Faculty of Tarbiyah IAIN Kediri
ICOE The Ananual International Conference on Education Proceedings

(E-Reading) ELECTRONIC READING: FOR ACTIVE AND INTERACTIVE LEARNING READING BASED ON OPEN-SOURCE SOFTWARE (OSS)

Griselda Gian Heris Herdina*
Department of English Education, State Islamic Institute of (IAIN) Kediri, Indonesia
e-mail: griseldagian285@gmail.com

Ria Fakhrurriana
Department of English Education, State Islamic Institute of (IAIN) Kediri, Indonesia
e-mail: ria.riana@iainkediri.ac.id

*Correspondence e-mail: griseldagian285@gmail.com

Article Info
Article History:
Received 01 August 2023
Revised 23 September 2023
Accepted 10 October 2023
Available online 20 October 2023

Abstract
Updates in technological innovation in the field of Education, especially English will be urgently needed. Technology in Education has revolutionized manual teaching and learning on an innovative, open-source basis. One of the innovations based on Open-Source Software (OSS) is Electronic Reading (E-Reading). It is designed for EFL class, especially in reading, so that it can run actively and innovatively based on a curriculum that will be packaged attractively and creatively so students can easily accept it. This study discusses based innovation between teaching reading and OSS sophistication compared to previous teaching techniques. This article limits how an OSS can make learning more conducive and productive. As a result, E-Reading strives to provide a beneficial experience for students in learning Reading with full features in the latest version and will be in accordance with the current English learning curriculum.

Keyword:
E-Reading, English, Open-Source, platform

Introduction

Teacher must be proficient with technology to teach English in EFL Class effectively. This is due to the fact that teaching English requires more than just studying the fundamentals of the language, it also necessitates understanding current events in order to enable students to create culture, receive information, and develop cross-cultural communication (Zou, 2017). There are many students feel bored and also less interested in learning English because English is a foreign language in which not all students are proficient in it. This is also supported by the demands for learning outcomes that are quite high for students so that more attractive packaging of material is needed so that students want to learn the material in class. The learning method is also very influential in the learning process. The most of learning methods are applied by adjusting existing learning media first. Traditional methods of teaching English can make students less interested in learning the language because they don't consider feedback and don't assess students' aptitude to the content. As a result, employing the appropriate media can boost students' enthusiasm to learn (Yana & Darwati, 2017). This may hinder their efforts to raise the caliber of educational activities in EFL Class.

Numerous other factors may also have an impact on the drive to learn a language. One is the lack of students needed to create the curriculum that should be used in classes (Zou, 2017). It may interfere with pupils' ability levels, daily language use, linguistic challenges,

and other objective demands. Regarding the irrational requirements that must be satisfied, such as learning strategies, techniques, and learning preferences. The achievement of students can be considerably impacted by the integration of the curriculum and application of learning in the classroom (Putri, 2018). Knowing these factors, a relevant solution is needed to overcome the problems being faced by students in learning to read. Reading is also an important component of English language skills which will have an impact on students' fluency in improving foreign language skills. Reading certainly also has a special learning strategy so that it makes it easier for students to learn the material received. The integration between manual learning and technology are no stranger to students, but there may be various variations offered in the learning process.

The use of technology in English instruction must be maximized. The majority of people utilized the Internet to browse, search, analyse data and information, and use cloud services throughout the industrial revolution 4.0 era, which was characterized by automation and the interchange of data (Prastiwi & Pujiawati, 2019). By the maximum use of internet sites as well as technological innovations that are continuously updated, it will make easier for teacher and students to exchange information. It is also pertinent to the 5.0 society, which aims to put people at the centre of technology and economic developments that integrate virtual and real-world systems to address a variety of issues. According to Fahimirad & Kotamjani (2018) educational technology has transformed teaching and learning into an inventive application of artificial intelligence in higher education. As a result, students in the fourth industrial revolution and society 5.0 need to be skilled in automation, data interchange, and information analysis. One of the developments of the technology itself is Open-Source Software (OSS).

OSS is also quite popular with the development of the technological era that is so fast at this time. The definition of OSS is open source software where users can learn, change, improve and also distribute through open source code. The use of OSS has advantages in terms of speed in its development. There are convenience services that will be obtained from OSS access, namely the right to copy the program and users can distribute copies. Users also have access to the device source code and can extend their application through modifications. Users are given the freedom to make improvements to their program. Everyone is given the right to sell the OSS program so that they will easily reach new markets quickly (Brunce Perens, 2007). OSS is widely used by teachers and students to develop learning strategies to make them more active and interactive. If a class creates a conducive atmosphere, it will make it easier for students to accept the material studied in class. In previous studies discussing the use of currently available open source technology in the development of distance learning processes, especially in Universities (Gozali & Lo, 2012). Based on research from Bedi (2020) also explains the development of OSS-based applications that function to assist learning. In this research, the researcher aims to discuss an innovative design called E-Reading. It is designed for the needs of students in reading classes and to improve students' reading skills on an OSS basis which makes it easier for users to practice reading skills through applications that have been designed for EFL classes.

E-Reading is one of the innovations offered to train students' reading skills. Popular collaborative open-source project since mid-2018 (Akhlaghi et al., 2019). This E-Reading design will support the development of students' reading skills. The visual appearance of this platform will tend to be more varied which will make users more interested during the learning process. Specifically, E-Reading includes student data, learning materials, and practice questions which students can access via mobile phones or laptops connected to the internet. This innovation was made because looking at the problems discussed above starting from the appearance of the material which is less attractive, access to limited material sources, to the demands for technological innovation that must be intensified will greatly support the concept of E-Reading. OSS applications tend to be more accessible to the general

public because they are open so that anyone can edit as needed. This will also be very useful for teachers as a learning media strategy from other media because this will be very interesting and also has a wider range of material. This design will later adapt several ideas including the OSS process which can help users create the applications they want especially in the educational sector.

Method

This article using conceptual design for research design which is an early phase of the design process, in which the broad outlines of function and form of something are articulated. It includes the design of interactions, experiences, processes, and strategies. It is expected to help students practice reading skills in class with technology-based innovations.

By this concept, perhaps it can make the learning atmosphere more different than usual because it is considered more creative and also interesting in terms of visual appearance. This also introduces EFL students that there are a lot of technological innovations that can be developed at this time which can help make it easier for students to practice skills in English lessons. They can also practice anytime and anywhere so that the time they use is more flexible.

Results and Discussion

E-Reading aims to be a reading platform based on Open-Source Software (OSS) in reading learning programs. OSS programming refers to source code that can be inspected, modified, and can also be developed publicly by anyone. OSS is also considered effective if applied in learning in the development of science and technology (Wang, 2019). This platform provides material and practice questions related to learning to read which supports the process of learning activities in the classroom because it is supported by attractive visual features that make students comfortable in learning. Teachers can find out student feedback through the platform and can target student interpretation of learning properly (Zou, 2017).

The integration between learning English Reading and OSS sophistication will have advantages over previous teaching techniques. This is how E-Reading works in the learning system:

1. Open-Source Software (OSS)

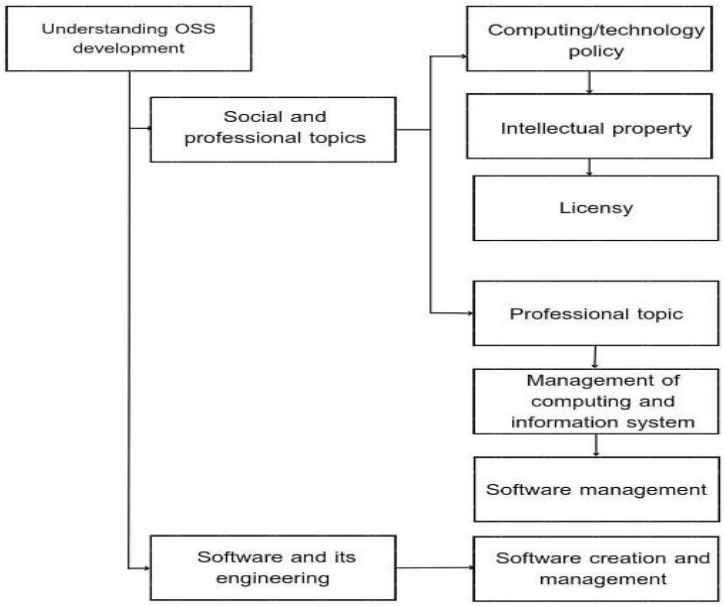

Figure 1: Open-Source Software (OSS)

From the chart described above, it can be clearly seen that the flow of the OSS process can be accessed by many users. OSS has several conveniences to offer its users. It is transparent which allows users to check and track the data they have created in OSS themselves. The flexibility that users get can be found by modifying the code in OSS and users can review through the open code that has been provided. Reliability in OSS has been guaranteed through system updates that are continuously carried out by the main programmers. OSS is considered lower cost because it can be used for free. In OSS there is also no vendor lock that can hinder the editing process in it. The open collaboration carried out by OSS will certainly facilitate access from various parties.

2. E-Reading Application Scheme

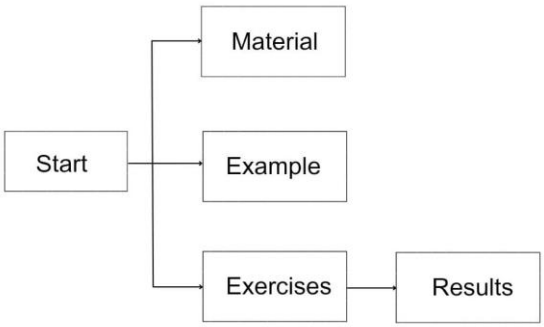

Figure 2: E-Reading application scheme

The way this application works is quite simple and easy for students to understand. First, the user will be given an initial "start" screen to translate. After pressing the "start" button, the user will be presented with options to choose material, view sample questions, or start practicing questions. In the schematic view of the application presented above it looks very simple because only 3 components will be displayed in the application. This application is packaged as simply as possible to make it easier for students to learn reading in EFL classes with a minimalist and attractive appearance. This E-Reading application can be accessed on various smartphones or computers which are still connected to the internet network.

2.1. Interactive Teaching Methods

This learning method is carried out through collaborative interaction between students and teachers regarding learning materials in accordance with the curriculum that influences learning so that it can combine traditional learning with modern learning.

2.2. Methods of Examination and Assessment

This platform provides multiple unit tests. Students can work on questions through the "exercise" feature which will go directly to Google Forms where students can work on questions without "signing in" first. Student data will be immediately captured by the system, and the teacher can process the values that have been captured. The form will automatically generate the final result online.

E-Reading seeks to provide a useful experience for students in reading learning with full features in its latest version. E-Reading continues to develop their technology and services as an OSS-based learning platform for students to improve their understanding and needs of the English language learning curriculum.

3. Advantage of E-Reading

E-Reading must have a pretty good advantage in education. This is because learning through the system can improve learning significantly. School administration activities are also more efficient thanks to OSS, for example assessing student work using

a web-based system, and automating sending feedback on assignments. To be more effective, the E-Reading platform provides examples to practice questions. With it, students will have a higher level of academic success through competent learning (Cheung, Phusavat, & Yang, 2021).

OSS-based E-Reading can reduce obstacles in the learning process. Online platforms can also improve the working atmosphere for teachers and students in class (Danny, Untung, Irwan, Ninda, & Ahmad, 2022). This is of course still related to the curriculum so that their learning can be fulfilled optimally. This is also relevant to previous researches regarding who do research about the use of currently available open source technology in the development of distance learning processes, especially in Universities and explains the development of OSS-based applications that function to assist learning.

Conclusion

The reading ability of students in the classroom must continue to be pursued in tandem with the rise of digital innovation. Every student from various majors has a different basis of ability. Conventional learning methods are considered less than optimal in learning English reading. Learning systems in Open Source, and learning models are very important to enhance independent learning. This material is built according to the target curriculum. Thinking skills and students' abilities are examined to determine their learning capacity through practice questions. The learning model builds relationships between learning outcomes as well as many elements such as instructional materials, resources, and instructional behaviour. The OSS system can be continuously upgraded and configured to provide support for an integrated guidance strategy based on instructional theory. Therefore, the authors designed OSS-based E-Reading to enhance learning through technology to improve the quality of student learning. This research strength the previous studies about OSS innovation which can make it easier for users to create their designs according to what is needed.

References

Akhlaghi, E., Bédi, B., Butterweck, M., Chua, C., Gerlach, J., Habibi, H., Ikeda, J., Rayner, M., Sestigiani, S., & Zuckermann, G. (2019). *Overview of LARA: a learning and reading assistant*. In Proceedings of SLATE 2019: 8th ISCA Workshop on Speech and Language Technology in Education, 10 (19): 99-103.

Bruce Perens. Michal Sroka. (2007). *Treasurer, Open Source Initiative*. O'Reilly's "Open Sources".

Danny, M., Untung R., Irwan S., Ninda L., & Ahmad B. Y. (2022). Dampak kecerdasan buatan bagi Pendidikan. 10 (19): 41-55.

Fahimirad, M., & Kotamjani. (2018). A Review n Application of Artificial Intelligence in Teaching and Learning in Educational Context. *International Journal of Learning and Development*. 8 (4): 106-118.

Ferrianto Gozali dan Billion Lo. (2012). Pemanfaatan Teknologi Open Source dalam Pengembangan Proses Belajar Jarak Jauh di Perguruan Tinggi. *Jurnal Nasional Pendidikan Teknik Informatika (JANAPATI)*, 1 (1): 47.

Chyntia Heru Woro Prastiwia and Nia Pujiawati (2019). Penggabungan Artificial Intelligence dan Kecerdasan Alami dalam Pembelajaran Ketrampilan Menulis Bahasa Inggris. *Seminar Nasional Pascasarjana 2019*, 172-178.

Ni Luh Putu Ning Septyarini Putri Astawa. (2018). The Impact of Project Based Instruction

on Students' Engagement and Speaking Skills. *Widys Accarya*.

Simon K. S. Cheung, Lam For Kwok, Kongkiti Phusavat and Harrison Hao Yang . (2021). Shaping the Future Learning Environments with Smart Elements: Challenges and Opportunities. *Int. J. Educ. Technol. High*. Educ. 18 (16): 1-9.

Yana, D., & Darwati, F. (2017). the implementation of Android-Based Application as a media for Teaching English in Simple Present Test. *Anglo-Saxon*, 8 (2): 158-165.

Zou, S. (2017). Designing and Practice of a College English Teaching Platform Based on Artificial Intelligence. *Computational and theorycal Nanoscience*, 14 (1): 104-108.