

Utilizing Digital Media as an Alternative to Support Independent BIPA Learning

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ABSTRACT

The rapid development of digital technology has transformed the methods of learning Indonesian for Foreign Speakers (BIPA) into a more modern and autonomous approach. This study aims to analyze the role of digital media in supporting BIPA learning, examine the effectiveness of various digital platforms, and identify the challenges in their implementation. The method employed is a literature review (library research), examining 25 reputable scientific articles published between 2020 and 2025. The data were analyzed thematically to identify patterns of effectiveness and barriers to technology use. The results indicate that digital media including social media (Instagram, TikTok, YouTube), gamified applications (Duolingo, Bahaso), and Artificial Intelligence (ChatGPT, Gemini) play a crucial role in enhancing accessibility, flexibility, and learning motivation. AI technology was found to be effective as a digital scaffolding that provides instant feedback and material personalization in accordance with the Zone of Proximal Development theory. However, this study also reveals significant challenges such as digital distractions, a lack of pedagogical guidance, and materials that are culturally decontextualized. The study concludes that the integration of technology in BIPA requires Self-Regulated Learning (SRL) strategies and the strengthening of the teacher's role as a facilitator to ensure that sociocultural aspects remain preserved. The practical implications of this research encourage curriculum developers to integrate local cultural content into digital platforms to create a comprehensive learning ecosystem.

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1. Introduction

The rapid development of technology in the digital era has provided convenience and innovation in various aspects of life, including education. This transformation encourages a shift toward more modern learning methods through the utilization of digital media that supports autonomous learning processes. Digital media refers to various forms of digitally encoded content such as text, audio, video, or interactive graphics used to convey information through electronic devices. In the educational context, digital media serves as a means to enrich the learning experience, particularly in learning that is flexible and personalized (Novela et al., 2024). This change is also evident in the context of Indonesian Language for Foreign Speakers (BIPA) (Maranta et al., 2023). BIPA programs are specifically designed for non-Indonesian speakers to enable them to understand, speak, read, and write in Indonesian for academic, professional, social, and cultural purposes.

Digital media not only facilitates access to learning materials but also makes the learning process more flexible, engaging, and tailored to individual needs (Klimova et al., 2024). In the context of BIPA, the utilization of digital media plays a vital role in creating a learning space that is not confined to formal classrooms, as materials can be accessed anytime and anywhere. This serves as a solution for foreign speakers who face time constraints and limited access to formal education, while also contributing to an increase in their learning motivation.

BIPA learners can now easily access learning materials through various digital platforms, including artificial intelligence-based media such as ChatGPT and Gemini. Consequently, they can experience a learning process that is more adaptive, personalized, and tailored to their respective needs (Karyadi, 2023). Digital media also provides a sense of practicality and systematic organization in BIPA instruction, while enhancing the efficiency and effectiveness of the learning process outside of formal hours. This encourages learner autonomy, allowing students to learn without total dependence on teachers or lecturers (Solikhah & Nurlina, 2024). The success of language learning relies heavily on the integration of the four language skills: reading, listening, speaking, and writing (Sadiku, 2015). A balance in mastering these four skills will encourage learners to develop holistic communicative competence and impact their overall language fluency. In the BIPA context, mastering these skills is essential so that learning can be applied in both daily life and professional settings. This is consistent with findings from a study in Vietnam, which demonstrated that a Task-Based Learning approach encourages language use in real-world contexts, making the learning process more meaningful and motivating students to achieve fluency (Nguyen & Dao, 2021).

Based on the literature review and previous research findings, this study aims to analyze the role of digital media in enhancing the effectiveness of autonomous BIPA learning. Through a literature study approach and observation of the features available on each platform, this research is expected to provide new insights into the utilization of digital media in BIPA instruction, particularly in strengthening autonomous learning strategies for foreign speakers. Given the rapid advancement of digital technology, it is essential for both educators and learners to maximize the potential of digital media to ensure the BIPA learning process becomes more

effective, adaptive, and contextual. The research questions in this study include (1) the role of digital media in supporting BIPA learning, (2) the effectiveness of digital platforms, (3) the challenges in utilizing digital media in BIPA learning.

2. Method

Data in this study were collected through the library research method. This technique was conducted by gathering, reading, and reviewing various scientific sources, such as journals, academic articles, and other relevant publications related to the utilization of digital media in teaching Indonesian for Foreign Speakers (BIPA). The data collection process was carried out systematically through the selection of credible and relevant literature, which was then analyzed thematically to identify patterns, trends, and key findings that could strengthen the discussion. This comprehensive literature review aims to validate arguments and deepen the understanding of the issues under study (Snyder, 2019). This method allows the researcher to synthesize knowledge from various perspectives, resulting in research findings that are richer and more contextual.

This study reviewed a total of 25 scientific articles, selectively chosen to ensure the depth of the analysis. The literature search was limited to the publication period from 2020 to 2025 to guarantee data recency and relevance to the latest developments in digital technology. The search process was conducted through reputable databases, including Google Scholar, Scopus, and Portal Garuda, using specific keywords such as 'Media Digital BIPA' (BIPA Digital Media), 'Teknologi Pembelajaran Bahasa' (Language Learning Technology), and 'Inovasi Pengajaran BIPA' (BIPA Teaching Innovation).

The selection of sources was based on strict inclusion criteria: the articles had to be original research results or literature reviews published in accredited journals with a focus on the implementation of digital media in BIPA classrooms. Meanwhile, exclusion criteria were applied to articles that did not have a direct link to the context of language learning for foreign speakers or those that only discussed technology in general without practical application. The collected data were then processed through a thematic analysis procedure consisting of several stages: (1) data familiarization through in-depth reading, (2) coding of relevant text segments, (3) grouping codes into major themes such as types of digital platforms, implementation challenges, and learning effectiveness, and (4) reviewing and defining themes to develop a comprehensive narrative of the research results.

3. Results and Discussion

The Role of Digital Media in Supporting BIPA Learning

Digital media has proven to play a crucial role in supporting the learning of Indonesian for Foreign Speakers (BIPA), particularly within the context of autonomous learning. Based on the results of the review and observations, the utilization of digital media provides significant contributions in several key aspects.

a) Improving Learning Accessibility and Flexibility

Digital media eliminates geographical and time constraints, allowing BIPA learners from anywhere and at any time to access learning materials. For instance, social media platforms such as Instagram, TikTok, and YouTube provide diverse and authentic Indonesian language content, enabling learners to be exposed to the language within daily contexts. Students can follow BIPA

educational accounts, join learning communities, or simply watch short videos to familiarize themselves with Indonesian flexibly. This accessibility significantly helps improve the autonomous learning process of BIPA students beyond the reach of teachers or lecturers. Literature studies indicate that digital technology and social media including Instagram, YouTube, and TikTok have been identified as effective learning tools in various digital education contexts (Prasetya et al., 2024); (Said, 2023); (Septriani & Rustandi, 2023). Instagram can increase students' interest in learning language vocabulary (Tsaqifah et al., 2023) and assist learners in acquiring new vocabulary (Sulfikar & Fawzani, 2023).

b) Facilitating Vocabulary and Grammar Mastery

Various digital media offer interactive features that are effective for vocabulary and grammar mastery. Language learning applications such as Duolingo are equipped with interactive exercises, quizzes, and spaced repetition systems designed to accelerate the memorization of words and phrases. This approach makes the learning process more engaging and less monotonous. Duolingo also provides a level-based grading system and leaderboards that allow users to see their achievements compared to other learners globally (Gragera, 2024). Duolingo effectively supports vocabulary acquisition for foreign learners (Sari et al., 2025). This indirectly serves as a stimulus for learners using Duolingo to reach their language levels through daily or weekly targets, fostering intrinsic motivation and a competitive spirit toward fellow users worldwide. Furthermore, immediate feedback from the application helps learners promptly identify and correct grammatical errors, which is crucial in building a better grammatical understanding (Kakerissa et al., 2022).

c) Improving Listening and Speaking Skills

Digital media, particularly audio-visual platforms such as YouTube and Spotify, play a vital role in training the ability to listen to and understand authentic Indonesian pronunciation. Through vlogs, news, podcasts, or everyday conversations presented in YouTube videos and Spotify audio, learners can familiarize themselves with the rhythm, intonation, and accents of native speakers (Rachmawati & Cahyani, 2020). Listening skills can be enhanced through digital media (Williyansen et al., 2023). Transcript or subtitle features often available on YouTube help learners associate sounds with text, which significantly supports the development of speaking skills and accurate pronunciation. Watching videos with subtitles also helps learners stay focused and motivated, as well as improves overall listening comprehension (Yuyun & Simamora, 2021).

d) Personalized Learning and Adaptive Feedback

Artificial Intelligence (AI) integrated into various digital media enables the personalization of learning content. AI systems can analyze a learner's progress and difficulties, then adjust the materials or practice questions presented to be more relevant to their individual needs and proficiency levels (Kinder et al., 2025). For example, AI tools such as Gemini and ChatGPT can be used to create adaptive practice questions, provide personalized grammar explanations, or

even serve as virtual conversation partners (Al-Hoorie & AlShakhori, 2025). Meanwhile, translation platforms like DeepL support learning through various translation options that reflect nuances of meaning, helping learners understand and improve their writing skills (Jiang, 2024). The ability of AI to provide instant feedback, identify areas for improvement, and offer adaptive learning recommendations proves that this technology is an essential component in effective and efficient autonomous BIPA learning strategies. Furthermore, the integration of multimedia features and interactivity reinforces the role of AI as a cornerstone of contemporary language learning.

Effectiveness of Digital Platforms in BIPA Learning

Based on the analysis of the role of various digital media that have been presented, the effectiveness of digital platforms in BIPA learning can be seen from several aspects.

a) Improving Learning Accessibility and Flexibility

Digital media has enhanced the accessibility and flexibility of autonomous BIPA learning, enabling students to study anytime and anywhere according to their own pace and needs. The utilization of platforms such as YouTube and Instagram has expanded the reach of learning without the constraints of space and time, while creating a more communicative and engaging learning atmosphere. Digital media has also proven effective in supporting the development of language skills—including listening, reading, speaking, and writing—through interactive and contextual audiovisual content (Solikhah & Nurlina, 2024). A concrete example of digital media implementation in BIPA learning is the exploration of the NCT Daily YouTube channel for A1-level BIPA learners. The research results indicate that beginner learners are able to understand basic expressions such as greetings, self-introductions, and simple sentences through interactive audiovisual content, effectively supporting the mastery of basic language competence (Amalia et al., 2023).

b) Personalization and Adaptation of Materials

Language applications such as Duolingo, which implement gamification, have successfully made language learning more engaging and enjoyable. Users benefit from interactive practice features covering reading, writing, listening, and speaking as well as systems of points, levels, badges, and global leaderboards that stimulate intrinsic motivation. A quasi-experimental study demonstrates that the use of Duolingo not only improves language skills but also strengthens daily learning commitment through clear and enjoyable targets (Herlina et al., 2021). Furthermore, the integration of Artificial Intelligence (AI) into platforms like Duolingo supports the provision of adaptive and personalized exercises. Based on recent research, AI technology analyzes user error patterns and learning progress to personalize content and provide relevant instant feedback. Practice models such as adaptive exercise generation (utilizing user history databases) have been proven to significantly increase the effectiveness of language learning (Cui & Sachan, 2023).

This adaptive AI support is also aligned with Vygotsky's theory of the Zone of Proximal Development (ZPD). AI functions as 'digital scaffolding' that provides exercises precisely when students need them—automatically adjusting the

difficulty level and offering the necessary guidance. A case study of Duolingo users over a 12-week period revealed that this adaptive system drives faster and more consistent language skill improvement compared to non-AI approaches (Kazu & Kuvvetli, 2025). Beyond Duolingo, generative AI platforms such as ChatGPT and Gemini enable the creation of highly personalized practice materials and dialogues. Users can engage in virtual conversations and receive contextual grammar feedback, strengthening their speaking and writing skills according to their respective needs and levels. Meanwhile, the DeepL platform provides more accurate and nuanced translation options, helping users understand the proper vocabulary context in writing. Overall, AI affirms its position as an essential component in efficient, adaptive, and personalized autonomous BIPA learning strategies, complete with instant feedback, multimedia features, and digital scaffolding.

c) Increased Motivation and Engagement

The utilization of digital media has proven to play a significant role in increasing student learning motivation within the context of Indonesian for Foreign Speakers (BIPA). Various platforms such as Duolingo, Bahaso, and educational social media offer flexibility, interactivity, and personalized approaches capable of addressing the diverse needs of BIPA learners. Platforms like Duolingo integrate gamification features such as point acquisition, daily streaks, and interactive challenges that create a sense of achievement. These features have been proven to foster learners' intrinsic motivation, as they align with the principles of Self-Determination Theory, which emphasizes the importance of autonomy, competence, and relatedness in the learning process. Students using Duolingo demonstrate a significant increase in learning enthusiasm and persistence in autonomous practice (Lahji, 2024). Social media can enhance motivation, expand knowledge, and facilitate interaction in language practice (Poernomo et al., 2025). Furthermore, social media can create interactive learning environments that support language learning (Kalukar et al., 2025).

Furthermore, Bahaso a home-grown platform resulting from a collaboration between PT Bahaso Intermedia Cakrawala and Universitas Indonesia provides structured and adaptive Indonesian language learning content. Features such as automated feedback, interactive audio-visuals, and learner performance analysis encourage active participation and build confidence in using the Indonesian language. This approach is aligned with the concept of scaffolded autonomous learning, a self directed learning strategy supported by adaptive technology to guide learners in achieving their learning goals incrementally and purposefully. The use of digital scaffolding materials has also been proven to significantly enhance the learning autonomy of EFL students in China through reflective exercises and the reinforcement of self-regulated learning strategies (Chen, 2020).

d) Comprehensive Skills Development

Digital media plays a significant role in developing comprehensive language skills for Indonesian for Foreign Speakers (BIPA) learners, encompassing listening, speaking, reading, and writing. These four skills are not only

important individually but are also interrelated in forming holistic and effective communication abilities. Listening skills serve as the initial foundation in language acquisition because, through the process of listening, learners can understand pronunciation, intonation, and the context of vocabulary usage. Video based platforms such as YouTube and TikTok provide various types of authentic content, ranging from daily vlogs and informal conversations to local cultural stories delivered in a natural linguistic style.

Meanwhile, speaking skills are crucial for increasing confidence and oral communication fluency. Applications like Duolingo provide pronunciation features with instant feedback, allowing users to practice their articulation directly. On the other hand, AI technologies such as ChatGPT and Gemini can be used as virtual conversation partners for speaking practice, enabling learners to independently practice speaking on various topics without social pressure. This approach provides a space for learners to experiment and practice intensively in a low risk environment (Pratiwi et al., 2024). Reading skills are equally important for enriching vocabulary and understanding text structures. Social media platforms like Instagram and YouTube Community Posts have been widely utilized to present short texts in the form of dialogues, infographics, and simple quotes accessible to beginner learners (Rizal, 2021). Duolingo also incorporates reading exercises through short interactive stories that combine text with audio and visuals, thereby supporting multi code comprehension.

As for writing skills, they can be honed through exercises in creating short texts, such as self-descriptions, comments, or social media captions. In this process, AI-based tools like DeepL Write are highly beneficial for improving grammar, sentence structure, and vocabulary selection. This application allows learners to write in Indonesian, then evaluate and revise their writing with the help of automated suggestions, encouraging reflective and autonomous learning. Consequently, digital media offers a learning ecosystem that supports the four language skills in an integrated manner. The flexibility, accessibility, and sophisticated features of digital media make it an effective tool for independent and sustainable BIPA learning (Liang, 2025).

Overall, digital platforms have proven highly effective in supporting autonomous BIPA learning due to their ability to provide accessibility, personalize materials, increase motivation, develop comprehensive language skills, and support learning independence. This transformation has made BIPA learning more dynamic, accessible, and aligned with the learning styles of the digital era.

Challenges in Utilizing Digital Media in BIPA Learning

Although digital media offers great potential to support Indonesian language learning for foreign speakers (BIPA), its implementation is not without various challenges that need to be overcome.

a) Lack of Pedagogical Guidance and Support

Although digital media provides flexibility in learning, many BIPA learners struggle to understand linguistic structures, culture, and pragmatic contexts due to the lack of direct guidance from instructors. This represents one of the primary challenges in autonomous BIPA learning through digital media. Self-directed learning using platforms such as Duolingo, DeepL, or ChatGPT is not

fully capable of providing the necessary pedagogical adjustments, progress monitoring, and personal interventions, especially for beginner learners. The absence of a teacher's or tutor's role in the online learning process can lead students to feel isolated and face difficulties in building a deep understanding. This poses a serious challenge because pedagogical interaction plays a role not only in knowledge transfer but also in facilitating motivation, reflection, and the interpretation of Indonesian cultural contexts (Uyun & Fitriani, 2025).

b) Limitations and Inappropriateness of Digital Learning Materials

There are constraints in selecting materials that suit the BIPA learning context, particularly for beginner-level learners who require gradual and structured guidance. Most available digital media may not yet be fully adapted to the specific needs of BIPA learners, especially regarding linguistic registers, the presentation of local culture, and visual interfaces that are user-friendly for foreigners. Learning materials are often general and lack context, making it difficult for learners to relate the content to real life in Indonesia. A major challenge in developing digital media for BIPA learners is the lack of material personalization according to the learners' cultural backgrounds and initial abilities (Pramudianto & Iskandar, 2024). The media used tends to follow general learning models and does not yet fully consider the unique needs of foreign learners, such as the introduction of culture in real contexts and language structures appropriate to their levels.

c) Digital Distractions and Low Internal Motivation

Concentration lapses caused by digital distractions such as social media notifications, ad pop-ups, or multitasking habits—are major obstacles in autonomous learning, including within the context of independent BIPA learning. Furthermore, low internal motivation poses a serious challenge, especially due to the lack of direct interaction and limited contextual learning experiences that build students' emotional engagement. Although digital media provides ease of access and flexibility, without structured learning strategies, the use of technology can actually decrease the effectiveness of the learning process. When online learning is not adequately supported, students tend to lose direction and motivation. To address this issue, BIPA educational institutions need to build an adaptive digital learning ecosystem grounded in strong pedagogy. One highly recommended strategy is Self-Regulated Learning (SRL), an approach that encourages students to manage their goals, monitor their learning process, and reflect on their achievements independently. Research shows that the implementation of SRL can mitigate the impact of digital distractions while simultaneously increasing learning motivation (Wang et al., 2022).

4. Conclusions

Digital media (social media, language applications, and audio-visual platforms) plays a crucial role in transforming BIPA learning to be more accessible and flexible. The presence of platforms such as Instagram, YouTube, and Duolingo allows learners to access authentic materials at any time without geographical constraints,

while simultaneously facilitating vocabulary acquisition and language skills (listening, speaking, reading, writing) in an interactive manner. The use of Artificial Intelligence (AI) such as ChatGPT, Gemini, and DeepL, alongside gamification features in learning applications, has proven effective in increasing learner motivation and engagement. This technology functions as digital scaffolding capable of providing instant feedback, adjusting materials to individual proficiency levels (adaptive), and creating a personalized and enjoyable learning experience. Although digital media offers great potential, its effectiveness still faces challenges in the form of digital distractions, culturally non-contextual materials, and the risk of learner isolation. Therefore, Self-Regulated Learning (SRL) strategies and strengthened pedagogical support are required to ensure that technology remains aligned with BIPA learning objectives and does not diminish the essence of cultural understanding and human interaction.

Conceptually, this discussion expands the horizons of language learning theory within a digital ecosystem. This research reinforces Vygotsky's Zone of Proximal Development theory by demonstrating that AI can act as a digital peer tutor, providing adaptive support tailored to the learner's cognitive level in real-time. It asserts that learning autonomy in the digital era is not merely studying alone, but rather the learner's capacity to exercise Self-Regulated Learning (SRL) amidst a distraction-filled environment. Furthermore, it provides a theoretical foundation showing that gamification elements in language applications are effective in fulfilling the psychological needs for competence and autonomy as defined by Self-Determination Theory.

The results of this discussion can serve as a reference for BIPA practitioners and program developers. BIPA instructors need to transform from being the primary source of information into facilitators capable of curating authentic digital content (vlogs, podcasts) to ensure alignment with the formal curriculum. For curriculum developers, it is essential to integrate local culture-based materials into digital platforms to minimize the contextual gaps often found in global applications. Learners are expected to begin utilizing AI tools (such as ChatGPT or DeepL) not merely as translation aids, but as virtual conversation partners to build communication confidence.

To further deepen the study in this field, several recommendations for future research include: examining the differences in pragmatic achievement (linguistic politeness) between learners who practice with AI compared to those engaging in direct interaction with native speakers. Development research (R&D) is also needed to create BIPA applications that do not only teach grammar but also integrate specific Indonesian socio-cultural values. Furthermore, longitudinal studies should be conducted to determine whether Self-Regulated Learning strategies are truly capable of maintaining learners' language retention after they no longer utilize those digital platforms or applications.

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