Designing an android smartphone app for office English: Focus on students' opinions toward the app

by Sri Wahyuni

# Designing an Android Smartphone App for Office English: Focus on Students' Opinions toward the App

Sri Wahyuni, Fauzul Etfita

Abstract: The majority of students use smartphone in daily activities on academic and non-academic purposes. For example, students utilize smartphone to share current information related to courses and sometimes have social communication. So, Smartphone and English Learning are like coins that cannot be separated. However, the existence of Smartphone is also made students reluctant to learn in the classroom because they use it in an inappropriate way. In addition, learning opportunity through smartphone is not utilized properly. Based on this phenomenon, to maximize using Smartphone in a positive and systematic way, the researcher developed an Android Smartphone App for college foreign students to improve office English students' achievement. Hence, this paper presented a study on students' opinions toward the App. it was named ENFORE. The contents of ENFORE consisted of eight topics, eight audios, and eight quizzes used for internal only as long as one semester. Hopefully, students learn autonomously by having this supplementary learning resource. To collect the data, the adapted questionnaires and interview were employed to gain students' opinions toward the App. Through designing and using the App, It is expected that the students' encouragement and language attitude could be improved and independent study can be created.

Index Terms: Android Smartphone App, Office English, Students' Opinion

I. INTRODUCTION

The smartphone use has increased slightly day by day. It is proven from the calculation that over 50.3% of all smartphone users now own and use it in 2018 (see Fig. 1). Because of the useable of smartphone features, users not only come from the general public but also students. Most of the students utilize smartphone in supporting their learning during the process as well as off-campus activities [1,2]. In other words, students are active smartphone users.
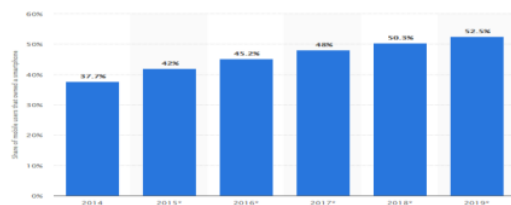
Fig 1. Worldwide Smartphones from 2014-2019 [3]

Responding to the millennial era, there are many researchers from all over the world who conduct research in revealing the advantages of using smartphone applications in educational purposes. Based on the findings, there are several important reasons for using a smartphone as a learning resource in language learning, such as students being more motivated, interesting, excited, and improving students' abilities in a positive way. It can be concluded that students are commonly interested in m-learning [4–7].

As an English lecturer, the adaption of the smartphone application into language learning and teaching process is suitable. Consequently, using the application in language learning is in accordance with the nowadays tendency of the educational trend in utilizing smartphone. Because of the transportable application, students can operate them on their smartphone. As well, without any limitation of surroundings, it is not hard to use. As confirmed by research studies that smartphone are effective to use in learning English [8–10].

II. LITERATURE REVIEW

Learning resources are a set of tools used to convey information in learning. Hence, learning resources have a very crucial role in the learning process. As stated by a study that learning resources can improve learning outcomes [11]. Further, another study states that learning resources are a set of materials and resources that help teachers and students in the learning and teaching process [12]. A similar thing was expressed that learning resources are a set of materials that are arranged hierarchically in the form of written or unwritten material that can be used in the learning process [13]. So, it can be concluded that learning resources are learning materials that are systematically designed to achieve learning objectives.

Learning resources can be printed or non-printed. The demands of technology integration into the teaching and learning process make non-printed learning resources grow rapidly at this time. In addition, in order to increase the frequency of use of digital learning based resources. Learning resources are created and developed as actively as possible so that the learning process is not one-way anymore [14]. Interesting and easy-to-use teaching materials will greatly assist students in learning, the presentation of learning resources through Android-based smartphones

will be an attractive catcher in the development of new learning resources to facilitate learning and improve learning outcomes [15].

Furthermore, the question arises why should a smartphone? and why should be Android? Smartphones have an operating system that has the potential to operate various applications. Android is one of the mobile operating systems that grow in the midst of other developing operating systems [16]. The popularity of Android is due to its open source nature where users are free to receive source code so that they can modify and develop an application without paying a license. In the context of this study, the application of learning resources designed on Android smartphones through *Playstore* can be downloaded by students without paying a fee. In addition, most of the people choose android as a system operating than others. Based on the calculation, it is confirmed that over 97.72% of all users smartphone use Android [17].

Several researchers have carried out development research related to Android-based learning resources including: first, Pilar, Jorge, & Cristina (2013), they built up a multipurpose learning application. They structured and built up a system hypothetical for another model of English as foreign language computer-assisted learning helped taking in led from a smartphone with lasting access to the web to enhance the type of discovering that is extremely adaptable, multipurpose, intelligent, and dynamic. Further, to structure and create phonetic ontologies varying media learning objects that empower an expansion in English as a foreign language to dodge issues innate in standard showing materials, which are for the most part static and not contextualized from regular socio-social settings. The finding of this study was the genuine usage of value criteria for the advancement of English as foreign language multipurpose applications that effectively consolidate specialized aptitudes with criteria 6 up to 10 and sound instructional methods with criteria one up to five.

Second, Wu (2015) designed an Android-based cell phone application called Word Learning CET6 for training English vocabulary and exploring its adequacy as a device in supporting English as a foreign language student learning English vocabulary. The application was consisted of 1274 English words, intended to be introduced on smartphone with the Android working framework. To make sense of the viability of the App, two gatherings of understudies were chosen as an experimental group that learned by using Word Learning-CET6 and a control group that learned without Word Learning-CET6. Students' vocabulary mastery was tried when the examination to survey the effect of the App. Wu's investigation demonstrates that understudies who utilize the application essentially beat those in the control group in procuring new vocabulary. Toward the finish of this examination, the application was designed and built up an educational worldview that can be pursued as a method for portable learning. The researcher design smartphone applications to teach English vocabulary (L2). Investigations were completed to assess the adequacy of the application. This is a pioneering research to develop smartphone applications to teach English vocabulary (L2). This research is pioneer research in teaching English vocabulary.

Finally, Cavus (2016) developed a smartphone application that can be used in learning English, especially in pronunciation. The application developed in this study is an application that can recognize errors in words that are spoken and then make the correction that word. This application feature improves student's motivation and makes learning more convenient and pleasant than learning with conventional learning methods.

Previous studies presented revealed a significant increase in the use or design of applications on smartphones for learning English. However, all research designs only provide material for general English learning. There has been no development of Android-based learning resources on smartphones related to practical use of English for specific purposes such as English for office.

In responding to the challenge in teaching and learning English, the researcher developed an Android-based learning resource to teach office English. It was named ENFORCE. The process of designing Application through several steps; first, collecting the data related to the students' needs, second, designing the content of the material, some revision and publish in *Play Store*. Further, with the Android system, the look of the application could be customized. Hence, the researcher designed the homepage which includes the brief introduction of the app, topics, audios, quizzes, and website links for the mid-term test and final test. The homepage can be seen in Fig. 2.
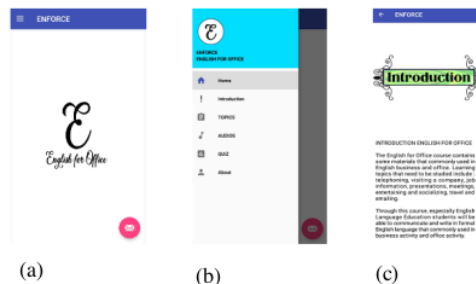

Fig 2. Snapshot of the Homepage. (a) Snapshot of the Homepage Cover. (b) Snapshot Displaying the Main Menu. (c) Snapshot Showing the Brief Introduction.

Several main topics of the subject are adapted and become the content in this application. The Topic page provided eight topics and its brief explanation by clicking the extension text. It can be seen in Fig. 3.

Fig 3. Snapshot of Topic Page. (a) Snapshot Displaying of Main Topics. (b) Snapshot of Brief Explanation. (c) Snapshot showing Extension Text.

Furthermore, to support the learning process, this application also provided audios for each main topics that display in the audio page. By clicking the extension text, the transcription of audios can be seen. The audio page and its transcription can be seen in Fig. 4.
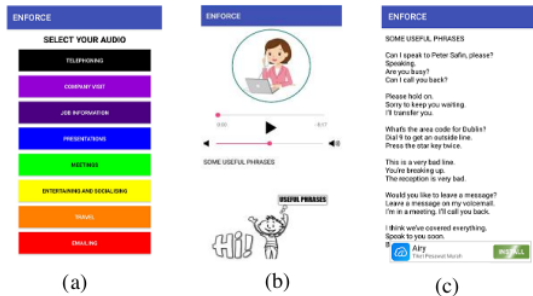

Fig 4. Snapshot of Audio Page (a) Snapshot Displaying Audios of Each Main Topics (b) Snapshot of The Example Audio (c) Snapshot showing transcription of Audio

In addition, there are several simple quizzes for each topic to test students' mastery. The form of quizzes is multiple choice. If students choose the wrong answer, the right answer will be displayed. The topic page can be seen in Fig. 5.

Fig 5. Snapshot of Quiz Page. (a) Snapshot displaying Quiz Page of Each Main Topics. (b) Snapshot showing the question. (c) Snapshot showing the right answer.

The researcher was aware that this study may have some limition. Due to the constaint of study, this application was only for internally used as long as one one semester for English for office subject. this app was also designed based on students' need, it was can be adapted only by other college students if there is a similar content.

III. METHODOLOGY

The participants were twenty-eight students of the fifth semester at Universitas Islam Riau, Indonesia. Random sampling technique was employed to select them from six classes. As well, the researcher ensured all of the students had an android smartphone by asking them to fill out an online survey anonymously to keep an internal validity between the researcher and the participants. This was used to inform related to the participants' frequency in using smartphone. They were also asked to choose the frequency of using smartphone in (c) The data of students' frequency of using an android smartphone was illustrated in table 1.

Table 1. Students' Frequency of Using Android Smartphone

Average Hour	Frequency	Percentage
1-5 hours	1	3.6
5-10 hours	16	57.1
10-15 hours	10	35.7
More than 15 hours	1	3.6

As well, the purpose of using Android Smartphone was also questioned. Referring to the fact, the tendency of students used smartphone was for social communication and academic purposes. The illustration of students' activities in using smartphone was summarized in table 2.

Table 2. The Purpose of Using Android Smartphone

Smartphone Purposes	Frequency	Percentage
Social Communication	12	42.9
Academic Purposes	11	39.3
Playing Game	4	14.2
Endorsement	1	3.6

The students were studying English for Office subject. The class was run once a week. Each meeting had a hundred minutes. The length of the semester was sixteen weeks. At the beginning of the semester, the researcher asked the students to install ENFORE application through Play Store. It was provided learning resources during one semester. Besides, the students were asked to learn independently through the app. This pre-learning activity was to encourage their pre-knowledge and increase students' interest so they were ready to have a class meeting in the classroom.

Moreover, to collect the data related to the students' opinions towards the use of the application, this study was based on online questionnaires designed in Google form and an open-ended question interview. They were asked to fill in a 20 item questionnaire, adapted and modified from Chuttur (2009) and Davis (1989). Besides, all statements and three open-ended questions were adapted and modified from the related literature discussing students' perceptions [8,23–27] using smartphone in language learning. The instrument consists of four indicators including perceived usefulness, perceived ease of use, attitude toward using, and actual system use. In term of the reliability, cronbach's α value for the questionnaire was .880. It can be said that the questionnaire was reliable to use. To answer the statements given, a 5-point Likert scale ranging from 1 for strongly

disagree to 5 for strongly agree was used to indicate the students' opinion. Moreover, the selected students were asked to respond to the open-ended question interview.

In addition, the mixed method was employed to analyze the data. For the quantitative data, the researcher initially calculated the means and frequencies of choice made by students with regard to five-option scales namely SA for Strongly Agree, A for Agree, U for Undecided, D for Disagree, SD for Strongly Disagree using SPSS 21. The range was used for this data including 1.00-1.50 for very low/very negative, 1.51-2.50 for low/negative, 2.51-3.50 for moderate, 3.51-4.50 for high/positive, 4.51-5.00 for very high/ very positive. Then, in analyzing the respond of three open-ended questions, the researcher followed the qualitative analysis data procedures.

IV. RESULTS AND FINDINGS

The aim of this study was to investigate students' opinions toward the ENFORE Application. After calculating and analyzing the data from students' questionnaire, means of the questionnaire from the perceived ease of use, perceived of usefulness, attitude toward usage, and actual system were found. The percentage for each item per indicator and means score can be seen in table 3 up to table 6.

In term of perceived ease of use (see table 3), this indicator was at high level or positive with range 3.51-4.50. It means that the students agree that ENFORE application was easy to use in English for office class. The most of students (82.1) believed that it was convenience learning through ENFORCE since they were less cost in providing learning resources (53.6), accessible (71.4), and face to face learning more understandable (75.0).

Table 3. Item Percentage and Means of Perceived Ease of Use

Statements	SD	D	U	A	SA	Mean
The user does not have to pay any payments to download and update the application	0.0	0.0	3.6	53.6	42.9	4.39
It is easy for me to remember how to open and use ENFORCE application	0.0	0.0	3.6	71.4	25.0	4.21
Interaction will be easy to do	0.0	3.6	0.0	82.1	14.3	4.07
Audio from ENFORCE application is very clear to hear	0.0	7.1	0.0	78.6	14.3	4.00
Using ENFORCE application will make the interaction clear and understandable	0.0	7.1	3.6	75.0	14.3	3.96

In term of actual system use, referring to the fact, students were sure that ENFORE can be a supporting application in the learning process (64.3). They did not reluctant to use the application (57.1) during this semester because they enjoyed using it as a media for learning (78.6). Based on the means

score, this indicator was at high level or positive with range 3.51-4.50. In other words, they used this application intentionally as a learning resource (see table 4).

Table 4. Item Percentage and Means of Actual System Use

Statements	SD	D	U	A	SA	Mean
ENFORCE application is my favorite learning tool	0.0	3.6	3.6	78.6	14.3	4.04
I use ENFORCE application as a learning resource.	0.0	0.0	7.1	57.1	35.7	4.29
I use ENFORCE application to supports interaction and learning process	0.0	7.1	7.1	64.3	21.4	4.00
I intend to use ENFORCE application during this semester	0.0	7.1	21.4	57.1	14.3	3.79

In term of perceived usefulness, student viewed that ENFORE helped them in running their task rapidly (78.6). This application was effective to be an enhancement in the learning process of English for office class (71.4). As well, students did not feel hard to learn through ENFORCE (64.3). The students independently increased their quality of study (71.4). The awareness of study towards this application was showed by looking at the students' interest and having fun in learning (75.0). Further, based on the means score, it was at high level or positive with range 3.51-4.50.

Table 5. Item Percentage and Means of Perceived Usefulness

Statements	SD	D	U	A	SA	Mean
Using ENFORCE application saves our time	0.0	3.6	14.3	64.3	17.9	3.96
Using ENFORCE application with a lot of enjoyments	0.0	3.6	14.3	75.0	7.1	3.86
Using ENFORCE application increase quality of study	0.0	3.6	7.1	71.4	17.9	4.04
Using ENFORCE application makes the learning process easier	0.0	3.6	7.1	64.3	25.0	4.11
Using ENFORCE application will enhance the effectiveness of learning process	0.0	7.1	7.1	71.4	14.3	3.93
Using ENFORCE application is able to accomplish task more quickly	0.0	0.0	10.7	78.6	10.7	4.00

In term of attitude toward usage, students believed that learning English for office through ENFORE provided a space to have communication with lecturer in out of the classroom (71.4). They comprehended the learning material (78.6). Besides, they

also approved that encourage them in learning through using this application (64.3). This application gave more information related to English for office subject (71.4). The last, the majority of students felt more this application applicable to use to learn English for office (75.0). In addition, based on the means score obtained from students' attitude toward usage, it can be said also that it was at high level or positive with range 3.51-4.50.

Table 6. Item Percentage and Means of Attitude toward Usage

Statements	SD	D	U	A	SA	Mean
Understand learning material more easily	0.0	3.6	7.1	78.6	10.7	3.96
ENFORCE application is flexible to interact with	0.0	3.6	14.3	71.4	10.7	3.89
ENFORCE application will stimulate the student to communicate	0.0	7.1	14.3	64.3	14.3	3.86
Follow up course information	0.0	3.6	14.3	71.4	10.7	3.89
Overall, using ENFORCE application helpful to learn office English	0.0	3.6	7.1	75.0	14.3	4.00

Furthermore, after collecting and analyzing data from the interview, the researcher found various responses from students' view about using ENFORCE in learning English for office subject. First, students' opinion was observed from perceived ease to use. They stated that they can access easier the learning resources without paying anything. Besides, that application was easy to operate. The audios of ENFORCE were very useful. Additionally, by using this application, learning English for office class was more understandable and interactive. Second, students' opinion was observed from the actual system use. They stated that they loved to use this application. They stated that they can learn everywhere and anytime. Also, they thought that it was very helpful. In addition, they stated that the intention used the application increase day by day along this semester. Third, students' opinion was observed from perceived of usefulness. They stated that they were comfortable using this application. This application did not waste their time because when they got obstacles, they just opened and find the explanation of that topic. This also influenced the quality of study because they can master the certain material before class meeting in the classroom. So they can discuss it fluently. In other hands, students stated that the effective learning can be achieved through this application. Third, students' opinion was observed from perceived of usefulness. They stated that they were comfortable using this application. This application did not waste their time because when they got obstacles, they just opened and find the explanation of that topic. This also influenced the quality of study because they can master the certain material before class meeting in the classroom. So they can discuss it fluently. The last, students' opinion was observed from the attitude toward usage. Students viewed that learning English for office subject help them to master it.

They thought that they were easy to send task to the lecturer. In other hands, students stated that the effective learning can be achieved through this application. Sample students' opinion on these indicators was presented below.

I just open the app and then i can found the material that i learn (S1)

The materials in the application make me easy to understand, the audio so clear. Can practice at home. (S2)

Very helpful me to find the material (S3)

Easy to understand, portable and automatically (S4)

There is complete explanation in every material title to make us (students) understand about the material for study (S5)

By listen to the audio, and read the material make us know about the subject in the class (S6).

"Practice English anywhere(S28)

Very helpful me to find the material(S18)

If i dont understand something, i open the app and it make me easily understand (S13)

we can known about world of job. and we can start from enforce (27)

easy to understand, portable and automatically (S18)

The material is available on ENFORCE. So we can learn even the lecturer can not come to the class (S12)

ENFORCE give complete material, and then students just discuss about the topic of ENFORCE (S10)

Materials used his existing one. So if we have work and don't understand we can see them (S26)

Very effective and very helpful (S5)

The finding of this study was in line with several researchers' findings. Firstly, Chung et al (2015) found students were used mobile learning through application had high positive observed from the compatibility of a mobile phone, self-efficacy, perceived ease of use. Whereas perceived of usefulness was at moderate level. Secondly, Tayan (2017) revealed that students (86%) and teacher (100%) had a positive attitude on the use of MALL program in a business English course. Additionally, students' motivation in learning increased. Another study also found that students agreed that mobile phones useful and easy to use as a media in the learning process [25]. These findings confirmed that this study was correct as the findings of the researcher that by using android smartphone application could give advantages to the students' learning process and achievement. Hence, the students positively respond the use of smartphone application in enhancing the learning process.

V. CONCLUSION

This research was focusing on describing the students' opinion towards an Android Smartphone App for English for Office students (ENFORE). Based on the research finding, the majority of the students responded positively towards an Android Smartphone application for English for Office students (ENFORE).

The frequency of the students' choice on the questionnaire given and

means score showed that students' believed that ENFORE was easy to use and useful in learning English for office class. Students felt that ENFORE can be supplementary learning resources in supporting the learning process. As well, the students intended to use it during this semester so their learning independence was also created. Besides, all of the means of the students' responses in the questionnaire in each item was at 3.51-4.50 which indicated students' responses were positive or at high level.

Regarding to the findings, some suggestions for the next researchers were recommended. Firstly, researchers might find the correlation of each indicator that influenced students' opinion on using smartphone application in the learning process. Secondly, this study examined students from a class that learned a certain subject from one university. It should be developed in terms of sample size. It was recommended that the addition of more university or another subject or other smartphone application or other system operating in smartphone for the future research. Thirdly, the tendency of students using this application could be conducted an experimental study. Finally, other external aspects that influence the usage of smartphone in learning should be included to view students' opinion and the tendency of using it.

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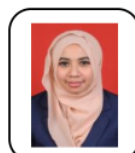
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