

VIVOICE: An Effort to Promote EFL Learners' Self-Regulated Learning during the COVID-19 Outbreak

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ABSTRACT

COVID-19 is a new pandemic affecting every sector worldwide including in educational environment. Thus, a mixture of various e-learning is required in order to make TLP possible. Besides, having self-regulated learning is beneficial for each student to survive during study from home because of the pandemic. Thus, most students need a media and teaching instruction that motivate them better than the existed media. In this way, this research is aimed at developing VIVOICE (Virtual Vocabulary Voice) to promote EFL learners' self-regulated vocabulary learning. The research design is R&D completed with quasi-experimental research design to prove the effectiveness of the developed product. A set of questionnaire and interview are used to collect the data of the research. The finding of the need analysis showed that most students need a better media of TLP during the outbreak. However, the product was developed based on the result of the students' need analysis, Buku Ajar Vocabulary 1 (@televocabot), evaluation and suggestion from the expert validators. More importantly, the findings of the field testing showed that product gets supportive support from the students and proved practical enough during the outbreak. The quasi-experimental in field testing done to prove the effectiveness of the developed product resulted the mean score of experimental groups increased from 75.9 to 80.8 while control group also increased from 76.1 to 76.7. Then, the analysis by utilizing SPSS version 25, the value of Sig. (2-tailed) in independent sample t-test scored 0.035 (<0.05). It proved that there is a significance difference between experimental group and control group. Meanwhile from paired sample t-test result, the value of Sig. (2-tailed) was 0.005 (<0.05) meaning that there is an improvement of self-regulated learning level in the experimental group after using VIVOICE during the outbreak. In conclusion, VIVOICE (Virtual Vocabulary Voice) is an effective offline audio-visual application to promote EFL learners' self-regulated learning during the outbreak.

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1. INTRODUCTION

Coronavirus Disease 2019 (COVID-19) is a contagious disease that firstly found in Wuhan, China in 2019. Coronavirus has easy wide spreading and high mortality rate which makes it as one of the worst global pandemic for decades. It has symptoms of including constant sneezing or coughing, runny nose, breathing difficulty, sore throat, and fatigue (Onyema et al., 2020). To prevent widespread of Coronavirus pandemic, social-distancing was implemented including in educational systems worldwide which lead to the closures of schools and colleges response to the pandemic. During pandemic, approximately billion learners have been affected due to this (Mustafa, 2020, p. 1). It created serious disruptions in academics activities which may last longer than expected if the spread of the pandemic still continues (Onyema et al., 2020). To ensure continuity of teaching learning process, many institutions, teachers, and students adopted online

learning. However, availability of adequate internet network access being the obstacles in this kind of learning (Alchamdani et al., 2020).

Meanwhile, E-learning is the use of information and communication technologies (ICT) to create learning experience (Horton, 2006). Further, e-learning is the use of information and communication technologies (ICT) that provides facilities for daily teaching-learning process (Basuki and Hidayati, 2019). Besides, the use of technologies in a virtual school and distance learning can facilitate delivery of lectures, virtual classroom sessions and other instructional materials and activities in efficient and reliable way (Onyema et al., 2020). Furthermore, various e-learning can be mixed with various learning forms, strategies, source, and media designed for an individual objective or learners (Horton, 2006). Therefore, e-learning can use the advantages of information and communication technologies (ICT) to provide learning experience and ensure learning process continue to enhance students' achievement.

Then, an application can be used to do particular task (Nazrudin in Pristy, 2014). While, the use of multimedia audio-visual makes the students pay more attention and interest in the English learning (Wazeema and Kareema, 2017). Besides, combining audio and visual presentations enable the learners to recall newly information and construct mental models (Putri, 2019). Further, combining audio and visual media can produce an innovative and interactive that can motivate students to learn independently and improve their ability and learning achievements (Agusalim, 2015). Thus, combining audio and visual in a piece of application can increase attention and interest of the students and enable them to recall newly information and construct mental models in learning something.

Further, vocabulary is a prerequisite of studying other language components and skills. It is seen as a starting point of people who are learning new language (Basuki et al., 2018). Furthermore, the wider knowledge of vocabulary makes the students to recognize the words and its meaning (Rosyidah, 2017). Besides, mastering English vocabulary makes the four English skills including writing, reading, speaking, and listening easier to learn (Rahayu & Riska, 2018). Moreover, learning vocabulary is a long-term task and need a sufficient foundation which can be achieved from practical process. Thus, it is necessary for students to have personalized practical regulatory process of learning (Waluyo, 2018). Therefore, learning vocabulary is a long and necessary because it is a starting point of learning a language to enable students recognize the words and its meaning for further language acquisitions.

In this way, self-regulated learning guides the learners by personally set goals and self-reflects to their strength and limitation (Zimmerman in Putri, 2019). Further, self-regulated learning brings significant impact to the students in higher level of education (Frederick in Farichah, 2012). In recent studies, implementation of self-regulated learning is able to enhance students' vocabulary outside classroom without involvement of teachers (Waluyo, 2018). He also recommends exploring another potential self-regulated learning for education (Waluyo, 2018). With this, it is suggested for teachers and students to adopt the benefits of using technology to improve the quality teaching and learning English Putri (2019). In accordance with it, self-regulated learning is important by personalizing the students own learning method to increase their achievements especially for college students who have more time outside the class.

Considering the current condition of EFL learners today especially in STKIP PGRI Trenggalek and with regards to some research reports above and also in an attempt to prove the effectiveness of an offline audio-visual media toward the EFL learners' self-regulated learning during the COVID-19 outbreak, this research tries to answer the research problem that sounds "how to develop VIVOICE (virtual vocabulary voice) as an offline audio-visual media to promote EFL learners' self-regulated learning during the COVID-19 outbreak?"

2. RESEARCH METHOD

This research utilized Research and Development (R&D) research design completed with quasi-experimental research design. Research and development is an industry-based development model to obtain new products and procedures, and then debated with systematic, evaluated, and refined according to the criteria of effectiveness, quality, and chosen standards (Gall et al. in Basuki et al., 2018). Further, the purpose of R&D in education is not to formulate or test theory but to develop needed and effective products for the use in educational institutions (Gay et al. Silalahi, 2018). Then, quasi-experimental design is a non-randomization design that has purpose to know the effect of treatment given to an experimental group and compare the result to a control group (Hastjarjo, 2019). The following figure shows the development steps of the product in this research.

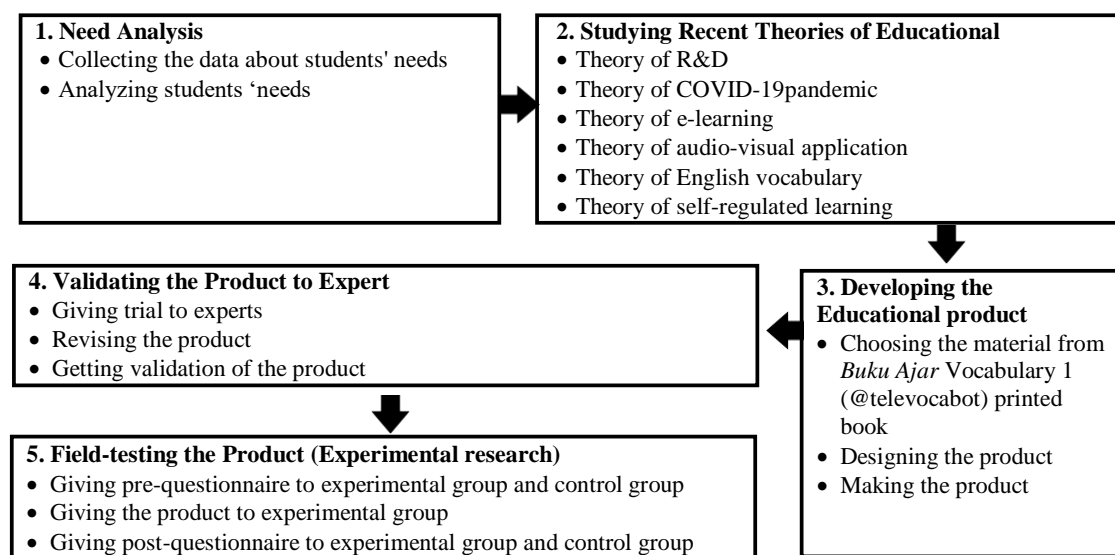


Figure 1. Development Steps of VIVOICE

This research uses purposive sampling to select subjects of the research. Purposive sampling is creating sample from population without considering strata, random or area but based on particular objective (Arikunto, 2013). The researchers conduct the research from March 2020 to September 2020 and the subject is the second semester students of English Language Education Department of STKIP PGRI Trenggalek in 2019/2020 academic year that consists of 21 students in experimental group and 22 students in control group.

Meanwhile, due to the COVID-19 outbreak, the data collection of the research is not able to be conducted in a face to face meeting. However, the researcher gave questionnaires and conducted interview via online to collect the data. The questionnaires consist of five alternative answers; strongly disagree, disagree, neutral, agree, and strongly agree. The researchers use questionnaires as instrument three times. First, it was to fulfill the data of students' needs analysis. It consists of 21 questions about students' opinions about their needs and interests in self-regulated learning, vocabulary, and audio-visual learning media. The second and third, pre-questionnaire and post-questionnaire was used in a quasi-experimental research design in the step of field testing the developed product. The pre-questionnaire is used to obtain data of the subject before intervention of the product. The pre-questionnaire was used to obtain data of the subject after intervention of the product. Both pre-questionnaire and post-questionnaire are similar and consist of 20 questions about students' intensity in their self-regulated learning. The researchers also use interview to get expert's validation and suggestion during developing the product. The questionnaire has been piloted before it is implemented to the real subjects of the research. The researchers use SPSS for Windows version 25 to know the validity and reliability of instruments. In validity test, all questionnaires resulted the values of Pearson Product Moment correlation more than 0.310 (>0.30) and declared valid (Andresen in Anisah, 2018, p. 33). While in reliability test, all questionnaires resulted the values of Alpha Cronbach more than 0.80 (>0.60) and declared have good reliability (Sekaran and Bougie in Muldyagin, 2018).

Further, the data collected from interview was analyzed qualitatively by using descriptive qualitative. Then, the data collected from pre-questionnaire and post-questionnaire were analyzed using independent sample t-test and paired sample t-test with the help of SPSS for Windows version 25. While data collected from questionnaire for students' needs were analyzed quantitatively by using the Likert scale. Likert scales data can be analyzed by summarizing the respondent's score, and then find its criteria. The Likert scales are given score as follows; 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (strongly agree) (Syofian et al., 2015). Then, the researchers sum the collected data with Q for number of questions and N for number of respondent; the researchers find the score criteria based the formula in following figure.

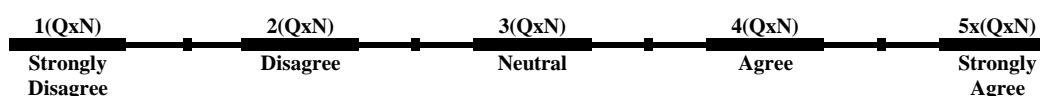


Figure 2. Continuum diagram of students' questionnaire result

3. RESULTS AND DISCUSSION

This section discusses the results of research including finding of initial product development, finding of expert validation, and finding of product field-testing.

3.1. Finding of Initial Product Development

From the students' needs questionnaire collected from 20 respondents, the total score is 1586. To interpret the data, the researchers count maximum score ($5 \times 21 \times 20$) = 2100, minimum score ($1 \times 21 \times 20$) = 420, score range ($2100 - 420$) = 1680 and resulted the following figure.

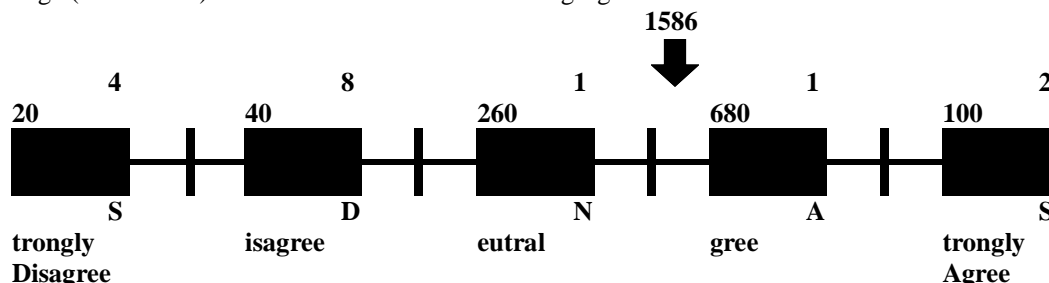


Figure 3. Continuum diagram of students' needs analysis

Accordingly, most students declared that they agree in the need of a better learning media to promote their self-regulated learning during the COVID-19 outbreak that may affect their SFH and achievement. Thus, they also agreed that learning English vocabulary can be enhanced by using English language, picture or illustration, and listening to correct production. Although some students agreed that audio-visual or digital material gives benefits, they still commented that it does not mean better than physical one. Then, the major number of the students agreed that interactivity in learning that may increase students' interest and motivation in learning a material but some of them commented it does not always give any effect. Lastly, most students' expected a learning application that has interesting appearances, clear explanation, and easy accessibility. More importantly, the result showed that the students mostly agreed with the development of the product of this research. Then, it could be taken as the basis information of application development in promoting self-regulated vocabulary learning that was fulfilled by theoretical framework of product development including the students' needs, self-regulated learning, English vocabulary, and audio-visual application.

3.2. Finding of Expert Validation

Before field-testing the product, the researchers validated the product to the experts. He suggested to revise the display, content, speakers' voice, and fixed the errors. Here are the details:

Table 1. Product comparison before and after validating to the expert

Before	After
▪ Title screen did not contain enough information about application	▪ Added information about user target, reference book, and characters
▪ The theme and layout was not interesting and confusing	▪ Re-design the theme and layout
▪ Speakers' explanation was too fast	▪ Reduce the speakers' speed
▪ There were no instructional analysis and course overview	▪ Added instructional analysis and course overview
▪ Title screen was not interesting and too informal	▪ Re-design the title screen and add some logos
▪ Characters' name was not suitable for the user	▪ Change the characters' name with local names
▪ There was several errors of the application	▪ Fixed the errors such as button and pictures

The following figure shows the characteristic, contents and features of the product that was developed in this research.

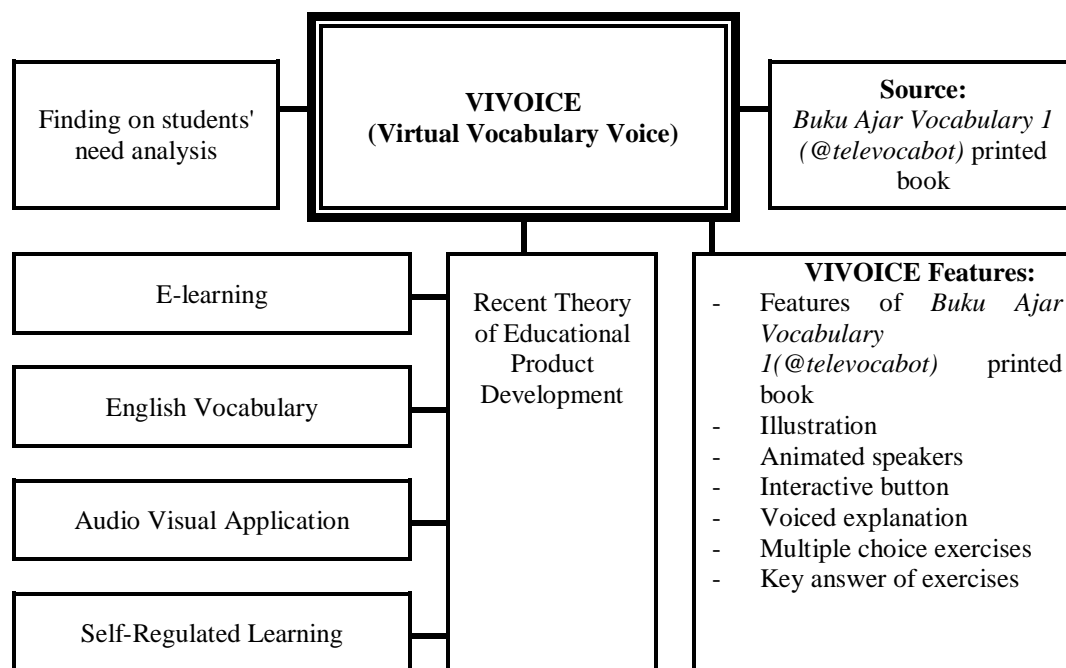


Figure 4. Characteristic, Contents and Features of the Product of Research Development

This research produced an audio-visual application for PC. It was created by using Tyrano Builder, a visual novel maker application for PC. The voice of the speaker was created by using Narrator's Voice, text-to-speech application for Android. The application can be run without internet connection in the following minimum systems requirements; Microsoft Windows Vista OS, Intel Pentium 4 CPU, 1 GB RAM, and 50 MB storage. The product of this research was developed as an interactive application where students can click a button to give order. It shows the contents of *Buku Ajar Vocabulary 1 (@televocabot)* printed book and which is given voiced explanation in English with animated and attractive speakers. The explanation is delivered by four characters with different voice; two males and two females. They were designed as college students of STKIP PGRI Trenggalek wearing *almamater* in anime style animation. The application adapted features of *Buku Ajar Vocabulary 1 (@televocabot)* printed book. The adapted features are instructional analysis, course overview, short course description, course relevancy, learning guidance, course competency, basic and standard competency, indicators of accomplishments, learning materials, summary, and evaluation.

The product of this research consists of three menus. The first menu shows the guide to use the application. Then, the second menu shows instructional analysis, course overview, short course description,

course relevancy, learning guidance, course competency, basic and standard competency, and indicators of accomplishments in learning vocabulary 1. In the third menu, student can choose a chapter about tips and trick in learning vocabulary, part of speech, morphemes and their compositions, forming new words, and phrasal verbs. Each chapter contain subchapter which is displayed as mind map. After student chooses a subchapter, a character will explain the topic summary that is divided in some parts. Each end of each part, student can choose to repeat or go to next part of the explanation. After finishing a subchapter, students are to do multiple choices exercise to evaluate their understanding. In the end of exercises, the application will show the correct answer to students as a feedback.

3.3. Finding of Product Field-testing

The researcher conducted t-test with the help of SPSS version 25 to investigate the effectiveness of the product in a real condition. First, independent sample t-test is used by comparing the experimental group and control group from pre-questionnaire and post-questionnaire result. Here is the result:

Table 2. Independent Sample T-test Result of Experimental Group and Control Group

	Group	N	Mean	Mean difference	Sig. in Levene's Test for Equality of Variances Table	Sig. (2-tailed) in t-test for Equality of Means Table
Before	Experimental	21	75.9048	-.2316	.134	.932
	Control	22	76.1364			
After	Experimental	21	80.8095	4.0822	.063	.035
	Control	22	76.7273			

Before experimental group used VIVOICE, the mean was 75.9048 while for control group was 76.1364. It means that the experimental group's score was 0.2316 lower than control group. To make sure that the data in pre- questionnaire has equality or in same condition, the researcher checked the value of Sig. (2-tailed) which value was 0.932. If the value of Sig. (2-tailed) is more than 0.05 (Damayanti et al., 2019, p. 12), it means that there was no significance difference in the result of pre-questionnaire of self-regulated learning level between experimental group and control group.

After experimental group used VIVOICE, the mean resulted 80.8095 while for control group was 76.7273. It means that the experimental group's score had been increased and 4.0822 higher than control group. However, it still did not represent any significant meaning. So, the researcher checked the value of Sig. (2-tailed) which was 0.035. If the value of Sig. (2-tailed) is less than 0.05 (Damayanti et al., 2019, p. 12), it could be concluded that there was a significance difference in the result of post-questionnaire of self-regulated learning level between experimental group that use VIVOICE and control group that do not use VIVOICE.

Second, paired sample t-test was used by comparing pre-questionnaire and post-questionnaire result of the experimental group. This group consisted of 21 students. Here the result:

Table 3. Paired Sample T-test Result of Experimental Group and Control Group

		N	Mean	Mean difference	Sig. (2-tailed)
Experimental Group	Before	21	75.9048	-4.9047	.005
	After	21	80.8095		

The result showed that the mean had been increased 4.9047 from 75.9048 to 80.8095. Further, the significance value (2-tailed) of the table was 0.005 ($p < 0.05$). If the value (2-tailed) in paired sample t-test is less than 0.05 (Damayanti et al., 2019), it means that there was an improvement of self-regulated learning level in the experimental group after using VIVOICE.

Given the research findings elaborated above, the discussion is highlighted to some points concerning to the content, development, applicability, and the form of the product. First, concerning to the content of the product in this research; vocabulary I materials (taken from the contents of *Buku Ajar Vocabulary 1*). In which, it is suitable with the statement of Basuki et al. (2018) that they do agree that vocabulary is a prerequisite of studying other language components and skills. It is necessary as it is seen as a starting point of people who are learning new language. Moreover, Rahayu & Riska (2018) believe that mastering English vocabulary helps basic learners to learn four English skills including writing, reading, speaking, and listening. Second, concerning to the product development steps in this research that took five steps namely need analysis, studying recent theories of education product development, developing the

educational product, validating the product to expert, and field-testing the product which are already in line with Gall et.al in Basuki et al. (2018). Then, the product development steps also have fulfilled the purpose of R&D in education that is not to formulate or test theory but to develop needed and effective products for the use in an educational institution (Gay et al. Silalahi, 2018). Third, concerning to the applicability of the product (Virtual Vocabulary voICE), that was developed based on the students' needs. It also fulfills the needs of all educational institutions, teachers and students to adopt technology as efficient educational media during pandemic that was highlighted in research result of Onyema et al. (2020) especially in learning English vocabulary. Moreover, since the product was developed in a form of an offline application, it was truly applicable for the college students of STKIP PGRI Trenggalek who are from rural and mountainous area which is hard to connect to the internet. This also is supported by Alchamdani et al. (2020) who merely say that to ensure continuity of teaching learning process, many institutions, teachers, and students adopted online learning. However availability of adequate internet network access being the obstacles in this kind of learning. Further, the applicability of the product that was tested in quasi-experimental research design, to know the effect of treatment given to experimental group and compares the result to control group (Hastjarjo, 2019) shows that students' self-regulated learning brings significant impact to the students in higher level of education (Frederick in Farichah, 2012). This is in line with research suggestion of Putri (2019) for teachers and students to adopt the benefits of using technology to improve the quality teaching and learning English. Lastly, concerning to the form of the product, which is in a digital form, it is supported with the research result of Jannah and Basuki (2020) who argue that the need of digital learning material in this digital era is indispensable necessities. Meanwhile, Agusalm (2015) states that producing an innovative and interactive audio-visual application can motivate students to learn independently and improve their ability and learning achievements.

4. CONCLUSION

This research produced VIVOICE (Virtual Vocabulary Voice) as an effort to promote EFL learners' self-regulated learning during the COVID-19 pandemic. The application is in a form of an offline interactive audio-visual application for PC. The application consists of three menus. The first menu shows the guide to use the application. The second menu shows instructional analysis, course overview, short course description, course relevancy, learning guidance, course competency, basic and standard competency, and indicators of accomplishments in learning Vocabulary 1. While in third menu covers topic summary and evaluation. It shows illustration and characters who gives voiced explanation in English language. The learning materials were adapted from Buku Ajar Vocabulary 1 (@televocabot) printed book that discuss about tips and trick in learning vocabulary, part of speech, morphemes and their compositions, forming new words, and phrasal verbs. At end of each chapter, students can do exercise to evaluate their understanding.

The application was arranged based on the result of students' need analysis, Buku Ajar Vocabulary 1 (@televocabot) printed book, evaluation and suggestion from the expert who validates the product. The expert suggested to revise the display or appearance, the content, the speakers' voice, and fixed the errors. The researchers revised the product and it is ready to be tried out in the classroom for the next stage. The field-testing was conducted to know the suitability and the applicability of the product toward the second semester students of English Language Education Department of STKIP PGRI Trenggalek in 2019/2020 academic year. The findings of the field testing show that the product gets supports from the students. They were satisfied with it. The product once was proved practical enough to be implemented and able to boost the students' interest, motivation, and eagerness to have the self-regulated learning. In conclusion, this research has been able to answer the research problem that sound, "How to develop VIVOICE (Virtual Vocabulary Voice): An offline application to Promote EFL Learners' Self-Regulated Learning during the COVID-19 Pandemic?" Further, this research has been able to achieve the objective of the research which is to develop VIVOICE (Virtual Vocabulary Voice): An offline application to Promote EFL Learners' Self-Regulated Learning during the COVID-19 Pandemic.

Given the findings, discussions, and conclusion elaborated above, it is suggested for the following people who may find benefits of this research. Firstly, for students learning English, it is suggestive of using the product of this research as a media to start having self-regulated learning to study English Vocabulary. Secondly, for vocabulary teachers, it is suggestive of using product of this research to promote self-regulated learning for the students especially in learning English vocabulary. Thirdly, for other researchers, it is suggestive for them who may use the research findings as references or use the product to conduct the research with the similar or different topic of self-regulated learning and/or research and development.

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