

EVALUATING THE IMPLEMENTATION OF TECHNOLOGY DESIGN IN ENGLISH LANGUAGE LEARNING

MENGEVALUASI IMPLEMENTASI DESAIN TEKNOLOGI DALAM PEMBELAJARAN BAHASA INGGRIS

Budi Riyanto¹, Irmu Agustina¹, Siti Raudhah Maidari*

¹Program Studi Teknika, Politeknik Pelayaran Malahayati, Aceh besar, Indonesia

*email: sr_maidari27@yahoo.com

ABSTRAK

Promosi teknologi pembelajaran bahasa telah banyak di gunakan oleh para pengajar dan pelajar Bahasa Inggris untuk meningkatkan kemampuan target bahasa tersebut. Penelitian ini bertujuan untuk meninjau keefektifan teknologi tertentu dalam pengajaran dan pembelajaran Bahasa Inggris. Teknologi tersebut berkaitan dengan CALL (Computer Assisted Language Learning) yang berfokus pada Grammar checkers, Kamus Elektronik, Chat, Blog dan Internet Forum Diskusi. Data tersebut di kumpulkan melalui penelitian kepustakaan dan di klasifikasikan ke dalam tiga kategori terhadap potensi penggunaan teknologi tertentu dalam pembelajaran Bahasa Inggris. Studi ini mengungkapkan bahwa pembelajran bahasa dengan menggunakan teknologi mengarah pada pembelajaran yan lebih menyenangkan di mana hal itu meningkatkan kesempatan siswa untuk berinteraksi, memperoleh lebih banyak umpan balik, memiliki lebih banyak waktu untuk menyusun kalimat dan yang paling penting adalah meningkatnya kemampuan siswa pada Bahasa tersebut.

Kata kunci: Teknologi pembelajaran bahasa, Grammar checker, Mobile Assisted Language Learning, Kamus elektronik, Chat, Blog / Internet Forum Diskusi

ABSTRACT

The promotion of language learning technology has widely used by many English teachers and learners in improving the target language. This study aims to review the effectiveness of particular technology in language teaching and learning. It concerns on CALL (Computer Assisted Language Learning) that focus on Grammar checkers, Electronic dictionary, Chat, Blog and internet forum and discussion. The data is compiled through library research and classified into three categories towards the potential used of a certain technology on language learning. This study revealed that language learning by using technology leads to joyful learning where it improves students opportunities for interaction, obtains more feedback, have more time to construct the sentence and the most important is students access to the target language is increased.

Keywords: Language learning technology, Mobile Assisted Language Learning, Grammar checkers, Electronic dictionary, Chat, Blog / internet forum discussion

1. Introduction

Today's technology is addressed as potential learning resources supporting language skills such as speaking, writing, reading, listening, and grammar. The disparity of a certain electronic device, website, and application have its own particular function towards each language skill,

for example Grammarly website is focusing on grammatical error on users' writing work.

Recent research frequently identified about language learning technology to innovatively modified teaching method as it is followed by the digital age. The use of technology in language learning has been emerged in EFL countries particularly to successful learning a foreign

language. Chapelle and Jamieson (2008) and Sharma and Barret (2007) stated that language learning technologies reflects the current needs, habits and tendencies of the digitalized society. It is quite debatable that technology can alter the book as a learning media in the next few years due to its advantages. Baek, Jung, Kim (2008) generalized the function of technology as a learning tool in the classroom is recognized to bring the real-world experience, provide scaffolding in complex tasks, receive sophisticated and individualize feedback, build interaction within teachers-students-parents circle, and expand teachers' development.

The advancement of technology has transformed the traditional language learning method from textbooks into technology devices that leads to autonomy learning. Reinders (2011) acknowledged learners learn new languages through YouTube, Google, language applications platforms which can be easily downloaded through mobile phone increase learners' autonomy due to the closer look to the authentic example of the target language.

Language learning technology is a broad scope since various designs of technology are created massively whether in the form of websites or applications. Thus this research will narrow down the research into a major and frequent technology used to support language learners, such as Chat, Blog, Grammar checkers, Electronic dictionary, and internet forum discussion.

Chatting platforms, for instance WhatsApp has provided features to communicate conveniently. Text and voice message are identified as a potential resource to assist learners improve their speaking and writing competence. Minal (2018) found that Voice message chat supports language learners in oral interaction while constructing and structuring the sentence during chatting will help learners in writing (Skyes, 2018). Also, in relevant to speaking and writing skill, Internet forum discussion platform is pointed as acceptable language learning tool because the users have a chance to communicate globally with people around the world, besides, the users can also receive feedback from native speakers once they are using the platform.

In addition, regarding the writing skill, Blog has seen as a modern media to practice, it is more interesting and challenging because they can publish their writing and communicate to the readers through comment feature (Lowe & William, 2004). Another common used application that improves learners' writing and sentence

structure is grammar checkers. There are some benefits using this tool both for teachers and learners. Checking grammar on students' writing work consumes such a time for teachers, so that Grammar checkers application can help teachers related to the time constraint, while the learners who use the tool can have a self-directed learning towards sentence-structure or grammatical error. While to help learners competence with the vocabulary matters, the present of Electronic dictionary is acknowledged as one of problem-solutions because it is easy to use and quick tools to identify the vocabulary meaning (Nomass, 2013), and most of the applications are completed by the audio recording.

2. Methodology

In terms of methodology of this study, first, we compiled a list of articles focusing on empirical studies that compare the use of technologies with more conventional one in teaching foreign language. The articles are compiled through the following criteria to guide the selection: (1) studies that were written in English; (2) studies that were published between 2000 and 2021 ; and (3) studies with a focus on computer language learning; Other type of publications, e.g. book reviews, commentaries, or editorial materials, were excluded from this review.

3. Result and Discussion

Electronic Dictionary

The using of dictionary has developed from traditional Paper dictionary to Electronic dictionary. Dictionary is an important thing for second language learners in consulting the meaning of a vocabulary. However the use of dictionary for some researchers (Knight, 1994; Schmitt, 2000) are not recommended , since it only provides a short definition that leads to a short-term memory and interfere the comprehension process, therefore, they prefer to extensive reading and listening since it provide the right meaning of a vocabulary contextually. However, other researchers (Luppescu & Day, 1993) find the evidence of using dictionary does facilitate the vocabulary acquisition and text comprehension. The electronic dictionary itself is truly developed following the needs of the users, it is not only in text illustration, but also provide the audio recordings such as Longman Interactive English Dictionary (LIED) and Longman Interactive American Dictionary (LIAD) (Leech & Nesi, 2011). Conversely, many people including

learners are still comfortable using Paper Dictionary even though the Electronic Dictionary is more convenient nowadays, Koyama and Takeuchi (2004) in their result research found that there is no significant difference between Electronic dictionary and Paper dictionary in the process of searching and students did not really believe in the effectiveness of the Electronic Dictionary for learning English as a Foreign Language since it cannot guarantee a better reading comprehension for learners because they have to look up more words to understand the text. Interestingly, both of the students with different dictionaries share the same reading comprehension where those with the electronic one did not disrupt the reading process (Koyama & Takeuchi, 2007; Laufer & Levitsky-Aviad, 2006). Another study about electronic dictionary reveals that it helps students to finish the reading task faster compared to those with paper dictionaries (Koyama & Takeuchi, 2007). Nonetheless, an earlier study from Koyama & Takeuchi (2004) stated that there were no significant differences in terms of time needed in completing task between the two types of dictionaries.

In terms of learners' attitudes towards reading process, some studies found that most learners show positive attitude towards the electronic dictionary and that they also have better willingness in reading. In this case, the studies confirm that they must prefer the electronic one over the paper based dictionaries (Laufer & Levitsky-Aviad, 2006; Loucky, 2005).

Grammar Checkers

This applications is frequently used by many language learners to assess their writing work. Grammar checkers may help learners learn the process of writing with the idea of self-directed learning, for example, Grammarly, it is one of online grammar checkers software that can be accessed anywhere and anytime, it is able to remedy and give feedback to the essays through underlining and flagging the errors, here is where the learner start learning, furthermore, it is modified by adding explanation offered in the comments, so the learner will know the reason behind the mistake in the essays (Jayavalan&Razali, 2018) . Grammar checkers can also promote the less time constraint in giving the feedback on students' writing work (Jones, Myhill, & Bailey, 2013). Nonetheless, The study from Burstn (2001) suggests that students have no idea on the optimal use of grammar checker, he

continues by stating that they need to be trained about how to use the electronic grammar checker before using it. This is due to the fact that prior to the training, the students with paper based references outperformed those with grammar checker. After the training, however, both groups show similar accuracy.

Chat

Another modern ways in language learning nowadays is using Social media that applicable on Smartphone. The development of technology is followed by sorts of social media that simplify people to communicate or interact each other. Social media indirectly influenced language learning, the platforms are generally play an important role to improve learners oral skills where they can be more active to use the target language freely and spontaneously (Warschauer, 1997). One of the frequently-used social media is WhatsApp, this application has gained the popularity over the globe with over 1 Billion users worldwide (Klein et al, 2018). This application has features that allow users to socialize and share information through text and voice message, photos and videos, video call and have a group discussion. The provided features attract language teachers and researchers to conduct research related to how this platforms support learners to improve their language skills. Minala, (2018) on his research reveals that voice message chat on a WhatsApp group is an effective way to improve language learners enhancing their verbal interaction. Beforehand, few years before WhatsApp is created, Brown (2001) shows the result of his research towards the voice message indicate a great impact to the learners on vocabulary, quizzes, translation and live talking tutors. While through text message, language learners have a chance to communicate with other learners, even the speakers of the target language from all over the world inexpensively and quickly (Khalili&Baradaran, 2009).

Several studies have particularly compared the effectiveness of chat either text or voice to the more traditional classroom discussion. Skyes (2005) found that students can produce more complex output when using written chat than face-to-face discussion and voice chat. He assumes that it happens in that students have more time to construct and practice the structures during the natural delay within the chat interaction. Another study also found similar result for the progress of oral proficiency. Students' practicing through written chat show more improvement than those

with face to face discussion (Blake, 2009; Payne & Ross, 2005).

Another quite similar study conducted by Abrams (2003) also show same result. He examined oral proficiency development between students using written chat compared to two other groups, one using CMC for discussion (bulletin board) and one with no CMC. Abrams found that a group of students with written chat produce greater output compared to the other group. In terms of lexical density and structure complexity, however, he believes that they did not significantly vary to each other. Furthermore, Chen (2008) believes that the written format of chat also help learners of foreign language to promote “noticing”, in which according to SLA theoretical construct, noticing is crucial for successful learners intake in learning language.

Blog

Blog has its own stage on language learning technology that is addressed as a new language learning technique. Blogs have seen as a media that effect the awareness of the target culture that allow to learn the target language, it supports the interactions and communications, contribute to improve basic language skills such as listening, speaking, reading and writing, direct to autonomous learning through sharing and exchange information on the blogs space and effectively engaged with learners’ critical thinking towards the using or content of the blogs. (Aydin, 2014). Blogs is a kind of personal journal that enable readers interact with the authors easily through comments, this media is easy and fast in publishing that include three elements such as audio, video and graphic (Hsu, Wang, & Comac, 2008). Educators encourage learners to create a blog to support language learning where they can express their thoughts through writing and give a chance to improve their communication skills at the same time through comments feature to the readers (Lowe & William, 2004). Blogs is addressed as a powerful media for literacy (Huffaker, 2005).

Furthermore, Students writing are more likely to improve when blogs were integrated into the curriculum. In some qualitative studies, it is stated that students prefer blogging to other traditional form of writing since they feel their writing are improved and to publish their writing into online are challenging yet motivating (Armstrong & Retterer, 2008). Moreover, in another similar study, students also said that blogging can increase their confidence in writing the target language

since they have time to reflect on their L2 production and proficiency and they can obtain greater creativity than in traditional writing forms (Ducate & Lomicka, 2005). Although the students greatly enjoy blogging, they would be happier if they can choose the topic by themselves. Moreover, they also suggest that in order to encourage the blogging capabilities, creativity can be added in the scoring rubric (Ducate & Lomicka, 2008).

Internet Forum and Discussion

The communication through internet forum and discussion facilitate learners to communicate in the target language or do any project related with target language. This media also allow the users to receive feedback from native speakers on their output and this is what the users valued the most. Nonetheless, this feedback is given only during e-tutoring session when it is explicitly needed (Ware & O’Dowd, 2008). It then can provide pedagogical implication for teacher who want to use internet forum for peer communication. For this reason, teacher has to design the task in which the feedback is fundamental for the students.

The findings of this study will have implications to the practitioners. First, it may improve the teaching practice by informing the educators about the characteristics of digital tool which corresponds to different learning material. Second, it may inform teachers to further be able to create or design a mediated-tool that is best suited to the learning aim and learner approach. Furthermore, the result of this study also provide contribution to the literature that is the benefits of technology for education could only be achieved if both the design and implementation are carefully considered by the instructor. Also, the affordances of technologies and their effects on the implementation towards the learning process need to be well-recognized.

4. Conclusion

Due to the increased use of technology for language learning, a large number of research has been focused either on describing the effectiveness of particular technology or on assessing its effect on students reactions towards language learning. Nonetheless, only few well-designed research found to examine its efficacy in improving the outcomes or learning process. It is undeniable true that the description about how enjoyable a particular type of technology is

favorable goals, however, it remains imprecise to what extent the particular activities conducted by using technology do improve the students learning. One can argue by stating that the excitement and self-selecting activities while using technology may lead the students to extra engagement to the target language. However, in this case, the actual increased in language proficiency by using technology have yet to be explored.

This review is aim to compile existing evidence on several types of technologies focusing on those which measure efficacy. However, it provides only limited view from larger technology on language learning literatures. Further studies will be needed to discover and describe the influence of particular technology on different proficiency levels and learning environments.

References

- Abrams, Z.I. (2003). The effect of synchronous and asynchronous CMC on oral performance in Germ. *Modern Language Journal*, 87, 157–167.
- Armstrong, K., & Retterer, O. (2008). Blogging as L2 writing: A case study. *AACE Journal*, 16, 233–251.
- Aydin, S. (2014). The use of blogs in learning English as a foreign language. *Online Submission*, 4(1), 244-259.
- Baek, Y., Jung, J., & Kim, B. (2008). What makes teachers use technology in the classroom? Exploring the factors affecting facilitation of technology with a Korean sample. *Computers & Education*, 50(1), 224-234.
- Baradaran, A., & Khalili, A. (2009). The Impact of Online Chatting on EFL Learners' oral Fluency.
- Bijeikienė, V., Rašinskienė, S., & Zutkienė, L. (2011). Teachers' attitudes towards the use of blended learning in general English classroom. *Studies about languages*, (18), 122-127.
- Blake, W.C. (2009). Potential of text-based internet chats for improving oral fluency in a second language. *Modern Language Journal*, 93, 227–240.
- Burston, J. (2001). Computer-based grammar checker and self-monitoring. *CALICO Journal*, 18, 499–515.
- Chapelle, C. A., Jamieson, J., (2008). *Tips for Teaching with CALL: Practical Approaches to Computer-assisted Language Learning*, New York: Pearson Education
- Chen, W.C. (2008). Personalized mobile English vocabulary learning system based on item response theory and learning memory cycle. *Computers & Education*, 51, 624–645.
- Ducate, L.C., & Lomicka, L.L. (2005). Exploring the blogosphere: Use of web logs in the foreign language classroom. *Foreign Language Annals*, 38, 410–421.
- Ducate, L.C., & Lomicka, L.L. (2008). Adventures in the blogosphere: From blog readers to blog writers. *Computer Assisted Language Learning*, 21, 9–28.
- Hardy, J.V. (1998). Teacher attitudes toward and knowledge of computer technology. *Computers in the Schools*, 14(3-4), 119-136.
- Hsu, H. Y., Wang, S. K., & Comac, L. (2008). Using audioblogs to assist English-language learning: An investigation into student perception. *Computer Assisted Language Learning*, 21(2), 181-198.
- Huffaker, D. (2005). The educated blogger: Using weblogs to promote literacy in the classroom. *AACE Journal*, 13(2), 91–98.
- Jayavalan, K., & Razali, A. B. (2018). Effectiveness of online grammar checker to improve secondary students' English narrative essay writing. *International Research Journal of Education and Sciences (IRJES)*, 2(1), 1-6.
- Jones, S., Myhill, D., & Bailey, T. (2013). Grammar for writing? An investigation of the effects of contextualised grammar teaching on students' writing. *Reading and Writing*, 26(8), 1241-1263.
- Kitade, K. (2008). The role of offline metalanguage talk in asynchronous computer-mediated communication. *Language Learning & Technology*, 12(1), 64–84.
- Klein, A. Z., Junior, J. C. D. S. F., Barbosa, J. L. V., & Baldasso, L. (2018). The educational affordances of mobile instant messaging (MIM): Results of Whatsapp® used in higher education. *International Journal of Distance Education Technologies (IJDET)*, 16(2), 51-64.
- Knight, S. (1994). Dictionary use while reading: The effects on comprehension and vocabulary acquisition for students of different verbal abilities. *The Modern Language Journal*, 78(3), 285-299.
- Koyama, T., & Takeuchi, O. (2004). Comparing electronic and printed dictionaries: How the difference affected EFL learning. *JACET Bulletin*, 38, 33–46.

- Koyama, T., & Takeuchi, O. (2004). How look up frequency affects EFL learning: An empirical study on the use of handheld-electronic dictionaries. *Proceedings of CLaSIC 2004*, 1018-1024.
- Koyama, T., & Takeuchi, O. (2007). Does look-up frequency help reading comprehension of EFL learners? Two empirical studies of electronic dictionaries. *CALICO Journal*, 25(1), 110–125
- Lai, C., & Zhao, Y. (2006). Noticing and text-based chat. *Language Learning & Technology*, 10, 102–120.
- Laufer, B., & Levitsky-Aviad, T. (2006). Examining the effectiveness of “Bilingual Dictionary Plus” – A dictionary for production in a foreign language. *International Journal of Lexicography*, 19, 135–155.
- Leech, G., & Nesi, H. (2011). Moving towards perfection: the learners’(electronic) dictionary of the future. In *The Perfect Learners' Dictionary (?)* (pp. 295-306). De Gruyter.
- Loucky, J. (2005). Combining the benefits of electronic and online dictionaries with CALL web sites to produce effective and enjoyable vocabulary and language learning lessons. *Computer Assisted Language Learning*, 18, 389–416.
- Lowe, C., & Williams, T. (2004). Moving to the public: Weblogs in the writing classroom.
- Luppescu, S., & Day, R. R. (1993). Reading, dictionaries, and vocabulary learning. *Language learning*, 43(2), 263-279.
- Minalla, A. A. (2018). The Effect of WhatsApp Chat Group in Enhancing EFL Learners' Verbal Interaction outside Classroom Contexts. *English Language Teaching*, 11(3), 1-7.
- Payne, J.S., & Ross, B.M. (2005). Synchronous CMC, working memory, and L2 oral proficiency development. *Modern Language Journal*, 9, 35–54.
- Reinders, H., & White, C. (2011). Learner autonomy and new learning environments. *Language Learning & Technology*, 15(3), 1-3.
- Schmitt, N., & Schmitt, D. (2020). *Vocabulary in language teaching*. Cambridge university press
- Sharma, P., & Barrett, B. (2008). *Blended learning: Using technology in and beyond the language classroom*. Macmillan.
- Sykes, J.M. (2005). Synchronous chat and pragmatic development: Effects of oral and written chat. *CALICO Journal*, 22, 399–431.
- Ware, P.D., & O’Dowd, R. (2008). Peer feedback on language form in telecollaboration. *Language Learning & Technology*, 12(1), 43–63.
- Warschauer, M. (1997). Computer-mediated collaborative learning: Theory and practice. *The modern language journal*, 81(4), 470-481.