JOLLT Journal of Languages and Language Teaching
https://e-journal.undikma.ac.id/index.php/jollt
Email: jollt@undikma.ac.id
DOI: https://doi.org/10.33394/jollt.v12i4.11851

October 2024. Vol. 12, No. 4
p-ISSN: 2338-0810
e-ISSN: 2621-1378
pp. 1689-1704

INNOVATIVE M-LEARNING WITH AUTOMATIC FEEDBACK: ENHANCING LANGUAGE ACQUISITION FOR LEVEL 2 INDONESIAN FOREIGN SPEAKERS (BIPA)

[1]*Helmi Muzaki, [1]Gatut Susanto, [1]Didin Widyartono, [2]Lossan Bonde, [3]Thilip Kumar Moorthy, [4]Ilham Akhsani

[1]Indonesian Literature Department, faculty of Literature, State University of Malang, Indonesia
[2]Department of Applied Sciences, Adventist University of Africa, Kenya
[3]Department of English Studies, Faculty of Social Science and Humanities, Tunku Abdul Rahman University of Management and Technology, Malaysia
[4]Teknik Informatika, Politeknik Baja Tegal, Indonesia

*Corresponding Author Email: helmi.muzaki.fs@um.ac.id

Article Info

Article History
Received: June 2024
Revised: August 2024
Published: October 2024

Keywords
Innovative M-learning; Automatic Feedback; Language acquisition; Indonesian foreign speakers;

Abstract

Indonesian has become the official language of the UN. Many BIPA students want to learn Indonesian online. However, online learning creates obstacles such as time differences between teachers and BIPA students, internet connections, and providing less than optimal feedback. This research aims to develop m-learning with automatic feedback for BIPA level 2 learners. This research uses a 4D development model: define, design, develop and deploy. This study's instrument is a questionnaire distributed to 2 validators and 18 BIPA learners. The results of this study are m-learning products that minimize internet connections; once installed, students only need to be connected to the internet when working on questions. In addition, m-learning is also equipped with automatic feedback that appears immediately after students answer questions. The results of the product trial show that students can use m-learning to learn anytime and anywhere, including in areas with minimal internet access. Automatic feedback in m-learning also helps students learn independently because they do not need to wait for feedback from teachers. The automatic feedback in M-learning is only for listening and reading questions while speaking and writing questions are still in the form of answer keywords or assessment rubrics that the teacher must correct. Based on expert validation and product trials with an average score of 88.8, we conclude that the development of m-learning is suitable for BIPA level 2 students.

How to cite: Muzaki, H., Susanto, G., Widyartono, D., Bonde, L., Moorthy, T.K., & Akhsani, I.. (2024). Innovative M-Learning with Automatic Feedback: Enhancing Language Acquisition for Level 2 Indonesian Foreign Speakers (BIPA). *JOLLT Journal of Languages and Language Teaching*, 12(4), 1689-1704. DOI: https://doi.org/10.33394/jollt.v12i4.11851

INTRODUCTION

BIPA teaching is essential in introducing the Indonesian language and culture to the international community and as a tool for Indonesian diplomacy (Muzaki, 2021). Moreover, now Indonesian has become the official language of the UN (Unesco, 2023). Many foreign speakers want to learn Indonesian. Now, most foreign speakers prefer to learn Indonesian online in their home country rather than offline in Indonesia, especially foreign speakers who have work or a family. BIPA learners consider that learning Indonesian online does not interfere with their work and time spent with their families.

However, online learning, carried out asynchronously, sometimes has obstacles. This obstacle is a time difference between teachers in Indonesia and students abroad. For example, online learning in Indonesia is at 01:00 PM, while the time for foreign speakers in America is 01:00 AM. Another obstacle in online learning is the internet connection and the need to provide feedback. Mengorio & Dumlao's research (2019) shows that internet connection is an obstacle

to online learning. An internet connection is one of the keys to success in online learning. Because online learning relies on the internet (Choudhury & Pattnaik, 2020). Besides that, providing online learning feedback is also a challenge for teachers (Jurs & Špehte, 2021). Even in online learning, feedback plays a crucial role (Bardach et al., 2021; Jensen et al., 2021). The solution to this problem is M-learning that can be used anytime and anywhere, minimizing internet connections and providing appropriate feedback.

Mobile learning (m-learning) uses mobile technology to support learning activities and facilitate various students in learning styles. M-learning has many advantages, including facilitating all student learning styles (Isal et al., 2021). The use of m-learning can improve academic performance (Demir & Akpınar, 2018; Y. Lu & Xiong, 2023), student achievement (Falode et al., 2022), student engagement (S. Yang et al., 2019), student motivation (Lin et al., 2017; Zou & Li, 2015), and encourage students towards independent learning (Razzaque, 2020). Johannsen's study (2023) found that students feel comfortable using mobile learning.

BIPA (Bahasa Indonesia bagi Penutur Asing) students typically range from teenagers to adults, reflecting a diverse age group interested in learning the Indonesian language. Research indicates that teenage learners show a strong preference for using mobile learning (m-learning) as an educational tool. Studies by Wei (2023), Kao et al. (2023), and Johannsen et al. (2023) reveal that teenagers not only enjoy m-learning but also find it satisfying and comfortable, which positively influences their learning experience. Meanwhile, studies focused on adult learners, particularly older adults, also support the potential of m-learning in language education. Klimova (2021) reported that a significant number of older adults possess smartphones with Android operating systems, making m-learning accessible and practical for this age group as well. Further evidence from Sanda and Klimova (2021) suggests that m-learning can be particularly beneficial for elderly language learners by reducing anxiety and boosting self-confidence, thus supporting language acquisition across different age groups.

Extensive research has explored various applications of m-learning in language education, targeting specific linguistic skills. For instance, studies have examined its role in improving vocabulary acquisition (Govindasamy et al., 2019; Klimova, 2021; Lei, 2018), pronunciation (Yang, 2022), speaking abilities (Dai & Wu, 2022; Tarighat & Khodabakhsh, 2016), listening skills (Azar & Nasiri, 2014; Jia & Hew, 2022), reading comprehension (Ho & Tzeng, 2021; Hutton et al., 2021), writing proficiency (Green, 2019; Jiang & Zhang, 2020; Llema & Vilela-Malabanan, 2019), and grammatical accuracy (Reeder et al., 2017; Serfaty & Serrano, 2020). These studies collectively highlight the versatility of m-learning in supporting different aspects of language education, indicating its potential as a comprehensive learning tool. However, much of this research focuses on isolated skills rather than a holistic approach to language learning.

The current study addresses a significant gap in the literature by developing a comprehensive m-learning application specifically for BIPA level 2 learners. While previous research has often centered on individual language skills, there is a need for an integrated approach that encompasses all four core language skills—listening, reading, speaking, and writing—to meet the comprehensive needs of language learners. Furthermore, existing m-learning solutions for BIPA learners remain limited, particularly for intermediate-level students, despite the fact that a substantial number of BIPA learners, as indicated by Suyitno et al. (2019), are at level 2 proficiency.

This study's novelty lies in the development of an m-learning platform tailored for BIPA level 2 students, incorporating automatic feedback mechanisms to enhance learning outcomes. The platform is designed in alignment with BIPA graduate competency standards, ensuring that it meets educational requirements and supports the overall language development of learners. By creating this integrated m-learning solution, the study aims to fill the current gap in BIPA educational resources, providing a much-needed tool for learners at the intermediate level. The

resulting m-learning platform not only addresses the scarcity of such resources but also offers a structured approach to mastering the four essential language skills, thereby promoting a more effective and engaging language learning experience.

RESEARCH METHOD

Product development stage

This research uses a 4D model (Thiagarajan et al., 1975) with four stages.

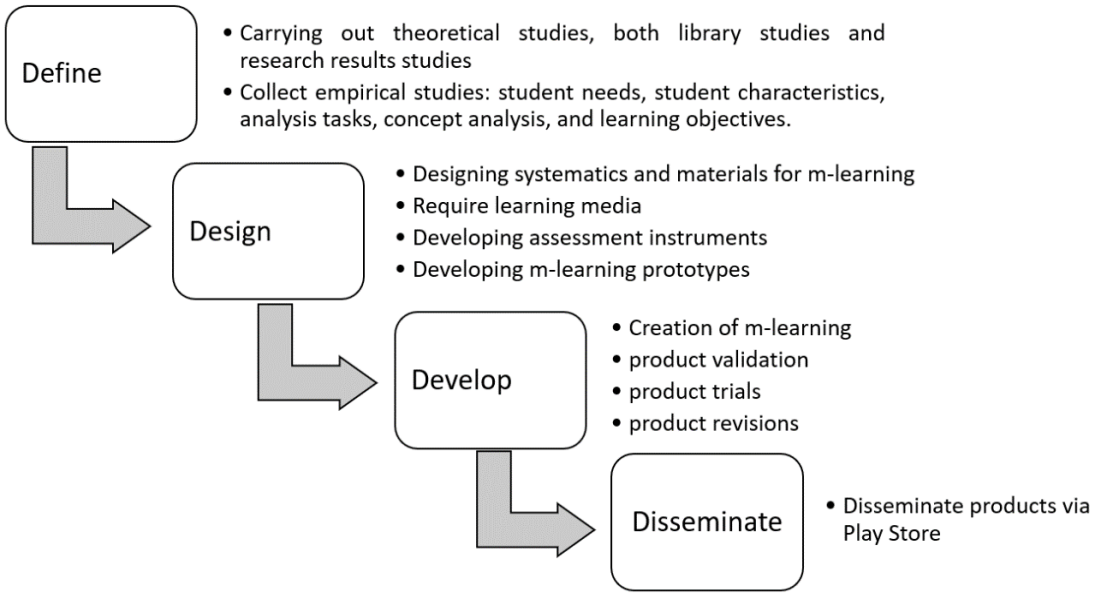

Figure 1. Development research procedure

Define Stage: In this Stage, the researchers analyzed student needs and collected initial information. In this process, researchers examine the BIPA curriculum to determine learning objectives and topics that will be discussed. Researchers also studied several beginner-level BIPA teaching materials to determine how to present the material and practice models. The BIPA teaching materials studied include the Low Beginner Level Online BIPA Teaching Materials (Rofi'uddin et al., 2021), the Upper Beginner Level Online BIPA Teaching Materials (Rofi et al., 2022), *Sahabatku Indonesia BIPA 1* (Artating & Novytasari, 2019), *Sahabatku Indonesia BIPA 2* (Akbar & Batubara, 2019), *Sahabatku Indonesia untuk Pelajar BIPA 2* (Putriasari, 2019) and several other BIPA teaching materials designed for upper beginner level students. Researchers also interviewed BIPA teachers at the State University of Malang who had experience teaching beginner-level BIPA.

Design stage: At the design stage, the researchers (1) compiled a framework, designed m-learning and materials, (2) compiled learning media, and (3) compiled assessment instruments with automatic feedback. At this stage, researchers produce materials, assessment instruments, and m-learning application prototype designs.

Development stage: in this stage, the activities carried out are: (1) researchers create a prototype of the m-learning application, (2) validate the product to BIPA learning experts and online learning experts by distributing questionnaires, the elements assessed by the experts include the graphics feasibility, presentation feasibility, material feasibility, language feasibility, and cultural value feasibility aspect, (3) conduct a product trial on BIPA learners, the product is tested on 18 BIPA learners after the BIPA learners are given a questionnaire, and *(4)* revise the product according to the validator's suggestions and during the product trial. At this stage, the researcher produces m-learning.

The assessment questionnaire for the feasibility of M-learning consists of five assessment aspects, namely graphic and organization feasibility, presentation, material,

language, and culture value. The questionnaire uses the Scala Linkert with 5 alternative answers, strongly disagree, disagree, neutral, agree, and strongly agree. The research questionnaire is presented in the following table.

Table 1
Graphics and Organization Feasibility

No	Question	Answer				
1	Selection of images/illustrations according to the material presented	1	2	3	4	5
2	Layout proportional M-learning text	1	2	3	4	5
3	Use variation letters (bold, italic, capital) already by the rules of the Indonesian language.	1	2	3	4	5
4	Font type and size letter proportional and easy to read.	1	2	3	4	5
5	Placement titles, subtitles, and learning activities are already uniform.	1	2	3	4	5

Table 2
Presentation Feasibility

No	Question	Answer				
1	A mini-dictionary available in M-learning makes it easier for BIPA learners to remember new terms/vocabulary.	1	2	3	4	5
2	Material presented in one unit reflects a unity theme.	1	2	3	4	5
3	The order presentation shows a coherent and easy flow of BIPA learners using M-learning.	1	2	3	4	5
4	Images in application M-learning is proportional and functional.	1	2	3	4	5

Table 3
Material Feasibility

No	Question	Answer				
1	M- learning 2 suitable used For online learning	1	2	3	4	5
2	Material in M-learning is appropriate with SKL BIPA 2.	1	2	3	4	5
3	Material in M-learning is already by the learning goal.	1	2	3	4	5
4	Text example presented by topics taught.	1	2	3	4	5
5	Difficulty level material Already by level skill BIPA 2 learners	1	2	3	4	5
6	Topics in M- learning are delivered in a way concrete and actual	1	2	3	4	5
7	The materials in M- learning according to life are real, varied, and interesting	1	2	3	4	5
8	Grammar notes in each lesson unit help BIPA learners understand Indonesian grammar concepts.	1	2	3	4	5
9	Audio in M- M-learning is audible clear and appropriate with learners For BIPA level 2.	1	2	3	4	5
10	Materials in M- learning help BIPA learners to practice critical-creative think methods in Indonesian.	1	2	3	4	5
11	The images in M-learning help BIPA learners understand materials and practices in Indonesian.	1	2	3	4	5
12	Material presented in M-learning materials can Motivate BIPA learners to Study Indonesian.	1	2	3	4	5
13	Order or existing instructions in M- learning very clearly.	1	2	3	4	5
14	Existing quizzes/questions in M-learning can measure the abilities and skills of BIPA learners in Indonesian.	1	2	3	4	5
15	Questions/issues the exercises given varied and appropriate with level ability BIPA learners.	1	2	3	4	5
16	The answer key in M-learning helps BIPA learners when studying independently.	1	2	3	4	5
17	The material in M-learning does not contain elements of race, religion, and inter-group relations.	1	2	3	4	5

18	Content in code stems and links provided in M-learning already by the material presented is easily accessed by BIPA learners.	1	2	3	4	5

Table 4
Language Feasibility

No	Question	Answer				
1	Vocabulary in M-learning is suitable For BIPA learners level 2	1	2	3	4	5
2	Structure sentences in M-learning are suitable For BIPA level 2 learners and use effective sentences.	1	2	3	4	5
3	Learning materials are already in Indonesian spelling and grammar.	1	2	3	4	5
4	M- learning uses Variety appropriate Indonesian language with situation.	1	2	3	4	5
5	M- learning uses communicative language.	1	2	3	4	5
6	The language used is by BIPA level 2.	1	2	3	4	5

Table 5
Cultural Value Feasibility

No	Question	Answer				
1	The content of M-learning already represents Indonesian culture.	1	2	3	4	5
2	Cultural materials in M-learning arouses curiosity know BIPA learners to learn Indonesian culture.	1	2	3	4	5
3	Presentation material culture is very informative.	1	2	3	4	5
4	Element existing culture in this M- learning helps BIPA learners understand Indonesian culture.	1	2	3	4	5

1= strongly disagree, 2= disagree, 3= neutral, 4= agree, and 5 = strongly agree

Table 6
Suggestions for M-learning

No	Question	Answer
1	Please give suggestions to improve M-learning!	

The subsequent stage involves calculating the percentage of responses obtained from the distributed questionnaire. This calculation serves as a crucial step in quantifying the feedback collected from participants. The suggestions and insights derived from the questionnaire are systematically analyzed and used as a foundational basis for making targeted improvements. These recommendations help identify areas that need enhancement and guide the development of actionable strategies for refinement. In calculating the responses, specific criteria are employed to assess the data, ensuring that the evaluation is consistent and aligns with the study's objectives. By applying these criteria, the assessment process becomes more structured, allowing for a clearer interpretation of the results and facilitating a data-driven approach to improving the subject under review. The overall goal is to utilize the quantified feedback to inform decisions and implement meaningful improvements based on the participants' input.

Table 7
Eligibility Criteria

Percentage	Eligibility rate
81% - 100%	Very feasible
61% - 80%	Eligible
41% - 60%	Adequate
21% - 40%	Less feasible
0% - 20%	Very inadequate

(Arikunto, 2011)

Disseminate stage: The researcher disseminates the product to the public by uploading it to the Play Store. The results of the development of BIPA teaching materials can be accessed for free by searching on the Play Store.

RESEARCH FINDINGS AND DISCUSSION

Research Findings

Description of the developed m-learning

M-learning BIPA 2 can be installed on a minimum Android smartphone version 7. After installation, users do not need to connect to the internet except when answering questions. M-learning BIPA 2 can be downloaded free on the Play Store. M-learning consists of 10 units with two exam questions (mid-semester exam and final semester exam). The ten lesson units are adjusted to BIPA learning needs for one semester. Each lesson unit is designed for asynchronous learning for 4 lesson hours. The distribution of the 10 study units is based on considering 16 meetings in one semester. The 16 meetings were divided into one initial meeting to explain the lecture procedures and get to know each other. Two meetings for the mid-semester exam and final semester exam. Then, the remaining 13 meetings are used for learning starting from units 1-10. The ten topics are My Art Corner, Traditional Games, My Profession, My Surrounding Area, Buying and Selling Activities, Public Transportation, Announcements, My Holiday Stories, I Like Food, and Personal Health.

Product validation

Product validation is carried out by BIPA learning experts and online learning experts. Validation was carried out using a questionnaire containing 37 statements and suggestions. These 37 statements were answered with the answer options strongly disagree, disagree, neutral, agree, and strongly agree. These 37 statements were answered with the answer options strongly agree, agree, neutral, disagree, and strongly disagree. Of the 37 statements, five statements were to measure the feasibility of the graphics, four statements were to measure the feasibility of the material presentation, 18 statements were to measure the feasibility of the material, six statements were to measure the feasibility of the language, and four questions were to measure the feasibility of Indonesian culture. The product validation results are as follows.

Table 8
Product Validation Results

Aspcet	Score
Graphic and Organization	90
Presentation	86
Material	89
Language	86
Culture Value	91
Average	88.4

An average score product validation 88.4, based on the eligibility criteria in table 7 it can be interpreted that M-learning is very feasible to use. Even though M-learning is included in the feasible category, it still needs revision according to the validator's suggestions, namely providing more variation in exercise.

Product Trial

Product trials were carried out on 18 BIPA students. After students use the product, they are given a questionnaire. The questionnaire contains questions to measure the feasibility of m-learning, including graphic and organizational, presentation, content, language, cultural values, and user friendly. The following are the results of product testing.

Table 9

Product Testing Results

Aspect	**Score**
graphic and organization	86.6
presentation	88.6
Material	87.6
Language	86,8
Culture Value	87,2
User Friendly	88.8
Average	**87.9**

Feasibility of Graphic and Organizational. Graphical and organizational feasibility get a score of 86.6. Indicators of graphical and organizational feasibility are application cover design is attractive and can represent the contents of the m-learning, the selection of images/illustrations is appropriate to the material presented, the m-learning layout is proportional to the use of letter variations (bold, italic, capital) is by Indonesian language rules, the type and size of the letters are proportional and easy to read. The placement of titles, subtitles, and learning activities is uniform. Graphic aspects need to be considered in writing learning materials (Khine & Yang, 2017). In the graphic aspect, the characteristics of suitable teaching materials are an attractive cover appearance, the use of pictures and other graphic illustrations that can facilitate students' learning, the use of pictures and other graphic illustrations adapted to student development, the use of pictures, the right size and type of letters and graphic illustrations (Ministry of Education and Culture, 2017).

Feasibility of Presentation. Based on the trial results, the feasibility of presenting the BIPA learning application is 88.6. It means that the presentation aspect is suitable for use. Indicators of presentation feasibility are the material presented in the unit, which reflects a unified theme, and the order of presentation, which shows a coherent flow. It makes it easier for BIPA students to use BIPA m-learning; the presentation of images in m-learning is proportional and functional, and there is a mini dictionary that makes it easier for BIPA students to understand and remember new vocabulary.

The feasibility of the presentation of teaching materials is vital because it indicates whether the teaching materials are suitable. Arsanti (2018) stated that aspects of the presentation of teaching materials can determine whether or not a teaching material is feasible. Furthermore, according to Markovic (2012), presentation aspects influence the quality of teaching materials. Several aspects in presenting teaching materials, including learning objectives involving active students and evaluation tools (Romansyah, 2016). In the BIPA learning application, there is a learning objective in each unit. The learning objective provides information on the abilities that will be mastered by BIPA learners, with this information motivating BIPA learners to study teaching materials (Zulfadilla et al., 2022).

Furthermore, involving students, the material in the BIPA learning application has been designed so that BIPA students are active in learning, which includes 4 language skills. Evaluation tools in the BIPA learning application also vary from matching question types, filling in gap sentences, multiple choice essays, speaking practice, and writing practice. Practicing varied questions can motivate students to learn (Shanmugavelu et al., 2020).

Feasibility of Material. The material feasibility aspect gets a score of 87.6; it can be interpreted that the BIPA student application is suitable for use. Indicators of the feasibility of the material are the suitability of the material to BIPA graduate competency standards 2, suitability of the material to the learning objectives, suitability of the level of difficulty of the material to the level of proficiency of BIPA 2 students, topics in m-learning are presented in a concrete and actual, material in m-learning is by real life, authentic, varied, and exciting. The audio in m-learning can be heard clearly and is suitable for students at BIPA level 2. The

material in the BIPA learning application motivates BIPA students and helps BIPA students practice critical-creative thinking in Indonesian, and the answer key in m-learning helps BIPA students when studying independently

The material in the application has been adapted to the BIPA graduate competency standards and student needs. According to Tiawati (2018), suitable teaching materials are teaching materials that match the curriculum or graduate competency standards. This is in line with the opinion Kacetl and Klímová (2019), who stated that in designing learning applications, it is necessary to adapt them to student needs. The material in the application is free from *SARA* (ethnicity, religion, ancestry, and group of people) elements that can be divisive. Quality teaching materials must be free from divisive stereotypes and prejudices (UNESCO, 2017). The material in the application uses authentic material. Using authentic material aims to make teaching and learning enjoyable and eliminate boredom (Widyastuti, 2017). Authentic materials can also increase interest and motivation (Jones, 2022; Siegel, 2019). When using the application, students are encouraged to practice using Indonesian, for example, telling stories or writing in Indonesian. According to Timmis (2018) authentic material must engage and interest the learner besides containing functional language. Interesting material can encourage BIPA students to re-read and listen outside of class.

Feasibility of language. In the language aspect, it gets a score of 86.8; it can be interpreted that the BIPA student application is suitable for use. The indicators assessed are the suitability of vocabulary, sentence structure, and the variety of language used with level 2 BIPA learners. Besides that, the use of language in communicative learning applications. The language used in the BIPA learning application has been adapted to Indonesian grammar and BIPA learners' development level. According to Sutarsih (2013), the use of language in teaching materials needs to consider learner development and grammar. The language used in m-learning uses simple language adapted to the level of BIPA learning proficiency. The aim of using simple language is that BIPA students can understand the material, especially when studying independently.

Feasibility of cultural values**.** The cultural suitability aspect gets a score of 87.2; it can be interpreted that the BIPA student application is suitable for use. Indicators of cultural appropriateness in m-learning are that the cultural material in m-learning represents Indonesian culture, making BIPA students curious to learn about Indonesian culture and helping them understand Indonesian culture. In BIPA learning, cultural aspects are fundamental to study (Tanwin & Rosliani, 2020). The culture of BIPA learners differs from Indonesian culture. Therefore, BIPA learners need to study Indonesian culture. Besides that, culture is one of the goals of foreign speakers studying BIPA (Haryati et al., 2019) and is one of the competencies that BIPA learners must achieve (Mintowati et al., 2021). The cultural aspects contained in the material can motivate and inspire foreign speakers to improve their skills in Indonesian (Saddhono & Erwinsyah, 2018). Cultural aspects in BIPA teaching materials can increase the interest of foreign speakers in studying BIPA and getting to know Indonesia.

User friendly of the application**.** During the product trial, user-friendly got the highest score 88.8. The high score could be because the M-learning product can be accessed in areas with minimal internet connection, even if there is no internet connection, users can learn the material. In addition, most BIPA learners are accustomed to using applications on smartphones so when operating M-learning, BIPA learner's does not have obstacles. In using m-learning, ease of access is essential. It is one of the determining factors for the success of m-learning. Ease of access in m-learning makes learning effective and efficient and can motivate students to learn languages. Purnomo's study (2020) show that the flexibility and ease of access to m-learning help students to learn. Ease of access in m-learning also shows that the flexibility and ease of access to m-learning help students to learn. Ease of access in m-learning also influences

learner motivation (Elaish et al., 2019). Learners will be motivated if they can easily access m-learning; conversely, they will feel lazy about learning if m-learning is difficult to access.

Discussion

M-learning-based applications are needed by BIPA students, especially those who want to learn Indonesian but are located far away from Indonesia. The m-learning application developed by researchers can be used anytime and anywhere. The results of this study are in line with the results of the study Abdul Talib et al. (2019) and Eteokleous & Ktoridou (2009) show that m-learning can make it easier for students to learn anytime and anywhere. Easy access to m-learning can increase learner motivation (Kacetl & Klímová, 2019; Razzaque, 2020; Zhampeissova et al., 2020; Zou & Li, 2015). A student motivated to learn a language will study the material well and diligently and will ultimately improve the student's language skills and knowledge. M-learning can also increase BIPA learners' independence in learning Indonesian.

The results of validation and product trials show that m-learning is suitable for use. This research shows that BIPA learners feel happy and like using m-learning, which can be installed on smartphones because it is easy to carry and operate. Miranda's research (2021) show that students prefer to use smartphones rather than desktops, laptops, and tablets. In addition, m-learning makes students complete learning activities more quickly than desktop or laptop computers (Isal et al., 2021). Students more easily access learning in places that are difficult to implement when using a desktop (Oyelere et al., 2016).

M-learning application developed by researchers minimizes internet connections so that internet connection is not an obstacle. Once the application is installed, users do not have to continue to be connected to the internet, especially when studying material. M-learning users only connect to the internet when listening to and completing quizzes so BIPA learners can learn the material even though they are not connected to the internet. This provides a greater opportunity for BIPA learners who live in remote areas or have limited internet access to continue learning. The results of this study differ from the results of the study Ekoç study (2021) show that internet connection is one of the shortcomings of m-learning. Hans & Sidana (2018) and Mengorio & Dumlao (2019) also stated that internet connection is an obstacle in m-learning.

The m-learning developed is equipped with quizzes with automatic feedback. Feedback is one of the keys to improving students' abilities (Márquez et al., 2023; Putri et al., 2021; Vattøy & Smith, 2019). This research shows that m-learning feedback is essential for students and can motivate students to learn languages. With feedback, students can find out their ability to understand the material. In addition, automatic feedback can improve speaking (Zou et al., 2023), writing (Lv, 2018; Wang & Wang, 2012) increase learner motivation (Narciss et al., 2014), help student success (Janar & Uralova, 2022) positively impact student performance (Zhu et al., 2020), and improve student achievement (Ion et al., 2019).

Feedback in online learning is essential because instructors and students are separated geographically and physically (Cavalcanti et al., 2021). The results of this research also show that the majority of students want immediate feedback. Immediate feedback can increase student motivation to improve because students remember the material or what they have just done. On the other hand, using delayed feedback can cause students to forget what they have done, reducing their motivation to improve. The results of this study confirm the findings of Fu & Li (2023) and X. Lu et al. (2023), which stated that immediate feedback had a more positive impact than delayed feedback. Automatic feedback helps teachers in assessing assignments because teachers no longer have to manually assess each BIPA learner's assignment. In using M-learning, teachers act as facilitators and mentors, the teacher's job is to help students understand deeper concepts and provide personal guidance.

Automatic feedback also provides valuable data on student learning patterns, such as frequent mistakes, time spent on certain tasks, and the difficulty level of the material. Teachers can use this data to adjust teaching approaches based on students' specific needs. This data can be used in curriculum development to adjust the difficulty level of the material or identify what material needs to be reinforced. So, it can help create a more personal and effective learning environment. In the use of M-learning, face-to-face or direct interaction between teachers and students has the potential to be reduced. To overcome this, teachers can create online discussion sessions or consultations via chat. This interaction is important to support aspects of motivation, emotional support, and personal guidance.

CONCLUSION

The development of m-learning for BIPA 2 learners has been successful. Based on the results of validation and testing, the M-learning product is suitable for use. M-learning can be downloaded on the Play Store and installed on Android-based smartphones. The material in m-learning includes listening, speaking, reading, writing skills, grammar, and introduction to Indonesian culture

The developed M-learning is equipped with automatic feedback and minimizes internet connection. M-learning with automatic feedback allows students to know the results of their work directly. This speeds up the learning process because students can immediately understand and correct their mistakes. Learning also becomes more efficient, because students do not need to wait for teachers to provide assessments or corrections. Automatic feedback also reduces the burden on teachers. M-learning with automatic feedback can make learners learn independently without waiting for instructions from teachers or tutors. Learners can find out the results of their work quickly. This M-learning minimizes internet usage so that students with limited internet access can still learn effectively, especially learners in areas with limited connections or high internet costs. Learners become more independent in learning and have the opportunity to practice repeatedly until they understand the material. Using M-learning that can be accessed offline, makes it easier for learners in various situations, such as when traveling, without having to worry about internet connections, supporting flexibility and continuity of education. Overall, the use of mobile learning with automatic feedback and minimizing internet connections provides advantages in terms of accessibility, efficiency, and flexibility, especially in areas with limited internet connections. However, attention to the quality of feedback and maintaining social interaction in the learning process is important to optimize learning outcomes.

M-learning developed by researchers has weaknesses, including: First, automatic feedback in m-learning is only for listening and reading questions, while speaking and writing questions use a form of assessment rubrics. Second, the number of respondents in product trials is still limited. Third, M-learning can only be accessed by Android smartphones. Therefore, to further this work, other researchers can add feedback for listening and speaking questions, conduct M-learning trials with more respondents, and extend the use of M-learning on iOS, and other smartphone platforms.

ACKNOWLEDGEMENT

The author conveys a course of thanks to the State University of Malang, which has financed the implementation of this research

REFERENCES

Abdul Talib, C., Aliyu, H., Abdul Malik, A. M., Hooi Siang, K., Novopashenny, I., & Ali, M. (2019). Sakai: A Mobile Learning Platform. *International Journal of Interactive Mobile Technologies (iJIM)*, *13*(11), 95. https://doi.org/10.3991/ijim.v13i11.10800

Akbar, R., & Batubara, D. H. (2019). *Sahabatku Indonesia BIPA 2*. Badan Pengembangan Bahasa dan Perbukuan. https://bipa.kemdikbud.go.id/belajar_info.php?id=849

Arikunto, S. (2011). *Prosedur Penelitian: Suatu Pendekatan Praktik*. Rineka Cipta.

Arsanti, M. (2018). Pengembangan Bahan Ajar Mata Kuliah Penulisan Kreatif Bermuatan Nilai-Nilai Pendidikan Karakter Religius bagi Mahasiswa Prodi PBSI, FKIP, UNISULA. *KREDO : Jurnal Ilmiah Bahasa dan Sastra*, *1*(2). https://doi.org/10.24176/kredo.v1i2.2107

Artating, H., & Novytasari, Y. P. (2019). *Sahabatku Indonesia BIPA 1*. Badan Pengembangan Bahasa dan Perbukuan. https://bipa.kemdikbud.go.id/belajar_info.php?id=846

Azar, A. S., & Nasiri, H. (2014). Learners' Attitudes toward the Effectiveness of Mobile Assisted Language Learning (MALL) in L2 Listening Comprehension. *Procedia - Social and Behavioral Sciences*, *98*, 1836–1843. https://doi.org/10.1016/j.sbspro.2014.03.613

Bardach, L., Klassen, R. M., Durksen, T. L., Rushby, J. V., Bostwick, K. C. P., & Sheridan, L. (2021). The power of feedback and reflection: Testing an online scenario-based learning intervention for student teachers. *Computers & Education*, *169*, 104194. https://doi.org/10.1016/j.compedu.2021.104194

Cavalcanti, A. P., Barbosa, A., Carvalho, R., Freitas, F., Tsai, Y.-S., Gašević, D., & Mello, R. F. (2021). Automatic Feedback in Online Learning Environments: A Systematic Literature Review. *Computers and Education: Artificial Intelligence*, *2*, 100027. https://doi.org/10.1016/j.caeai.2021.100027

Choudhury, S., & Pattnaik, S. (2020). Emerging Themes in E-learning: A Review from the Stakeholders' Perspective. *Computers and Education*, *144*, 103657. https://doi.org/10.1016/j.compedu.2019.103657

Dai, Y., & Wu, Z. (2022). Mobile-Assisted Peer Feedback on EFL Pronunciation: Outcome Effects, Interactional Processes, and Shaping Factors. *System*, *111*, 102953. https://doi.org/10.1016/j.system.2022.102953

Demir, K., & Akpınar, E. (2018). The Effect of Mobile Learning Applications on Students' Academic Achievement and Attitudes toward Mobile Learning. *Malaysian Online Journal of Educational Technology*, *6*(2), 48–59. https://doi.org/10.17220/mojet.2018.02.004

Ekoç, A. (2021). Mobile Language Learning Applications from the Perspectives of Adult Language Learners in Turkey. *Shanlax International Journal of Education*, *9*(4), 259–264. https://doi.org/10.34293/education.v9i4.4147

Elaish, M. M., Shuib, L., Ghani, N. A., & Yadegaridehkordi, E. (2019). Mobile English Language Learning (MELL): A literature review. *Educational Review*, *71*(2), 257–276. https://doi.org/10.1080/00131911.2017.1382445

Eteokleous, N., & Ktoridou, D. (2009). Investigating Mobile Devices Integration in Higher Education in Cyprus: Faculty Perspectives. *International Journal of Interactive Mobile Technologies (iJIM)*, *3*(1), 38. https://doi.org/10.3991/ijim.v3i1.762

Falode, O. C., Dome, K., Chukwuemeka, E. J., & Falode, M. E. (2022). Development of an Interactive Mobile Application for Learning Undergraduate Educational Technology Concepts. *International Journal of Professional Development, Learners and Learning*, *4*(1), ep2204. https://doi.org/10.30935/ijpdll/12009

Fu, M., & Li, S. (2023). The Associations Between Foreign Language Anxiety and the Effectiveness of Immediate and Delayed Corrective Feedback. *Foreign Language Annals*, flan.12708. https://doi.org/10.1111/flan.12708

Govindasamy, P., Yunus, M. M., & Hashim, H. (2019). Mobile Assisted Vocabulary Learning: Examining the Effects on Students' Vocabulary Enhancement. *Universal Journal of Educational Research*, *7*(12A), 85–92. https://doi.org/10.13189/ujer.2019.071911

Green, M. (2019). Smartphones, Distraction Narratives, and Flexible Pedagogies: Students' Mobile Technology Practices in Networked Writing Classrooms. *Computers and Composition*, *52*, 91–106. https://doi.org/10.1016/j.compcom.2019.01.009

Hans, G., & Sidana, H. (2018). Mobile Learning Application and its Usage Among Students in Education. *JETIR*, *5*(1). https://www.jetir.org/papers/JETIR1801186.pdf

Haryati, G., Andayani, A., & Anindyarin, A. (2019). The Complexity of Cultural Outcomes as Indonesian Language Teaching Material for Foreign Speakers (BIPA). *International Journal of English Literature and Social Sciences*, *4*(6), 1979–1984. https://doi.org/10.22161/ijels.46.55

Ho, H.-H., & Tzeng, S.-Y. (2021). Using the Kano Model to Analyze the User Interface Needs of Middle-Aged and Older Adults in Mobile Reading. *Computers in Human Behavior Reports*, *3*, 100074. https://doi.org/10.1016/j.chbr.2021.100074

Hutton, J. S., Huang, G., Wiley, C., DeWitt, T., & Ittenbach, R. F. (2021). Randomized Trial of a Mobile App Introduced During Well-Visits to Enhance Guidance for Reading With Young Children. *Academic Pediatrics*, *21*(6), 977–987. https://doi.org/10.1016/j.acap.2021.05.005

Ion, G., Sánchez Martí, A., & Agud Morell, I. (2019). Giving or Receiving Feedback: Which is More Beneficial to Students' Learning? *Assessment & Evaluation in Higher Education*, *44*(1), 124–138. https://doi.org/10.1080/02602938.2018.1484881

Isal, R. Y. K., Santoso, H. B., & Novandi, E. R. (2021). Development and Evaluation of a Mobile-Learning Application Based on the Felder-Silverman Learning Styles Model. *International Journal of Emerging Technologies in Learning (iJET)*, *16*(15), 107. https://doi.org/10.3991/ijet.v16i15.24165

Janar, A., & Uralova, N. (2022). The Integration of the "Floop" Platform for Enhancing the Effectiveness of Feedback in the Postsecondary Education Context. *International Journal of Emerging Technologies in Learning (iJET)*, *17*(15), 54–67. https://doi.org/10.3991/ijet.v17i15.30711

Jensen, L. X., Bearman, M., & Boud, D. (2021). Understanding Feedback in Online Learning – A Critical Review and Metaphor Analysis. *Computers & Education*, *173*, 104271. https://doi.org/10.1016/j.compedu.2021.104271

Jia, C., & Hew, K. F. T. (2022). Supporting Lower-Level Processes in EFL Listening: The Effect on Learners' Listening Proficiency of A Dictation Program Supported By A Mobile Instant Messaging App. *Computer Assisted Language Learning*, *35*(1–2), 141–168. https://doi.org/10.1080/09588221.2019.1671462

Jiang, D., & Zhang, L. J. (2020). Collaborating With 'Familiar' Strangers in Mobile-Assisted Environments: The Effect of Socializing Activities on Learning EFL Writing. *Computers & Education*, *150*, 103841. https://doi.org/10.1016/j.compedu.2020.103841

Johannsen, F., Knipp, M., Loy, T., Mirbabaie, M., Möllmann, N. R. J., Voshaar, J., & Zimmermann, J. (2023). What Impacts Learning Effectiveness of A Mobile Learning App Focused on First-Year Students? *Information Systems and E-Business Management*. https://doi.org/10.1007/s10257-023-00644-0

Jones, C. (2022). Authenticity in Language Teaching Materials. In *The Routledge Handbook of Materials Development for Language Teaching*. Routledge.

Jurs, P., & Špehte, E. (2021). The Role of Feedback in the Distance Learning Process. *Journal of Teacher Education for Sustainability*, *23*(2), 91–105. https://doi.org/10.2478/jtes-2021-0019

Kacetl, J., & Klímová, B. (2019). Use of Smartphone Applications in English Language Learning—A Challenge for Foreign Language Education. *Education Sciences*, *9*(3), 179. https://doi.org/10.3390/educsci9030179

Kao, M.-C., Yuan, Y.-H., & Wang, Y.-X. (2023). The Study on Designed Gamified Mobile Learning Model to Assess Students' Learning Outcome of Accounting Education. *Heliyon*, *9*(2), e13409. https://doi.org/10.1016/j.heliyon.2023.e13409

Khine, M., & Yang, L. (2017). Descriptive Analysis of the Graphic Representations of Science Textbooks. *European Journal of STEM Education*, *2*(3). https://doi.org/10.20897/ejsteme/81285

Klimova, B. (2021). Evaluating Impact of Mobile Applications on EFL University Learners' Vocabulary Learning – A Review Study. *Procedia Computer Science*, *184*, 859–864. https://doi.org/10.1016/j.procs.2021.03.108

Lei, Z. (2018). Vocabulary Learning Assisted with Smart Phone Application. *Theory and Practice in Language Studies*, *8*(11), 1511. https://doi.org/10.17507/tpls.0811.17

Lin, M.-H., Chen, H.-C., & Liu, K.-S. (2017). A Study of the Effects of Digital Learning on Learning Motivation and Learning Outcome. *Eurasia Journal of Mathematics, Science and Technology Education*, *13*(7), 3553–3564. https://doi.org/10.12973/eurasia.2017.00744a

Lina Tiawati, refa. (2018). Indonesian Language Learning Planning for Foreigners (BIPA) For Beginners Level (Perencanaan Pembelajaran Bahasa Indonesia bagi Penutur Asing (BIPA) untuk Tingkat Pemula). *Gramatika STKIP PGRI Sumatera Barat*, *4*(2). https://doi.org/10.22202/JG.2018.V4I2.2732

Llema, C. F., & Vilela-Malabanan, C. M. (2019). Design and Development of MLERWS: A User-Centered Mobile Application for English Reading and Writing Skills. *Procedia Computer Science*, *161*, 1002–1010. https://doi.org/10.1016/j.procs.2019.11.210

Lu, X., Wang, W., Motz, B. A., Ye, W., & Heffernan, N. T. (2023). Immediate text-based feedback timing on foreign language online assignments: How immediate should immediate feedback be? *Computers and Education Open*, *5*, 100148. https://doi.org/10.1016/j.caeo.2023.100148

Lu, Y., & Xiong, T. (2023). The attitudes of high school students and teachers toward mobile apps for learning English: A Q methodology study. *Social Sciences & Humanities Open*, *8*(1), 100555. https://doi.org/10.1016/j.ssaho.2023.100555

Lv, X. (2018). A Study on the Application of Automatic Scoring and Feedback System in College English Writing. *International Journal of Emerging Technologies in Learning (iJET)*, *13*(03), 188. https://doi.org/10.3991/ijet.v13i03.8386

Markovic, M. G. (2012). Role and importance of presentation design in learning and in quality of multimedia learning material. *In8th WSEAS International Conference*. Technology Innovations in Education. https://www.bib.irb.hr/586812/download/586812.EDUTE-20.pdf

Márquez, J., Lazcano, L., Bada, C., & Arroyo-Barrigüete, J. L. (2023). Class participation and feedback as enablers of student academic performance. *SAGE Open*, *13*(2), 21582440231177298. https://doi.org/10.1177/21582440231177298

Mengorio, T. M., & Dumlao, R. (2019). The Effect of Integrating Mobile Application in Language Learning: An Experimental Study. *JET (Journal of English Teaching)*, *5*(1), 50. https://doi.org/10.33541/jet.v5i1.959

Ministry of Education and Culture. (2017). *Kajian Buku Teks dan Pengayaan: Kelengkapan dan Kelayakan Buku Teks Kurikulum 2013 Serta Kebijakan Penumbuhan Minat Baca*

Siswa. Puslitjakdikbud. https://pskp.kemdikbud.go.id/assets_front/images/produk/1-gtk/buku/Buku_Teks_dan_Pengayaan-.pdf

Mintowati, M., Panich, P., Andriyanto, O. D., Septiana, H., & Tandra, H. Y. (2021). Problematics Of BIPA Teachers At Unesa Indonesia And Walailak University Thailand. *International Conference of Humanities and Social Science (Ichss)*, 492–500. https://doi.org/10.1234/ichss.v1i1.56

Miranda, J. P. P., Dianelo, R. F. B., Yabut, A. M., Paguio, C. A. L., Dela Cruz, A. G., Mangahas, H. W. G., & Malabasco, K. C. (2021). Development of INSVAGRAM: An English Subject-Verb Agreement Mobile Learning Application. *International Journal of Emerging Technologies in Learning (iJET)*, *16*(19), 219. https://doi.org/10.3991/ijet.v16i19.24071

Muzaki, H. (2021). Pengembangan Bahan Ajar BIPA Tingkat 3 Berbasis Budaya Lokal Malang. *Jurnal Ilmiah SEMANTIKA*, *2*(02), 1–9. https://doi.org/10.46772/semantika.v2i02.379

Narciss, S., Sosnovsky, S., Schnaubert, L., Andrès, E., Eichelmann, A., Goguadze, G., & Melis, E. (2014). Exploring feedback and student characteristics relevant for personalizing feedback strategies. *Computers & Education*, *71*, 56–76. https://doi.org/10.1016/j.compedu.2013.09.011

Oyelere, S. S., Suhonen, J., & Sutinen, E. (2016). M-Learning: A New Paradigm of Learning ICT in Nigeria. *International Journal of Interactive Mobile Technologies (iJIM)*, *10*(1), 35. https://doi.org/10.3991/ijim.v10i1.4872

Purnomo, A., Kurniawan, B., & Adi, K. R. (2020). Expanding Learning Environment through Mobile Learning. *International Journal of Emerging Technologies in Learning (iJET)*, *15*(07), 123. https://doi.org/10.3991/ijet.v15i07.13215

Putri, N. V. W., Munir, A., & Anam, S. (2021). Students' perceptions of teacher feedback in EFL English class and their self-regulated learning after receiving feedback. *Journal on English as a Foreign Language*, *11*(1), 42–60. https://doi.org/10.23971/jefl.v11i1.2237

Putriasari. (2019). *Sahabatku Indonesia untuk Pelajar BIPA 2*. Badan Pengembangan Bahasa dan Perbukuan. https://bipa.kemdikbud.go.id/belajar_read.php?id=848

Razzaque, A. (2020). M-Learning Improves Knowledge Sharing Over e-Learning Platforms to Build Higher Education Students' Social Capital. *SAGE Open*, *10*(2), 2158244020926575. https://doi.org/10.1177/2158244020926575

Reeder, P. A., Newport, E. L., & Aslin, R. N. (2017). Distributional learning of subcategories in an artificial grammar: Category generalization and subcategory restrictions. *Journal of Memory and Language*, *97*, 17–29. https://doi.org/10.1016/j.jml.2017.07.006

Rofi, A., Susanto, G., Widyartono, D., Muzaki, H., & Panich, P. (2022). *Development of BIPA Online Teaching Material for Beginner High Level Learners*. *7*(2), 2636–2641.

Rofi'uddin, A., Susanto, G., Muzaki, H., Widyartono, D., & Panich, P. (2021). Pengembangan Bahan Ajar Bipa Daring Tingkat Pemula Rendah. *Ranah: Jurnal Kajian Bahasa*, *10*(1), 153–169. https://doi.org/10.26499/rnh.v10i1.3376

Romansyah, K. (2016). Pedoman Pemilihan dan Penyajian Bahan Ajar Mata Pelajaran Bahasa dan Sastra Indonesia. *LOGIKA Jurnal Ilmiah Lemlit Unswagati Cirebon*, *17*(2), Article 2.

Saddhono, K., & Erwinsyah, H. (2018). Folklore As Local Wisdom for Teaching Materialsin Bipa Program (Indonesian for Foreign Speakers). *KnE Social Sciences*, *3*(10), 444. https://doi.org/10.18502/kss.v3i10.2926

Sanda, L., & Klimova, B. (2021). Educational Mobile Applications for Learning English as a Second Language by Czech seniors. *Procedia Computer Science*, *192*, 1848–1855. https://doi.org/10.1016/j.procs.2021.08.190

Serfaty, J., & Serrano, R. (2020). Examining the potential of digital flashcards to facilitate independent grammar learning. *System*, *94*, 102342. https://doi.org/10.1016/j.system.2020.102342

Shanmugavelu, G., Ariffin, K., Vadivelu, M., Mahayudin, Z., & R K Sundaram, M. A. (2020). Questioning Techniques and Teachers' Role in the Classroom. *Shanlax International Journal of Education*, *8*(4), 45–49. https://doi.org/10.34293/education.v8i4.3260

Siegel, J. (2019). Teaching lecture notetaking with authentic materials. *ELT Journal*, *73*(2), 124–133. https://doi.org/10.1093/elt/ccy031

Sutarsih. (2013). Pemilihan Kata Bahasa Indonesia Sebagai Sarana Penguasaan Bahan Ajar. *Seminar Nasional Pendidikan Bahasa Indonesia*, 312–323. http://publikasiilmiah.ums.ac.id/handle/11617/3330

Suyitno, I., Susanto, G., Kamal, M., & Fawzi, A. (2019). The cultural and academic background of BIPA learners for developing Indonesian learning materials. *Pertanika Journal of Social Sciences and Humanities*, *27*(T2), 173–186.

Tanwin, S., & Rosliani, R. (2020). The Development of Indonesian Language Teaching Materials for Beginner Level of Foreign Speakers with Local Content. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*, *3*(3), 1600–1613. https://doi.org/10.33258/birle.v3i3.1250

Tarighat, S., & Khodabakhsh, S. (2016). Mobile-Assisted Language Assessment: Assessing speaking. *Computers in Human Behavior*, *64*, 409–413. https://doi.org/10.1016/j.chb.2016.07.014

Thiagarajan, S., Semmel, D. S., & Semmel, M. I. (1975). *Instructional Development for Training Teachers of Exceptional Children: A Sourcebook*. Leadership Training Institute/Special Education, University of Minnesota.

Timmis, I. (2018). A Text-based Approach to Grammar Practice. In C. Jones (Ed.), *Practice in Second Language Learning* (1st ed., pp. 79–108). Cambridge University Press. https://doi.org/10.1017/9781316443118.006

UNESCO (Ed.). (2017). *Making textbook content exclusive: A focus on religion, gender, and culture*. United Nations Educational, Scientific and Cultural Organization.

Unesco. (2023). *Third report of the Legal Committee: Recognition of Bahasa Indonesia as an official language of the General Conference—UNESCO Digital Library*. https://unesdoc.unesco.org/ark:/48223/pf0000387629

Vattøy, K.-D., & Smith, K. (2019). Students' perceptions of teachers' feedback practice in teaching English as a foreign language. *Teaching and Teacher Education*, *85*, 260–268. https://doi.org/10.1016/j.tate.2019.06.024

Wang, F., & Wang, S. (2012). A Comparative Study on the Influence of Automated Evaluation System and Teacher Grading on Students' English Writing. *Procedia Engineering*, *29*, 993–997. https://doi.org/10.1016/j.proeng.2012.01.077

Wei, W. (2023). Understanding and supporting the use of feedback from mobile applications in the learning of vocabulary among young adolescent learners. *Studies in Educational Evaluation*, *78*, 101264. https://doi.org/10.1016/j.stueduc.2023.101264

Widyastuti, W. (2017). Authentic Material and Automaticity for Teaching English. *Register Journal*, *10*(1), 83. https://doi.org/10.18326/rgt.v10i1.83-100

Yang, L. (2022). Student Engagement With Teacher Feedback in Pronunciation Training Supported by a Mobile Multimedia Application. *SAGE Open*, *12*(2), 21582440221094604. https://doi.org/10.1177/21582440221094604

Yang, S., Zhou, S., & Cheng, X. (2019). Why do college students continue to use mobile learning? Learning involvement and self-determination theory: College students mobile learning continuance. *British Journal of Educational Technology*, *50*(2), 626–637. https://doi.org/10.1111/bjet.12634

Zhampeissova, K., Kosareva, I., & Borisova, U. (2020). Collaborative Mobile Learning with Smartphones in Higher Education. *International Journal of Interactive Mobile Technologies (iJIM)*, *14*(21), 4. https://doi.org/10.3991/ijim.v14i21.18461

Zhu, M., Liu, O. L., & Lee, H.-S. (2020). The effect of automated feedback on revision behavior and learning gains in formative assessment of scientific argument writing. *Computers & Education*, *143*, 103668. https://doi.org/10.1016/j.compedu.2019.103668

Zou, B., Du, Y., Wang, Z., Chen, J., & Zhang, W. (2023). An Investigation Into Artificial Intelligence Speech Evaluation Programs With Automatic Feedback for Developing EFL Learners' Speaking Skills. *SAGE Open*, *13*(3), 21582440231193818. https://doi.org/10.1177/21582440231193818

Zou, B., & Li, J. (2015). Exploring mobile apps for English language teaching and learning. *Critical CALL – Proceedings of the 2015 EUROCALL Conference, Padova, Italy*, 564–568. https://doi.org/10.14705/rpnet.2015.000394

Zulfadilla, I., Wardhani, F. P., Fiamanillah, Islamiyah, H. Y., Pajriansyah, & Mukhlis, M. (2022). Analisis Kelayakan Penyajian Buku Teks Bahasa Indonesia Kelas XI Kurikulum 2013 Edisi Revisi 2017. *Sajak: Jurnal Penelitian Dan Pengabdian Sastra, Bahasa, Dan Pendidikan*, *1*(1), Article 1. https://doi.org/10.25299/s.v1i1.8828