

Implementing Bamboozle as an ICT-Based Interactive Learning Medium in Elementary Indonesian Language Instruction

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Abstract

The integration of Information and Communication Technology (ICT) into Indonesian language instruction at the elementary school level continues to face challenges, particularly the continued use of conventional teaching methods that limit classroom interaction. This article examines the implementation of the Bamboozle platform as an ICT-based interactive learning medium in Indonesian language instruction at SDN Tanah Tinggi 01 and explores teachers' perceptions of its potential through a community service program. A qualitative descriptive approach was employed. Data were collected through participant observation, interviews, and documentation during webinar and training activities and were analyzed using data reduction, data display, and conclusion drawing. The findings show that the implementation of Bamboozle through interactive lectures, demonstrations, group simulations, and discussions improved teachers' understanding of interactive learning media, technical skills, and readiness to integrate ICT into classroom instruction. The participants also perceived that gamification elements, including points, challenges, and collaboration, have the potential to support more engaging and student-centered Indonesian language learning. However, successful implementation depends on reliable internet access, continuous teacher professional development, and appropriate instructional planning. Continuous mentoring and institutional support are recommended to encourage the sustainable integration of game-based learning media in elementary schools.

Keywords : *Interactive Learning Media, Bamboozle, Information And Communication Technology, Gamification, Indonesian Language Learning*

INTRODUCTION

The integration of Information and Communication Technology (ICT) has become an important part of educational transformation in the digital era (Aditya & Suranto, 2024; Harini et al., 2024). As technology continues to develop, schools are expected to provide learning environments that encourage active participation, collaboration, creativity, and digital literacy. In this context, teachers are no longer expected to function solely as knowledge providers but also as learning facilitators who are able to integrate digital technologies into meaningful classroom activities that meet students'

developmental needs (Lestari & Prasetyo, 2023; Sari, 2022). The successful integration of ICT is particularly important in elementary education because young learners generally respond better to learning experiences that are interactive, visual, and activity-based.

This need is particularly relevant to Indonesian language instruction at the elementary school level, where students are expected to develop listening, speaking, reading, and writing skills through active classroom participation. However, Indonesian language teaching in many elementary schools is still characterized by teacher-centered practices, such as lectures, textbook reading, and written exercises, which often provide limited opportunities for interaction and meaningful participation (Hidayah & Nugroho, 2021; Wulandari, 2022). In addition, many teachers continue to experience difficulties in selecting and implementing interactive digital learning media that are appropriate for elementary school students. These conditions indicate the need for practical approaches that can help teachers integrate ICT into Indonesian language learning more effectively.

One instructional approach that has received increasing attention is gamification, which refers to the use of game elements, such as points, challenges, rewards, and collaboration, in non-game contexts to improve learning experiences (Dicheva et al., 2015). Previous studies have shown that gamification can increase learner participation, classroom engagement, and learning motivation when it is integrated with appropriate instructional strategies (Subhash & Cudney, 2018). More recent evidence further suggests that the effectiveness of gamification depends not merely on the inclusion of game mechanics but also on well-designed instructional content that aligns with learners' needs and learning objectives (Triantafyllou et al., 2025). Among the available digital learning platforms, Bamboozle provides a simple web-based application that enables teachers to create interactive quiz games without requiring advanced programming skills. Its accessibility and ease of use make it a promising tool for supporting more interactive, engaging, and learner-centered Indonesian language instruction.

Although previous studies have reported the educational benefits of gamification and digital learning media, most have focused on classroom implementation and students' learning engagement or achievement. Comparatively little attention has been given to teachers' experiences during professional development programs that introduce game-based learning media before classroom implementation. Since teachers play a central role in integrating educational technology, understanding how they experience, interpret, and prepare to use interactive learning media is essential for supporting sustainable ICT integration in elementary education.

Despite the growing body of research on gamification and ICT-based learning media, several important gaps remain. Most previous studies have focused on the effects of game-based learning on students' engagement, motivation, or learning outcomes using quantitative or experimental approaches. As a result, relatively little attention has been given to how teachers experience professional development programs that introduce game-based learning media before classroom implementation. Understanding teachers' experiences and perceptions is important because successful ICT integration depends not only on the availability of digital technology but also on teachers' understanding,

technical skills, readiness, and instructional competence in using it effectively. In addition, studies examining the implementation of the Bamboozle platform within teacher professional development programs, particularly in the context of Indonesian language instruction at the elementary school level, remain limited. Therefore, a qualitative exploration of teachers' experiences and perceptions is needed to provide a more comprehensive understanding of how game-based learning media can be introduced and adopted through structured professional development programs.

This study was conducted as part of a community service program in collaboration with SDN Tanah Tinggi 01, where preliminary observations indicated that Indonesian language instruction was still largely based on conventional teaching methods and that many teachers had limited experience in using ICT-based interactive learning media. To address this need, a webinar and hands-on training on the Bamboozle platform were organized for elementary school teachers. This study describes the implementation of the training program and explores teachers' experiences and perceptions of its contribution to their understanding, technical skills, and readiness to integrate ICT into Indonesian language instruction. Unlike previous studies that mainly focused on students' learning outcomes after classroom implementation, this study provides a qualitative perspective on teachers' experiences during professional development before the technology is applied in the classroom. By highlighting teachers' voices and experiences, the findings are expected to enrich the literature on teacher professional development and ICT integration while providing practical insights for designing sustainable training programs that support the adoption of game-based learning media in elementary education.

METHOD

This study employed a qualitative descriptive approach to explore the implementation of the Bamboozle platform and teachers' perceptions of its potential as an ICT-based interactive learning medium in Indonesian language instruction (Creswell & Poth, 2018). The study was conducted as part of a community service program in the form of an online webinar and training organized by lecturers and students from the Indonesian Language Education Program, Graduate School, Universitas Indraprasta PGRI, in collaboration with SDN Tanah Tinggi 01 on May 6, 2026, involving 24 elementary school teachers. The training consisted of interactive lectures, platform demonstrations, group simulations, discussions, and question-and-answer sessions. Data were collected through participant observation, informal interviews, and documentation, including activity recordings, discussion transcripts, attendance records, and presentation materials. The data were analyzed using the interactive model of Miles, Huberman, and Saldaña (2014), which includes data reduction, data display, and conclusion drawing and verification. During the analysis, the data were organized into themes related to teachers' understanding, technical skills, perceptions of the potential of the Bamboozle platform, and implementation challenges. To ensure the trustworthiness of the findings, source triangulation was applied by comparing data from observations, interviews, and documentation, thereby enhancing the credibility and consistency of the results.

FINDINGS AND DISCUSSION

This study describes the implementation of the Bamboozle platform as an Information and Communication Technology (ICT)-based interactive learning medium in Indonesian language instruction at the elementary school level and explores teachers' perceptions of its potential after participating in a community service program. The data were collected through participant observation during the webinar and training sessions, interviews with the participants, and documentation of the activities. The data were analyzed using descriptive and interpretative approaches through the processes of data reduction, data display, and conclusion drawing. The analysis resulted in three main themes that form the basis of the discussion: the implementation of the Bamboozle platform in teacher training, teachers' perceptions of the potential of Bamboozle as an interactive learning medium, and the factors influencing its implementation. These themes are discussed in an integrated manner by presenting empirical findings, interpreting the results, comparing them with previous studies, and explaining them using relevant theoretical perspectives.

The results from observations, interviews, and documentation showed that the Bamboozle platform was implemented through four main activities: interactive lectures, demonstrations, group simulations, and discussion sessions. In the first stage, the facilitators explained the concept of ICT-based interactive learning and introduced the main features of the Bamboozle platform. Next, they demonstrated how to create an account, design quizzes, manage scores, and use the platform in a team-based game. After that, the participants joined group simulations to practice using the platform. The activity ended with discussion and question-and-answer sessions, where participants shared their experiences and discussed possible challenges in applying Bamboozle in their schools.

The findings showed that most participants were able to follow all training activities and create simple quizzes independently. Based on the interviews, the teachers said that direct practice helped them understand the platform better than theoretical explanation alone. They also felt more confident to explore ICT-based learning media for Indonesian language instruction. However, these findings only describe the teachers' experiences and perceptions during the training. They do not provide direct evidence of the effectiveness of Bamboozle in improving students' learning or classroom outcomes.

These findings are consistent with Sari (2022), who found that practice-based training is more effective than theory-based training in helping teachers adopt educational technology. The findings can also be explained by Social Learning Theory (Bandura, 1986), which states that people learn new skills through observation and direct practice. In addition, the training followed the principles of andragogy (Knowles et al., 2020), which emphasize that adult learners understand new knowledge more effectively when it is related to their professional needs and supported by practical experience. Therefore, the training helped teachers improve their understanding and readiness to use ICT-based interactive learning media in Indonesian language teaching.

The interviews showed that the teachers had positive perceptions of the Bamboozle platform after participating in the training. Most participants believed that the platform could make Indonesian language learning more interesting and interactive through game elements such as points, challenges, and teamwork. They also suggested that Bamboozle could be used for activities such as vocabulary practice, reading comprehension, and language quizzes. These findings indicate that teachers perceived Bamboozle as a learning medium with the potential to support student-centered learning, although this study did not measure its direct impact on students' motivation or learning outcomes. This finding is consistent with Dicheva et al. (2015), who reported that gamification can improve learner participation when it is integrated into meaningful learning activities. It can also be interpreted using Self-Determination Theory (Ryan & Deci, 2020), which explains that learning activities may become more engaging when they provide challenge, achievement, and social interaction. Therefore, this study suggests that teachers viewed Bamboozle as a promising ICT-based learning medium for Indonesian language instruction.

The observations, interviews, and discussions identified both challenges and supporting factors related to the implementation of Bamboozle. The participants reported that limited internet access, unstable network connections, and differences in teachers' digital skills could affect the use of the platform in schools. They also noted that game activities should be carefully planned so that students remain focused on the learning objectives rather than the game itself. At the same time, the teachers believed that Bamboozle could be implemented successfully when supported by adequate facilities, continuous training, and good instructional planning. These findings are in line with Subhash and Cudney (2018), who emphasized that gamification is more effective when it is aligned with instructional goals, and with Lestari and Prasetyo (2023), who highlighted the importance of teacher competence and institutional support in ICT implementation. Overall, the findings suggest that successful implementation depends not only on the technology itself but also on teacher readiness and school support.

This study provides both theoretical and practical contributions. Theoretically, it supports previous research showing that ICT-based learning media and hands-on training can improve teachers' readiness to adopt educational technology. Practically, the findings suggest that Bamboozle can be introduced as an alternative interactive learning medium for Indonesian language instruction through structured teacher training. The study also highlights the importance of continuous professional development, adequate technological infrastructure, and institutional support to encourage the sustainable use of ICT in schools. The novelty of this study lies in its focus on teachers' experiences, perceptions, and readiness during the implementation of a Bamboozle training program in a community service context, rather than examining its effectiveness through direct classroom intervention with students.

This study has several limitations because it involved a limited number of participants from one community service program and focused only on teachers' experiences and perceptions during the training. Therefore, the findings cannot be generalized to all elementary schools or be interpreted as evidence of the effectiveness

of Bamboozle in improving students' motivation or learning outcomes. Future studies should investigate the implementation of Bamboozle in real classroom settings and include students as research participants to obtain a more comprehensive understanding of its educational impact. Despite these limitations, this study achieved its objective by describing the implementation of Bamboozle and exploring teachers' perceptions of its potential as an ICT-based interactive learning medium, providing useful insights for future teacher training and technology integration in Indonesian language education.

CONCLUSION

The implementation of the Bamboozle platform as an ICT-based interactive learning medium in Indonesian language instruction at SDN Tanah Tinggi 01 was carried out through interactive lectures, demonstrations, simulations, and discussion sessions. The findings indicate that this training improved teachers' conceptual understanding and technical skills in using digital game-based learning media and broadened their perceptions of the potential of gamification to support more engaging Indonesian language learning through points, challenges, and collaborative activities. These perceptions can be interpreted through the principles of Self-Determination Theory. The study also found that the successful implementation of the platform depends on several supporting factors, including reliable technological infrastructure, continuous teacher professional development, and appropriate instructional planning. Therefore, the integration of game-based learning media should be supported by ongoing training, institutional commitment, and adequate school facilities to encourage sustainable classroom implementation. Since this study focused on teachers' experiences and perceptions during the training, it did not examine the direct impact of Bamboozle on students' classroom engagement or learning outcomes. Future studies are recommended to investigate the implementation of Bamboozle in real classroom settings using quasi-experimental or longitudinal designs to provide stronger empirical evidence of its educational effectiveness.

REFERENCES

- Aditya, R. Q., & Suranto, S. (2024). The role of educational transformation in the digital era in improving student quality. *Al Qalam: Jurnal Ilmiah Keagamaan dan Kemasyarakatan*, 18(3), 1756-1772. <http://dx.doi.org/10.35931/aq.v18i3.3301>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
- Dicheva, D., Dichev, C., Agre, G., & Angelova, G. (2015). Gamification in education: A systematic mapping study. *Educational Technology & Society*, 18(3), 75–88.
- Harini, H., Ripki, A. J. H., Sulistianingsih, S., Herlina, H., & Putri, A. (2024). Digital Transformation: The Utilization of Information and Communication Technology to Enhance Educational Management Efficiency in the Modern Era. *Jurnal Minfo Polgan*, 13(2), 1668-1674. <https://doi.org/10.33395/jmp.v13i2.14195>

- Hidayah, N., & Nugroho, A. (2021). Karakteristik belajar siswa sekolah dasar dan implikasinya terhadap strategi pembelajaran. *Jurnal Pendidikan Dasar Nusantara*, 6(2), 112–123.
- Knowles, M. S., Holton, E. F., & Swanson, R. A. (2020). *The adult learner: The definitive classic in adult education and human resource development* (9th ed.). Routledge.
- Lestari, D., & Prasetyo, B. (2023). Integrasi teknologi informasi dan komunikasi dalam pembelajaran abad ke-21 di sekolah dasar. *Jurnal Teknologi Pendidikan Indonesia*, 11(1), 45–58.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). SAGE Publications.
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61, 101860.
- Sari, M. (2022). Pelatihan media pembelajaran digital berbasis praktik bagi guru sekolah dasar. *Jurnal Pengabdian dan Pemberdayaan Masyarakat*, 8(1), 33–41.
- Subhash, S., & Cudney, E. A. (2018). Gamified learning in higher education: A systematic review of the literature. *Computers in Human Behavior*, 87, 192–206.
- Triantafyllou, S. A., Georgiadis, C., & Sapounidis, T. (2025). Gamification in education and training: A literature review: SA Triantafyllou et al. *International Review of Education*, 71(3), 483-517. <https://doi.org/10.1007/s11159-024-10111-8>
- Wulandari, R. (2022). Problematika pembelajaran Bahasa Indonesia di sekolah dasar dan alternatif solusinya. *Jurnal Bahasa dan Sastra Indonesia*, 14(2), 89–100.