Science and Technology Education*, 20(6), em2459. <https://doi.org/10.29333/ejmste/14658>
- [25] Suryani, L. D., Jazeri, M., & Maunah, B. (2021). Pengembangan Multimedia Interaktif Berbasis Permainan Tradisional *Dakon* dalam Meningkatkan Hasil Belajar Bahasa Jawa Kelas IV SD. *JRPD (Jurnal Riset Pendidikan Dasar)*, 4(2), 86-98. <https://doi.org/10.26618/jrpd.v4i2.5629>
- [26] Teng, M. F. (2023). Incidental vocabulary learning from captioned video genres: vocabulary knowledge, comprehension, repetition, and working memory. *Computer Assisted Language Learning*, 1-40. <https://doi.org/10.1080/09588221.2023.2275158>
- [27] Utama, W. W. I., Rahayu, W., & Hapidin. (2024). Re-inventing Vernacular Heritage for the Modern World: Integrating the Philosophical Values of Traditional Games in Early Childhood Education in Indonesia. *International Society for the Study of Vernacular Settlements*, 11(8), 108–124. <https://doi.org/10.61275/isvsej-2024-11-08-08>
- [28] Winarsih, E. (2018). Inventarisasi Permainan Tradisional Jawa Sebagai Sarana Pendidikan Karakter dalam Pembelajaran Bahasa Indonesia pada Siswa Sekolah Dasar. *Widyabastra: Jurnal Ilmiah Pembelajaran Bahasa dan Sastra Indonesia*, 2(2), 91-99. <http://doi.org/10.25273/widyabastra.v2i2.2114>
- [29] Ye, Y., & Kaplan-Rakowski, R. (2024). An exploratory study on practising listening comprehension skills in high-immersion virtual reality. *British Journal of Educational Technology* 55(4), 1651-1672. <https://doi.org/10.1111/bjet.13481>

- [30] Zou, D., Huang, Y., & Xie, H. (2021). Digital game-based vocabulary learning: where are we and where are we going? *Computer Assisted Language Learning*, 34(5-6), 751-777. <https://doi.org/10.1080/09588221.2019.1640745>
- [31] Zuhrita, S., & Mufidati, N. (2017). Permainan *dakon* writing therapy untuk mengembangkan kemampuan dasar menulis anak kelompok A TK Aisyiyah 33 Surabaya. *Pedagogi: Jurnal Anak Usia Dini dan Pendidikan Anak Usia Dini*, 3(3b). <https://doi.org/10.30651/pedagogi.v3i3b.1037>