



## **Designing Mobile-Assisted Language Learning to Improve Reading Skills and the Vocabulary Mastery of Legal Terms**

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### **Kata kunci:**

grammatical cohesion  
textuality, linguistics

### **Abstrak**

English in Indonesia has been an important capital in all aspects of life. Currently, there is so much information delivered in English. Currently, In Indonesia, English learning media are too concentrated for general language use. Therefore, in order to solve the problem above, there must be learning media that not only cover the field of law but also motivate students to enhance their reading frequency in order to improve their vocabulary mastery. To improve students' vocabulary mastery and reading skills as well as gaining learning motivation, there are many ways that can be applied. One of them is by providing learning materials by making use of the current developing technology. This research is intended to design a mobile-assisted language learning to improve reading skills and mastery of legal terms vocabulary and purposively addressed to an Indonesian youth community located in South Tangerang, Banten, Indonesia. The employed interview has resulted in a well-designed mobile assisted language learning program that has been tested through the usability testing and questionnaire analysis.

### **Introduction**

English in Indonesia has been an important capital in all aspects of life. Currently, there is so much information delivered in English. As a consequence, Indonesian people should be aware that English now has an important role in their life. Despite the existence of English lessons in Indonesian schools, The English language skills of Indonesian students are still far from meeting the real-life needs.

Currently, In Indonesia, English learning media are too concentrated for general language use. There are only a few numbers of English materials covering particular specific fields brought to classrooms of English lessons, whereas many specific fields demand English vocabulary, unexceptionally the field of law.

The field of law in Indonesia seems to be too marginalized in current English learning materials. Consequently, there are many terms of the law that are inaccurately defined and used by Indonesian people. This misunderstanding occurs not only among Indonesian people but also among students. Moreover, it also happens to law practitioners. For example, many people define the word gratification as a bribe instead of its original meaning which is something that gratifies or is related to satisfaction. This kind of misunderstanding is caused by the lack of legal terms of vocabulary.

This phenomenon of the lack of vocabulary mastery is really worrying because a strong vocabulary is a foundation for reading comprehension (Callella, 2004). Moreover, the lack of vocabulary mastery has resulted in weak reading motivation, whereas reading has beneficial

impacts on learners. Firstly, it can help learners to improve their reading skills as stated by Rog that “the more you read, the better you read”. Secondly, reading is beneficial to gain learners’ intellect as stated by Trelease 2001 that “the more you read, the more you know; and the more you know, the smarter you grow”. Therefore, in order to solve the problem above, there must be learning media that not only cover the field of law but also motivate students to enhance their reading frequency in order to improve their vocabulary mastery.

To improve students’ vocabulary mastery and reading skills as well as gaining learning motivation, there are many ways that can be applied. One of them is by providing learning materials by making use of the current developing technology as stated by Sarker et al (2019) that “incorporating technology in the teaching-learning process can be an effective way to develop the learners and educators for better learning and education outcomes”.

Technology development has brought language learning to be more attractive and interactive learning. Many language learning activities are now supported by technology as computer-based instruction (CBI), computer-assisted language learning, and mobile-assisted language learning. The implementation of those technology-based learning approaches has resulted in more effective language learning processes and better learning outcomes.

Compared to computer-based instruction and computer-assisted language learning, mobile-assisted language learning can be the most favored approach since it does not require classroom wire so that it can be used either inside or outside the classroom. Therefore, providing mobile assisted language learning will be a good alternative for enhancing reading skill and gaining students’ vocabulary mastery. Based on the discussion above, there is a necessity for designing mobile-assisted language learning to improve reading skills and mastery of legal terms vocabulary.

## **Literature Review**

### **A. Reading Comprehension**

As a language skill, reading has become one of learning objectives in either schools or universities. The objective of reading measures the level of reading comprehension that students should achieve because it is an essential capital for students to develop academic and personal success (Jones, 2004). With regards to its essential role, reading comprehension has been widely defined by many scholars.

According to Block and Parris (2008), “reading comprehension is a cognitive process that requires representation and coordination of multiple elements, contemporary work in cognitive development has important implications for understanding the development of comprehension processes”. In other words, reading comprehension is an understanding produced by cognitive processes.

Another definition of reading comprehension is also stated by Oakhill, Cain, and Elbro (2014). According to them, “reading comprehension is a complex task, which requires the orchestration of many different cognitive skills and abilities”. It can be assumed that reading comprehension is not a simple thing. Instead, it is a result of integration between cognitive skills and abilities.

In addition, Ertem (2010) also asserts that cognitive process has an essential role towards reading comprehension. According to him, “reading comprehension is an active cognitive process, and involves interaction between reader and text to construct meaning”. The statement of Ertem above is similar to what Oakhill, Cain, and Elbro state that reading comprehension is a result of cognitive work towards readers’ interaction with text in building meaning.

### **B. Vocabulary**

As the definition of reading, vocabulary definition has also been defined by many linguists. The definitions they shared are various despite the similar term they used. The

following definition, however, describes the definition of vocabulary that is closely related to language learning, especially reading.

One of those who defines the definition of vocabulary is Richards (2002). According to him, “vocabulary is a core component of language proficiency and provides much of the basis for how well learners speak, listen, read, and write”. It can be concluded that vocabulary has a crucial role in language skill development, including reading skill.

In addition, vocabulary is also defined in more specific terms by Richards, Platt and Platt (1992). They assert that “vocabulary is defined as 'a set of lexemes (the smallest unit in the meaning system of a language distinguishable from other similar units), including single words, compound words and idioms”. In other words, vocabulary is not a word, it can be in the form of phrases or idioms. It reflects that it is also important to teach students idioms since it is also a basic component to support reading skill.

From the definitions above, vocabulary can be concluded as a unit of language that has meaning which is a set of lexemes that is a core component of language proficiency. It is similar to what is stated in the research background that vocabulary is fundamental for reading comprehension which is one of language skills. Moreover, having a strong mastery of vocabulary is important for reaching the success of academic and career as well as gaining better self confidence in expressing thought through speaking and writing and improving reading comprehension Ehrlich (2005).

### **C. Mobile-Assisted Language Learning**

Mobile-assisted language learning (MALL) has been one of most favored self learning tools since it has its unique characteristic which is mobile. The definition of MALL has also been widely discussed around the world.

According to Kukulska-Hulme & Shield (2008), MALL is a handled learning tool provided for either formal or informal learning that is accessible anytime and anywhere. In other words, MALL is a learning tool that is flexible and usable in any learning context. It is, therefore, essential for language teachers and educators to make use of MALL in order to encourage autonomous learning.

Another point of view related to MALL is also shared by Miangah & Nezarat (2012). In their work entitled Mobile-Assisted Language Learning, MALL is perceived as an idyllic resolution to break language learning blocks with regards to time and place. This point of view supports the statement Kukulska-Hulme & Shield (2008) that MALL is a tool that is beneficial to get rid of the limit of traditional language learning that is limited to classroom and particular time.

Based on the discussions above, it can be concluded that MALL is a learning tool that learners should be encouraged to use autonomously since it is a learning tool that breaks traditional learning boundaries with regards to time and place. Therefore, there must be a reform movement in the selection of learning material form in order for reaching the more effective learning processes.

### **D. Guidelines for Reading MALL Development**

This research applies research development or research and development (R&D) applying the ADDIE Model as the development model. The ADDIE model stands for Analysis, Design, Development, Implementation, and Evaluation of learning materials and activities.

“The concept of Instructional Design can be traced back to as early as the 1950s. But it wasn’t until 1975 that ADDIE was designed. Originally developed for the U.S. Army by the Centre for Educational Technology at Florida State University, ADDIE was later implemented across all branches of the U.S. Armed Forces.

The ADDIE model was based on an earlier ID model, the Five Step Approach, which had been developed by the U.S. Air Force. The ADDIE model retained this five-step feature, and included many sub-stages within each of the five broad phases. Due to the hierarchical

structure of the steps, one had to complete the process in a linear fashion, completing one phase before starting the next.

Practitioners over the years have made several revisions in the stages of the original hierarchical version. This has made the model more interactive and dynamic. It was in the mid-1980s that the version similar to the current version appeared. Today, the influence of the ADDIE method can be seen on most ID models being used.”

Designing MALL programs for reading development, of course, should consider learning aspects derived from the perspective of students. The work of Lin, Lin, and Liu (2019) is considerably advantageous to be applied. Their work entitled Mobile-assisted reading development: a review from the Activity Theory perspective has evaluated the research of mobile-assisted reading published between 2008 and 2018. The research results in detailed sociocultural accounts and recommendations for the design and implementation of reading in MALL. With regards to the MALL development, they have established substantial guidelines for developing MALL with regards to reading and vocabulary mastery as drawn below.

- a. Design-related guidelines
  - 1. Adopt suitable learning modes.
  - 2. Create impactful functions.
  - 3. Design reading contexts that decrease cognitive load
- b. Strategy-related guidelines
  - 1. Select level-appropriate strategies.
  - 2. Raise learner awareness of reading strategies.
  - 3. Explicate benefits of each reading strategy.
- c. Learner-related guidelines
  - 1. Enhance user perceptions.
  - 2. Foster self-regulated learning.
  - 3. Increase motivation, interest, and enjoyment while reducing learning anxiety

## **E. Related Studies**

Studies on the implementation of mobile-assisted language learning related to reading comprehension and vocabulary mastery have been conducted by researchers worldwide. Among them who recently conduct studies on MALL are Kalati (2014) Hazaea and Alzubi (2016), Cholis, Fauziati, Supriyadi (2018),

Kalati's (2014) study explores MALL and its influence on both English learning and vocabulary. This study is delivered to 36 male and female undergraduate Iranian students and addressed to measure to what extent they agree to use mobile devices to learn. The research covers qualitative and quantitative data. The research finding shows that 72% of the students preferred to learn English via mobile devices and 64% of them are willing to use vocabulary learning programs to add to their word bank.

A study conducted by Cholis, Fauziati, Supriyadi (2018) that is published in The International English Language Teachers and Lecturers Conference (iNELTAL) is conducted in Surakarta, Indonesia. The data are collected through online interviews with 3 students. This qualitative research results in a positive attitude towards the implementation of MALL. It is stated that students are encouraged to learn autonomously even though there are some technical problems in the operations. What is interesting from this research is the fact that students confirmed that the advantages of using MALL for improving reading comprehension were more than its challenges.

Besides, Hazaea and Alzubi's (2016) research that is similar to the research of Cholis, Fauziati, Supriyadi (2018) investigates the 30 student-reading class of Najran University. The research collects the data through During the treatment, WhatsApp group, self-reflection journals, and then semi-structured interviews with 5 participants. The research results show that with the use of mobile features and applications, students gain their

reading activities. Moreover, the participants no longer ask about word meanings since they have access to find the meanings.

## **Methodology**

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## **Analysis Key Components**

According to Kurt (2018), “there are several key components that should be utilized to make sure analysis is thorough. Course texts and documents, syllabi and the internet are to be employed. With the help of online materials such as web courses, a structure can be determined as the primary guide for the syllabus. At the end of the program, instructional analysis will be conducted to determine what subjects or topics are to be included. The Analysis Phase generally addresses the following issues and questions”:

1. What is the typical background of the students/participants who will undergo the program? Personal and educational information such as age, nationality, previous experiences and interests should be determined. What is the target group? What are the educational goals, past knowledge levels, experiences, ages, interests, cultural background etc. of the learners?
2. What do the students need to accomplish at the end of the program? What are the learner’s needs?
3. What will be required in terms of skills, intelligence, outlook and physical/psychological action-reaction? What are the desired learning outcomes in terms of knowledge, skills, attitudes, behavior etc.?
4. Determining popular methods being used around the subject and taking a look at what needs to be developed and improved. Review of existing instructional strategies employed. Are they adequate? What aspects need to be added, clarified and improved upon?
5. Determining target objectives of the project. What instructional goals does the project focus on?
6. Determining the various options available with respect to the learning environment. What is the most conducive learning environment? A combination of live or online discussions? What are the Pros and Cons between online- and classroom-based study? What delivery option is to be chosen? What type of learning environment is preferred? Does one opt for online or face-to-face or a blend of both? If online is preferred what will be the difference in learning outcomes between classroom-based learning and web-based learning?
7. Determining limiting factors to the overall goal of the project. What limiting factors exist with respect to resources, including technical, support, time, human resources, technical skills, financial factors, support factors?



## **Findings and Development**

Developing a mobile-assisted language learning needs an analysis in order to discover user needs and wants. The analysis itself is a required phase in the ADDIE-based learning media development. The user needs of learning through a mobile-assisted learning app were discovered using interview. Based on the interview result, the following findings were found to be major issues.

1. Only a few of participants used their mobile phone to learn English.
2. Most participants had experienced in learning English through mobile phone.
3. Most participants were not motivated to learn English using their mobile phone due to the monotonous language content exposed in mobile application.
4. Majority of the participants demanded a new learning experience provided in the app.
5. Most mobile applications that participants had used were not purposively designed for Indonesian learners.
6. Most participants never found English vocabulary of legal terms in mobile application.
7. Most participants found that English texts they read in mobile application were not interesting, the texts were mostly far from their real-life context.
8. Most participants were interested in reading news and legal-related texts if the issues were attractive.

Based on the need analysis, most users were not motivated to learn English through mobile application due to the unavailability of a mobile-assisted language learning that was well designed and purposively addressed to Indonesian learners. This fact resulted in the misalignment between the existing mobile app and the participants needs.

Regarding the learning contents, Indonesian learners need a mobile-assisted language learning that provides factual texts that were interesting and closely related to their real-life context. Knowing that most participants were interested in reading news and legal-related texts through mobile app, it is essential to make use of this attraction and the learning content types they intended to read.

The analysis result leads to a conclusion that the participants' attraction on reading news and legal-related text could be a stimulus to enhance their learning motivation. The availability of a mobile-assisted learning providing legal-related texts and is purposively addressed to Indonesian learners can lead to an interesting mobile application that is motivational.

A mobile-assisted language learning that meets user needs will gain learning frequency. Moreover, that kind of motivational learning media can turn its users to intensive learning activities. In sum, the analysis result shows that a new inventory of a mobile-assisted language learning was necessary to meet Indonesian learners demands in order to facilitate their English learning.

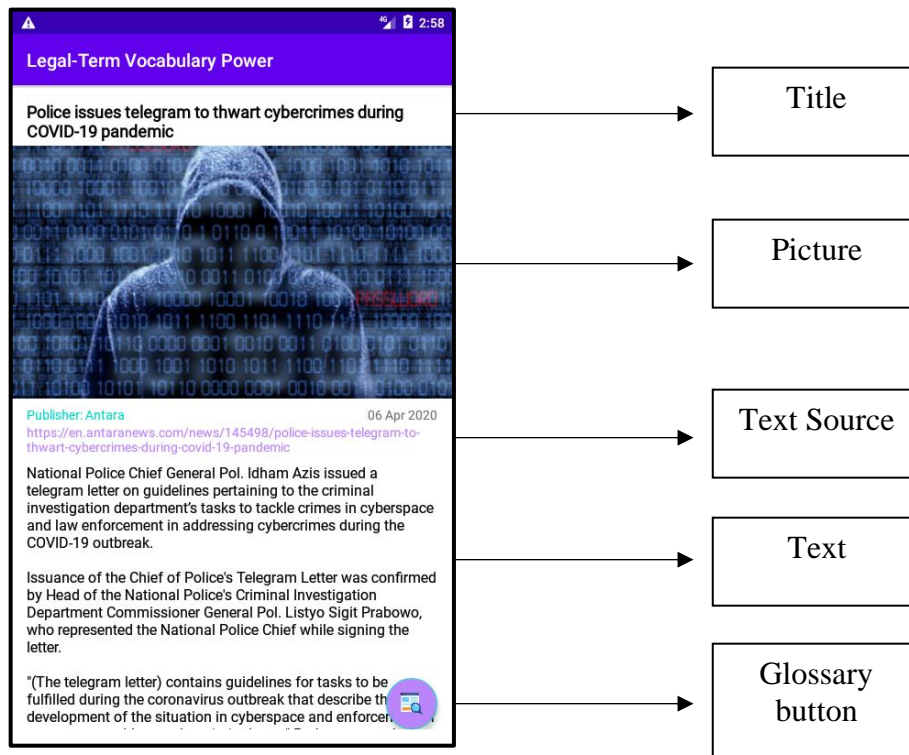
## **Design**

In ADDIE-based learning media development, design is a phase where the analysis results are transformed into a blueprint. The blueprint was intended to produce a learning media design that meets the user needs and wants before further development phase.

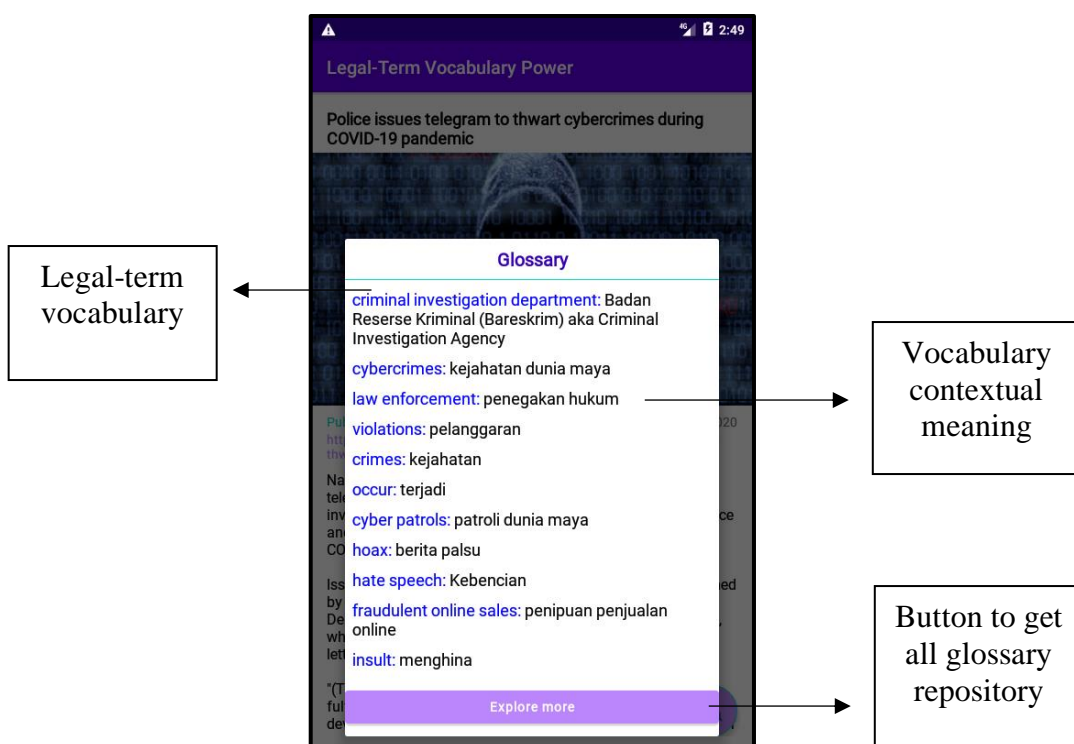
Based on the need analysis, the blueprint provides the following features:

1. Reading text concerning legal issues that were factual and closely related to Indonesian learners' real-life context.
2. Glossary support to support vocabulary mastery.
3. Reading exercise facilitating users to evaluate their learning achievement.

Regarding the reading texts, the presentation should be attractive in order to have a joyful feeling during reading activities. To meet this demand, availability of pictures in each reading page is necessary. Besides, pictures can also be a contextual clue for readers before they start reading. Finally, the reading text screen design of the MALL program provides structural views as shown below.



Designing a mobile-assisted language learning for Indonesian learners should consider their proficiency level. Since reading English text related to legal issues can possibly expose them to either unfamiliar or difficult words, glossary is considerably necessary to prevent boredom and lower motivation. Therefore, it is essential to provide such a relief for users in order to prevent them from facing such a learning constraint.



The glossary shown on the pop-up window is aimed to keep users' orientation that they are still on a reading activity. It is done to maintain the users' concentration so that they do

not get loss of their on-going reading activity. However, the users can keep exploring other legal-term vocabularies by tapping on the Explore more button. The button is designed to let users explore more glossary repository established at the MALL program.

## Implementation

Implementation is a phase of ADDIE-based learning development in which the development result is distributed and tested. After having the mobile-assisted language learning developed and ready to use, it was distributed to some Indonesian learners which were the member of youth community in Pamulang, Banten, Indonesia. They were asked to use the mobile application in order to evaluate the user experience and learning contents. In this phase, usability testing method was employed.

### A. Usability Testing

The user experience evaluation was done using usability testing method. It was addressed to find out how user behave during the learning process and what painful feelings users faced while using the application. Before the usability testing was done, the participants were given clearly defined tasks. The tasks and usability testing results were as follows:

**Table 1 Usability Testing Tasks**

No	Tasks	Success Indicator	Success Rate (%)
1	To read and comprehend a text.	Click on a reading topic	100
2	To find a solution for difficult vocabularies of legal terms.	Click on glossary feature	82
3	To learn other difficult vocabularies of legal terms.	Click on explore more on glossary pop-up view	78
3	To evaluate their reading comprehension.	Click on exercise	90
4	To bookmark a reading topic to be read later.	Click on bookmark	76

The usability testing shows that most participants could understand the buttons and menus provided in the program. They could navigate to reading activity and learning exercise without any significant issues. Regarding the glossary feature, most participants indicated that it was an important element of reading tasks. The glossary feature was also helpful for most participants since most of them made use of it to find any difficult words they had. Meanwhile, the more exploration of glossary was found to be in a lower rate which was 78% of participants checked it.

Despite the successful usability testing flow, this MALL program was still considered not to meet the learner needs by some participants. They felt that it was painful when they did not find difficult words in the glossary feature since they presumed that all word definitions were provided in the glossary feature. They thought that the MALL program was much better if the glossary feature provides all word definitions instead of concerning on legal term vocabularies.

In conclusion, most participants agreed that the user experience of this MALL program was practical and effective to be used as a mobile language learning tool. They could had gone through reading tasks and exercises well. The learning processes explored were considered easy to use and user-friendly since the user interface and content presentation were acceptable.



## B. Questionnaire Analysis

The questionnaire was distributed into 30 participants consisting of 18 males and 12 females. The data gathered were grouped into three aspects: usability, learning ability, and motivation within the Likert scale. The usability aspect investigated how easy the MALL program distributed was installed and explored by the participants. Meanwhile, the learning ability aspect investigated to what extend the MALL program distributed contributes to language learning related to reading and vocabulary exploration. The other aspect, motivation, investigated to what extend the MALL program motivates and attracts the participants in reading and learning legal-term vocabularies.

Statistics		Motivation	Usability	Learning Ability
N	Valid	30	30	30
	Missing	0	0	0
Mean		4.1667	4.4133	3.9800
Std. Deviation		.54351	.45768	.33466

The questionnaire analysis found that the average score of the motivation was 4.1 which means that the program developed was motivating. Regarding the usability aspect, the score reached 4.4 mean which means the program developed was practical and user friendly for the participants to use. Unfortunately, the learning ability did not reach 4 score. It was only 3.9 average score which means that the learning ability needs better concept and presentation. This might be caused by the unclickable difficult words presented on the reading page. If only every word in the reading page was clickable, the learners could have learned more easily and defined the words and context more efficiently. The inexistence of exercise or practice features might also be the factor of the lower learning ability score because participants, however, learning needs evaluation for the participants to do a kind of self-assessment.

Besides, the data analysis with regards to gender type was done with Kruskal-Willis H test type. The analysis also divided into three aspects which were motivation, usability, and learning ability. Below is the analysis result table.

Ranks			
	Gender	N	Mean Rank
Motivation	Male	18	16.25
	Female	12	14.38
	Total	30	
Usability	Male	18	14.36
	Female	12	17.21
	Total	30	
Learning ability	Male	18	17.08
	Female	12	13.13
	Total	30	

The gender analysis found out that males were more motivated in using MALL than females despite the fact that both were motivated well. Regarding the usability aspect, the analysis found that females tend to have more positive perspective. They made use of the

MALL program better than the males. Meanwhile, in term of the learning ability, males took advantage more than the females did.

The MALL program developed with the ADDIE model in this study was considerably practical and effective. It can be assumed by looking at the usability testing and questionnaire investigating three aspects which are motivation, usability, and learning ability.

## **Conclusion**

This research was purposively addressed to an Indonesian youth community located in South Tangerang, Banten, Indonesia. The employed interview has resulted in a well-designed mobile assisted language learning program that has been tested through the usability testing and questionnaire analysis.

Developing a MALL program, indeed, needs considerable procedures to have significant impacts of the learning processes. Besides, the MALL program should consider not only the learning ability, but also the motivation and usability aspects. The program developed has successfully covered the three aspects so that students can learn within a good motivation and user-friendly program presenting lessons that has impacts on the users' language development.

However, the program developed needs further improvement related to self-assessment. It is necessary for users to know to what extend their language has been improved and what aspects of language they have improved. Therefore, further research in developing the MALL program is necessary.

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