Fostering Autonomy through Digital Reading: Students' Evaluation of the *ReadyRead* Application

Rulli Putri Maulida*, Francisca M. Ivone, Anik Nunuk Wulyani
English Language Teaching, Universitas Negeri Malang
*Email: rpmaulida@gmail.com

Abstract: *ReadyRead is* an *Android*-based application which provides several features for scaffolding reading comprehension practice. It is the product of Design-Based Research. The present study examined high school students' experience in using the application. An online questionnaire was employed to gather information on students' opinions regarding the content, learning activities, and usability of the app. Results of the data analysis revealed the most favorable feature in the app perceived to be the most helpful for students in learning reading independently. Further, the app provides space for students to learn individually and collaboratively. Suggestions from the students are constructive and taken into account in the further development and sustainability of the app.

Keywords: reading application, reading course, student assessment, independent learning

Abstrak: *ReadyRead* merupakan aplikasi membaca yang menyediakan fitur-fitur untuk mendukung pembelajaran membaca. Artikel ini meneliti pengalaman siswa SMA selama menggunakan aplikasi tersebut. Kuisioner daring digunakan untuk mengumpulkan informasi terkait pendapat siswa tentang isi, aktivitas dan penggunaan aplikasi. Hasil data analisis mengungkapkan bahwa fitur yang disukai siswa adalah fitur yang dirasa sangat membantu siswa untuk belajar secara mandiri. Selain itu, aplikasi ini juga memberikan ruang untuk siswa belajar secara kolaboratif selain belajar secara individu. Masukan dari siswa sangatlah membangun untuk pengembangan dan keberlanjutan aplikasi *ReadyRead.*

Kata kunci: aplikasi membaca, pembelajaran membaca, penilaian siswa, pembelajaran mandiri

INTRODUCTION

Researchers doubt whether learning a foreign language using merely mobile applications can be successful. Especially when there is a common belief strongly growing among the society that teachers are the most powerful resources in classroom teaching and learning (Ardi, 2020). Thus, many students are seen as passive, uncritical, and too dependent on their teachers (Nakata, 2011). Although many, particularly those who are of adolescent age, are technology savvy, they are perceived incompetent in using their handy digital devices to effectively support their independent learning (Underwood, 2014).

Technological devices have several drawbacks which are quite technical that may be bothersome when used for independent learning. For example, learning through mobile applications is restricted to screen size that may cause eyestrain (Dobler, 2015). It causes inconvenience, particularly when performing reading activities that load long texts on a small-sized screen. Besides, the appearance and quality of multimedia assets such as pictures and videos are sometimes compromised due to incompatibility issues (Maulida, 2015). Hence, users need to make sure that the operating system on their smartphones is up-to-date to have a sound experience in using apps in general.

Unsteady internet connection also becomes another technical constraint when using online LL apps (Klimova & Prazak, 2018; Singer & Alexander, 2017). Unfortunately, these challenges are perceived inheritance from the devices themselves or other supporting facilities that users do not have control over (Chinnery, 2006).

External factors, such as distractions, also influence learning independently with LL apps. Kinds of distractions that often occur when learning on mobile devices are other applications particularly ones that function as communication tools such as social media, notifications from games and other apps, email, news subscriptions, internal system, and even advertisements innate from the application (Underwood, 2014). This kind of distraction may disrupt students' attention as the information entering the working memory compete with their limited concentration (Robison & Unsworth, 2015). Further, it would likely hinder students from completing their learning tasks.

Looking into LL apps, most of their features and activities are designed to facilitate autonomous learning. For example, besides promoting seamless learning, access to online materials are becoming limitless so that students can independently decide which ones that suit their interest (Bárcena, et al., 2015). These features definitely cannot be found when students are in a traditional learning context that relies mainly on paper-based resources. The variety of LL apps becomes a virtue with its miscellany of content delivery, skill development focus, digital learning activities, user experience, and pedagogical implementation that could cater for a variety of learning styles, such as individual and collaborative learning (Kukulska-Hulme & Shield, 2008).

LL apps also urged students to read on-screen, accordingly, they become more and more familiar with digital reading and screen reading. Applications that focus on developing reading skills provide helpful features to support digital reading such as "manipulation of font size, text-to-speech options, expandable dictionary, and note capabilities" (Larson, 2010). These features benefit students in dealing with reading problems commonly occur in classroom learning, such as limited vocabulary bank, little background knowledge, and references for further reading that can widen their insight about related issues (Coiro, 2011). Furthermore, digital reading activities commonly carried out individually is likely to enhance the use of certain reading strategy which suit students'

reading pace and capacity (Trakhman, Alxander, & Silverman, 2018). Likewise, digital reading accessible through LL apps also promotes a novelty in the way students read through digital platform that would enhance their skills in regulating their learning.

Nevertheless, as the use of LL apps in a disciplined manner is considered rare, several studies suggest inconsistent findings on the impact of screen-reading on mobile applications towards students' attitudes and reading achievement. A study by Chen, Cheng, Chang and Zheng (2014) on the effect of using paper-pencil versus on-screen tests that required college students to read a vast amount of text in a limited time span in China revealed that there was no significant difference among both groups. However, the findings implied that students who read on-screen through tablets performed significantly better in deep reading comprehension activities. This entails that the sophistication of features available in a mobile application could foster students' reading comprehension, particularly in deep reading processing. Wells (2012) also found that there was no significant difference between students who passed a GMRT test by using paper-based versus digital-based tests.

Interesting findings were reported by Eshet-Alkalai and Geri (2007) who investigated high school and college students who read on-paper and on-screen. It was revealed that high school students performed better in digital reading compared to college students. Similarly, Jones and Brown (2011) discovered that third graders who utilized e-book application performed better in digital-based test. It can be inferred from the two studies that the younger the students are, the more familiar they are with the use of digital technology, and thus the better their language learning performance is when they use digital devices.

Ackerman and Goldsmith (2011) in his study with the college students also revealed rather surprising findings. In their study, students were assigned into two groups. In one group, they learned by using paper-based resources, while those in the other group used digital devices to learn. In a limited time period of finishing their task, there was no significant difference between both groups. However, when students were doing the task under an unscheduled time, those who were assigned to use digital-based materials performed worse compared to those who were in paper-based group. This implied that in unscheduled time context, students need to rely on their skills in regulating learning to finally achieve the learning goal satisfactorily.

Considering the challenges that may appear, it can be concluded that learning through LL apps requires students to have a strong commitment to regulate learning. However, the journey of becoming a skillful autonomous learner who could govern one's own learning is not an instant one. There is a complex construct to become autonomous learners initiated with individual learning (Godwin-Jones, 2019). Therefore, assistance is needed to guide students in using digital devices to foster learning as well as learning autonomy (Underwood, 2014). Besides, condition that stimulates independent learning, for instance, communication with peers, is also essential during mobile learning since it could decrease students' anxiety and loneliness (Lee, 2016; Tuovinen, 2000).

Abundant applications for language learning (LL apps) with diverse characteristics are available in the application stores such as *Playstore* and *Google Play*. Some applications are specifically developed for language learning while some are not. Yet, they are somehow useful for learning a language. However, approximately 90% of LL apps in stores are designed for informal learning (Burston, 2014). This implies that students as prospective users are urged to learn a language without depending on their teacher's presence. Consequently, it is recommended that developers of LL apps design and integrate specific features into mobile language learning that could enhance learner autonomy (Papamitsiou & Economides, 2019).

Although there are hundreds LL apps developed and intended for English language learners, there are a few investigations which identify the features of an application that focuses on English language learning in Indonesian context. Considering the potential and challenges of using language learning app in independent language learning context, this study aimed to investigate the use of a newly-developed reading application named *ReadyRead*. The study looked into students' evaluation towards the use of the *ReadyRead* app in independent learning.

ReadyRead: A Language Learning Application for EFL students in Indonesia

ReadyRead is an *Android* application that provides reading resources and activities for learning English. The application ws designed specifically for the eleventh graders of senior high school. It contains supplementary reading materials based on the curriculum currently used at Indonesian schools. The application is used for independent learning outside the classroom. As it was developed specifically for

Indonesian high schools, the content, materials, and activities were designed according to Curriculum 2013. The material developed was based on the following Basic Competence 4.8:

Comprehending the contextual meaning related to social functions, text structure, and language features of explanation text in the form of spoken and written form which cover several themes i.e. natural or social phenomena which are included in other subjects of grade XI.

The user must have a *Google* account to login to the application. It also requires an online network to connect and interact with the content and activities, for example for watching videos which are uploaded to *YouTube* channel and using sharing features that connect to some social media platforms.

ReadyRead employs the three-phase reading technique or scaffolded reading experience (SRE) that has been proven effective for learning reading and can be easily applied in mobile-learning. In the pre-reading activities, animation videos are presented to students before reading a text. The videos provide initial descriptions of the main ideas in the text. When watching the videos, users can activate subtitles or captions. User control is also available to cater for students' pace and needs.

In during-reading activities, students are given a reading text equipped with illustrated pop-up annotations. In addition, students can also adjust the text size by zooming in and out so that the screen size of their device does not disturb the screen reading activities.

After reading, students can continue to the quiz. There are three types of quiz presented, namely multiple choice, short answer, and short paragraph answer. The assessment on the quiz is done automatically by the system. Feedback is also given to students in four levels and at different times. The feedback is design to help students find the correct answer. In the short-paragraph type of quiz, a sharing feature is provided to support collaborative learning that matches the learning needs of the 21st Century. It also allows students to conduct peer assessment online via social media.

Post-reading activity is provided in the form of games containing short conversations between two characters which are illustrated in interactive comics. Students are asked to fill in the right words to complete the conversation. This game is given to strengthen students' comprehension skills, especially in understanding the use of various language structures.

In this application, students are given a summary of the material to be accessed after completing all activities in the application. In addition, students can also check their performance in the progress check feature.

METHODOLOGY

The study used an online survey designed to evaluate the *ReadyRead* app using a *Google Form*. The questionnaire consisted of 51 questions in total; 46 close-ended and 5 open-ended. The close-ended items were in the form of a *Likert* scale ranges from 1 to 4 to identify students' agreement towards the statements. The open-ended items asked students about their opinion on how helpful the app is in supporting their independent learning, what features they like the most, what challenges they found in using the app, how motivating the app is for learning, and what recommendations they can give for the betterment of the app.

The questionnaire was administered to the target users of the app that was the eleventh graders in one public senior high school located in one of regencies in East Java province. Thirty-four students took part in the survey. The data collection took 7 consecutive days to obtain at least 1/3 of the total number of eleventh graders in the school.

The result of this study was analyzed by using concurrent triangulation strategy as the data collected were in the form of quantitative and qualitative ones as suggested by (Creswell, 2009). However, the qualitative data which were acquired from the open-ended questions were considered as the main data source while the quantitative data were expected to strengthen the statements given by the students. The qualitative data were coded by scrutinizing the key words and grouped them under the same themes of an open-ended questions. The quantitative data were calculated by using descriptive statistics.

FINDINGS

The results of the study are presented in the following sub sections based on the research questions.

Does *ReadyRead* sufficiently help students achieve their learning goals?

Most of the students (91%) stated that this app could sufficiently help them achieve their learning goals which had been set in the app. This claim is supported by several comments such as:

" The app is easy to use."

" The learning goals are clear."

" Translation feature is helpful."

" The app is interesting."

These statements support the results of the close-ended items which evaluate the general impression of the app, including its user-friendliness (Table 1). The majority of criteria evaluated in the general impression section are connected to user friendliness. It started from the initial process of downloading and installing the app which is perceived as easy by many students (78.6%). Other aspects that follow are easy operation upon using the application (85.7%), including the login process (83.6). The presentation of learning objectives is also perceived understandable by the majority of students (80.7%). Further, the appearance of this app is also perceived interesting by most of the students (82.3%). Some comments shared by the students in relation to the format and layout of the app are as follows.

" Because this app could support learning at home like in a today's pandemic situation"

" Bring fun atmosphere when learning with app wherever & whenever"

" Foster deep understanding when learning individually"

" Can be used as an alternative for face-to-face learning"

These remarks supported the results of the close-ended items as shown in Table 2. The core design and layout of the app is perceived to be able to support students' independent learning. This claim is supported by most of the students (88.6%). Other design which emphasized the visualization and appearance of the app are found encouraging for students to focus on achieving learning goals while learning independently which is unlimited by time and space.

### What are the most favorite features in *ReadyRead*?

When students were asked about the most favorite part in the application, they shared various answers. The results presented in Figure 1 show that the most favorite part of the app is the features

Table 1. Students' General Impression after Using *ReadyRead*

No.	General Impression	Responses
1	The application can be downloaded and installed easily.	78.6%
2	The application can be operated easily.	85.7%
3	Log-in can be processed quickly.	83.6%
4	The learning objectives are understandable.	80.7%
5	The general appearance of the application is interesting.	82.9%
	Total	**82.3%**

Table 2. Students' Evaluation Result on The Format and Layout of *ReadyRead*

No.	Format & Layout	Response
1	The icon of the app is interesting.	85.0%
2	The design of the app is suitable for independent learning.	88.6%
3	The design of the app is simple.	86.4%
4	The layout of the app is suitable for independent learning.	84.3%
5	Color theme of the app is appealing.	83.6%
6	The headings in the app are suitable with its contents.	86.4%
	Total	**85.7%**

Number of responses in percentage (%)
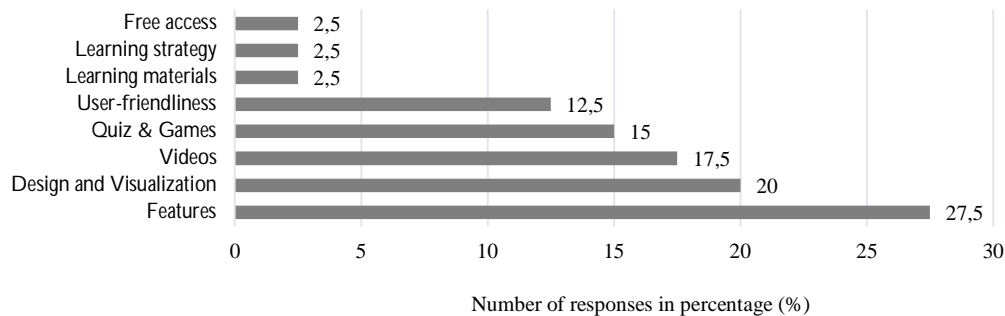
Figure 1. Favorite Parts of *ReadyRead*

(27.5%). Eight students wrote pop-up glosses as their most favorite part in the app while the remaining three students mentioned the feedback, hints, and translation feature. The findings echoed the results of the close-ended survey on the aspect of reading materials which also examined students' opinions on the pop-up glosses feature (see Table 3).

From Table 3, it can be inferred that students are satisfied with the availability of the pop-up glosses as the total response was 84.8%. The pop-up glosses address students' needs particularly in helping them understand the difficult words in the texts (83.6%). The way the glosses are presented is also easy to understand as they incorporate pictures and contextual translation. Regarding the reading materials in the app, students added that "*the materials are closely related to real life, for example the text about bullying, so that it is easy to get into the text*". Hence, learning material in this app was mentioned as one of students' favorite part in the app.

The students also liked the videos in the application (17.5%). The result can be further interpreted through the survey on multimedia aspects delivered in the close-ended questions. The result presented in Table 4 shows that several aspects evaluated concerning the presentation of videos are the quality, the smoothness of videos when played, the content of the videos, the sound of narration, and background music. The combinations of these aspects were expected to assist students in understanding the texts. Overall, these aspects are responded positively by the students as the average score in the survey reached 84.8%.

The availability of quiz and games in the app was also positively responded by the students (15%). This claim is supported by the survey result as shown in Table 5. The difficulty level of the quiz and games was perceived appropriate for the students (77.1%). Students added a comment such as "*the quiz is fairly challenging*" which means that it is neither too easy nor

Table 3. Students' Opinion About Pop-up Gosses Feature

No.	Reading Materials	Response
1	The difficult words in the pop-up glosses are suitable with your needs.	83.6%
2	The pictures in the pop-up glosses give understandable cues.	85.0%
3	The pictures in the pop-up glosses are helpful to understand the difficult words.	85.7%
	Total	**84.8%**

Table 4. Students' Opinion About Videos in The App

No.	Multimedia	Response
1	Videos in the app have good quality.	83.6%
2	The videos can be smoothly played in the app.	84.3%
3	Information in the video is clear and concise.	86.4%
4	Audio narration in the video is clear.	84.3%
5	The narration is presented with an appropriate speed.	85.7%
6	The background music is suitable with the tone of text presented.	84.3%
7	The whole design of the video is appealing.	85.7%
8	The content of the video is helpful in understanding the text.	84.3%
	Total	**84.8%**

Table 5. Students' Opinion About Quiz and Games in The App

No.	Quiz & Games	Response
1	Quiz instructions are easy to understand	82.1%
2	The exercises in the quiz are easy to understand.	77.1%
3	The game is accessible.	82.1%
4	The feedback directly responds the answer.	83.6%
5	The feedback gives appropriate cues of the correct answer.	85.0%
6	The feedback is understandable.	82.1%
	Total	**82.2%**

too difficult for them. The indicators evaluating the feedback in the app were also positively regarded by the students with an average score of 83.6%. Thus, it is added up to the part of student's favorite in the app.

What are the challenges of using *ReadyRead*?

Most of the students (73%) did not find any difficulties when using this app. However, the rest of the students faced several technical challenges as presented in Figure 2. There are 18% of the students who stated that they had problems when installing the app. This problem happened as the file of the app was uploaded in a cloud storage which was not specifically used for mobile applications. Thus, the system could not guarantee the security issue which further hinder students in installing the app in their smartphone.

The other challenges experienced by the students were related to the functionalities of features in the app. There were 3% of the students who reported that the sharing feature did not work properly. The problem may due to the unstable internet connection for connecting to social media. In addition, 3% of the students commented on the hint provided in the feedback feature. They gave comments such as "*It is hard to fill the short-answer questions as my answer which I thought similar was not suitable with the answer key*". The problem may be caused by answer keys provided in the app that accommodate more than one possible answer.

Further, 3% of the students highlighted the bombproof issue which made the app unexpectedly close when students were using it. This issue may occur due to out-of-date *Android* system. Therefore, it is suggested that users make sure that the system of their smartphones is up-to-date. Compared to the result

Table 6. Students' evaluation on control & usability of the application

No.	Control & Usability	Responses
1	The functional icons (located below the main menu) in the app are recognizable.	87.9%
2	The slides move smoothly in the app.	84.3%
3	The app works smoothly even with fast interaction.	85.7%
4	The translation feature works appropriately.	86.4%
5	The feature of progress checker works well.	84.3%
6	The answer of Quiz 3 can be shared to social media.	80.0%
	Total	**85.7%**

of the close ended survey on the control and usability of the app (see Table 6) which are closely related to these issues, students' responses were highly positive (85.7%) thus these problems can be regarded as minor problems. Nevertheless, the findings contribute to the suggestions and recommendations for further development of the application.

Does *ReadyRead* motivate eleventh graders to learn reading better?

All of the students (100%) were pretty sure that this app motivated them to learn reading. This is supported by their positive comments which echoed the previous findings concerning the appearance, learning materials, learning strategy applied in the app, multimedia, quiz and game, as well as control and usability, for example:

"Using this app is not boring as the user experience and interface are so good that it boosts my mood."

"The animation videos are appealing. It really helps as the pictures are simple. Some important words are also highlighted in the videos which can be easily found on the text. It helps me a lot in understanding the text."

"There is a feature that can help me to understand the meaning of the difficult words."

"The choice of words used in the text are appropriate for me so that I want to read more."

Several other comments expressed their impression on the experience of using the app, such as:

"I can share my personal opinions through social media in English about the latest issues and trend which are happening in the society. This makes me interested and I think it can boost our literacy skill as well."

"This app makes my curiosity aroused because the materials are presented in a non-monotonous way, unlike English that I usually learned in class. Learning English with this app is not as difficult as I thought before."

"It can be used as an alternative when we could not learn English in classes anymore because the materials are almost similar to what is taught at school. So, this app is actually bridging what had been taught by the teacher at school and we can re-learn the same materials at home."
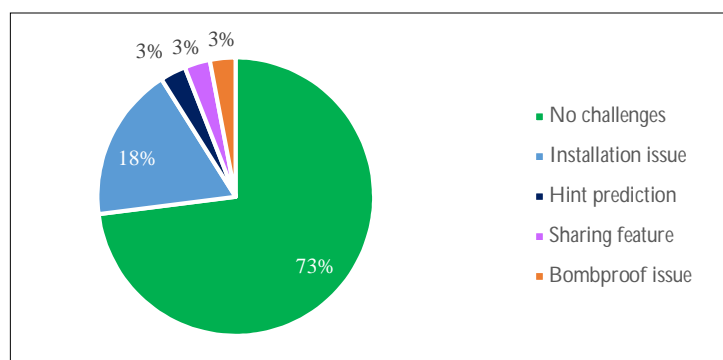
Figure 2. Challenges Found When Using The Application

In summary, the comments emphasize on the advantages of being collaborative through the application by sharing opinions and ideas with peers in social media. It also confirms the benefits of the learning strategy used in the app as part of mobile learning which could not be found when students are in a classroom. Last but not least, the application benefits the students when they learn outside the class because the materials are suitable with their needs and tailored to fit the present curriculum and learning framework generally used at Indonesian school. Those are some of the reasons that make the students felt more motivated to learn reading better through the application.

What are the recommendations eleventh graders give to improve *ReadyRead*?

Students suggest the developer to provide solutions to the problems they experienced when using the app, particularly related to the technicality and usability of the app. As some students experienced problems in downloading the application, they suggested that the app is uploaded to an app store. Difficulties in operating several features, such as sharing features, are also expected to be addressed. In relation to the quiz and games, the students expected that additional features such as undo or reset be added so that they could edit their answers and have more opportunities to try the game.

Some constructive comments given by the students were in terms of supporting and sustaining several elements in the application. For example, students requested that additional pop-up glosses to include more words in the text. Besides, they also expected for more features which are helpful for learning. Improvements on the visualization and multimedia assets in the application were also recommended. Further, the students also expected that the app could cover more types of texts of various and interesting topics.

DISCUSSION

Several elements and attributes of the application have become the reasons why it could assist students to achieve the learning goals while learning independently. It is ranging from user friendliness, learning features, multimedia presentation, visualization, activities and appearance of the app. This is because each student has different way to survive when learning independently (Bárcena et al., 2015). They expect for easy access to learning resources when they cannot depend on the presence of the teachers. Thus, user friendliness of mobile application is important for them to feel at ease when doing language learning activities. The use of language in the application also supports the user-friendliness. It is because sufficient comprehensible input must be presented to students so that they could understand the learning goals thus they know what to do when learning independently (Fishe, Lapp, & Wood, 2011; Reinders & Pegrum, 2016).

Learning features in the application, such as pop-up glosses and translation feature, also encourage students in being aware of their language learning needs. Pop-up glosses is found helpful for students in reading in the target language as it could help them recognize words and easily connect the words to the text as they present contextual meaning completed with illustration (Khezrlou, Ellis, & Sadeghi, 2017). Translation feature in mobile app is not for translating the whole texts as it aims to encourage students to focus on real-world context so that they could use the skill for communicative purpose (Brown & Lee, 2015). Thus, it is available only to translate the instructions in the app which is considered as the vital part of the app that help users start their activities. The feature is perceived important for EFL students in grade eleven with various level of proficiency who attempt to govern their own learning by using the application.

On the other hand, multimedia in the app is found encouraging for students, particularly those who are visual learners, to achieve their learning goals. It is presented as part of the learning strategy. The video in the app, for example, is provided to assist students in activating their background knowledge. Additional reference to related videos is also added as it is expected to provide more opportunities for students who have little background knowledge of the topic (Coiro, 2011). To prevent cognitive overload issues when learning with multimedia assistance, the videos highlight several words which signal the main ideas from the text. This implemented the signaling principle of multimedia learning (Mayer, 2002). Further, user control is also provided to help students set the speed of the videos and let them decide whether to activate the subtitles or not. This practice is relevant to a notion that user control should be provided to minimize cognitive load (Amadieu, Lemarié, & Tricott, 2017) as well as to give freedom to the students to learn at their own pace.

Activities in the application are also perceived accommodating students' learning styles which are varied. Some students revealed that they liked to learn reading by using this application because they preferred to learn individually. Individual learning made them comprehend the materials better compared to group learning. On the other hand, some students stated that learning by using this application make them able to share their opinions about related issues which currently occurred among the society with their friends on social media. The findings implied that besides accommodating individual learning as the initial seed of becoming autonomous, this application also provides space for students to connect with their peers. This addresses the recommendations from Lee (2016) and Tuovinen (2000) that it is important to decrease the pressure and anxiety of learning by creating relaxed atmosphere when learning independently by sharing with peers virtually.

Having various supports when learning reading independently, the learning activities in the app are considered rich. This is one of the reasons why students said that using this app motivated them to learn. Learning applications which are developed for a certain learning context with particular group of students, distinct curriculum demand, and specific learning framework to teach language skills are found rare (Burston, 2014; Oakley, Pegrum, Faulkner, & Striepe, 2012). Therefore, the application is perceived as an alternative platform for learning the materials taught at school but with richer resources and interactive activities.

Some challenges in learning with this application were experienced by the students. Although the challenges are considered minor, technical challenges regarding internet connection and other limitations that are innate from the smartphones should be addressed properly. The finding echoes previous studies by Klimova and Prazak (2018) and Singer and Alexander (2017). Hence, recommendations from the students mostly focused on technical enhancement and some considerations for the sustainability of the application in the future.

CONCLUSIONS AND SUGGESTION

Conclusions

This study investigates students' evaluation of the use of *ReadyRead* application for learning reading in EFL context in Indonesia. It unravels students' perspectives on how the application could assist them to achieve their learning goals while learning independently. Besides, it also uncovers students' favorite parts of the application which also involve the most helpful features when learning with the application. Further, it also answers the questions whether the application motivate them to learn reading better through a mobile application.

The materials, features, activities, and multimedia assets designed in the application are beneficial and helpful for students when learning independently. Moreover, learning language through mobile application can also cater for students' needs and learning styles. Students' positive attitudes and motivation in learning by using this app is such a great start to maintain their struggle to learn independently when learning outside the language classroom.

Suggestions

This study is limited to several aspects, such as the subjects that only engaged students in grade eleven of senior high school. The materials presented in the application were also limited to one type of text. Technical constraints which were experienced by the students when using this application are also part of the limitation of the study. Therefore, it is recommended for future researchers to investigate how these limitations can be addressed. The content of the app as well as the pedagogy implemented in the app which are unique should be considered to be evaluated.

REFERENCES

Ackerman, R., & Goldsmith, M. (2011). Metacognitive regulation of text learning: On screen versus on paper. *Journal of Experimental Psychology: Applied*, 17(1), 18–32. doi: https://doi.org/10.1037/a0022086

Amadieu, F., Lemarié, J., & Tricot, A. (2017). How may multimedia and hypertext documents support deep processing for learning? *Psychologie Française, 62*(3), 209–221. doi: https://doi.org/10.1016/j.psfr.2015.04.002

Ardi, P. (2020). Promoting learner autonomy through *Schoology* m-Learning platform in an EAP class at an Indonesian University. *Teaching English with Technology, 17*(2), 55-76. Retrieved from: http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.desklight-7121bf2d-0e16-4f90-a977-4e8ec79d635b/c/ARTICLE3.pdf

Bárcena, E., Read, T., Underwood, J., Obari, H., Cojocnean, D., Koyama, T., ... & Ávila-Cabrera, J. (2015). *State of the art of language learning design using mobile technology: sample apps and some critical reflection.* In Proceedings of the 2015 EUROCALL Conference (pp. 36–43). Dublin: Research-publishing.net. Retrieved from http://oro.open.ac.uk/45355/reflection. *Critical CALL – Proceedings of the 2015 EUROCALL Conference, Padova, Italy*, 36–43. https://doi.org/10.14705/rpnet.2015.000307

Brown, H. D. & Lee, H. 2015. *Teaching by Principles: An Interactive Approach to Language Pedagogy, Fourth Edition.* USA: Pearson Education, Inc.

Burston, J. (2014). The Reality of MALL: Still on the Fringes. *CALICO Journal*, 31(1), 103–125. doi: https://doi.org/10.11139/cj.31.1.103-125

Chen, G., Cheng, W., Chang, T.-W., Zheng, X., & Huang, R. (2014). A comparison of reading comprehension across paper, computer screens, and tablets: Does tablet familiarity matter? *Journal of Computers in Education*, 1(2–3), 213–225. doi: https://doi.org/10.1007/s40692-014-0012-z

Chinnery, G. M. (2006). Going to the MALL: Mobile assisted language learning. *Language Learning & Technology*, 10(1), 9-16. Retrieved from: https://www.learntechlib.org/p/74432/

Coiro, J. (2011). Predicting Reading Comprehension on the Internet: Contributions of Offline Reading Skills, Online Reading Skills, and Prior Knowledge. *Journal of Literacy Research*, 43(4), 352–392. doi: https://doi.org/10.1177/1086296X11421979

Dobler, E. (2015). e-Textbooks: A Personalized Learning Experience or a Digital Distraction? *Journal of Adolescent & Adult Literacy*, 58(6), 482–491. doi: https://doi.org/10.1002/jaal.391

Eshet-Alkalai, Y., & Geri, N. (2007). Does the medium affect the message? The influence of text representation format on critical thinking. *Human Systems Management*, 26(4), 269–279. Retrieved from: https://www.openu.ac.il/personal_sites/download/eshet%20&%20Geri%202007-Print%20vs.%20Digital.pdfFisher, D., Lapp, D., & Wood, K. (2011). Reading for Details in Online and Printed Text: A Prerequisite for Deep Reading. *Middle School Journal*, 42(3), 58–63. https://doi.org/10.1080/00940771.2011.11461767

Fisher, D., Lapp, D., & Wood, K. (2011). Reading for Details in Online and Printed Text: A Prerequisite for Deep Reading. *Middle School Journal*, 42(3), 58–63. doi: https://doi.org/10.1080/00940771.2011.11461767

Godwin-Jones, R. (2017). Godwin-Jones, R. (2017). Smartphones and language learning. *Language Learning & Technology*, 21(2), 3-17. Retrieved from: https://scholarspace.manoa.hawaii.edu/bitstream/10125/44607/21_02_emerging.pdf

Jones, T., & Brown, C. (2011). Reading engagement: A comparison between e-books and traditional print books in an elementary classroom. *Online Submission*, 4(2), 5-22. Retrieved from: https://eric.ed.gov/?id=ED522678

Khezrlou, S., Ellis, R., & Sadeghi, K. (2017). Effects of computer-assisted glosses on EFL learners' vocabulary acquisition and reading comprehension in three learning conditions. *System, 65*, 104–116. doi: https://doi.org/10.1016/j.system.2017.01.009

Klimova, B., & Prazak, P. (2018). Evaluation of the Effectiveness of the Use of a Mobile Application on Students' Study Achievements – A Pilot Study. In S. A. Al-Sharhan, A. C. Simintiras, Y. K. Dwivedi, M. Janssen, M. Mäntymäki, L. Tahat, I. Moughrabi, T. M. Ali, & N. P. Rana (Eds.), *Challenges and Opportunities in the Digital Era* (pp. 37–44). Springer International Publishing. doi: https://doi.org/10.1007/978-3-030-02131-3_5

Kukulska-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL, 20*(3), 271–289. doi: https://doi.org/10.1017/S0958344008000335

Larson, L. C. (2010). Digital Readers: The Next Chapter in E-Book Reading and Response. *The Reading Teacher, 64*(1), 15–22. doi: https://doi.org/10.1598/RT.64.1.2

Lee, L. (2016). Autonomous learning through task-based instruction in fully online language courses. *Language Learning*, 20(2), 81-97. Retrieved from: https://scholarspace.manoa.hawaii.edu/bitstream/10125/44462/20_02_lee.pdf

Maulida, R. P. (2015). Developing Mobile Application as Supplementary Reading Materials for Tenth Graders of Senior High School (Undergraduate Thesis, State University of Malang, Malang, Indonesia). Unpublished Thesis.

Mayer, R. E. (2002). Cognitive theory and the design of multimedia instruction: An example of the two-way street between cognition and instruction. *New Directions for Teaching and Learning, 2002*(89), 55–71. doi: https://doi.org/10.1002/tl.47

Nakata, Y. (2011). Teachers' readiness for promoting learner autonomy: A study of Japanese EFL high school teachers. *Teaching and Teacher Education, 27*(5), 900–910. doi: https://doi.org/10.1016/j.tate.2011.03.001

Oakley, G., Pegrum, M., Faulkner, R., & Striepe, M. (2012). *Exploring the pedagogical applications of mobile technologies for teaching literacy. Perth, Western Australia: the Association of Independent Schools of Western Australia (AISWA).* Retrieved from: https://research-repository.uwa.edu.au/en/publications/exploring-the-pedagogical-applications-of-mobile-technologies-for

Papamitsiou, Z., & Economides, A. A. (2019). Exploring autonomous learning capacity from a self-regulated learning perspective using learning analytics. *British Journal of Educational Technology*, *50*(6), 3138–3155. doi: https://doi.org/10.1111/bjet.12747

Reinders, H., & Pegrum, M. (2016). Supporting language learning on the move. In B. Tomlinson (Ed.) - *SLA Research and Materials Development for Language Learning* (pp. 219-231). New York: Routledge.

Robison, M. K., & Unsworth, N. (2015). Working memory capacity offers resistance to mind-wandering and external distraction in a context-specific manner: Mind-wandering and distraction. *Applied Cognitive Psychology*, *29*(5), 680–690. doi: https://doi.org/10.1002/acp.3150

Singer, L. M., & Alexander, P. A. (2017). Reading Across Mediums: Effects of Reading Digital and Print Texts on Comprehension and Calibration. *The Journal of Experimental Education*, *85*(1), 155–172. doi: https://doi.org/10.1080/00220973.2016.1143794

Singer Trakhman, L. M., Alexander, P. A., & Silverman, A. B. (2018). Profiling reading in print and digital mediums. *Learning and Instruction*, *57*, 5–17. doi: https://doi.org/10.1016/j.learninstruc.2018.04.001

Tuovinen, J. E. (2000). Multimedia Distance Education Interactions. *Educational Media International*, *37*(1), 16–24. doi: https://doi.org/10.1080/095239800361473

Underwood, J. (2014). Using iPads to help teens design their own activities. In Sake Jager, Linda Bradley, Estelle J. Meima, and Sylie Thouesny (Eds.), C*ALL Design: Principles and Practice*. EUROCALL Conference, conducted in Groningen, The Netherlands.

Wells, C. (2012). *Do students using electronic books display different reading comprehension and motivation levels than students using traditional print books?* (Doctoral Dissertation, Liberty University, Lynchburg, Virginia, USA). Retrieved from: https://digitalcommons.liberty.edu/doctoral/623/