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Technology in listening and writing learning for BIPA learners

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ABSTRACT

This research discusses the use of technology in BIPA learning, with a particular focus on listening and writing skills. This research will explore how technology can improve BIPA students' listening and writing skills. By understanding the potential and challenges of using technology in BIPA learning, it is hoped that this research will contribute to developing more effective learning methods in the BIPA context. This research method uses a descriptive qualitative design. This is based on research data in the form of the results of filling out a questionnaire, and the researcher acts as the main instrument. It was found that, on average, BIPA teachers have used technology in BIPA learning, especially for listening and writing. In the context of BIPA learning, technology has proven to be an effective tool for improving BIPA students' listening and writing skills. Technology also positively influences BIPA learning, especially when it can make learning more exciting and varied. Learners have rich exposure and experience of languages used today. However, the research results also show that the use of technology in BIPA learning also has challenges, barriers, and obstacles.

ABSTRAK

Penelitian ini membahas tentang penggunaan teknologi dalam pembelajaran BIPA, dengan fokus khusus pada keterampilan menyimak dan menulis. Penelitian ini akan mengeksplorasi bagaimana teknologi dapat digunakan secara efektif untuk meningkatkan keterampilan menyimak dan menulis siswa BIPA. Dengan memahami potensi dan tantangan penggunaan teknologi dalam pembelajaran BIPA, diharapkan penelitian ini dapat memberikan kontribusi penting dalam pengembangan metode pembelajaran yang lebih efektif dalam konteks BIPA. Metode penelitian ini menggunakan desain kualitatif deskriptif. Hal ini didasarkan pada data penelitian berupa hasil pengisian angket dan peneliti bertindak sebagai instrumen utama. Hasil penelitian menunjukkan bahwa rata-rata pengajar BIPA telah menggunakan teknologi dalam pembelajaran BIPA, terutama untuk menyimak dan menulis. Dalam konteks pembelajaran BIPA, teknologi terbukti menjadi alat yang efektif untuk meningkatkan kemampuan menyimak dan menulis siswa BIPA. Teknologi juga memberikan pengaruh positif dalam pembelajaran BIPA, terutama ketika teknologi dapat membuat pembelajaran menjadi lebih menarik dan bervariasi. Para pembelajar memiliki eksposur dan pengalaman yang kaya akan bahasa yang digunakan saat ini. Namun, hasil penelitian juga menunjukkan bahwa penggunaan teknologi dalam pembelajaran BIPA juga memiliki tantangan, hambatan, dan rintangan tersendiri.

Kata Kunci: BIPA; menulis; menyimak; pembelajaran; teknologi

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INTRODUCTION

The development of Indonesian language learning for foreign speakers (BIPA) is increasingly fruitful. This can be seen by the increasing number of institutions organizing BIPA learning worldwide. Based on data from BIPA Daring, the number of BIPA learning institutions worldwide in 2023 is 523 institutions in 54 countries (see: https://bipa.kemdikbud.go.id/portal). The number continues to grow from only 428 institutions in 50 countries until 2022. The development of BIPA shows that the position of Indonesian has bargaining power and is increasingly seen as appropriate to compete with other languages.

Indonesian is an attractive medium of communication for international learners. Indonesian is also a tool of social interaction that replaces individuals in stating something or expressing to interlocutors in a social group as a tool for communication and the identity of its speakers (Noermanzah, 2019). Based on Pasal 44 paragraph (1) of Undang-Undang Republik Indonesia Nomor 24 Tahun 2009 Tentang Bendera, Bahasa, dan Lambang Negara, Serta Lagu Kebangsaan, "Pemerintah meningkatkan fungsi Bahasa Indonesia menjadi bahasa internasional secara bertahap, sistematis, dan berkelanjutan". It can also improve international relations between Indonesia and some cooperating countries. BIPA was used to internationalize the Indonesian language (Tanwin, 2020).

For those interested in learning BIPA, listening and writing skills are crucial to communicating effectively in Indonesian. Listening skills have an essential role in everyday life because, as stated by Guo and Wills (2006) in Yildirim and Yildirim (2016), listening is a way for humans to obtain information, education, understanding of the world and human affairs, ideals, feelings, and values. As mentioned earlier, listening is also essential for running education and teaching. That is, listening is an essential ability in language learning, and more than 50% of the time students spend learning a foreign language will be used for listening. In summary, listening is vital in everyday life and academic contexts because it is essential for maintaining effective communication. Emphasizing the importance of listening, Anderson and Lynch in Yildirim and Yildirim (2016) state that listening skills are as essential as speaking skills because people cannot communicate face-to-face unless both skills are developed simultaneously. Wallace, Stariha, and Walberg state that listening skills are crucial for learning because students receive information and gain insight through listening. In addition to listening skills, writing skills are also crucial for BIPA learners because writing is an ability that allows learners to express their ideas in Indonesian. Research also reveals that learners who can produce writing with academic language can quickly transfer argumentation skills to speaking skills. If learners learn writing and experience improvement, their speaking skills will also improve (Raxmanova, 2023).

Ihsan explained that the basic principle of the Society 5.0 concept is utilizing scientific knowledge based on digital technology to meet and support human needs. This includes the world of education (Ihsan, 2023). This aligns with Sari's Ihsan (2023) statement that teachers must have technological skills to facilitate learning. Technology has opened new opportunities to develop more interactive, efficient, and exciting learning methods. In the context of BIPA learning, using technology can also improve learners' listening and writing skills.

One of the main questions is how technology can be integrated into BIPA learning, especially in the context of listening and writing, to provide maximum benefits for learners. Loncar et al. 2023 observed that using technology in foreign language education can potentially improve learners' listening and writing skills. However, they also noted the need for further research to explore the best methods of integrating technology into BIPA learning.

Previous research on BIPA learning technology was conducted by Aria Septi Anggaira with the title Current Literacy in BIPA Learning in the Digital Revolution Era, published on February 22, 2019 (Anggaira, 2019). The research discusses the latest literacy in learning Indonesian for Foreign Speakers (BIPA) in the digital

revolution era and literacy development strategies for BIPA learners. The research also discusses the importance of BIPA teachers understanding Indonesia's current situation and development and being at the forefront of civilizing Indonesia through new literacy, such as data literacy, technological literacy, and human literacy.

The following previous research that discusses technology in BIPA learning is research conducted by Kelvin Pradana, Resi Utami, and Muhammad Taqiyuddin with the title Utilization of Technology in Learning during the Covid-19 Pandemic which was published on January 27, 2022 (Pradana et al., 2021). The study found that the COVID-19 pandemic has accelerated the digital transformation of education in Indonesia, encouraging online learning implementation. The study also found that information and communication technology has been integrated into learning. A small example is the use of email to collect learners' assignments. Information and communication technology is also used as an effective tool to be used as a medium for learning.

The last previous research was conducted by Ahmad Juliar Fahri, Syihabuddin, and Rinaldi Supriadi with the title Designing Indonesian Language Educational Games for Beginner Arabic Speakers Based on Website published on May 14, 2023. The research focused on developing an educational game website for beginner Arabic speakers learning Indonesian. The study used the Research and Development (R&D) method with the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). The research emphasized the importance of developing sustainable learning media for BIPA learners, especially for Arabic speakers. Using technology with a game-based approach and interactive learning is also very important in improving access and quality of BIPA education. The research also found the potential of a game-based approach to improve the learning experience for Arabic speakers learning Indonesian.

In the context of technology in BIPA learning, the research conducted by the author will discuss the use of technology in BIPA learning, with a particular focus on listening and writing skills. This research describes how technology can be used effectively to improve the listening and writing skills of BIPA learners. By understanding the potential and challenges of using technology in BIPA learning, it is hoped that this research will contribute to developing more effective learning methods in the BIPA context. With this background, this study will explain the relevant theoretical foundations and research approaches used to answer essential questions in the context of technology in BIPA learning, especially in listening and writing skills.

LITERATURE REVIEW

Listening Learning in the BIPA Context

Listening plays an essential role in communication, as described by Gilman and Moody (1984) in Tangkakarn and Gampper (2020). Their research findings discuss how humans spend time in their lives communicating; they found that listening takes up to 40-50% of the time, while speaking, surprisingly, is only 25-30%, and reading is about 11-16%, and writing is about 9%. Therefore, learners need to practice listening more. In other words, listening is the key to other language skills.

Wulandari & Sya'ya in Widia & Annisa (2023) state that listening skills are the most essential skills because these skills will be used for the first time when someone starts learning a language. In other words, listening skills are the basic skills used to communicate effectively daily. Listening is learning language skills that are important in obtaining information or knowledge (Ramadhianti & Somba, 2021). In line with that, Izzettin in Fatmawati (2023) also explained that listening is the basis of language skills. Therefore, listening learning has a significant position.

To do listening learning, it is necessary to understand the listening process. The listening process includes six stages: listen, identify, interpret, understand, assess, and respond (Fatmawati, 2023). These six stages must be present in listening learning. Listening teaching has experienced development and progress, especially regarding media and listening materials used primarily in cities. However, it has not been maximized by some teachers and students (Arono, 2019), especially in the context of listening learning for foreign learners or speakers.

Writing Learning in the BIPA Context

According to Atar Semi in Fatmawati (2023), writing transfers thoughts and feelings into written language using symbols. Johnson in Dana & Dharmayanti (2021) states that writing involves organizing and communicating ideas. This means that students not only have ideas during writing but can also organize and communicate their ideas. The Big Indonesian Dictionary defines writing as giving birth to ideas or feelings with writing. Writing means putting the writer's ideas into writing so those who read it know and understand its intentions. A person's ability to write is called a writing skill.

Ahmad Rofi'uddin and Darmiyati Zuhdi in Fatmawati (2023) also state that writing skills are the ability to use language to express ideas, thoughts, or feelings to others using written language. Writing skills are productive and expressive language skills used to communicate indirectly and not face-to-face with other parties. Writing skills need to be mastered by learners as a way to communicate with others. Writing learning is a series of activities carried out by learners so that they are skilled at writing. Writing learning should facilitate learners' ability to choose words, compose sentences, use spelling, express ideas, and express opinions. Learning to write in a foreign language, in this case Indonesian, is a complex problem-solving process, which requires not only a range of skills from writing a letter in Indonesian to writing a complete essay but also the ability to make claims and provide appropriate supporting details Kirkland and Saunders in Jiang & Kalyuga (2022). In addition, writing learning should also be taught more systematically and programmatically by applying concrete learning steps that are easy for learners to follow (Mawadati & Andayani. et al., 2019).

Use of Technology in Language Learning

According to Greek, technology is called "technology," which means systematic treatment or handling something systematically, according to the Webster's Dictionary. Meanwhile, techne is the basis for the word technology, meaning art, ability, knowledge or expertise, or scientific skills (Agustian & Salsabila, 2021). Currently, many media sources and applications make it easier for someone to learn a language. Technology is used in language learning for both offline and online learning. In offline learning, technology is used as a support for learning, while in online learning, technology is used as the main component of learning (Makruf, 2020). Technological developments have benefits that can be obtained. Namely, learning will be more effective and exciting; it can help teachers deliver material through visual/audiovisual media. Visual/audiovisual media and time use will be more efficient, creating a new atmosphere in the learning process (Akbar & Noviani, 2019). Information and communication technology has three main functions used in learning (Pradana et al., 2021), namely:

1. Technology functions as a tool for learners to assist learning,

   Technology can be used as a tool in the learning process. It can help learners acquire information, understand concepts, and develop skills. It also makes it easier for learners to find sources relevant to the information needed in learning.

2. Technology functions as science,

Technology in science can assist in collecting, analyzing, and presenting data in various fields of science. It can also help in the development of scientific theories and models. Technology has become an essential part of science and can help improve the effectiveness of research.

3. Technology functions as materials and tools for learning

Technology is interpreted as a complete learning material to master computer-assisted learning competencies. Technology can help learners access broader and more diverse learning resources like video, audio, and images. In addition, technology can also help learners practice and master computer-assisted learning competencies, such as the use of learning software and application development. In this case, technology can help improve learners' skills and abilities in facing challenges in the digital era.

This follows the statement of Trisnadewi and Muliani in Maharany et al. (2023), which states that four components support online learning, namely (1) infrastructure, (2) systems and applications, (3) content, and (4) operators. We can adopt e-learning in emergencies and consider the quality of virtual classes in the daily scope (Affouneh et al., 2020). This is in line with the opinion of Akbar & Noviani (2019) that with technological advances, the learning process does not have to be face-to-face with students and teachers but can also use internet services and others. For example, by sharing the videos on social media, this video can help learners without the limitations of space and time (Supriadi & Nurmala, 2022), audio-podcast (Zunaidah et al., 2021), or with MOOCs learning models (Ningsih et al., 2021). Therefore, developing learning that can be accessed anytime and anywhere is essential.

Challenges in the Use of Technology in BIPA Learning

No fixed road map in foreign language teaching remains valid at all times and in all conditions (Armut, 2020). The challenge in using technology in BIPA learning is the lack of innovation in renewing learning media in BIPA learning, and the use of learning media that utilize technology is still minimal (Fahri et al., 2023). Various parties must develop BIPA learning programs interested in BIPA learning (Wirawan, 2018). To produce good results, teachers must devote much time and effort to determining the most satisfying, suitable, and effective teaching methods (Suhardiana, 2019). Teachers are tasked with creating a pleasant atmosphere in the BIPA learning process so that it is readily accepted and understood by BIPA students (Mawadati & Andayani, 2019). The development of BIPA learning programs includes curriculum development, teaching materials, media, learning methods, and others. In addition, integrating BIPA learning with Indonesian culture is very important because cultural factors have an essential role in language.

METHODS

This research method uses a descriptive qualitative design. According to Sugiyono (Ridwan et al., 2021), descriptive qualitative research is a research method that uses post-positivism philosophy as its basis, where it is generally used to conduct research in objective conditions with the researcher serving as the key instrument. This is based on research data in the form of the results of filling out polls and researchers acting as the main instrument. This method focuses on describing and interpreting the data obtained to describe the characteristics, context, and relationship between the variables observed. The questionnaire-filling activity was carried out to several BIPA teachers in various regions. The questionnaire instrument

was prepared using Google Forms and distributed to several BIPA teachers. In the context of this study, descriptive qualitative methods were used to describe the experiences, perceptions, and interactions of BIPA teachers toward technology in BIPA learning. Data was collected by distributing and filling out questionnaires and document analysis. This study will describe how technology can help learn BIPA listening and writing.

RESULTS AND DISCUSSION

This study found that the average BIPA teacher has used technology in BIPA learning, especially for listening and writing learning. Here are the results found through this research according **Table 1** below.

Table 1. Research Results: Technology Influence

No.	Technology Influence	Description
1.	Technology positively affects BIPA learning, making learning more exciting and varied.	These include videos and audiovisual presentations that allow learners to actively and deeply engage in the learning content. It makes BIPA learning more interesting, visualizes the concepts being taught, and enriches the learners' learning experience. In addition, technology also allows teachers and learners to access diverse resources, thus providing variety in learning methods. Using online platforms and even learning applications designed explicitly for BIPA learners will allow learners to practice listening and writing skills at various difficulty levels. It is also possible that online platforms and even specially designed learning apps will make learning more varied and dynamic by presenting features such as online discussions, receiving immediate feedback, and collaboration among learners. Technology also allows the integration of interactive resources, such as online quizzes, digital whiteboards, and discussion forums. This allows learners to participate in learning and increase their engagement actively. Finally, technology allows BIPA learners to listen to Indonesian accents and dialects through online audio resources. This will help them adapt to various communication situations and enrich their understanding of Indonesian language varieties.
2.	The use of technology in BIPA learning is relevant to current language skills.	Technology will allow learners to access various learning resources online, enriching their understanding of the Indonesian language. It allows them to keep track of the development of the Indonesian language and interact with the language in communicative situations as needed. Technology also provides BIPA learners with practical tools for practicing and developing Indonesian language skills to become more competent communicators in Indonesian.
3.	Technology-based BIPA learning facilitates BIPA learning for teachers.	This is because technology provides various access and powerful tools to improve the learning and teaching experience in BIPA learning. For example, monitoring the progress of learners' abilities can be more measurable, accompanied by adequate documentation, flexibility over time and place to access BIPA learning, can increase learner engagement and motivation by creating various educational games, online quizzes, and discussion forums, then technology also allows immediate feedback for immediate evaluation and improvement, and various applications and devices can facilitate learning by facilitating teachers to easily create exercises, assignments, and even exams, thus saving time and effort.
4.	Technology-based BIPA learning, such as websites and applications, are preferred because they are easily accessible anywhere and anytime.	BIPA learning websites and applications that are available online allow learners to access BIPA learning easily anywhere and anytime as long as they have an internet connection. In addition, learners can also learn independently. It can even allow learners from various countries to access quality learning resources and interact with instructors or fellow online learners.

No.	Technology Influence	Description
5.	Topics or themes given to BIPA learners become up-to-date to accommodate learners well.	With the help of technology, BIPA learners can access quality learning materials from various sources online to take online courses, download learning materials, and even take classes virtually to access the latest and relevant resources permanently.
6.	Learners are rich in exposure and experience of the language used today.	With the internet and multimedia technology, learners can easily access content in the Indonesian language they are learning. Moreover, they can access game-based education that allows for more interactive learning. In addition, technology allows learners to take Indonesian classes online with qualified and experienced tutors.

Source: Research 2023

According the **Table 1** above, we have discussed how technology affects learning, especially BIPA learning. Technology has changed the way learners learn a language, mainly Indonesian. Technology has erased geographical boundaries and opened the door for learners to engage in various types of language learning and interaction. However, the use of technology must still refer to the BIPA learning principles.

The principles of BIPA learning refer to language learning for foreign speakers, namely natural language learning, so that the language can be used under its context based on Gobbo in Setyaningrum & Pangesti (2020). Applying the principles of technology-based BIPA learning requires preparation from various parties. Teachers, for example, need to learn the appropriate technology so that language teaching can be carried out using learning resources that are relevant and appropriate for learners. Technology experts, for example, can develop appropriate platforms with various features to accommodate teachers and learners in conducting learning. However, the research also shows that the use of technology in language learning also has challenges, obstacles, and constraints. Here is the explanation based **Table 2** below.

Table 2. Research Results: Challenges, Barriers, and Constraints of Using Technology in BIPA Learning

No.	Challenges, Barriers, and Constraints of Using Technology in BIPA Learning	Description
1.	It takes ability, skill, and a long time to prepare for BIPA learning with technology.	Developing effective and engaging BIPA learning materials requires skills in designing content that matches the learners' level of understanding, integrating various multimedia, and creating interactive and varied activities. Teachers should also know relevant software, applications, and online resources. BIPA teachers must invest in a careful and continuous preparation process to provide practical and quality learning experiences for BIPA learners.
2.	The duration of simulations for listening lessons is limited, and there is a lack of voice gender options.	In some cases, the audio materials available in Indonesian are inadequate or have limited access to different accents, dialects, and voices. It can also be limited in terms of topics and communication situations. It could also be due to poor audio quality.
3.	It is difficult for some learners unfamiliar with technology or old.	Learners unfamiliar with technology take longer to understand how to use a device, app, or technology platform, which can be a significant barrier that requires extra support.
4.	It is difficult to use technology to learn to write.	For example, due to limited online writing space and limited tempo of accessing writing. Often, learning platforms do not provide sophisticated tools to facilitate the writing process, making it difficult for BIPA learners to practice with different types of texts. In addition, the text resources available in Indonesian are minimal, especially when looking for materials suitable for BIPA learners' abilities. Editing and correction are also challenging to do in online learning.

Source: Research 2023

The challenges, obstacles, and constraints mentioned in the table above are challenges and constraints that can still be solved with the cooperation of various related parties. For example, for challenge, obstacle, and constraint number 1, "it takes ability, skill, and a long time to prepare BIPA learning with technology," it can be overcome by holding continuous training on preparing BIPA learning with technology, which results in producing products that can be used in BIPA learning. The solution to dealing with the obstacles experienced by teachers in learning to write is that teachers must be willing to spend more time looking for and making learning media (Mawadati & Andayani, 2019).

In the current era of globalization, utilizing technology in BIPA learning is essential. BIPA learners from various countries will be well accommodated if BIPA learning uses technology such as applications or websites. Unfortunately, BIPA learning tools that use technology have not been widely developed. Technology plays a significant role in improving listening and writing learning for BIPA learners.

Technology-Based BIPA Listening Learning

From the teacher's perspective, listening learning is the most difficult language skill to teach online (Nirmalasari, 2023). This can happen because when teaching listening skills, teachers must be able to choose the right audio and media to share simulations, a stable network, and use laptops that have no obstacles to learning. However, technology has provided opportunities to use audio and video to listen and learn. Voice recordings, video clips, and audiovisual materials can give BIPA learners the experience of listening to various accents and speech styles that represent the diversity of the Indonesian language.

Providing an online platform can also overcome the challenge of listening learning. Online learning platforms allow BIPA learners to flexibly access listening materials from various sources. Learners can follow learning through online courses, listen to podcasts, or even use special listening applications or websites to improve their listening comprehension. Technology can also provide automatic feedback on learners' listening practice. Tools like speech recognition or other possible features can help learners track their progress, provide instant feedback, and suggest improvements.

Technology-Based BIPA Writing Learning

Writing is a language skill that enables learners to produce writing. Technology-based BIPA writing learning can be done by designing applications specifically designed to develop writing skills in Indonesian (Mardasari et al., 2022). The application can provide various writing exercises, provide grammatical guidance, and introduce learners to the correct writing style. Technology also allows writing learning to be done through the online collaboration of BIPA learners in a forum or collaborative project that involves writing, giving, and receiving feedback from fellow learners or even online tutors. In addition, the app can be equipped with automatic text editing that can help BIPA learners identify and correct grammatical and structural errors in their writing. This can improve the quality of their writing and accelerate the learning process.

Challenges and Solutions in Technology-Based BIPA Listening and Writing Learning

Technology-based BIPA listening and writing learning certainly has its challenges and solutions, including:

1. Limited Access to Technology

   Challenges related to limited access to technology may arise. Solutions can involve providing more comprehensive access, such as using digital libraries or technology access assistance programs for BIPA learners.

2. Quality Indonesian Language Content

It is essential to ensure the availability of high-quality Indonesian-language content in the online environment. Careful development and curation of content will support BIPA learners in understanding and mastering listening and writing skills.

3. Security and Privacy

In using technology, paying attention to security and privacy issues is necessary. Parties involved in BIPA learning must ensure that the platforms and applications used meet the necessary security and privacy standards.

In addition to the challenges already mentioned, some other challenges may be faced in technology-based BIPA learning. One of them is the learners' lack of technology skills and digital literacy. Solutions to overcome this problem can include training on technology skills and digital literacy and providing better technology support for the learners. In addition, the lack of social interaction and emotional support in technology-based BIPA learning can also be a challenge. Solutions to this issue include using learning platforms that enable social interaction and emotional support between learners and teachers.

Besides the challenges, some solutions can be applied to technology-based BIPA learning. One uses more interactive and participatory learning methods, such as group discussions and collaborative projects. In addition, using more varied learning media, such as video, audio, and pictures, can also help improve learning effectiveness. Furthermore, using technology, such as automated assessment systems and immediate feedback, can also help in learning assessment (Zamzamy, 2021). By implementing these solutions, technology-based BIPA learning can become more effective and efficient in helping learners develop good Indonesian language skills.

CONCLUSION

The existence of technology today can support various aspects of education, one of which is BIPA learning. This study found that technology proved to be an effective tool to improve the listening and writing skills of BIPA learners. Technology has become an easy-to-use and exciting platform for presenting learning. Technology can provide a wide variety of materials, making it easier for learners to access the most relevant resources. Audiovisuals, multimedia materials, apps, and related websites can help learners better understand and practice Indonesian more efficiently. In addition, technology can also help learners to communicate and collaborate with fellow learners and teachers. In this case, technology can help increase learners' engagement and participation in learning.

Despite the advantages of using technology by BIPA learners, some challenges need to be considered by learners. These challenges can be minimized by improvements that can be made in the future by evaluating BIPA learning technology. This research can be an input for further technology development in implementing BIPA learning. This research can also be developed for further research to discuss the existence of technology that provides speaking practice for students. Many languages in Indonesia have the same writing but with different pronunciations. In addition, many new languages and many new abbreviations continue to emerge among young people. So that BIPA learning technology can continue to make developments in language provision. In addition to standard Indonesian, it can also provide slang, which is the daily language of Indonesian people. Supported by the wise use of technology, listening and

writing learning for BIPA learners can be more dynamic, engaging, and effective in supporting them in developing good Indonesian language skills.

AUTHOR'S NOTE

The authors declare that there is no conflict of interest related to the publication of this article. The authors emphasize that the data and content of the article are free from plagiarism.

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