Mobile-Assisted Language Learning (MALL) Innovation for Vocational Education

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Abstract
Learning activities need to facilitate vocational students in learning independently. It certainly has an impact on students' low understanding and skills. This research aims to develop Mobile-Assisted Language Learning (MALL) for Vocational Education. This type of research is development research. The development model used is the ADDIE model. The subjects of this research consisted of 2 learning design experts, 2 learning media experts, and 2 learning materials experts, as well as practical tests carried out by 2 teachers. Individual trials were carried out on 3 students, and small group trials were carried out on 12 students. Data collection methods are observation, interviews, and questionnaires. The instrument used is a questionnaire. The data analysis techniques for this research are qualitative descriptive analysis and quantitative descriptive analysis. The results of the research, namely the assessment given by learning material experts, obtained an average of 96.5%. It was concluded that the MALL developed had very valid qualifications. The results of the learning media expert assessment were 97%, so the qualification was very valid. The results of the assessment given by the teacher were an average of 96%. The results of individual trials were 95.6%, and small group results were 94.7% (very good). It was concluded that the mobile-assisted language learning (MALL) developed had very good and practical qualifications, so it was suitable for use in English language learning.

Keywords: MALL; vocational; English

Introduction

Vocational education is a type of education that prepares students to work in certain areas of expertise. Vocational education is designed to provide practical education, so that students can

develop specific industry skills that enable students to enter the profession directly and be able to work straight away (Bui & Do Van Dung, 2019; Lindvig & Mathiasen, 2020; Oktarina et al., 2021; Sudana et al., 2019). Vocational education must be adapted to the needs of the labor market and be an integral part of the education system. Vocational training refers to teaching programs that focus on skills needed for work (Syauqi et al., 2020; Tampang & Wonggo, 2018; Wordu et al., 2013). Vocational Education provides direct, job-specific instruction. The difference between vocational education and regular education is that first, vocational education focuses on the special skills and knowledge needed to work in a particular job (El Haji et al., 2018; Zahour et al., 2020). Second, it provides practical education so that students develop specific industry skills that allow them to go directly into the profession and provide students with a complete understanding of the concepts in their field. Third, it is designed for more technical fields that involve hands-on work (Christian Pilarta Oliquino, 2019; Ghergut, 2014; Haug et al., 2019; Sahin, 2010). Vocational education focuses more on providing students with the specific skills and knowledge needed for work, while upper secondary education focuses more on providing a broad-based education that prepares them for a variety of careers..

In learning activities, vocational schools prepare students to enter the world of work by providing them with practical learning, so that they develop special skills (El Haji et al., 2018; Forster & Bol, 2018; Soputan, 2017; Zahour et al., 2020). Some of the ways vocational schools prepare their students to enter the world of work are special skills and knowledge, direct training, work readiness, tailored programs, and real-world experience. In learning activities, vocational education combines classroom training and hands-on training so as to give students a complete understanding of the concepts in their field and how to carry out their trade tasks. (Nurjanah & Sofiawati, 2019; Stadler & Smith, 2017). Hands-on training allows students to practice necessary skills. Graduates of vocational programs have an advantage over high school graduates because they have developed the skills necessary for the student's chosen profession (Sangsawang, 2020; Seyi, 2014; Sudana et al., 2019). Vocational school training is based on a hands-on learning approach which means students are taught practical skills and knowledge that are directly sought by Companies (Syauqi et al., 2020; Tampang & Wonggo, 2018; Wordu et al., 2013). Graduates are expected to have real-world work experience, so vocational schools adapt program offerings, learning formats, and student services to meet students' diverse needs. This means that students can receive specific training according to their needs and career goalsa.

However, the current problem is that learning activities for secondary vocational students are not yet optimal. Previous research findings also reveal that learning activities do not facilitate students in learning independently (Alifya et al., 2020; Martriwati et al., 2018; Rahmatih et al., 2017). This certainly has an impact on students' low understanding and skills. Currently, the learning process carried out has not achieved the maximum national education goals (Aris et al., 2019; Sutrisno & Siswanto, 2016; Yulianisa et al., 2018). One ability that cannot be said to be optimal is students' creative thinking abilities. The results of the initial analysis found that there are still many students who still have difficulty producing design products. Educators also stated that the students' lack of enthusiasm for learning in this subject resulted in the products produced being less than optimal, the assignments given were not completed on time, and there were several products that were the same for several students. This condition illustrates that students' creative thinking abilities cannot yet be said to be developing optimally. The results of the study show that students' creative thinking abilities are still low because 97.4% of students do not have the ability to think creatively (Malisa et al., 2018). This condition is caused by several things, including educators rarely or never directing creative thinking skills and students are not encouraged to

develop thinking skills in the learning process (Amirullah et al., 2019; Wahyuni & Kurniawan, 2018). If left unchecked, it will certainly have a negative impact on the aim of vocational education itself, namely producing human resources who are ready to compete in the world of work.

In overcoming this problem, the approach that can be used is Mobile-Assisted Language Learning (MALL) for vocational education. Based on this, to overcome the problem of not yet optimal vocational learning, Mobileassisted language learning (MALL) innovation is needed for vocational education. MALL is technology-based learning using smartphone applications (Azar & Nasiri, 2014; Darsih & Asikin, 2020). This MALL has done a lot to improve students' language skills. MALL focuses on the mobility of learning practices and emphasizes interactions between learners and learning content, peers, or instructors and can increase effectiveness, flexibility, and comfort in learning (Liu et al., 2016; Nafa, 2021; Saragih & Jaelani, 2020). Mobile-Assisted Language Learning (MALL) is a language learning method that involves the use of handheld mobile devices such as laptops, cell phones, and tablets to assist language learning activities. MALL is a part of technology-assisted language learning (TALL). MALL involves the use of various mobile applications in learning a second language (Hou & Aryadoust, 2021; Soleimani et al., 2014). In addition, students can also use mobile media such as photos, videos and audio recordings to produce their own content, making language learning more interesting and relevant. MALL is considered a promising technology for language teaching due to its accessibility. There are several applications that can be used to learn a second language, such as Duolingo, Babbel, Memrise, Busuu, and HeloTalk.

Previous research findings state that learning activities become more efficient if using technological assistance (Cucus et al., 2016; Escobar Fandiño et al., 2019). Previous findings also reveal that with the help of technology, learning activities become more effective and efficient (Garcia et al., 2020; Ichsan et al., 2020; Wulandari et al., 2020). Other research also reveals that MALL makes learning activities easier so that it can improve student learning outcomes effectively (Darsih & Asikin, 2020; Nafa, 2021; Segaran et al., 2014). Based on this, it can be concluded that MALL is a technology-based learning that can be used by vocational students learning English. The advantage of Mobile-Assisted Language Learning (MALL) is that mobile allows for a personalized learning experience, because students can access language learning materials anywhere and at any time. Apart from that, another advantage is that it can increase motivation because it provides a more interesting and interactive learning experience. Based on this, the aim of this research is to develop Mobile-Assisted Language Learning (MALL) for Vocational Education.

Research method

This type of research is development research. The development model used in creating Mobile-Assisted Language Learning (MALL) is the ADDIE model which includes analysis, design, development, implementation and evaluation (Tegeh, & Jampel, 2015). At the analysis stage, student characteristics analysis, curriculum analysis, and environmental analysis and learning facilities are carried out. At this stage, mobile-assisted language learning (MALL) design is carried out, namely designing lesson plans, worksheet, teaching materials and assessment instruments. At this stage, learning development and product validation are carried out. The subjects of this research consisted of 1 learning media expert and 4 learning material experts as well as practical tests carried out by 2 teachers. Furthermore, after MALL received excellent qualifications, individual trials were carried out on 3 students and small group trials on 12 students. Data collection methods are observation, interviews and questionnaires. Observations and

interviews to find out learning problems. Questionnaire to collect score data and reviews from experts. The instrument used is a questionnaire, the grid is presented in Table 1 and Table 2.

Table 1. Material expert validation test instrument

No.	Component	Criteria	Items numbers	Numbers of Items
1	Deductive	a. The material presented in the MALL is appropriate	1, 2, 3	3
		b. Material benefits	4, 5, 6	3
		c. Irrelevance of the question	7	1
2	Construction	a. Completeness of materials at the MALL	9, 10	2
		b. Use of words and language	8	1
		c. Contextual Approach	11, 12, 13	2

Table 2. Media expert validation test instrument

No.	Component	Criteria	Items numbers
1	Coloring	The color combination is appropriate and attractive	1
		Suitability of images and materials used	2
2	Appearance	The image and background design gives a positive impression	3
		Suitability of the typeface and font used	4
		Accuracy of icon selection	5
		MALL presentation supports student learning	6
3	Presentation	Systematic MALL presentation	7
		Presentation of images, videos and examples in accordance with the material	8

In testing instrument items through experts and carried out using the Gregory formula. The results of data analysis of the content validity coefficient of the instrument are 1.00, so the content validity of the instrument is very high. The data analysis techniques for this research are qualitative descriptive analysis and quantitative descriptive analysis. Qualitative descriptive analysis techniques are used to process data in the form of expert input. Quantitative descriptive analysis techniques process data in the form of scores from experts.

Results

This research develops Mobile-Assisted Language Learning (MALL) for Vocational Education using the ADDIE model, namely analysis, design, development, implementation and evaluation. However, the limitation of this research is that this research only reaches the product validity testing stage (development stage) and the implementation and evaluation stages will be continued in further research. The results of this research are as follows. First stage, analysis. At the analysis stage, student characteristics analysis, curriculum analysis, and environmental analysis and learning facilities are carried out. Analysis of student characteristics is used to determine student learning style tendencies and student interest in learning. Curriculum analysis is used to develop appropriate learning content and learning designs. Analysis of the learning environment and facilities is used to determine the learning facilities that students have that can support the learning process. The results of the analysis are student characteristics, namely student learning styles. Most of them are audio-visual. Students like learning media that combines video and image elements so it is very interesting. Apart from that, all students also have cellphones and laptops that can support learning activities. The results of the analysis of the school environment

and learning facilities at the school are also very adequate, the school has a computer room and WIFI access that students can use for learning. The results of the analysis of learning materials show that students have difficulty learning foreign languages, especially English. This is due to the lack of learning media that supports students' independent learning activities.

Second stage, design. At this stage, mobile-assisted language learning (MALL) design is carried out, namely designing lesson plans, worksheet, teaching materials and assessment instruments. The learning design was developed to provide an overview of the MALL workflow. The activity of designing learning designs refers to the syllabus and learning implementation plan. The developed MALL focuses on the mobility of learning practices and emphasizes interaction between learners and learning content, peers, or instructors and can increase effectiveness, flexibility, and comfort in learning.

Third stage, development. At this stage, learning development and product validation are carried out. Product development includes MALL and guidelines for its use. In the developed mobile-assisted language learning (MALL), there are three types of learning media that can be accessed by students which can facilitate each student's learning style in learning a foreign language. The learning media are audio, visual and audio-visual. Apart from that, several features found in MALL are first, formatted assessments such as quizzes and surveys. This aims to monitor student progress and provide feedback to students. Second, self-assessment. This feature helps students develop metacognitive skills. Third, performance-based assessment. These assessments are like speaking and writing assignments, to evaluate language proficiency and progress. Assessing student progress requires a combination of formative and performance-based assessments, as well as ongoing monitoring of application usage and student attitudes toward MALL. By providing feedback and support to students, teachers can help them achieve better learning outcomes and develop the skills necessary to communicate effectively in English. The results of MALL product development are presented in Figure 1, and Figure 2.
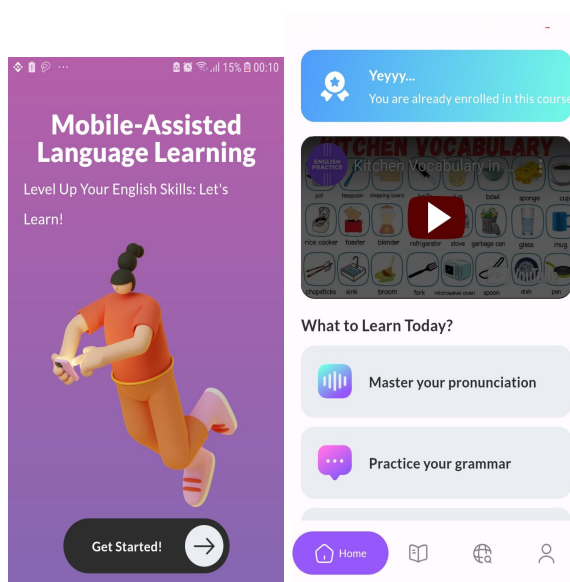

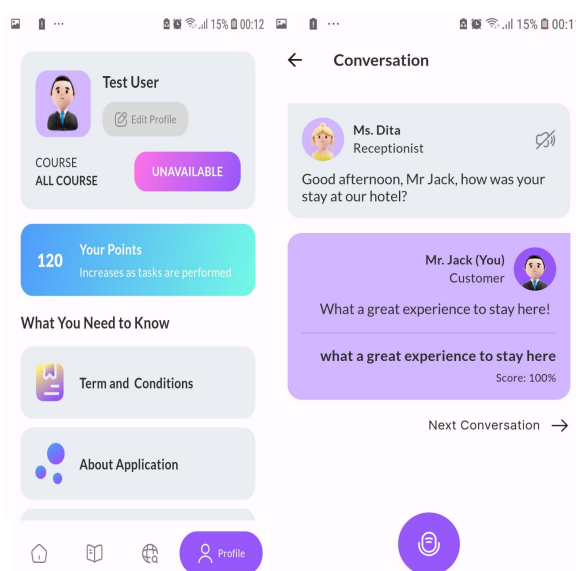Figure 1. Initial view of the mall   Figure 2. Student interaction in the MALL

After MALL was developed, its validity was tested by experts. The product developed was then tested by 2 learning design experts, 2 learning media experts and 2 learning materials experts

as well as practicality testing carried out by 2 teachers. Product repairs are carried out according to expert advice. The validity test results are presented in Table 3.

Table 3. Assessment results from experts

Evaluation	Score of Expert I	Score of Expert II	Score of Expert III	Score of Expert IV	Average	Description
Learning Materials Expert	97%	98%	95%	96%	96.5%	Very Valid
Learning Media Expert	97%	-	-	-	97%	Very Valid
Practicality Test (Teacher)	95%	97%	-	-	96%	Very Practical

Based on the results of the assessment given by learning material experts, namely expert I (97%), expert II (98%), expert III 95%, and expert 96%, so that an average of 96.5% was obtained, it was concluded that the MALL that was developed received qualifications. very valid. The assessment results provided by learning media experts were expert I (97%). It was concluded that the MALL developed received very valid qualifications. The results of the assessment given by teachers, namely teacher I (95%) and teacher II (97%), resulted in an average of 96%, it was concluded that the MALL developed had very practical qualifications.

Next, the developed MALL will be tested on students. The first stage is individual trials (One to One Evaluation). It is important to carry out individual trials to see the shortcomings and suggestions of the product being developed. The individual test subjects were 3 students who had medium, low and high abilities. Next, a Small Group Evaluation was carried out. The small group trial involved 12 subjects. The test results are presented in Table 4, and Table 5.

Table 4. One to one evaluation

Subject	Score	Description
A1	95 %	Very good
A2	98.3 %	Very good
A3	93.5 %	Very good
Average	95.6 %	Very good

Tabel 5. Small group evaluation

Subject	Score	Description
B1	93.3 %	Very good
B2	94 %	Very good
B3	95 %	Very good
B4	95 %	Very good
B5	94 %	Very good
B6	92.3 %	Very good
B7	95 %	Very good
B	96 %	Very good
B9	97 %	Very good
B10	95 %	Very good
B11	96 %	Very good
B12	94.3 %	Very good
Average	94.7 %	Very good

Based on the results of the individual trial assessment, an average score of 95.6% was obtained, and the results of the small group trial assessment were 94.7%. Based on this, MALL

gets very good qualifications so that students learn effectively and use it effectively. Based on the results of data analysis, it can be concluded that the mobile-assisted language learning (MALL) developed has very good and practical qualifications so that it is suitable for use in English learning.

Discussion

The results of the analysis show that mobile-assisted language learning (MALL) has very good qualifications, so it is suitable for use in learning. Mobile-assisted language learning (MALL) received very good qualifications due to several factors. First, mobile-assisted language learning (MALL) received very good qualifications because the material presented at MALL was appropriate. MALL can increase motivation because it provides a more interesting and interactive learning experience (Azar & Nasiri, 2014; Naderi, 2018). MALLs are more affordable than traditional classroom learning, because the cellphones and applications used are often cheaper than computers. Overall, MALL-assisted language learning has many advantages that make it an effective and convenient way to learn a new language (Liu et al., 2016; Saragih & Jaelani, 2020; Soleimani et al., 2014). MALL can be used to enhance vocabulary learning, as students can use MALL to access language learning applications and games that focus on vocabulary acquisition. Apart from that, students can also practice listening and speaking (Azar & Nasiri, 2014; Naderi, 2018; Segaran et al., 2014; Wahyu et al., 2018). MALL can be used to provide opportunities for students to practice listening and speaking so that they can improve students' skills. MALLs can also be used to promote independent learning, as students can use mobile devices to access language learning resources and practice materials outside of class (Liu et al., 2016; Saragih & Jaelani, 2020; Soleimani et al., 2014; Yudhiantara & Saehu, 2017).

Second, mobile-assisted language learning (MALL) received excellent qualifications because its use is very practical and efficient. Mobile-assisted language learning enables a personalized learning experience, so students can access language learning materials anywhere and at any time. Mobile-Assisted Language Learning (MALL) is a means that supports the teaching and learning process during learning from home. This helps teachers and students to carry out learning activities anytime and anywhere without having to go to school and meet other people (Abarghoui & Taki, 2018; Al Qasim & Al Fadda, 2013). MALL is a new way of language learning that allows EFL students to use cell phone devices to learn outside the classroom. MALL provides EFL students with the opportunity to learn independently and more responsibly (Abarghoui & Taki, 2018; Azar & Nasiri, 2014; Pham & Lai, 2022). Today's EFL students' learning experiences tend to be supported by technological developments. Students will learn more effectively independently with the technology they like to improve their skills. There are several mobile devices that help students' language learning, for example smartphones, iPods, mp3/mp4 players, and electronic dictionaries (Ahdan et al., 2020; Y.-L. Chen & Hsu, 2020; Imelda et al., 2019; Koderi et al., 2019). The application of MALL helps students learn (Azar & Nasiri, 2014; Yudhiantara & Saehu, 2017), improve students' listening skills, especially those who seem to be demotivated (Alzieni, 2021; Widiawati, 2022), improve writing skills (Gharehblagh et al., 2020), and support students' listening activities (Sepyanda et al., 2023). So, the existence of MALL has a positive impact on the learning process.

Third, mobile-assisted language learning (MALL) gets very good qualifications because it makes it easier for students to learn. Before implementing MALL into a language learning method it is important to identify the learning objectives and the tools that can be used to support these objectives (Abarghoui & Taki, 2018; Azar & Nasiri, 2014; Pham & Lai, 2022). This is important

to understand so that learning activities can run well. Mobile-assisted language learning can be accessed online, so students can access it from anywhere (Hou & Aryadoust, 2021; Soleimani et al., 2014). In addition, MALL supports linguistic learning which is important for language learning. MALL can be integrated into language learning methods through blended learning which combines face-to-face learning with online learning. Applying MALL to language learning methods provides a more interesting, flexible and personalized learning experience for students (Dashtestani, 2013; Yudhiantara & Saehu, 2017). By combining face-to-face learning activities with the benefits of mobile learning, language students can achieve better learning outcomes and develop the skills they need to communicate effectively in a foreign language.

Previous findings also confirm that MALL is very effective to apply in language learning (Alzieni, 2021; Chen et al., 2019; Saragih & Jaelani, 2020). It was concluded that implementing MALL requires careful planning and consideration of learning objectives and student needs, so that the MALL developed is suitable for application in learning. By choosing the appropriate application, it will create a more interesting and effective learning experience for students. MALL has been widely used by educators at elementary, middle school, high school and college levels to help with the distance learning process. However, until now there has been no research regarding MALLs that design learning products with the characteristics of students and the curriculum that applies in vocational schools. MALL in the learning process will make the learning process easier to improve students' listening skills, especially those who seem to experience decreased motivation and improve writing skills.

Conclusion

The results of data analysis show that mobile-assisted language learning (MALL) has received very good qualifications from experts. It is concluded that mobile-assisted language learning (MALL) is suitable for use in Vocational Education. Mobile-assisted language learning (MALL) presents material according to needs and systematically, making it easier for students to learn English.

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