



The assistance of e-dictionaries in learning English vocabulary to Indonesian EFL students

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Abstract

This research investigated EFL Indonesian students' perception of using e-dictionaries in learning English. The subjects were 50 students still studying at a university in Banda Aceh, Indonesia. They completed a questionnaire, and ten were selected to be further interviewed. The questionnaire and interview questions were developed from several theories proposed by experts. The results of the study showed that the students had a positive attitude toward the use of e-dictionaries. Although e-dictionaries provided some benefits for students' language learning, especially in vocabulary, such as ease of use, time, and place, the students also faced some difficulties using them. These included incomplete information on the definitions offered for words searched, uncomfortable and constant pop-up advertisements on the apps, cost and internet quota, and finally, eye health issues where students could not read their smartphone screen for some time duration. It is hoped that as the dominance of digital technology increases, more applications in the future can resolve these problems to better assist students in language learning.

Keywords: e-dictionaries; English dictionary use for students questionnaire; English language learning; students' perception

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In the 21st century, technology is proliferating to ease people's daily activities and learning in the education sector. Kogoya (2015) implies that technology is born from human thinking and seeks to facilitate activities applied in life. For example, smartphones and other mobile learning technologies provide opportunities for learners to learn languages and provide several ways and tools to learn on their own or to teach themselves on their way (Kurtz, 2012). According to Nagasubramani (2018), there are, and there will be, more applications that will assist learners in development and learning because of the power of digital increases day by day. Thus, one of the applications available today is electronic dictionaries, also known as e-dictionaries.

EFL students are likely to use e-dictionaries to help themselves find the meaning of words. As lecturers, we witness our students open their smartphones and search for words they do not know the meaning of. Sometimes, lecturers and students search for unknown words together (Susanto et al., 2020). According to Amirian and Heshmatifar (2013), unfamiliar words for students are 'building blocks' that can prevent them from transferring their ideas. Therefore, finding the unknown meaning of words through an electronic dictionary can provide collaborative activities among students. Unlike today, two decades ago, students still bring printed dictionaries to class. However, today, those are considered old-fashioned and most students today do not even buy printed dictionaries to help them learn English. Bringing a heavily printed dictionary is another problem and spending more time to find a specific word in it. As time goes by, this kind of dictionary is now replaced by an electronic dictionary which is easier to carry.

The first electronic dictionary introduced was in the form of a calculator. It was small in size and quick to find a word. This model kept evolving, and is now replaced by an online dictionary available on smartphones. E-dictionaries, which can be used either online or downloaded, are becoming more modern and advanced, voices to pronounce the words are provided by the app, and sample sentences are also provided to illustrate word usage and store difficult words for special memorization. Since vocabulary plays a major role in language learning

(Annisa et al., 2022; Tahir et al., 2021; Suryani et al., 2022), that special function can help the students remember some new words with high efficiency. Moreover, the number of vocabulary items included in e-dictionaries exceeds the number of words compared in the printed dictionary (Zheng & Whang, 2016).

In this study, we intend to seek the EFL students' perceptions in Indonesia of e-dictionaries. It is essential to understand the students' perceptions towards using e-dictionaries while learning English which is treated as a foreign language in their country. By understanding the benefits and pitfalls, classroom instructors, lecturers, and teachers could better understand how to manage classroom learning when e-dictionaries are involved.

Zheng and Whang (2016) defined dictionaries as tools that help language learners check the pronunciation and spelling of unknown words. These tools are available in several forms (dedicated handheld devices, apps on mobile devices, CD-ROMs or DVD-ROMs, and online products). E-dictionaries range from general single-language dictionaries to specific, terminology-based dictionaries for medical, legal, and other professional languages. Online dictionaries continue to evolve to fulfill the needs of users for effectiveness and productivity; these e-dictionaries do not just assist users in learning a language, but also provide a better understanding of the language culture being learned (Le & Dao, 2019).

In English education, an electronic dictionary is a tool for students to help them learn this language. They are accessible for students via handheld mobile devices, laptops or desktop computers, and internet websites. Using a dictionary has become an inseparable and indispensable part of successful language learning (Metruk, 2017). It offers unprecedented advantages with easy access, high speed, and a multimedia environment (Rezaei & Davoudi, 2016).

Many websites provide dictionaries, such as Google Translate (<https://translate.google.com/?hl=id>), where students can translate words and sentences. It can be used on online websites, or it can also be downloaded. The features provided are audio and translation. Another is Translate.com (<https://www.translate.com/>) which can also translate English sentences, and the features available on this website are audio, translation, and picture. Next, Kamusku can be installed on mobile phones so that they can be used offline and provides audio and translation. Naver Dictionary, an online dictionary application can be installed on a smartphone. It offers text translation, meaning, audio, and example from a native speaker. The Bing Translator (<http://www.bing.com/translator/>) can translate precisely, easily, and has audio and words/sentences translator as its features. Line Kamus Inggris is a social media application provided by Line. It can be used offline with provided features of conversation, speaking and listening practice, quiz, and sentence translation. Next, U-Dictionary: Translate & Learn English can translate more

than 30 languages. This app offers many features such as audio, translator, quiz, and more. Last but not least is the English-Indonesian Dictionary (Offline). This application is almost similar to others that can be used offline. Its features can translate sentences and audio, enabling users to know the correct pronunciation.

Several research have been conducted on students' perceptions of using e-dictionaries. Dashtestani (2013) found that students had positive attitudes toward using e-dictionaries for English learning. For this study, questionnaires and interviews were used to gain an in-depth insight into the perceptions of both EFL teachers and students about using e-dictionaries for learning EFL. The results revealed that most Iranian EFL students use e-dictionaries installed on their cell phones. They had positive perspectives on ease of use and access, audio-visual features, portability, and online access to e-dictionaries. The students mentioned that when using an electronic dictionary, the possibility of conducting searches efficiently, easy portability, and time efficiency were important benefits of using e-dictionaries.

However, Dashtestani (2016) stated that using e-dictionaries by EFL learners might create several challenges, including being distracted from learning and participating in-class activities, over-simplified explanations and descriptions of words, low-quality sounds, lack of access to appropriate e-dictionaries and insufficient examples provided. Hence, a majority of users are not aware of the different services that e-dictionaries offer for language learning. In this regard, looking up words in printed dictionaries can improve vocabulary retention. E-dictionaries, on the other hand, can be detrimental to vocabulary recall even while they work well as motivational tools for reading comprehension (Hamdi, 2015).

On the other hand, Rezaei and Davoudi (2016) found that e-dictionaries could have a significant influence on vocabulary learning and retention. They used the experimental procedure that consisted of three stages on students who learned with e-dictionaries: pre-test, treatment, and post-test. Each participant was presented with 100 target words on a paper as a multiple-choice test. The participants were to write the equivalent meaning of the target words in their native language. Out of 100 words, twelve words were discarded because all the students could write the proper equivalent meaning. Hence, the students' better performance in vocabulary learning could be attributed to the use of the powerful tool of the electronic dictionary.

Loucky (2013) claims that bilingual e-dictionaries are more technologically advanced (giving more rapid access to unfamiliar word meanings) and more cognitively effective in that they facilitate faster lexical processing and recording in the L2 mental lexicon. The availability of e-dictionaries on a smartphone makes students ease to access them (Zheng & Whang, 2016) and thus makes them very

convenient to use (Mohamad et al., 2017). Furthermore, most vocabulary learning should happen by chance or incidentally due to listening and reading (Elfiondri et al., 2022; Nation, 2014). Therefore, using e-dictionaries can improve students' pronunciation, which is usually neglected, especially when they engage in self-studying (Rezaei & Davoudi, 2016).

The studies above were done in an overseas context where technology is likely more advance than that in Indonesia's educational system all over the country. Moreover, this study also constructed a set of questionnaires based on previous theories, which we named the EDUS (English Dictionary Use for Students) Questionnaire. Studies on this issue are still lacking in the Indonesian context, especially in provinces with the highest poverty in the country, including Aceh Province (Tim detikFinance, 2022). Thus, this study fills the gap in EFL perceptions towards the use of e-dictionary in a developing country.

METHOD

This study is aimed at finding students' perceptions of e-dictionaries. It was conducted for EFL students at the Department of English Education, Faculty of Teacher Training and Education, Universitas Syiah Kuala, Indonesia. The samples were selected based on the students' availability and consent; the students chosen were those studying in their 6th to 12th semester because they have completed at least a quarter duration of their study and assumed to have the experience of using e-dictionary during their study. Of 100 questionnaires distributed to the students, only 50 returned the questionnaire, and thus they were taken as samples for this research. Furthermore, a number of 10 students of the 50 students were purposely selected to be interviewed. The selection was based on their answers in the questionnaire, which we deemed needed more detailed information and clarification on the items being inquired.

The questionnaire was a simple Yes/No question and constructed based on several frameworks; thus, in this research, this questionnaire is named EDUS (English Dictionary Use for Students) Questionnaire. Items 1 and 5 were taken from Metruk (2017); they inquired about using e-dictionaries as a part of language learning for EFL learners today. Items 2 and 8 were designed based on Zheng and Wang (2016); they inquired about the availability of e-dictionaries on mobile devices. Item 3 was taken from Rezaei and Davoudi (2016), which inquired about the vocabulary in the e-dictionaries. Item 4 was captured from Alhaisoni (2016), which inquired about the interest in using e-dictionaries for EFL learners. Item 6 was selected from Dashtestani (2016), which inquired about the challenges of using e-dictionaries. Item 7 was from the study of Amirian and Heshmatifar (2018) that inquired about students' achievement in vocabulary learning and retention using e-dictionaries. Then, item 9 was from Zheng and Whang (2016), who inquired about the effectiveness of e-dictionaries in helping

language learners check the pronunciation and spelling of unknown words. Finally, item 10 was from Rezaei and Davoudi (2016), which inquired whether using e-dictionaries improved students' pronunciation which is usually neglected, especially when they engage in self-studying.

The questionnaire was checked, evaluated, commented on, revised, and finally validated by two universities' professors in ELT (English Language Teaching) before being distributed to the students. The first professor is from Universitas Syiah Kuala, Banda Aceh, and the second is from Universitas Islam Negeri Imam Bonjol, Padang. A simple percentage calculation was employed in analyzing the questionnaire results.

Meanwhile, for the interviews, four questions were asked; on the difficulty, enjoyment, effectiveness, and language improvement in terms of vocabulary from using e-dictionaries while learning. The interview was done in Indonesian to ensure that the students were at ease in expressing their opinions freely without language barriers. The questions asked were:

- (1) Do you have any difficulty using an electronic dictionary?
- (2) Do you enjoy using an electronic dictionary?
- (3) Can you find all the vocabulary that you need in the electronic dictionary?
- (4) Does your vocabulary improve using an electronic dictionary?

Each interview was about 15 minutes and recorded by the third researcher using an audio recorder. The recordings were later transcribed; this was done because this interpretive act is expected to lead us to a particular phenomenon or event (McMullin, 2021). The interview results in this paper are described based on the themes found in the transcription data.

FINDINGS

Questionnaire

The percentage is used to know students' perceptions of e-dictionaries. The results of this research are based on the students' responses to the questionnaire, which are shown in Table 1. The table shows that the majority of students felt optimistic about the use of e-dictionaries. They believed that e-dictionaries are easily accessible to students (100%); since telephone providers also provided internet services that could be accessed from smartphones, students did not have to use their laptops to access the e-dictionaries. It was seen that all students had mobile phones. Furthermore, they were easy for students to use (98%) and easy to carry around (98%). Some 92% of the students believed that e-dictionaries could improve their pronunciation, and 90% believed that they improved their

English vocabulary. Perhaps this was because e-dictionaries are equipped with audio, enabling students to check pronunciation and imitate them for practice. Consequently, it could lead to vocabulary improvement since it provides examples of words and the use of words in context and meaning. However, this study did not investigate the extent of their vocabulary improvement or how long they could memorize or retain the words. This is recommended for further research conducted.

Table 1. Students Responses from the EDUS Questionnaire

No	Items	Yes	No
1	It is easy to use e-dictionaries	98%	2%
2	E-dictionaries are easily accessible	100%	0
3	More detailed definitions are provided in e-dictionaries compared to paper dictionaries	70%	30%
4	I prefer using e-dictionaries to the printed dictionaries	86%	24%
5	I usually use e-dictionaries	96%	4%
6	I usually use paper dictionaries	28%	72%
7	E-dictionaries can improve my English vocabulary	90%	10%
8	E-dictionaries are easy to carry around	98%	2%
9	I usually use both electronic and paper dictionaries	46%	54%
10	E-dictionaries can improve my pronunciation	92%	8%

Moreover, approximately 96% of the students use the apps for e-dictionaries, with about 86% of the students prefer e-dictionaries to printed ones. Then 70% of them found that e-dictionaries provided more detailed definitions than paper dictionaries. Hence, 46% of the students use both electronic and paper dictionaries. Perhaps this is due to the need for smartphones to use the app and the internet connection when the app is not directly downloaded to their phones. When these two items are not available, then there is a need to switch to the paper dictionary. Further explanation is provided in the following sub-headings of the interview results. Finally, only 28% of the students only use paper dictionaries.

Interviews

Ten students were also interviewed to support the data from the questionnaire. The responses to the four questions from each respondent are presented in the following sub-headings; the sources of excerpts (E) are coded as Students 1 (S1) and so forth. The respondents answered the questions in Indonesian, and the answers were translated into English for this paper.

The Difficulty while Using E-Dictionaries

From the interview, eight out of ten students declared they had no difficulty using e-dictionaries because of their user-friendly design and application. They prefer using e-dictionaries better than paper dictionaries because of the app's

ease of use and direct results of the vocabularies they were looking for. S2 and S5 denounce this in E1 and E2.

- (E1) "I do not have any difficulty when I use e-dictionaries because it is easy to use. I type in the words that I need, then I can directly see the results". (S2)
- (E2) "I think I have no difficulty because it is so easy. We can directly open our smartphone, open the app, type in a word that we need to know the meaning, and there it is!" (S5)

Meanwhile, only two students had a minor difficulty in using the e-dictionaries. They informed,

- (E3) "I am not comfortable with the advertisements in some e-dictionary programs. They keep popping up, it's uncomfortable, and eye-soaring when I read the screen for too long". (S1)
- (E4) "For e-dictionaries in smartphones, the difficulty is when you want to use it, but there is no internet network, then you cannot search for the words that you need to know the meaning right away ". (S3)

From the excerpts, S1 in E3 had no difficulty using e-dictionaries. However, the pop-up advertisements that appeared while using them were uncomfortable, and the time length to read with the screen bothered her eyesight. Meanwhile, S3 complained about the internet connection that sometimes could be weakened or disappear while using the apps. Hence, to overcome this problem, students should download the e-dictionary application so that they can also make use of it offline or without the internet. However, smartphone memory space was another problem that prevented students from downloading the app, as continued by S3 in E3 below.

- (E5) "I know it will be easier for me to use if I just download it to my smartphone, but there is not enough memory space. I have installed Gmail, WhatsApp, Instagram, and Facebook, and my phone is so full". (S3)

The Enjoyment in Using Electronic Dictionary

It was found that almost all students enjoyed using e-dictionaries, mostly because of their practicality and time-saving.

- (E6) "I also enjoy using the e-dictionaries because I can directly see the result of the vocabulary". (S2)
- (E7) "I enjoy using the e-dictionary very much because it can be used everywhere, and also if there are some words that I do not know from an article or a book that I read, I immediately take my smartphone, then open the e-dictionary, and I can return to the article or the book without wasting

my time. So, the electronic dictionary saves time to get the words we need". (S7)

From E6 and E7, they enjoyed using e-dictionaries because of their contentment, ease of use, and time-saving. Some students thought they could benefit from using an electronic dictionary because it was more effective than a paper dictionary. However, there is an issue that made it impractical; similar to E4, S6 also had a problem with an internet connection. She also informed about the cost of and insufficient internet quota needed for her smartphones to use the e-dictionaries.

(E8) "I enjoy using it a lot, but we need memory space to install it on our phones. We also need the internet to use it. Sometimes I don't have enough quota, and I don't have enough money to buy it right away. So, when we study in class, I can't use it right away because of this." (S6)

Similar to S3, S6 also did not download the free applications of the e-dictionaries because of the limited space, internet cost, and problems on their phones, so they preferred to use them online.

Vocabularies Needed are Available in E-Dictionaries

The interview revealed that most students found the vocabulary they needed in e-dictionaries. These are extracted from the excerpts of the interview:

(E9) "Up till now, every vocabulary that I need is always available in the electronic dictionary". (S10)

(E10) "Every vocabulary that I want to know the meaning is available in the dictionary". (S4)

From E9 and E10, they pronounced that every vocabulary that they needed was always available in the e-dictionaries. However, some students find it otherwise, as displayed in the excerpts below.

(E11) "For the offline electronic dictionary that I have ever used, not all vocabularies or phrases are available; for example, we cannot find any slang words in the dictionary". (S8)

(E12) "Not every vocabulary that I need can be found in this dictionary, such as slang words, I cannot find precise meaning for those". (S7)

S7 and S8 criticized that slang words and phrases could not be found in e-dictionaries. Commonly, they stumbled across slang words or phrases when watching movies, reading novels, listening to songs, or interacting through social media. However, when searched, these words or phrases were not commonly

found in the e-dictionaries. Paper dictionaries were preferred because they were deemed more complete by these students.

Vocabulary is Improved by Using E-Dictionaries

It was discovered that most students believed that their vocabulary improved when using e-dictionaries; the expressions can be seen in E13 and E14. One student stated otherwise; she alleged that her vocabulary improved using a paper dictionary instead (see E15). Meanwhile, another student stated that it was the same for him from both versions of the dictionary in terms of vocabulary improvement.

(E13) "Besides, it gives quick results to the vocabulary I am looking for; it helps me improve my vocabulary because I can use it everywhere and whenever I need it". (S10)

(E14) "In my opinion, it definitely can help us improve our vocabulary, because just like I have said before, the process of finding words is so easy that we do not have to search them by alphabetical order, but we can directly type in words, submit and the results instantly come out". (S2)

It is shown from the interviews that S10 and S2 chose to use the e-dictionaries because they thought it helped them improve their vocabulary better than when using paper dictionaries due to their conveniences (i.e., easy to carry, time-saving, and instant results).

Meanwhile, S9 believed the paper dictionary worked for her better than the e-dictionary in learning vocabulary. Her reasons are stated below:

(E15) "Well, the electronic dictionary does not improve my vocabulary while learning English, but so far, the paper dictionary works better for me. This is because using the printed dictionary requires more effort to find the words. I also can read the explanation better because the printed one is more detailed in providing examples for each word. So, this helps my memory to remember better the words that I read intently one by one. It is different when I read from the screen; I don't remember better by it". (S9)

From S9 point of view, the printed dictionary helped her remember better in vocabulary learning because she believes that reading the meaning of the words directly from paper retained her memory better than reading from a screen. She read some vocabulary one by one while searching for a specific word.

On the other hand, one student, S5, finds no differences between both dictionary forms regarding vocabulary improvement.

(E16) "I think in terms of vocabulary improvement, it is the same between the electronic dictionary and paper dictionary for me. I don't feel any difference". (S5)

DISCUSSION

Generally, it was found that most students in this study preferred using e-dictionaries compared to paper dictionaries, and this is in line with the findings of Alhaisoni (2016) on EFL learners. Besides its ease of use, e-dictionaries also offered efficiency in terms of time and place. Thus, installing the app on smartphones was required to use it offline. Most of the students also did not encounter any constraints in using it. It was more practical and offered many features, such as audio, that enabled users to listen to how the words were pronounced. Despite Amirian and Heshmatifar (2018) found that the use of e-dictionaries proved to be a powerful tool for improving students' achievement in vocabulary learning and retention, Chun et al. (2012), on the other hand, found that learning vocabulary by using a dictionary does not encourage long-term vocabulary retention as much as unintended vocabulary learning.

Nevertheless, using the dictionary has assisted vocabulary learning irrespective of dictionary type (Rezaei & Davoudi, 2016). Dictionaries are essential tools for language learners, and as technology is rapidly developing, the trend for using e-dictionaries among students also increases (Waloyo, et al., 2021). Accordingly, as the power of digital increases, there will be more applications in the future that can better assist students in learning (Nagasubramani, 2018).

Based on the research results from the questionnaire and interview, we also found a similarity in students' perceptions of using e-dictionaries in learning English from several previous research findings. Most EFL students have a positive attitude toward using e-dictionaries in learning the language English compared to the paper dictionary. In the research by Dashtestani (2013), it is concluded that students' positive attitudes toward using e-dictionaries also influenced their motivation to learn EFL. The availability and quick access to e-dictionaries influenced the student community across the nations to use this resource to learn foreign languages (Alhaisoni, 2016).

Hence, despite its benefits, some constraints in using e-dictionaries were found. Even though not significant, thus some students complained about bothersome pop-up advertisements, eye sores due to staring at the screen to read, and internet connections to those who could not download the e-dictionary apps due to limited phone memory space or the cost of the internet quota. Like Mohamad et al. (2017), they also found that the main problems faced by students in using e-dictionaries are limited internet access and incomplete definitions and

examples. They also found a lack of credibility in some bilingual e-dictionaries' developers, but the students in this study did not encounter this problem.

CONCLUSION

Based on the research findings and discussion, it can be concluded that the students of this study had a positive attitude towards using e-dictionaries in learning English. Most of them preferred to use the e-dictionaries compared to the paper ones because the e-dictionaries offer ease of use and efficiency in time and place. Nevertheless, the students also put forward some difficulties in using them. They are the incomplete information on the definitions offered for words searched, uncomfortable and constant pop-up advertisements on the apps, eye-health issues, cost and internet quota, and finally, eye health issues where students could not read their smartphone screen for some time duration.

Though this study has answered the research question, it still bears some limitations to be further researched in the future. More data should be collected from more students, and the relationship between their perceptions of e-dictionaries and achievement in EFL, such as vocabulary improvement, should be tested. Furthermore, using e-dictionaries in the classroom during the teaching and learning process should also be integrated into the lesson. Teachers should design tasks or assignments that require students to open e-dictionaries and practice pronunciation together. The students are also expected to gradually memorize words that they have looked up to improve their vocabulary. However, it is important to note that teachers should also be involved in managing the class when they let their students use an electronic digital device while learning. If not, students will likely be distracted by other online content from their cell phones (i.e., social media, entertainment on YouTube, etc.).

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