



The Application of Android-Based Business English Learning Module

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Abstract. During pandemic Covid-19 this world requires all elements of society to adapt through the use of digital technology, especially in the education aspect. The application of android mobile-based learning module becomes one of the solutions within solving problems in learning, so that education goals can be reached. This research focuses on the development of Basic English teaching materials in universities, which can be accessed by students through smartphones. Research and development in developing learning innovation products is used as an alternative method in developing the module. Data collection would be done through relevant previous research studies, questionnaires, and interviews. The subjects of the study are the students in the Digital Business Study Program who have been studying online. Validation of this product is done through construct validation and content validity to experts in the field of android development and digital education. Through comprehensive teaching guidance, this android's module could be used as a tool of learning in improving student understanding and learning motivation.

Keywords: Learning · English · Android-based · application · Module

1 Introduction

The development of the digital world in the current era has changed a lot of human activities and influenced various areas of life [1]. Entering the era of the industrial revolution 4.0 now, changes in human activities are very obvious differences compared to the previous era. Such rapid changes make many unthinkable things appear suddenly becoming a new innovation or disruption for all sectors. The preparation of adequate Human Resources (HR) is the main concern in order to be able to adapt and compete in the face of changes that will constantly change [2]. The evolving needs of the industry will continue to look for high-quality human resources to be able to survive in the competition in the digital era. The emergence of the Covid-19 pandemic, which was not realized before, made human activities and behavior largely dependent on technology innovation. Therefore, people need to adapt to be digitally switched.

Firstly, Pandemic Covid-19 was first discovered in China in November 2019, until it spread to several other countries and is still ongoing today [3]. This made a drastic change to human activity, from normally doing full activities outside the home, to staying indoors to reducing the spread. The development of Covid-19 in Indonesia was spreading rapidly. The government urged people not to leave the house and to cover activities outside the home, including teaching and learning activities. This phenomenon not only had an impact on the health sector and the economic sector, but also within the education sector. Data from the Ministry of Education and Culture [3], there were 68.7 million students in Indonesia who carried out learning activities at home. Technology became an alternative solution to prevent the spread of this virus without having to meet face to face in person. The effectiveness of learning carried out during the pandemic depends on the planning carried out by educators so that the planning made must integrate and utilize technology and communications as well as possible so that the learning process remains interactive and effective [4].

During the pandemic, learning process activities are not only centered on educators, but get from the use of digital media. The motivation of teachers and students were influenced when trying to adapt to online learning. Education is an important part of life as an effort to develop self-abilities, both hard skills and soft skills. The process of effective education or learning was inseparable from the learning media utilized by educators in the classroom [5]. The use of technology has been used in the world of education before the Covid-19 pandemic existed. The existence of the pandemic had made digital education used rapidly, judging from the increasing needs. This digital learning was considered quite effective and efficient, and easily accessible to some students by conducting learning independently through the internet to find reference sources other than those obtained from educators and help in understanding the material to be studied. In addition, learning became more flexible because the form of material is not only verbal or verbal, but also more varied, such as text, visual, audio, and motion [6].

However, to avoid misinformation about the material sought by students, educators should contribute to developing learning media, one of which is a module that adjusts the characteristics of the material [6]. Business Basic English learning materials were very suitable to be developed with learning media in the form of digital modules. Data on internet users in Indonesia released by We Are Social and Hootsuite in 2021 explained that out of a total of 274.9 million Indonesians, there were 202.6 million Indonesians using the internet, showing an increase of 27 million from the previous year [8]. The utilization of mobile devices in Indonesia is about 96.4%. It provides opportunities to take advantage of the use of android-based digital applications in various fields, especially in the field of education. From the results of the Statcounter survey in 2021, Indonesia seems to use the most androids up to 59.25% [9]. Thus, the development of this android-based digital module will be an effective and efficient solution in the digital learning process, especially during a pandemic, because students can access the module anywhere and anytime without being limited by distance, space, and time. Based on the background that has been described, researchers need to conduct research on "Development of Android-Based Business English Learning Modules".

2 Research Method

Figure 1, shows the characteristic of this research design that is the development of existing product designs, forms and or functions, to be refined again [10]. In the research and development of learning modules in particular, the rearrangement of the structure and content of learning is based on real things or facts in the field. Research and development (Research and Development) is used as a research method to measure the validity, practicality, and effectiveness of the products developed, one of which is in education and learning [11] [12]. There is research and development (Research and Development) level three, where researchers develop existing products, make revised products, and test the effectiveness of these products. The product produced in this study is the design of the android module for learning Basic English business so that research and development (Research and Development) level three which is the type of research design used in developing android-based learning modules. The subjects of the study were the students in Universitas Pendidikan Indonesia. The instruments used for data collection are in the form of validation sheets from material experts and media experts, questionnaires, and interview guidelines. Material expert validation sheets are used to find out how deep the material presented is and its relevance to the expected competencies. Media expert validation sheets are used to determine the feasibility of the media for use in learning. The interview guidelines are used to find out responses, comments and suggestions from students to the design of an android-based module for learning Basic Business English. Questionnaires are used to find out the initial conditions for the use of learning modules by students.

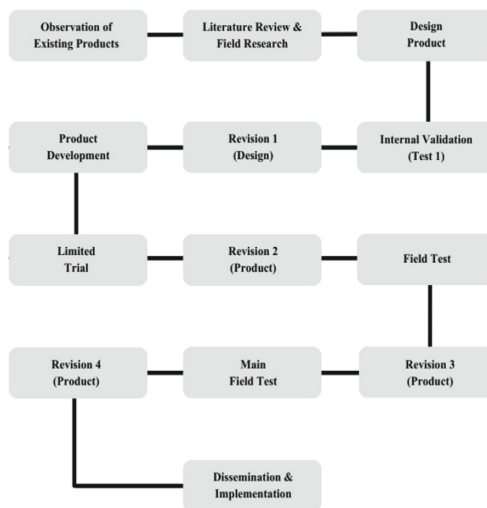


Fig. 1. Research Design

3 Result and Discussion

3.1 Need Analysis About Module

Based on Table 1, several previous studies on the development of android-based modules are presented. Some research on the development of English modules focuses on learning structure or grammar, has not focused on managing these modules to attract learners. These studies still focus on certain competencies, be it just listening, reading, speaking, or writing.

Due to this research was focused more on learning Business English in lectures by providing pre-test, post-test, material, questions, quizzes, assignments, flashcards, and exam features. In this developed module, of course, it did not only provide material on Business English, but also hones students' tenses, pronoun, listening, and writing skills. To strengthen the analysis of product development needs, field research has been carried out directly by collecting data through a questionnaire sheet for student needs for further module development. There were three variables namely sought, namely learning conditions in the classroom, student learning styles, and media development design. During distributing the questionnaire through Google Form, researchers obtained the

Table 1. Literature Research of The Study

No	Ref.	Heading	Difference
1	[13]	Application based on English Pronoun, To be, dan Tenses learning comprehension	This android-based English learning application only focuses on pronouns, tobes, and tenses, with several features including theory pages, quizzes, about, sources, and videos.
2	[14]	Application named as 'Smart Technical English' to improve skills for vocational students	The Android-based English learning application, named "Smart Technical English", is specifically designed for vocational engineering students at polytechnics, with a focus on only three features, namely listening, writing, and TOEIC-based quiz.
3	[15]	Application based on android to improve pronunciation	This android-based English learning application, which is named "Pronunciation Practice", is specifically designed for students, with its focus only on learning pronunciation.
4	[16]	Modul Application based on android	The application, which contains learning materials for Business English courses, is systematically and interestingly arranged, consisting of material, questions, and sample questions only.

results of 39 students from various universities in Indonesia. The form of each statement has an answer choice that takes the form of a Likert scale, which is 1–5.

The results of the student needs questionnaire are as follows:

1) Learning Conditions in the Classroom

It was found that 33.3% of the 39 students agreed that the delivery techniques carried out by teachers in the classroom were less innovative and seemed ordinary. Meanwhile, 33.3% of the 39 students agreed that they often had difficulty in understanding English learning materials in class. Then, 38.5% of the 39 students the most chose to agree that the teacher's delivery techniques in the classroom rarely use interactive media, such as the use of smartphones, YouTube, and so on. In addition, 33.3% of the 39 students voted strongly agree that it is permissible and free for teachers to be able to access information using cellphones in the classroom. Then, 35.9% of the 39 students most chose to hesitate that teachers in the classroom often use cellphones as a learning medium.

2) Student Learning Styles

It was found 43.6% of the 39 students chose to agree that using androids is more interesting and makes students more motivated to learn. There were found 30.8% of the 39 students who voted the most agreed that they preferred to access learning modules using android. Then, 43.8% of the 39 students most chose to agree that it was happier and more helpful if English learning in the classroom could be accessed easily and effectively using androids. In addition, 46.2% of the 39 students most chose to agree that they felt enthusiastic and interested in learning English using androids.

3) The Interest of Module Design

As many as 46.2% of the 39 students who chose the most strongly agreed that the existence of flashcards in android-based modules containing new vocabulary along with meanings and pronunciations could make it easier for students to learn English material. Regarding the existence of an explanatory video at the beginning of each English language learning, 46.2% of the 39 students most chose to strongly agree that this could make it easier for students to better understand every material in the Android-based module, and 64.1% of the 39 students most chose to strongly agree that interactive learning media in the form of video and audio is much more interesting than just video or audio alone. Then, 56.4% of the 39 students most chose to agree that giving quizzes and assignments in learning English packaged into android-based modules felt very effective and efficient.

As for the English quiz questions in the form of multiple choices, 41% of the 39 students chose to strongly agree and 41% of the 39 students chose to agree that this was something they wanted. Furthermore, there were two results of the same choice, namely 43.6% of the 39 students chose to strongly agree and 43.6% of the 39 students chose to agree that giving a score made students more enthusiastic about learning English. Then, 46.2% of the 39 students who voted strongly agreed that the awarding of certificates made students more motivated and enthusiastic about learning English. In addition, 46.2% of the 39 students who voted most agreed that the notification to collect assignments in android-based English learning modules could make students more aware of their assignments definitively and clearly, and easily remembered.

Not only that, from the results of open questions to respondents, that as many as 6 out of 39 students did not agree if android-based learning media was suitable to be

applied in the classroom. It would generate the addiction within using gadgets. It becomes unfocused during learning and it is more advisable to interact directly by the teacher. Some of them said they agree the use of learning media is suitable to be applied in the classroom because students will be more interested in participating in learning, easy to access, practical, varied, and interactive. There are suggestions from respondents for the development of an interesting Android-based English learning module by making the UI (User Interface) display of the module or presenting suitable and more eye-catching graphics, and easy to use. Then, the use of images, videos, and audio in the module to multiply the English practice questions will also be very helpful.

3.2 Designing

This process is carried out based on a pre-carried out needs analysis. Through the creation of an Android Application Design or prototype on the English Module, an overview of the application model would be shown. This is done so that the product design positively answers the current student learning problems. There are three stages in the product design of this android-based module, including wireframe, user interface design, and prototype. Wireframe is the initial stage to describe the concept of the product, wireframe is a crucial part of designing the front-end of websites and mobile applications [17]. At this stage it is necessary to determine the flow of the application, the exposure of features, and also the design documentation. This wireframe sketching is the basis for the next stage of design development. Sketching wireframe can be drawn through paper with the following view:

The concept and flow are documented, so this is the right time to develop the user interface design of the application. At this stage, it clarifies the design from the previous stage and begins to add colors so as to produce an application design without interaction. Figure 2, is about interface design uses the Figma application. The following is the user interface design of the student learning module:

However, in order to be easily tested, it is necessary to develop up to the prototype stage. The Prototype method is a design display system design process that is created

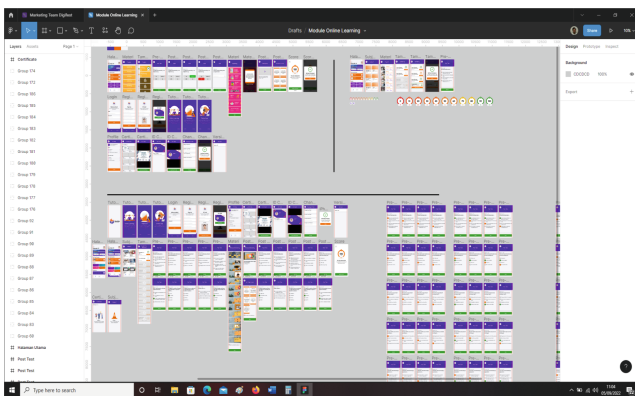


Fig. 2. Design via Figma

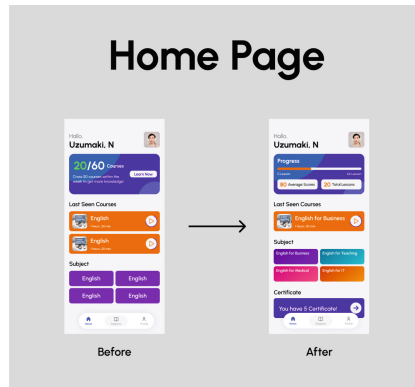


Fig. 3. Design of Home Page Features

as an example to develop a product as an illustration for the user directly, and the types presented are Wireframe, Mockup and prototypes or can be said to be similar to the application but because the buttons in the design can be pressed and produce reactions like a real application [18].

3.3 Design After & Before Validation

The differences in product design from before and after performing the analysis had been tested to expert lecturers in the academic field, which resulted in several changes. Among them by adding pre-test & post-test questions and focusing on English for various purposes such as English for Business, English for IT, and English for Special needs. It can be said that the current product design is the best result following the corresponding opinions of users. The product design will change according to the results of the analysis carried out. This is also done by us where after the product has reached the prototype stage, we carry out product testing by testing the prototype to potential users so that the initial product design will be different every time adjusting from the product testing results. Figure 3 is about the new home page that before and after revised and getting validation from the experts. Then Fig. 4, explains the id card design that getting revised from color and layout to improve students' motivation learning.

Flash card design was corrected from the adding of amount the question. It purposed to adjust the students learning in university. It can be showed in Fig. 5 below. Furthermore, the design of certificate was not getting a lot of revision. The Fig. 6 showed that the certification was designed according to students' preference in English learning. Figure 7 and Fig. 8 showed about the design of pretest and posted, which the layout was changed.

3.4 Discussion

Based on the research already conducted, relevant with the media development should be improved within interactive items, such as interactive visualization, video of materials, good audio aids, and able to help student's learning [19] [20] [21]. This media is

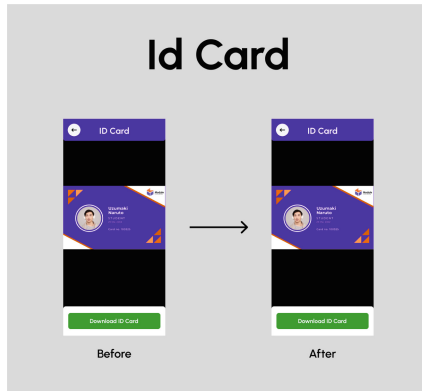


Fig. 4. Design of ID Card Features

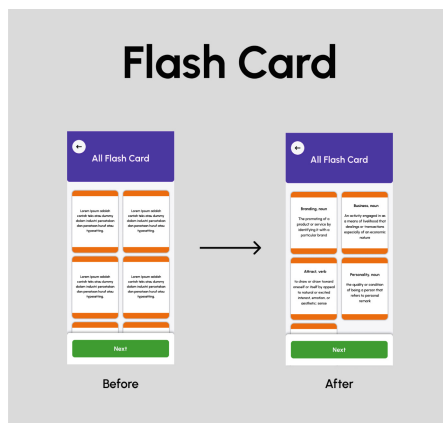


Fig. 5. Design of Flashcard Features

developed based on need analysis from students in university that really need different learning media to help them study about English business. Furthermore, the students could use this application everywhere and everytime they stay, as long as they get a good signal. The use of certificates became a motivation for students to complete the study and learning achievement. Referring to the needs analysis, android-based learning modules as an interactive and innovative medium can be a solution, because they can be accessed easily, effectively and feel enthusiastic and interested in learning [22][23]. In addition, the interactive side of the module must adjust the content and appearance of the module, such as in the English module by presenting interesting and interactive features. Presenting material that is not only in the form of text, but also video and audio [24]. Then, the flashcard feature that contains new vocabulary, meaning, and pronunciation is complemented by a multiple-choice quiz. Providing scores, certificates, and notifications in collecting assignments on the Android-based English module makes students



Fig. 6. Design of Certificate Features

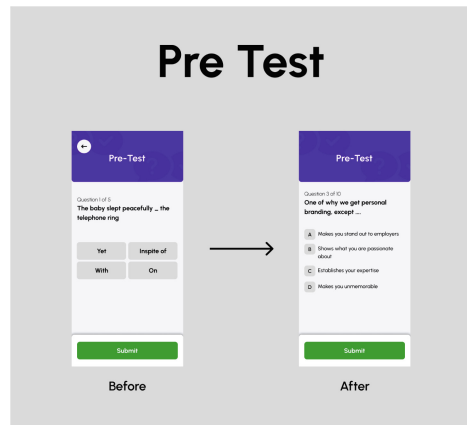


Fig. 7. Design of Pre-Test Features

more enthusiastic about learning English [25]. In addition, in terms of a colorful appearance, it will give a sense of enthusiasm and interest in using the module [26]. However, obstacles are still found when learning using Android because it is possible for students to lose focus by opening things that are not related to learning. Hence, the need for an innovative concept of creating android-based modules.



Fig. 8. Design of Post-Test Features

4 Conclusion

Research on online education has long been carried out by Indonesia. However, the real implementation in the field in a massive manner is still not fully implemented. The covid-19 pandemic situation from march 2020, has placed restrictions on educational activities to reduce transmission due to the virus. This condition makes Indonesia adopt a policy of carrying out limited activities and conditions within online, including learning. Technology-based learning innovation is one way to overcome learning problems that are carried out in a limited manner. Various technology-based innovations in the field of education are widely carried out, such as media development, development of teaching materials, and modules on learning.

Based on these results, it can be concluded that the current development of the times has brought such drastic changes, especially in technology, humans are required to be able to utilize technology in helping activities become more effective and efficient. This can be seen when the past method was still used at this time. Boredom arises because the application was not interesting and innovative. The atmosphere of learning must apply interactive and innovative media so that students are more interested and do not get bored quickly in understanding the material. The development of android-based modules is one of the solutions in the Covid-19 pandemic for students, especially in higher education (PT). The characteristics of this module are part of the student learning media that can be accessed anywhere and anytime. This application is a medium for student learning aids to increase and strengthen competencies in the field of business English. This study aims to develop a mobile application for the Business English learning module. The result is that the design of this application is worth developing and using for students studying Basic English. However, this application is limited as a learning medium that still needs guidance and reinforcement through teaching by lecturers or instructors in the classroom.

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