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BIPA teachers' perspectives on Digital Game-Based Language Learning (DGBLL): Attitudes, benefits and challenges in teaching Indonesian as a foreign language

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ABSTRACT

As technology becomes increasingly integrated into foreign language education, Digital Game-Based Language Learning (DGBLL) has emerged as an innovative approach to enhance learner engagement and improve language acquisition. This study examines *Bahasa Indonesia bagi Penutur Asing* (BIPA) or Indonesian Language for Foreign Learners (ILFL) teachers' attitudes, perceived benefits, and challenges in integrating DGBLL into BIPA[1] teaching. While much of the existing research focuses on learners, only a limited number of studies examine teachers' perspectives on implementing DGBLL in language classrooms. This study collected data through semi-structured interviews with nine experienced BIPA teachers working in universities, language centers, and independent teaching environments. The data were then analyzed using thematic analysis. The findings reveal that BIPA teachers generally hold positive attitudes towards DGBLL, acknowledging its potential to enhance learner motivation, engagement, and vocabulary acquisition. Teachers also emphasize the benefits of DGBLL in facilitating personalized and adaptive learning as well as improving teaching efficiency and assessment practices. However, several challenges hinder the full implementation of DGBLL, including technological limitations, the need for pedagogical alignment, gaps in digital literacy, and insufficient institutional support. These findings highlight the need for targeted teacher training programs, better technological infrastructure, and the development of culturally relevant digital games to integrate DGBLL into BIPA teaching effectively. This study contributes to the expanding body of research on DGBLL by providing a region-specific perspective on its implementation in Indonesian language as a foreign language education.

Keywords: BIPA teachers; digital game-based language learning; educational technology; Indonesian as a foreign language; teacher perspectives

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[1] For clarity and consistency, henceforth the term 'BIPA' will be used throughout this paper to refer to *Bahasa Indonesia bagi Penutur Asing* (Indonesian Language for Foreign Learners)

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INTRODUCTION

Technology integration in foreign language education has significantly transformed teaching and learning methodologies, providing innovative strategies that enhance learner engagement, motivation, and language acquisition. Among these, Digital Game-Based Language Learning (DGBLL) has emerged as an approach that leverages digital games to create interactive and immersive learning experiences. Research has shown that DGBLL can support vocabulary acquisition, improve learners' motivation, and foster an engaging learning environment (Acquah & Katz, 2020; Al Murshidi et al., 2024; Alfuhaid, 2023; Bouzaiane & Youzbashi, 2024; Dixon et al., 2022; Hung et al., 2018). In addition to these benefits, DGBLL has been widely implemented in various language education contexts, including English (Aeni et al., 2024; Chowdhury et al., 2024) and Arabic (Ghani & Daud, 2023; Roseandree et al., 2024; Zainuddin et al., 2020), to name a few.

Unlike Europe, the Middle East, or Southeast Asia, Indonesia presents a unique case for integrating DGBLL into language teaching due to its distinct linguistic, infrastructural, and pedagogical challenges. Indonesia's vast archipelagic geography presents barriers to digital access and connectivity, leading to inconsistencies in the technological resources available for language learning (Aeni et al., 2024). While European and Middle Eastern countries often benefit from well-established digital learning infrastructure, many Indonesian institutions still struggle with limited access to digital tools and stable internet connectivity (Nurjannah et al., 2024; Ridzki et al., 2025). This disparity makes digital game-based learning significantly more challenging in Indonesia compared to regions with more robust technological support systems.

Additionally, the *Bahasa Indonesia bagi Penutur Asing* (BIPA) or Indonesian Language for Foreign Learners (ILFL) program operates within a unique linguistic and cultural framework. Unlike English and Arabic, which have long-standing digital learning ecosystems supported by extensive gamified language-learning resources, BIPA lacks a comparable repository of digital games tailored specifically for BIPA teaching (Taufik et al., 2020). Earlier studies have explored the use of digital games in BIPA teaching. For instance, Cahyaningsih (2021) examined how BIPA teachers at Canggu Community School integrate Quizlet, Kahoot, Quizizz, and Scribble.io into online learning to introduce and review vocabulary interactively. Similarly, Siahaan et al. (2023) highlighted the utilization of Kahoot to enhance word recognition skills in BIPA instruction. Another study by Septriani and Rustandi (2023) investigated the use of Wordwall in distance BIPA learning in Switzerland, emphasizing its effectiveness in increasing learner engagement and comprehension. More recent research by Pradiani et al. (2024) explored how the Quizlet application can be used to support learners' mastery of new vocabulary and terms in BIPA instruction.

Moreover, cultural attitudes toward the adoption of technology in education vary across regions. While DGBLL is widely accepted in many Western and Middle Eastern educational contexts, some teachers in Indonesia remain hesitant due to concerns about digital literacy, curriculum alignment, and institutional support (Taufik et al., 2020). These differences indicate that although DGBLL has been adopted in several parts of the world, challenges in its implementation still vary depending on the social, cultural, and institutional factors specific to each country. In the context of foreign language education, integrating DGBLL into teaching can be an innovative solution to overcoming technological and pedagogical barriers while making language learning more interactive and learner centered.

While many studies explore the role of DGBLL in foreign language education, much of the existing research focuses on learners' perspectives, with less emphasis on how teachers perceive and implement these technologies in their classrooms, including the challenges they face in the implementation of DGBLL. As a result, BIPA teachers often struggle to find and adapt digital games that align with the curriculum, whereas teachers in Europe or the Middle East have access to a broader selection of pre-existing DGBLL resources (Dashtestani, 2022; Huertas-Abril & García-Molina, 2022). Understanding teachers' attitudes toward DGBLL is crucial, as they play a key role in facilitating effective DGBLL teaching.

To address this gap, this study investigates BIPA teachers' perspectives on integrating DGBLL into their teaching practices. Specifically, the study examines teachers' attitudes toward DGBLL, identifies the perceived benefits of its implementation, and explores the challenges they encounter. By focusing on Indonesia, this research provides a nuanced understanding of how DGBLL can be effectively incorporated into BIPA teaching, considering the country's specific educational landscape and institutional constraints. Furthermore, the findings may inform teachers, policymakers, and curriculum developers to better support the adoption of DGBLL in Indonesian as a foreign language education. This research is guided by the following questions.

1. How are BIPA teachers' attitudes toward integrating DGBLL into teaching Indonesian as a foreign language?
2. What are the perceived benefits of using DGBLL in BIPA teaching?
3. What challenges do BIPA teachers face in implementing DGBLL in their teaching practices?

By addressing these questions, this study aims to bridge the research gap on teacher perspectives in DGBLL, specifically in BIPA teaching. The findings will contribute to the broader literature on DGBLL and provide region-specific insights that can inform policy and pedagogical strategies used in BIPA programs across Indonesia. Additionally, this study seeks to critically analyze how BIPA teachers navigate the complexities of DGBLL integration, offering practical recommendations for overcoming existing barriers and enhancing language learning outcomes.

Digital Game-Based Language Learning (DGBLL)

Digital Game-Based Language Learning (DGBLL) is an innovative approach that integrates technological and non-technological resources to enhance language acquisition (Deterding et al., 2011). It is a specialized subset of Digital Game-Based Learning (DGBL) that utilizes digital games to facilitate natural language development in an interactive and immersive environment (Osman et al., 2020). The growing interest in DGBLL is largely attributed to its ability to foster engagement and motivation among learners, particularly in the post-pandemic era, where digital transformation has reshaped education (Kazu & Kuvvetil, 2023). This shift aligns with Prensky's (2009) concept of "digital citizens," which describes individuals raised in the digital age who naturally integrate technology into their learning processes. From a theoretical perspective, DGBLL is closely associated with Self-Determination Theory (SDT) (Deci & Ryan, 1985), which posits that learners are more likely to be engaged when their intrinsic psychological needs—autonomy, competence, and relatedness—are fulfilled. Digital games support autonomy by allowing learners to control their learning pace, enhance competence through structured challenges and feedback, and promote relatedness by fostering collaborative learning experiences.

DGBLL can be categorized into three main types: educational games, commercial off-the-shelf (COTS) games, and game-based applications, each of which contributes uniquely to language acquisition (Belda-Medina & Poveda-Balbuena, 2024; Connolly et al., 2012). Educational games are specifically designed with pedagogical objectives in mind, ensuring structured language learning experiences. In contrast, COTS games, though primarily intended for entertainment, provide authentic linguistic input through in-game dialogues, narratives, and immersive storytelling, which help learners develop language proficiency in a more naturalistic context (Dixon et al., 2022; Tang & Taguchi, 2020). Game-based applications, on the other hand, incorporate gamification elements such as badges, rewards, and challenges to enhance motivation and engagement (Truong & Dinh, 2024). The effectiveness of DGBLL in language learning is well-documented in empirical research. Studies have consistently shown its positive impact on vocabulary acquisition (Alfuhaid, 2023; Bouzaiane & Youzbashi, 2024; Chandra & Kepirianto, 2021; Dixon et al., 2022; Kazu & Kuvveti, 2023; Truong & Dinh, 2024; Ying & Ismail, 2022), while others highlight its ability to enhance motivation and engagement through immersive game-based experiences (Acquah & Katz, 2020; Govender & Arnedo-Moreno, 2021; Hung et al., 2018). The success of DGBLL can be further explained by Expectancy-Value Theory (Eccles & Wigfield, 2002), which suggests that learners engage in learning activities based on their belief in success (expectancy) and the perceived usefulness of the task (value). In the context of DGBLL, learners who perceive digital games as both enjoyable and beneficial for language learning are more likely to invest effort and persist in their learning journey.

Teachers' Attitudes toward DGBLL

Teachers' attitudes play a crucial role in the effective implementation of DGBLL, as their perceptions, beliefs, and judgments influence both instructional practices and learner engagement (An, 2018). Attitudes toward DGBLL vary and can be categorized as positive, negative, or neutral, depending on factors such as prior teaching experience, digital literacy, cultural background, institutional support, and personal teaching philosophy (Belda-Medina & Poveda-Balbuena, 2024). The Theory of Planned Behavior (TPB) (Ajzen, 1991) provides a useful framework for understanding these attitudes, suggesting that teachers' intentions to adopt DGBLL are influenced by three key factors: their personal attitudes toward digital games, the influence of social norms and institutional expectations, and their perceived control over the ability to integrate games into their teaching practices. Research indicates that many teachers hold positive attitudes toward DGBLL, recognizing its ability to enhance learner motivation, facilitate interactive learning, and improve vocabulary retention. For example, Zainuddin et al. (2020) found that Arabic language teachers valued DGBLL for its role in expanding learners' vocabulary, while Dashtestani (2022) reported that Iranian pre-service teachers acknowledged the cooperative and problem-solving benefits of digital games in language learning. These findings suggest that teachers generally understand the educational advantages of DGBLL and appreciate its potential to make language learning more engaging and effective.

Despite these positive perceptions, several challenges hinder the widespread adoption of DGBLL in classrooms. The Technology Acceptance Model (TAM) (Davis, 1989) explains that teachers' willingness to integrate technology depends on two

key factors: perceived usefulness and perceived ease of use. Many teachers express concerns about the pedagogical challenges of incorporating digital games into structured curricula, as well as the risk of learners becoming distracted during gameplay (Burston, 2014; Gilakjani & Leong, 2012). Moreover, a lack of digital literacy among teachers remains a significant barrier, with studies indicating that many pre-service and in-service teachers have not received sufficient training in using DGBLL effectively (Alyaz & Genc, 2016; Belda-Medina & Calvo-Ferrer, 2022). Institutional constraints, such as limited access to technology, inadequate professional development opportunities, and a lack of administrative support, further exacerbate these challenges. These obstacles highlight the gap between teachers' willingness to adopt DGBLL and their ability to implement it effectively in real-world educational settings. Addressing these barriers through targeted training programs, institutional investment in digital resources, and curriculum integration strategies is essential for ensuring the successful adoption of DGBLL in foreign language education.

Benefits and Challenges of Integrating DGBLL

Integrating DGBLL into foreign language teaching has influenced teachers' pedagogical practices, presenting benefits and challenges. Several scholars (e.g., Al Murshidi et al., 2024; Al-Harbi & Madini, 2024; Avidov-Ungar & Hayak, 2023; Chen, 2022; Mihat et al., 2024; Umamah & Saukah, 2022; Zainuddin et al., 2020) highlight that DGBLL improves learner engagement and motivation through the addition of increased interactive and engaging learning. This effect is especially obvious in the use of several digital tools such as Kahoot, Padlet, and Quizizz, which incorporate several gamified elements, real-time feedback, and collaborative learning opportunities (Chen, 2022; Rajabpour, 2021), which creates competitive and learner-centered learning. Additionally, Mihat et al. (2024) point out that Kahoot!'s immediate feedback enables learners to spot errors right away and fix their comprehension. Likewise, Rajabpour (2021) stresses how extremely valuable quick feedback is, noting that it allows learners and teachers to rapidly check comprehension, fix misunderstandings, and greatly improve the entire learning experience. Beyond engagement and motivation, DGBLL has been shown to contribute to language proficiency development, particularly in areas such as vocabulary acquisition, reading comprehension, and listening skills (Alyaz & Genc, 2016). Chowdhury et al. (2024) and Dixon et al. (2022) also noted that digital games, due to their engaging and appealing characteristics, increase vocabulary retention and allow people to comprehend language concepts better. Additionally, Konstantakis et al. (2022) clearly state that DGBLL considerably helps learners learn languages, such as English, through customized methods that thoroughly address each learner's specific requirements.

Despite its benefits, there are some challenges associated with using DGBLL in language learning. Scholars (e.g., Alsuhaymi & Alzebidi, 2019; Dashtestani, 2022; Umamah & Saukah, 2022) reported that teachers in the Middle East and Southeast Asia encountered inadequate digital infrastructure, including limited access to digital devices, unreliable internet connectivity, and insufficient technical support. These challenges made it harder for teachers to include activities based on games in a good way and also limited learners' access to important materials. In the end, this reduced how well digital language learning worked. Such challenges are evident in the use of platforms like Kahoot, where teachers struggle with technical issues, including unstable internet connections and inadequate device availability (Rajabpour, 2021). Moreover, Taufik et al. (2019) noted that poor internet connection in Indonesia makes teachers think twice about using digital-based games in the classroom. Beyond technological constraints, teachers often struggle to find resources that align with their instructional goals (Dashtestani, 2022). However, time constraints pose an additional challenge, making it difficult for teachers to design curriculum-aligned quizzes and effectively integrate game-based learning activities into teaching (Rajabpour, 2021).

On another note, Dashtestani (2022) and Huertas-Abril and García-Molina (2022) highlighted that preservice teachers were concerned about the ability of DGBL to accommodate diverse learning styles. These concerns arise from differences in learners' cognitive preferences, learning speeds, and digital literacy levels, each of which can affect their engagement and understanding in game-based educational settings. Besides those challenges regarding learners, teachers face multiple teaching-related issues when adding digital games to language classes. Research by Belda-Medina and Poveda-Balbuena (2024), Blume (2019), and Huertas-Abril and García-Molina (2022) indicates that many teachers have limited knowledge and experience in effectively utilizing digital games as teaching tools. Without proper training and support, teachers may battle to link game-related tasks to curriculum goals, assess learner progress within games, and balance entertainment with educational outcomes.

METHOD

Research Design

This study employs a descriptive qualitative research design to explore and understand BIPA teachers' perspectives on integrating DGBLL into their instructional practices. Qualitative research is

particularly suitable for investigating complex social phenomena, allowing researchers to capture participants' experiences, perceptions, and challenges in-depth (Denzin & Lincoln, 2018; Merriam & Tisdell, 2016). A descriptive design ensures that the study systematically records and interprets teachers' perspectives in their natural teaching contexts, providing a rich and holistic account of their engagement with DGBLL (Sandelowski, 2000). Furthermore, this approach facilitates an interpretative understanding of how teachers navigate the opportunities and limitations of digital game-based pedagogy (Patton, 2015). Given the evolving nature of educational technology in language teaching, a qualitative descriptive study is well-suited to generating nuanced insights into teachers' real-world practices.

Participants

The participants in this study consisted of BIPA teachers who taught Indonesian as a foreign language in various educational settings, including universities, language centers, and independent teaching environments. For this purpose, nine teachers were chosen using purposive sampling to ensure they had relevant experience with DGBLL in their classes. Given that DGBLL is not widely implemented in all teaching contexts, the following selection criteria were established.

- Participants must be BIPA teachers at a university, language center, or another recognized teaching institution.
- They must have actively incorporated DGBLL in their teaching practices.
- They must have at least three years of experience using digital games in language teaching.
- They must hold a master's or PhD degree in a relevant field.
- They must have at least five years of teaching experience in face-to-face and online learning environments.

The final sample comprised four male and five female participants aged 30 to 50. To ensure ethical compliance, participants were fully informed about the study's objectives and provided written informed consent before participation. Ethical approval was obtained from the Universitas Tidar Ethics Committee under approval code B/1228/UN57.L1/PT.01/2024.

Data Collection

Data were collected through semi-structured interviews conducted online via Zoom between August 19 and September 3, 2024. Semi-structured interviews were chosen because they allow flexibility in probing participants' responses while maintaining consistency across interviews (Creswell, 2015). Each interview lasted between 20 and 30 minutes and was audio-recorded with the consent of the participants to ensure accurate data transcription.

To enhance the credibility and rigor of the study, a preliminary pilot study was conducted with a small group of BIPA teachers to refine the interview questions. This step ensured the questions were clear, relevant, and aligned with the study's objectives. After the interviews, the recordings were transcribed verbatim and translated from Indonesian to English to facilitate the analysis.

Member checking was employed to improve the trustworthiness of the data. Each participant was given the opportunity to review their transcribed interview and provide feedback to ensure their responses were accurately captured and interpreted. This process minimized potential misinterpretations and strengthened the reliability of the findings.

Data Analysis

Thematic analysis, as outlined by Braun and Clarke (2006), was employed to analyze the data using both deductive and inductive coding strategies for a systematic and theory-informed approach. The process began with the manual transcription of the interviews to ensure accuracy, followed by familiarization with the data through repeated readings of the transcripts while taking notes on key observations (Nowell et al., 2017). The deductive coding process was guided by existing theoretical frameworks regarding teacher attitudes toward technology integration in language learning, such as Davis' TAM (1989). This ensured that established categories, including perceived usefulness, ease of use, and pedagogical benefits, were systematically applied. In parallel, an inductive coding approach allowed new themes to emerge organically from the data, capturing perspectives beyond the pre-existing theoretical constructs (Clarke & Braun, 2017). Initial descriptive codes were generated using NVivo software to structure relevant concepts related to the research questions. These codes were then examined to identify recurring patterns and were grouped into broader themes that reflected both theory-driven and data-driven insights regarding BIPA teachers' attitudes, perceived benefits, and challenges in implementing DGBLL (Clarke & Braun, 2017). The themes underwent multiple rounds of review and refinement to ensure clarity, coherence, and alignment with both theoretical perspectives and participant experiences (Vaismoradi et al., 2013). To enhance validity, peer reviews and member checking were conducted, ensuring that the emerging themes accurately reflected participants' perspectives and minimized potential researcher bias (Lincoln & Guba, 1985). This combined approach ensured that the themes were systematically developed through both pre-existing theoretical lenses and empirical findings from the data.

Validity and Reliability

To establish the validity and reliability of this study, multiple strategies were implemented throughout the research process. Credibility was ensured through member checking, where participants reviewed their interview transcripts to confirm the accuracy of their responses, minimizing misinterpretation and ensuring that their perspectives were authentically represented (Creswell & Poth, 2018). A pilot study was conducted before data collection to refine the interview questions, enhancing clarity and relevance. Additionally, peer debriefing was carried out, allowing external researchers to review the coding and thematic development process, further validating the findings and mitigating potential researcher bias (Braun & Clarke, 2021).

Transferability was addressed by providing a comprehensive description of the study's context, including participant selection, data collection procedures, and analytical methods. This level of detail enables future researchers to assess the applicability of the findings in similar educational settings (Shenton, 2004). Confirmability was achieved by maintaining a thorough audit trail documenting coding decisions, theme development, and researcher reflections. This transparency enhances the study's reproducibility and strengthens its methodological rigor, ensuring reliable and meaningful insights into BIPA teachers' perspectives on DGBLL (Guba & Lincoln, 1994).

FINDINGS

BIPA Teachers' Attitudes toward Integrating DGBLL

BIPA teachers exhibited a range of attitudes toward integrating DGBLL in their classes, from strong support to cautious optimism and neutrality. These attitudes were shaped by teachers' perceptions of DGBLL's usefulness, ease of implementation, and alignment with learner needs. Many BIPA teachers expressed strong enthusiasm for DGBLL, recognizing its potential to enhance learner engagement, foster motivation, and create an interactive learning environment. They viewed DGBLL as a means to make lessons more dynamic and appealing, moving away from traditional rote learning methods. Participant 3 emphasized:

> I support using DGBLL in BIPA teaching because it enhances learning, enriches learners' experiences, and provides them with an interactive learning environment.

Similarly, participant 8 reinforced the idea that digital games captivate learners:

> I stand to be corrected, but I strongly believe DGBLL amazes learners, and that is why learning BIPA through DGBLL is more enjoyable.

These statements highlight that for some teachers, DGBLL was not just an additional tool but a fundamental shift in how language learning should be approached. They believed that digital games made language learning more accessible and encouraged participation by lowering learners' anxiety and creating a more relaxed environment. Participant 5 further reinforced this notion, stating: "The use of DGBLL should be embraced because lessons become more enjoyable, and learners participate more." Such perspectives suggest that DGBLL has the potential to transform traditional language learning paradigms by making lessons more student-centered. Teachers with this mindset often emphasized how learners became more involved and motivated when learning felt like playing, making the learning experience more immersive and natural.

Despite strong support from some teachers, others exhibited cautious optimism, acknowledging the benefits of DGBLL while raising concerns about its universal applicability. A recurring theme among these teachers was that while DGBLL could be motivating and effective, it might not be suitable for all learners. Participant 7 elaborated:

> Through DGBLL, learners can be motivated, remember things, and even easily learn new words. However, the reality is that not all learners have the same advantages.

For this teacher, the effectiveness of DGBLL depended on learners' individual differences. While digital games worked well for some learners, others struggled with engagement or had difficulty adapting to digital game-based learning methods. Factors such as prior exposure to digital tools, learning styles, and personal preferences influenced how effective DGBLL could be. Some learners might find digital games distracting rather than helpful, leading to reduced focus on core language learning objectives.

Similarly, participant 2 highlighted the importance of learner demographics:

> DGBLL is beneficial and enhances engagement, but factors such as learners' age and background should be taken into account to ensure its effectiveness.

This comment underscores the need for a more nuanced approach to DGBLL implementation. Younger learners who were more familiar with digital tools might find game-based learning intuitive, whereas older learners or those from educational backgrounds with limited digital exposure could struggle. Some teachers also worried

about varying levels of digital literacy among learners, which could create disparities in learning outcomes. In this case, the digital divide was not just about access to technology but also about familiarity and comfort with using digital platforms effectively for learning purposes.

A smaller group of teachers remained neutral, suggesting that while DGBLL could be beneficial, it was not essential for all teaching contexts. Some teachers viewed digital games as supplementary rather than core instructional tools, indicating that their adoption depended on learning objectives and institutional constraints. Participant 1 explained:

> It depends on the situation. DGBLL can be useful, but not all learners and teachers see them as essential, particularly in more formal or scientific learning environments.

For this teacher, DGBLL was seen as an option rather than a necessity. They acknowledged its potential benefits but did not believe it should replace traditional teaching methods entirely. In some cases, the nature of the subject matter being taught played a role in determining whether DGBLL was appropriate. More structured or academically rigorous lessons might require direct instruction and guided practice, where digital games might not be the best fit.

Similarly, participant 6 emphasized the need for careful planning: "It is about how we use them. DGBLL can help, but we must be careful and sensible about how we implement them." This perspective highlights the importance of balance. This teacher recognized that while DGBLL could enhance learning, it required thoughtful integration into the curriculum to ensure that the games supported rather than distracted from learning goals. She also stressed the importance of selecting appropriate games that aligned with lesson objectives rather than using games simply for engagement without a clear pedagogical purpose.

Benefits of Integrating DGBLL into Teaching Indonesian as a Foreign Language

A major benefit of DGBLL in BIPA teaching is its ability to enhance learners' engagement and motivation. Digital games create an immersive environment that encourages active participation. Teachers have observed that when lessons are gamified, learners become more enthusiastic and eager to participate. This enthusiasm is evident in participant 4's statement:

> DGBLL makes the classroom atmosphere more enjoyable. Learners are more enthusiastic, and I can see they are more motivated to participate.

The interactive nature of DGBLL seems to foster a sense of excitement that is often missing in traditional learning environments. Similarly, participant 8 highlighted the effectiveness of DGBLL in maintaining learner attention, stating, "Using DGBLL helps keep learners engaged, especially when they are feeling tired or distracted. They become more active in class." This indicates that the gamified elements help sustain attention and energy, ensuring that learners stay focused even in challenging moments. The dynamic and gamified nature of digital games not only maintains learners' interest but also prevents the monotony that can sometimes plague traditional classroom settings.

Teachers further emphasized that DGBLL prevents boredom and fosters curiosity among learners. This is reflected in Participant 1's observation:

> Since using DGBLL, the class no longer feels boring. Learners have become more curious and have even started showing interest in digital games.

Another major benefit of DGBLL is its contribution to vocabulary acquisition and language practice. Teachers pointed out that digital games provide repeated exposure to vocabulary and grammar structures, which helps learners retain new words more easily. Participant 3 remarked:

> Learners can remember vocabulary more effectively when they learn through digital games. The repetition and visual elements help them retain new words.

The use of repetition, coupled with visual aids, reinforces vocabulary acquisition, making it easier for students to internalize and recall new words. Moreover, the interactive nature of games supports deeper cognitive processing, as learners associate words with images, actions, and contextual clues. This multisensory approach enhances long-term memory retention.

Additionally, DGBLL promotes autonomous learning by allowing learners to practice at their own pace. This benefit was noted by Participant 6: "With DGBLL, learners can practice vocabulary at their own pace and measure their own improvement." By offering individualized learning experiences, DGBLL empowers learners to take control of their language development, leading to greater self-confidence and motivation. Participant 5 also emphasized that digital game-based learning strategies create a more enjoyable learning experience:

> This method combines fun with effective memory strategies. I can see its positive impact on learners' retention of vocabulary and sentence structures.

DGBLL provides interactive learning experiences tailored to different learning styles and proficiency levels. The ability to adjust the difficulty level allows for a more personalized approach, accommodating both high-achieving learners and those who need more support. This adaptability was highlighted by participant 9:

> Some learners struggle with traditional exercises, but they feel more comfortable learning through DGBLL because they can learn at their own speed.

This flexibility ensures that all learners, regardless of their level, can progress in a way that suits their individual needs. Additionally, the use of multimedia elements, such as animations, sound effects, and gamification mechanics (e.g., points, badges, and leaderboards), further enhances learner engagement. These features stimulate learners' intrinsic motivation by introducing elements of competition and achievement. Participant 2 observed:

> Learners are more excited when they see colorful visuals and animations in learning games. It helps them stay interested and focused.

Beyond boosting learner engagement, DGBLL also contributes to teaching efficiency and assessment. Several teachers pointed out that automated scoring and instant feedback reduce the time spent on manual grading, allowing teachers to focus more on teaching. Participant 8 explained:

> I used to spend a lot of time checking learners' answers manually. Now, with DGBLL, learners receive immediate feedback, which helps them correct their mistakes instantly.

This immediate feedback loop not only saves teachers time but also accelerates the learning process for students. Furthermore, digital games accelerate learners' understanding through instant feedback, as highlighted by participant 7: "With the scoring and automatic feedback features, learners quickly recognize their mistakes and can correct them immediately."

The responses from the teacher suggest that DGBLL is an effective tool for both online and face-to-face learning settings. The adaptability of digital games ensures their usability in various instructional contexts.

Challenges of Integrating DGBLL into Teaching Indonesian as a Foreign Language

Another common theme was the challenges associated with implementing DGBLL in BIPA teaching. While DGBLL enhances engagement and provides interactive learning experiences, its integration is not without difficulties. The significant hurdle is the unpredictability of technology, particularly in environments where infrastructure might not fully support the demands of digital games. One major concern was unreliable internet connectivity, which made it difficult for students to stay connected and engaged during lessons. As emphasized by participant 1: "When the internet is spotty, learners keep getting kicked out of the game, which makes it hard to keep them interested." This statement reveals how critical a stable internet connection is for maintaining student focus and ensuring an uninterrupted learning experience. The disruption caused by poor connectivity undermines the potential of digital games to engage students, leading to frustration and disengagement.

Additionally, access to technology varies across learning environments. Some classrooms may have weak internet signals, which prevents full participation. This issue was highlighted by participant 4: "In some places, the internet signal is not strong enough, so not all learners can participate equally." This reflects the digital divide, where learners in areas with inconsistent or poor internet access are at a distinct disadvantage. The lack of equal access to resources creates an inequitable learning environment, where not all students have the same opportunities to benefit from digital game-based learning. In areas with these connectivity issues, students might experience delays or get disconnected, which in turn disrupts the flow of the lesson and negatively impacts overall engagement.

Furthermore, the challenge of limited access to devices, particularly mobile phones that might not support interactive features, was also noted by teachers. As observed by participant 5, "Not all learners have access to their own digital devices, and some classrooms lack the necessary equipment to support digital games." The lack of appropriate devices, especially in areas where students rely on their mobile phones, intensifies the existing gap in access to digital learning tools. The absence of sufficient devices further exacerbates the problem, making it difficult for teachers to ensure all students can engage in the game-based activities, limiting the overall effectiveness of DGBLL.

Beyond technical concerns, the educational value of digital games is another issue raised by teachers. While games can be entertaining, they are not always designed with language learning objectives in mind. As participant 3 pointed out, "If games are not carefully designed, they might entertain rather than teach." This statement underscores the necessity of selecting or designing games that are not just fun but also pedagogically sound. If the games fail to support specific learning goals, they can detract from the educational value of the lesson. Teachers must therefore ensure that the

games align with the learning objectives, thereby enhancing the quality of instruction rather than just serving as entertainment.

Moreover, the implementation of DGBLL requires teachers to accommodate diverse learning styles. While some students thrive in competitive, game-based environments, others prefer more traditional methods, such as reading or written exercises. As explained by participant 6:

> Some learners thrive on competition and games, but others are introverted and prefer reading. We need to balance games with other teaching methods.

This response highlights the importance of using a variety of teaching strategies to address the diverse needs of students. Teachers must find a balance between engaging students with game-based learning while also ensuring that students who do not respond well to games still receive the instruction and support they need through more traditional learning methods.

Digital literacy is another key challenge. While younger learners are often familiar with digital tools, adult learners, in particular, may struggle with navigating the digital platforms required for DGBLL. Participant 7 observed, "Some adult learners are not familiar with digital platforms, making it difficult for them to engage with the digital games effectively." This gap in digital literacy can serve as a barrier to participation, as students who are not comfortable with technology may find it difficult to engage with the learning materials. Teachers must therefore provide additional support to help learners develop the necessary digital skills, ensuring that all students have the opportunity to engage fully with DGBLL.

Similarly, teachers face challenges in mastering the digital tools required for DGBLL, necessitating continuous professional development. As noted by Participant 5, "Teachers must continuously learn new digital games and be creative in designing engaging activities, which can be time-consuming." This statement indicates that integrating DGBLL requires not only technical skills but also creativity and a significant time investment on the part of the teacher. Without adequate training, teachers might struggle to effectively utilize digital games in their lessons, diminishing the potential impact of this teaching method.

Unlike traditional teaching methods, integrating DGBLL into lesson plans requires additional preparation. Teachers must carefully select and customize digital games to align with lesson objectives, ensuring that learners receive meaningful language practice. This challenge was highlighted by Participant 8, "It takes extra time to prepare digital games that align with specific lesson topics and learning objectives." This added preparation time can deter teachers from fully embracing DGBLL, particularly if they feel overwhelmed by the time and effort required.

Moreover, the lack of institutional support compounds these challenges. Teachers expressed frustration over the absence of clear policies or training provided by their institutions regarding the use of digital games in teaching. As shared by Participant 9:

> There are no specific guidelines or training sessions provided by my institution on how to use digital games effectively in teaching BIPA. I have to figure it out on my own.

This lack of institutional support means that teachers often face these challenges alone, without the resources or guidance necessary to effectively implement DGBLL. The absence of training and clear policies on integrating digital games into language teaching further exacerbates the difficulties teachers face.

DISCUSSION

This study contributes to the growing body of research on DGBLL by offering an in-depth examination of BIPA teachers' perspectives, addressing gaps that previous research has overlooked. While earlier studies primarily focused on learners' engagement and learning outcomes (Bouzaiane & Youzbashi, 2024; Truong & Dinh, 2024), this study shifts the focus to teachers as key implementers of DGBLL, highlighting their attitudes, perceived benefits, and challenges. The findings reveal that BIPA teachers generally have positive attitudes toward integrating DGBLL, consistent with previous research emphasizing its ability to enhance classroom engagement (Avidov-Ungar & Hayak, 2023; Chowdhury et al., 2024). This positive perception can be interpreted through TAM (Davis, 1989), which suggests that teachers are more likely to adopt technology when they perceive it as useful and easy to implement. Teachers who support DGBLL highlight its benefits in enhancing learner engagement and learning experiences, indicating that they see this technology as an effective tool in BIPA education. This aligns with previous research showing that teachers are more likely to accept technology when they believe it positively impacts learning (Teo, 2011). Furthermore, DGBLL contributes to increased engagement and comfort in BIPA learning. These findings confirm Deci and Ryan's (1985) theory that DGBLL can enhance learner motivation by fulfilling their basic needs for autonomy, competence, and relatedness, thereby creating a more effective and enjoyable learning environment. Therefore, the positive attitudes observed in this

study indicate that DGBLL can be effectively integrated when teachers recognize its practical benefits in BIPA teaching.

Nevertheless, some teachers adopt a cautious approach to integrating Digital Game-Based Language Learning (DGBLL), taking into account learner readiness and whether this technology is suitable for learners from diverse backgrounds. This perspective aligns with TPB (Ajzen, 1991), which suggests that individuals' intentions to behave in a certain way are shaped by their attitudes, subjective norms, and perceived behavioral control. While teachers recognize that DGBLL can enhance motivation and aid vocabulary retention, they are also mindful of its limitations. These limitations include differences in access to digital devices and varying levels of student readiness to use technology. These concerns echo the findings of Dashtestani (2022) and Blume (2019), who noted that teachers' confidence in implementing DGBLL is influenced by external factors such as institutional support, learner readiness, and prior exposure to technology. Additionally, some teachers maintain a neutral stance toward DGBLL, arguing that this method may not be essential in every learning context. This viewpoint can be explained by the Expectancy-Value Theory (Eccles & Wigfield, 2002), which posits that individuals are more likely to adopt a method if they perceive it as valuable and effective. Teachers who remain neutral might not see DGBLL as necessary, particularly in more formal or academically structured learning environments. This suggests that, although DGBLL has numerous advantages, its implementation should be customized according to the learning objectives and the preferences of both teachers and learners.

These findings also highlight the benefits of using DGBLL into BIPA teaching. BIPA teachers identify several key benefits of DGBLL, with enhanced engagement and motivation emerging as significant benefits. They recognize that integrating digital games fosters a more interactive and enjoyable learning environment, which aligns with previous research (Al Murshidi et al., 2024; Al-Harbi & Madini, 2024; Umamah & Saukah, 2022). The interactive and gamified nature of DGBLL is consistent with self-determination theory (Deci & Ryan, 2000), which emphasizes the role of intrinsic motivation in learning. When learners perceive learning as enjoyable, they are more likely to remain engaged and actively participate. Additionally, DGBLL plays a vital role in vocabulary acquisition and language practice for BIPA learners. Teachers emphasized that repeated exposure to vocabulary and grammar structures within digital games enhances retention and recall. The interactive nature of these games allows learners to encounter new words in meaningful contexts, practice their usage, and receive immediate feedback, all of which contribute to more effective language acquisition. These findings align with previous studies indicating that digital games facilitate vocabulary learning by integrating linguistic input with engaging, immersive experiences, thereby fostering deeper cognitive processing (Chowdhury et al., 2024; Dixon et al., 2024; Hung et al., 2018).

Another key benefit of DGBLL is its capacity for personalization and adaptive learning. Teachers reported that digital games allow learners to progress at their own pace, reinforcing the findings of Alyaz and Genc (2016), who highlighted the adaptability of digital game-based learning to diverse learning styles. Additionally, teachers emphasized the role of multimedia elements such as animations and interactive feedback in enhancing comprehension and retention, a finding echoed in research by Konstantakis et al. (2022). The automated assessment features of DGBLL were also perceived as beneficial, reducing the burden of manual grading and providing immediate feedback to learners. Research by Mihat et al. (2024) similarly highlights the efficiency of digital game-based formative assessments, reinforcing the idea that digital tools can streamline the evaluation process while enhancing learners' understanding.

Despite these benefits, integrating DGBLL into BIPA teaching presents considerable challenges. Technological constraints, such as unreliable internet access and limited digital infrastructure, were among the most frequently cited issues, mirroring findings by Alsuhaymi and Alzebidi (2019). Teachers reported that connectivity problems often disrupted digital game-based activities, limiting their effectiveness in the classroom, a concern also raised by Rajabpour (2021). Furthermore, disparities in learners' access to digital devices pose additional barriers, highlighting the need for institutional investment in technological resources to support game-based learning initiatives. Another challenge lies in ensuring the pedagogical relevance of digital games. Many teachers expressed concerns that commercially available games prioritize entertainment over structured language learning, making it difficult to align them with curriculum goals. Similar findings were reported by Dashtestani (2022), who emphasized the need for teachers to carefully select or modify digital games to meet instructional objectives. The lack of high-quality, curriculum-aligned digital games for BIPA teaching further underscores the necessity for investment in localized game development to enhance the effectiveness of DGBLL.

Digital literacy gaps among both teachers and learners also pose significant challenges to DGBLL adoption. While younger learners tend to adapt quickly to digital tools, older learners and teachers with limited experience in digital game-based platforms often struggle with implementation. This aligns with findings by Belda-Medina and Poveda-

Balbuena (2024), who reported that pre-service teachers often lack the necessary training to integrate digital games effectively into language teaching. Scholars such as Huertas-Abril and García-Molina (2022) advocate for targeted professional development programs that equip teachers with the digital skills needed for successful DGBLL integration. From the perspective of TAM (Davis, 1989), a lack of perceived ease of use and usefulness may deter teachers from adopting DGBLL in their classrooms. Additionally, time constraints and the effort required for game selection and implementation further hinder DGBLL adoption. Teachers in this study reported that preparing and integrating digital games into lesson plans requires additional effort, aligning with findings by Burston (2014) and Rajabpour (2021). Without structured institutional support and clear guidelines for integrating DGBLL, teachers are left to navigate these challenges independently, a concern similarly observed by Demirbilek et al. (2022). The absence of formal policies promoting digital game-based teaching within many educational institutions exacerbates these difficulties, limiting the widespread adoption of DGBLL in BIPA teaching.

The findings underscore the necessity of structured teacher training programs that enhance digital literacy and pedagogical skills to integrate DGBLL effectively. As suggested by Huertas-Abril and García-Molina (2022), professional development initiatives are crucial in equipping teachers with the skills needed to navigate digital game-based learning environments. Training workshops should focus not only on the technical aspects of using digital games but also on strategies for aligning them with language-learning objectives. Additionally, teacher training programs must address varying levels of digital proficiency among teachers, ensuring that both novice and experienced teachers can effectively implement DGBLL in their classrooms.

Enhancing technological infrastructure is another key implication of this study. Many teachers identified unreliable internet connectivity and a lack of access to suitable devices as significant barriers to DGBLL adoption. Addressing these challenges, as emphasized by Alsuhaymi and Alzebidi (2019), requires institutional support to provide stable digital learning environments. Governments and educational institutions must invest in upgrading digital infrastructure, particularly in regions with limited access to technology. By ensuring equitable access to digital tools, learners and teachers can fully engage with game-based learning without technical disruptions.

Finally, the study highlights the need for the development of culturally relevant and curriculum-aligned digital games tailored specifically for BIPA teaching. While existing digital games often cater to widely taught languages such as English and Spanish, there is a lack of high-quality resources for Indonesian language for foreign learners. Collaborative efforts between teachers, game developers, and policymakers are essential to creating digital learning tools that effectively support BIPA teaching. Such initiatives will not only enhance the quality of digital game-based learning but also ensure its sustainability in foreign language education.

CONCLUSION

This study highlights the significance of DGBLL in BIPA teaching by shedding light on teachers' attitudes, perceived benefits, and challenges. The findings reveal that while BIPA teachers generally support the integration of digital games in language learning, various barriers, including technological constraints, pedagogical concerns, and digital literacy gaps, hinder its full implementation. Addressing these challenges requires targeted teacher training, improved technological infrastructure, and the development of culturally relevant learning materials. By overcoming these obstacles, teachers and policymakers can enhance the effectiveness of digital game-based learning in BIPA teaching, ultimately enriching the language learning experience and fostering greater learner engagement.

While this study provides valuable insights into BIPA teachers' perspectives on DGBLL, several limitations should be acknowledged. This study is based on qualitative data from a relatively small sample of teachers, limiting the generalizability of the findings. Future research should consider expanding the sample size and incorporating quantitative methods to provide a more comprehensive analysis of DGBLL implementation in BIPA teaching. Additionally, this study focuses primarily on teachers' perspectives; further research should explore learner experiences with DGBLL to gain a more holistic understanding of its impact on language learning. Longitudinal studies examining the sustained effects of digital game-based learning on learner proficiency would also provide valuable insights into best practices for DGBLL implementation. Finally, comparative studies between BIPA and other foreign language programs could offer broader perspectives on the effectiveness of digital game-based teaching across different educational contexts.

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