Using Cloud-Based Tools for English as a Second Language Reading Activities among Malaysian Polytechnic Students

Noorhafizah Rubaai

Politeknik Merlimau Melaka, Malaysia

Harwati Hashim

Faculty of Education

Universiti Kebangsaan Malaysia, Selangor, Malaysia

Corresponding Author: harwati@ukm.edu.my

Received: 5/4/2021

Accepted: 7/8/2021

Published: 7/31/2021

Abstract

Reading is essential in helping English as a Second Language learners' mastery of the language. With the emergence of cloud-based tools and the availability of advanced technology, education and language learning process have become much more enjoyable. However, even with the availability of the Internet and other cloud tools, the reading frequency rate among students, especially in higher learning institutions is still considered low. Therefore, this study aims to investigate the polytechnic students' perceptions on the ease of use of using cloud-based tools for ESL reading activities, and the polytechnic students' perceptions on the usefulness of using cloud-based tools for ESL reading activities. One hundred semester one students (n=100) of a polytechnic in Malaysia were involved in this study. The questionnaire survey was developed based on *Technology Acceptance Model*. The findings revealed that the students have positive perceptions of using cloud-based tools for ESL reading activities. The results of the current study are hoped to provide insight and ideas for educators in implementing the use of cloud-based tools for ESL reading activities, and the administrators to provide the best support for the benefits of students as a whole. Significantly, the findings of this study were hoped to redound to the use of cloud-based tools for reading considering that the majority of ESL learners in higher learning institutions, especially in Malaysian polytechnics are not habitual readers.

Keywords: Cloud-based tools, English as a Second Language, technology acceptance model, reading

Cite as: Rubaai, N., & Hashim, H. (2021). Using Cloud-Based Tools for English as a Second Language Reading Activities among Malaysian Polytechnic Students. *Arab World English Journal (AWEJ) Special Issue on CALL (7)*. 406 -418.

DOI: <https://dx.doi.org/10.24093/awej/call7.28>

Introduction

The implementation of technology in education is the current trend for teaching and learning activities worldwide (Aydin, 2017; Kessler & Hubbard, 2017; Yang, 2020). Studies have shown the promising results of technology implementation in the teaching and learning of language (Chapelle, 2010; Hashim, 2018; Rahamat, Shah, Din & Aziz, 2017; Son, 2011). The teaching of four skills which are writing, reading, listening, and speaking has also incorporated technology as part of the pedagogy. With the advancement of modern technology and the availability of access to the Internet, reading activities can be done even without the availability of printed materials. The reading culture has changed from reading printed materials to Internet sources (Olszak & Curie-Skolodowska, 2015). The new generations have been fashioning the devices and technology as part of their lifestyle. They rely heavily on technology and devices to do many things, including reading. The current development of Information and Communication Technology (ICT) has produced a new generation of learners who are more exposed to the digital and electronic worlds of various social media (Bakar, Latif & Ya'cob, 2017). Thus, language teachers should be aware that it would be demotivating to learners if there is no technology being used in the classroom, and a dull teaching style that will hardly help them establish focus during the learning session (Rabiul, 2016).

In Malaysian polytechnics, the English courses being taught are communicative English. This is to help students improve their communication skills either through speaking, listening, reading, or writing in English when they graduated. However, the students in polytechnics struggle to learn the English language, and sadly, their ability to communicate using the language is low (Yasin, Shaupil, Mukhtar, Ghani & Rashid, 2010). While the students are facing challenges during the process of learning to master English, one crucial practice for ESL mastery that has been found lacking is reading (Annamalai & Muniandy, 2013). Research shows that the students are lacking in reading habits which contributed to their low English proficiency (Kaur, Othman & Abdullah, 2017). Interestingly, there are many cloud-based tools over the Internet that have been widely used among learners and lecturers for language learning and teaching (Son, 2011), which is also the popular medium for learners to access reading materials. While many studies have been done related to the technology-embedded for ESL learning (Hartmann, Braae, Pedersen, & Md. Saifuddin, 2017; Hashim, 2018; Taj, Ali, Sipra, & Ahmad, 2017; Mohamad, Ghazali & Hashim, 2018; Yunus, Hashim, Embi & Lubis, 2010), very few studies have been conducted concerning the perceptions of students on the use of cloud-based tools for English as a Second Language (ESL) reading specifically in Malaysian polytechnic settings.

Therefore, this study aims to investigate polytechnic students' perceptions on the ease of use and usefulness of using cloud-based tools for ESL reading activities. The findings of this study were hoped to redound to the use of cloud-based tools for reading considering that the majority of ESL learners in higher learning institutions, especially in Malaysian polytechnics, are not habitual readers. The greater demands for the polytechnic graduates to communicate effectively using English language justifies the need for them to practice reading frequently.

Literature Review

Cloud-based Tools for Learning

Cloud-based tools allow educators and learners to access highly advanced applications usable for learning purposes through the push of a button (Hamilton, 2015). Besides that, learners can use many online tools that can assist their ESL learning, especially for reading activities. Son (2011) listed various types of online tools which are accessible and beneficial for educational purposes. Some examples of cloud-based tools are Google Drive, DropBox, and YouTube for resource keeping and sharing, Google Slides, Padlet, and Prezi for presentations, Google and Yahoo! Search for web search engines, Dictionary.com and Merriam-Webster Online for online dictionaries, and Wikis and Blogs for reading and writing activities.

Cloud storage, also known as cloud computing, is a reliable, fun, efficient, and cost-effective platform (Korobeinikova, Volkova, Kozhushko, Holub, Zinukova, Kozhushkina & Vakarchuk, 2020; Yang, 2020) that can be used as an effective medium for information storage, sharing, editing (Gangwar, Date & Ramaswamy, 2015) which can be accessed from anywhere at any time (Hartmann, Braae & Khalid, 2017; Yang, 2020). It also enables users to use the services even though they have no expertise to control technology infrastructure that comes with it (Taylor & Hunsinger, 2011).

One of the many cloud storage systems available is Google Drive which has been present since 2010. It is an online cloud storage application produced by Google which is now widely used for teaching and learning purposes (Alqahtani, 2019; Syakur, 2020). This cloud storage enables users to store, edit and share PDF files, Microsoft Office files, images and videos, Google presentations files, and gain access to it at any time, online or offline (Alqahtani, 2019). In addition, users only require a device and Internet access to start using Google Drive (Korobeinikova et al., 2020; Rosique-Martínez, Domínguez-Barrera & Izquierdo, 2018). This has made the access to vast reading materials for language learning appear to have limited boundaries. Students can become active learners and can use this utility to support effective language learning either in or outside of the classroom. Additionally, learners will practice their reading activities via cloud-based and enjoyed doing so, as they perceived that less effort is needed to learn how to apply it (Changchit, 2014).

Reading in ESL Learning

In language learning, it is very important for ESL learners to acquire reading skills. Barrett's taxonomy shows five levels of reading comprehension skills; literal comprehension, reorganization, inferential comprehension, evaluation, and appreciation (Barrett, 1972). Through reading, learners will be able to learn, understand, and remember a wide range of vocabulary, syntax, and other language skills needed to be used when communicating using the language (Guo, 2012). Besides, reading is an activity that helps learners to collect information and ideas which is crucial for emotional and mental growth (Olszak & Curie-Skolodowska, 2015), which leads to the development of their language mastery. While Constantinescu (2007) defined reading as a skill that allows interaction between the readers themselves and the text they read, it is undeniably that a reader who possesses excellent reading proficiency skills must have extensive vocabulary knowledge to them understand and comprehend the meaning of the text. Thus, in becoming a skilled reader, teachers can help learners to practice reading using suitable strategies (Ismail,

Petras, Mohamed & Eng, 2015) and cloud-based tools that suit them best. However, lack of motivation, difficulties in comprehending texts, and limited vocabulary are among the causes of poor reading habits among students (Kaur et al., 2017; Nanda & Azmy, 2020). Despite the availability of many reading materials available online, many of the students still need guidance in motivating them to make reading a habit, especially for ESL learning, through the use of cloud-based tools.

The Benefits of Cloud-based Tools for Reading

The emergence of various cloud-based mediums provides opportunities for readers to practice online reading. Which just buttons away, learners can access many reading materials which are available online, and many are for free. Interestingly, one study by Coiro (2009) found that students preferred online texts more than printed texts, which suggested that there is an increase in reading activities, which is needed, especially for ESL learning. This might be due to extensive cloud-based platforms which provide reading materials whereby the students can access (Alqahtani, 2019) and they can do as much as online reading they preferred.

Many studies have suggested that the benefits of cloud-based tools for ESL reading are that they allow online reading to be done after class, students get easier and faster access, it helps with vocabulary development, allows students to read multiple texts and promotes self-reading and learning (Robb, 2018). Simultaneously, this helped learners to develop critical literacy skills. They could improve their critical literacy skills such as critical thinking, evaluating the contents, and drawing inferences by taking advantage of the networked environment provided by technology (Coiro & Dobler, 2007) which allowed them to have discussions with peers, where it is not limited to time and geographical issues.

To add, teachers could also promote extensive reading activities through cloud-based platforms as the students can browse through various online reading materials (Robb, 2018). If needed, they could quickly look for the meaning of words, as the online dictionary is just one click away. The availability of the online dictionary was found to be beneficial for the learners to learn the meaning of words when they practice online reading (Robb, 2018). Even though research has shown the benefits of cloud-based tools for reading activities, yet teachers still need to work on how to best motivate students to keep reading, especially for their ESL learning journey online.

Learning Theory

One of Krashen's hypotheses of language learning is the reading hypothesis (Krashen, 1989). He believes that the more language learners read the more vocabulary he will learn. Thus, it is crucial to incorporate reading activities, especially in language classrooms to help ESL learners learn the target language effectively. Krashen (2004) believed that reading can provide various long-term benefits to language learners. Thus, he suggested a few ideas, including surveying students' reading interests and creating a reading library in the classroom. To do this, the incorporation of technology and cloud-based tools would be suitable to promote reading activities among ESL learners. Cloud-based tools allow a pool of reading materials to be collected, compiled, and accessed, representing an online mini library, where students could access it, at any time and anywhere.

Methods

Research Design

Survey design was employed for this study. The survey questionnaire was developed based on Davis' (1993) TAM and other previous studies (Davis & Wiedenbeck, 2001; Sanchez & Hueros, 2010).

Research Samples

The samples for this study were one hundred (60 male and 40 female) of semester one students from a polytechnic in Malaysia. Purposive sampling techniques was done for the election of the respondents. Students who have experience using cloud-based tools, namely Google Drive, for their ESL reading activities were chosen. The sampling proportion value is more than 0.05 of the total number of semester one students (N=596) and the number of samples is sufficient for this study to be conducted (Chua, 2012).

Research Instruments

The instrument for data collection of this study was a set of questionnaires adapted from the Technology Acceptance Model (TAM) by Davis (1989), Davis and Wiedenbeck (2001), and Sánchez & Hueros (2010). The questionnaire consisted of three sections using Likert-type scales (Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, Strongly Agree = 5). The purpose of the first section was to collect the demographic information of the respondents. The items covered the respondents' age, gender, and the department in polytechnic, SPM English grade, their level of English proficiency, their hometown, the devices they used, and the places they visited to get Internet connectivity. The second section consisted of seven items about the students' perceived ease of use concerning cloud-based tools for reading. The third section consisted of seven items about the students' perceptions of perceived usefulness towards the use of cloud-based tools for reading. The questionnaire was prepared in English with Bahasa Malaysia translation to help increase the respondents' understanding when answering the survey. The back-to-back checking was conducted to ensure the face validity and content validity of the questionnaire. A pilot study was conducted and the Cronbach's alpha value obtained is 0.93, which means 90% of the variance in the scores is a reliable variance. The rule of thumb in interpreting Cronbach's alpha shows that if $\alpha \geq 0.9$, the internal consistency of the item is excellent (Tavakol & Dennick, 2011).

Data Collection Procedures

The distribution of the questionnaire survey was conducted on the fourteenth week of semester December 2018, which was in March 2019. The researchers distributed the questionnaire to the respective classes. The students were briefed about the questionnaire and completed the questionnaire using their mobile devices. The duration of the survey session was 20 minutes.

Data Analysis

The data for this study was tabulated by using the SPSS packages to obtain the percentages and frequency. The data were analysed using percentages and frequency.

Findings

The survey was conducted among the semester one students of a polytechnic in Malaysia to find out their perceptions of using cloud-based tools for ESL reading activities.

Table 1. *The Demographic characteristics (n=100)*

Demographic Characteristics	n (%)
Gender	
-Male	60
-Female	40
Age	
-18 - 19	60
-20 - 21	36
-22 – 23	4
Department	
-Department of Tourism and Hospitality	2
-Department of Commerce	26
-Department of Civil Engineering	32
-Department of Electrical Engineering	40

Table one shows the demographic information of the survey respondents. This survey was dominated by one gender as 60% of the students were male and another 40% of them were female. Their age ranged from 18 to 19, 20 to 21, and 22 to 23, and the majority of them were from age 18 to 19, 60%. These students were from three departments, 32% from the Department of Civil Engineering, 26% from the Department of Commerce, and 2% from the Department of Tourism and Hospitality.

Perceived Ease of Use of Cloud-based Tools for ESL Reading

The survey questionnaire was distributed to investigate the students' perceptions towards cloud-based tools for ESL reading activities. The first part of the questionnaire was to find out the students' perceived ease of use of cloud-based tools for ESL reading

Table 2. *Perceived ease of use of cloud-based tools for ESL reading*

Statements		Frequency% (n=100)		
		SD / D	N	A / SA
1	Reading activities using cloud-based tools would be easy for me.	2 (2%)	33 (33%)	65 (65%)
2	I would find it easy to use cloud-based tools to do what I want it to do.	2 (2%)	36 (36%)	62 (62%)
3	It would be easy for me to become skilful at using cloud-based tools.	1 (1%)	33 (33%)	66 (66%)

4	I would find cloud-based tools are easy to use.	1 (1%)	34 (34%)	65 (65%)
5	Learning to use cloud-based tools for reading purposes is easy for me.	1 (1%)	31 (31%)	68 (68%)
6	I would find cloud-based tools are user-friendly.	1 (1%)	29 (29%)	70 (70%)
7	Overall, I believe that cloud-based tools are easy to use.	1 (1%)	29 (29%)	70 (70%)

Table two reveals that 70% of students agreed with statements six and seven, which ‘I would find cloud-based tools are user-friendly’ and ‘Overall, I believe that cloud-based tools are easy to use’. Slightly lower than that is 68%, where the students agreed with the statement ‘Learning to use cloud-based tools for reading purposes is easy for me’. Interestingly, more than half of the students, which is 65% agreed with both statements ‘Reading activities using cloud-based tools would be easy for me’ and ‘I would find cloud-based tools are easy to use’. In contrast, the lowest percentage for students’ agreement with a statement shows that 62% of students ‘I would find it easy to use cloud-based tools to do what I want it to do’. Overall, the majority of students positively perceived the cloud-based tools for ESL reading as easy to use. However, for statement two, 36% of students chose ‘Neutral’ for the statement ‘I would find it easy to use cloud-based tools to do what I want it to do’, which shows some of the students revealed that their feeling towards the ease of use for cloud-based tools to do whatever they want is neutral.

Perceived Usefulness of Cloud-based Tools for ESL Reading

The next part of the questionnaire intended to find out the students’ perceptions regarding perceived usefulness of cloud-based tools for ESL reading.

Table 3. *Perceived usefulness of cloud-based tools for ESL reading*

Statements		Frequency% (n=100)		
		SD / D	N	A / SA
1	Using cloud-based tools would improve my interest in reading.	1 (1%)	32 (32%)	67 (67%)
2	Using cloud-based tools would increase my reading frequency.	2 (2%)	27 (27%)	71 (71%)
3	Using cloud-based tools would enhance my effectiveness in keeping my reading materials.	1 (1%)	30 (30%)	69 (69%)
4	I would find cloud-based tools as useful for my reading activities.	1 (1%)	30 (30%)	69 (69%)

5	Using cloud-based tools enable me to keep the record of my reading materials quickly.	1 (1%)	34 (34%)	65 (65%)
6	Using cloud-based tools make it easier for me to read.	1 (1%)	27 (27%)	72 (72%)
7	Overall, cloud-based tools are advantageous for my reading activities.	1 (1%)	25 (25%)	74 (74%)

Table three indicates that 74% of students agreed with the statement ‘Overall, cloud-based tools are advantageous for my reading activities’. In addition, another 71% of students agreed that ‘Using cloud-based tools make it easier for me to read’ and ‘Using cloud-based tools would increase my reading frequency’. Most of the students (69%) also agreed that ‘Using cloud-based tools would enhance my effectiveness in keeping my reading materials’ and ‘I would find cloud-based tools as useful for my reading activities’. The findings also revealed that 67% of students agreed that ‘Using cloud-based tools would improve my interest in reading’. All in all, most of the students positively perceived the usefulness of cloud-based tools for ESL reading activities.

Discussion

The present study aimed to investigate the polytechnic students’ perceptions on the ease of use and usefulness of using cloud-based tools for ESL reading activities. Through the questionnaire survey, the findings have suggested a better understanding of the students’ perceptions towards cloud-based tools for ESL reading activities. The findings gathered also support some of the findings from previous studies. This emerging online facility has overall gained positive perceptions from its users.

Perceived Ease of Use of Using Cloud-based Tools for ESL Reading

The findings in this study revealed that most of the students agreed that the cloud-based tools are easy to use. They agreed that their ESL reading activities are easier with cloud-based tools and are highly usable (Hamilton, 2015). This finding is supporting the findings from Coiro (2009) where the students preferred reading online texts due to plenty of choices and easy access. They also found that it is easier for them to use cloud-based tools for any kind of purpose, which in line with Changchit’s (2014) findings on the students’ positive perceptions towards cloud-based tools. Besides, most of the students concurred that it is easier for them to become skilful at using cloud-based tools. Most of them also have not encountered problems in learning to use the cloud-based tools for ESL reading activities. In addition, the cloud-based tools are user-friendly and they helped them with their ESL reading activities which support the findings by Robb (2018). Overall, the students perceived the use of cloud-based tools for ESL reading as easy, and that it is effortless for them to use cloud-based tools for their ESL reading activities. This finding is in line with the finding by Changchit (2014) where students’ perception in terms of perceived ease of use’ is high; thus, less effort is needed from the students to learn how to use cloud-based tools for educational purposes. This is also in line with Taylor and Hunsiger (2011) who stated that the use of Google Drive enables users to use the services even though they have no expertise to control the technology infrastructure. The findings suggested that the students have no problem learning and using of cloud-based tools for language learning, especially for ESL reading activities. To add, the

incorporation of cloud-based tools in language classrooms and learning activities might be beneficial for the students in terms of promoting self-learning and increasing their reading frequency better.

Perceived Usefulness of Cloud-based Tools for ESL Reading

The findings from this study suggested that the students perceived cloud-based tools as useful for their ESL reading activities. The majority of students agreed that cloud-based tools helped to improve their interest and frequency in ESL reading, where the students' motivation for reading has positively increased. This finding is concurrent with Hartmann et al. (2017) where users' increase in motivation when using the cloud-based tools is one of the many benefits that it offers. This is also probably because students preferred online texts more than printed texts, which suggested that there is an increase in reading activities, which is needed, especially for ESL learning (Coiro, 2009). They also admitted that cloud-based tools helped in enhancing the effectiveness of keeping their online reading materials. Furthermore, they also recognized that cloud-based tools enable them to quickly keep the record of their reading materials. This current result has supported the findings from Hartmann et al. (2017) in which cloud-based tools provide unlimited data storage which is beneficial especially for educational purposes. Majority of them agreed that cloud-based tools are useful and made it easier for them to read, which also help to motivate them to read more (Coiro, 2009; Robb, 2018). In general, the students agreed that the cloud-based tools are advantageous for their reading activities. The findings suggested to educators that cloud-based tools can be useful to help students feel motivated to increase their ESL reading frequency. The availability of technology and gadgets, including Internet access, has enabled the students to access unlimited reading materials that are available online. This situation should be really helpful for the students in terms of language learning and reading practice, with proper guidance from their teachers to apply other skills in effectively searching and storing the reading materials they find over the Internet. The cloud-based tools can facilitate learners with vocabulary development, allowing them to read multiple texts, they could do self-reading and learning, and at the same time learn the knowledge of navigation skills (Robb, 2018).

As recommendations for future research, full-scale research can be conducted with larger sample size, and investigation can be made on different variables to get in-depth analysis. The effectiveness of cloud-based tools for ESL reading can also be investigated for future study. The results will benefit all educators and administrators in giving insights to guide the learners to gain the mastery of necessary skills in learning a language.

Conclusion

This study aims to investigate the polytechnic students' perceptions on the ease of use and the usefulness of using cloud-based tools for ESL reading activities. The findings revealed that the students have positive perceptions of using cloud-based tools for ESL reading activities and found that majority of students agreed that the cloud-based tools are easy to use. They perceived the ease of use of cloud-based tools as easy and this would help to increase the frequency of their ESL reading practice better. Next, the findings showed that the students perceived cloud-based tools as useful for their ESL reading activities. The use of cloud-based tools has also increased the students' motivation to read more, which is a crucial activity for language learning. Educators from Malaysian polytechnics and any other institutions should consider including the use of cloud-based

tools to promote ESL reading activities among ESL learners. It is vital for the students to practice reading habits and know how to effectively use the technology primarily for ESL learning purposes.

Acknowledgment

The authors would like to acknowledge the Ministry of Higher Education Malaysia (MOHE) under the Fundamental Research Grant Scheme (FRGS) with project code no. FRGS/1/2019/SS09/UKM/02/2 for the financial support of this research and Universiti Kebangsaan Malaysia under the research grant no. GG-2020-027.

About The Authors

Noorhafizah Rubaai is an English Language lecturer at Politeknik Merlimau Melaka, Melaka, Malaysia. She obtained her masters' degree in Education focusing on Teaching English as a Second Language from Universiti Kebangsaan Malaysia (UKM). ORCID ID: <https://orcid.org/0000-0001-6619-9065>

Harwati Hashim, Ph.D, is a senior lecturer at the Centre of Innovation in Teaching and Learning, Faculty of Education, Universiti Kebangsaan Malaysia (UKM). She is an educational technology enthusiast and an m-learning practitioner. Her areas of concentration are TESL, mobile learning, Mobile-assisted Language Learning (MALL), technology acceptance as well as innovative pedagogy, and the use of technology in teaching English as a Second Language (ESL). ORCID ID: <https://orcid.org/0000-0002-8817-427X>

References

- Bakar, N. A., Latif, H., & Ya'acob, A. (2017). Fusion of Technology with Language Learning: Blog Community. *The Southeast Asian Journal of English Language Studies*, 23 (4), 200–211.
- Alqahtani, A. (2019). Usability Testing of Google Cloud Applications: Students' Perspective. *Journal of Technology and Science Education*, 9(3), 326-339. Available at <https://eric.ed.gov/?id=EJ1215341>
- Annamalai, S., & Muniandy, B. (2013). Reading habit and attitude among Malaysian polytechnic students. *International Online Journal of Educational Sciences*, 5(1), 32- 41.
- Aydın, B. (2017). Three birds with a stone: Technology integration in language education with reverse mentoring model. *Journal of Teacher Education and Educators*, 6(2), 177-190.
- Barrett, T. C. (1972). *Taxonomy of reading comprehension*. Lexington, MA: Ginn and Company.
- Changchit, C. (2014). *Students' perceptions of cloud computing*. *Issues in Information Systems*, 15(1), 312-322.
- Chapelle, C. A. (2010). The spread of computer-assisted language learning. *Language Teaching*, 43(1), 66-74. DOI: <https://doi.org/10.1017/S0261444809005850>

- Chua, Y.P. (2012). *Mastering research methods*. Selangor, Malaysia: Mc-Graw Hill.
- Coiro, J. (2009). Rethinking online reading assessment. *Educational Leadership*, 66(6), 59–63.
- Coiro, J. & Dobbler, E., (2007). Reading comprehension on the Internet: Exploring the online comprehension strategies used by sixth-grade skilled readers to search for and locate information on the Internet. *Reading Research Quarterly*, 42 (2). DOI:10.1598/RRQ.42.2.2
- Constantinescu, A. (2007). Using technology to assist in vocabulary acquisition and reading comprehension. *The Internet TESL Journal*, xiii(2). Available at <http://iteslj.org/Articles/Constantinescu-Vocabulary.html>
- Davis, F. D. (1993). User acceptance of information technology: system characteristics, user perceptions and behavioral impacts. *International Journal of Man-Machine Studies*, 38(3), 475–487. doi:10.1006/imms.1993.1022
- Davis, S., & Wiedenbeck, S. (2001). The mediating effects of intrinsic motivation, ease of use and usefulness perceptions on performance in first-time and subsequent computer users. *Interacting with Computers*, 13(5), 549–580. doi:10.1016/s0953-5438(01)00034-0
- Gangwar, H., Date, H., & Ramaswamy, R. (2015). Developing a cloud-computing framework. *Global Business Review*, 16 (4), 632–651. DOI: 10.1177/0972150915581108
- Guo, S. C. (2012). Using authentic materials for extensive reading to promote English proficiency. *English Language Teaching*, 5(8), 196–206. doi:10.5539/elt.v5n8p196
- Hamilton, M. (2015). The future of cloud computing. *Jisc Report*. Available at <https://www.jisc.ac.uk/reports/the-future-of-cloud-computing>
- Hartmann, S. B., Braae, L.Q., Pedersen, S., & Khalid, Md. S. (2017). The potentials of using cloud computing in schools: A systematic literature review. *The Turkish Online Journal of Educational Technology*, 16, 190–202.
- Hashim, H. (2018). Application of Technology in the Digital Era Education. *International Journal of Research in Counseling and Education*, 1(2), 1–5.
- Taj, I. H., Ali, F., Sipra, M.A., & Ahmad, W. (2017). Effect of Technology Enhanced Language Learning on EFL Reading at Tertiary Level. *Arab World English Journal*, 8(1), 108–129. doi:10.24093/awej/vol8no1.9
- Ismail, S. A. M. M., Petras, Y. E., Mohamed, A. R., & Eng, L. S. (2015). Compensatory Reading among ESL Learners: A Reading Strategy Heuristic. *English Language Teaching*, 8(8), 46–55.
- Kaur, N., Othman, N. H., & Abdullah, M. K. K. (2017). Lexical competence among tertiary students: teacher-student perspectives. *The English Teacher*, 15, 90–104.
- Kessler, G., & Hubbard, P. (2017). 19 Language Teacher Education and Technology. In *The handbook of technology and second language teaching and learning*, John Wiley & Sons, Inc, 278–292.
- Korobeinikova, T. I., Volkova, N. P., Kozhushko, S. P., Holub, D. O., Zinukova, N. V., Kozhushkina, T. L., & Vakarchuk, S. B. (2020). Google cloud services as a way to enhance learning and teaching at university. Available at <http://elibrary.kdpu.edu.ua/handle/123456789/3854>
- Krashen, S. D. (2004). *The power of reading: Insights from the research: Insights from the research*. ABC-CLIO.

- Krashen, S. D. (1989). We acquire vocabulary and spelling by reading: Additional evidence for the input hypothesis. *The Modern Language Journal*, 73(4), 440-464.
- Mohamad, M., Ghazali, N., & Hashim, H. (2018). Secondary School Students' Perceptions on the Use of Google+ towards Improving ESL Writing Skills. *International Journal of Emerging Technologies in Learning (iJET)*, 13(09), 224-238.
- Nanda, D. W., & Azmy, K. (2020). Poor reading comprehension issue in EFL classroom among Indonesian secondary school students: Scrutinizing the causes, impacts and possible solutions. *Englisia: Journal of Language, Education, and Humanities*, 8(1), 12-24.
- Olszak, I., & Curie-Skolodowska, M. (2015). The effect of online tools on reading habits among teenage students: model of chances and dangers. *English for Specific Purposes World*, Vol. 16, 1-12.
- Rabiul, Islam. (2016). Assessing Bangladeshi university's students' virtual learning activities: experiences and expectations. *International Conference on Teaching and Learning Proceeding*. ISBN:9789843407801.
- Rahamat, R., Shah, P., Din, R., & Aziz, J. (2017). Students' readiness and perceptions towards using mobile technologies for learning the English language literature component. *The English Teacher*, 16.
- Robb, T. (2018). An Introduction to Online Sites for Extensive Reading: Extensive Reading on the Internet. *TESL-EJ*, 1(22). Available at <http://www.tesl-ej.org/wordpress/issues/volume22/ej85/ej85int/>
- Rosique-Martínez, L. A., Domínguez-Barrera, G., & Izquierdo, J. (2018). The attitudes of English-as-a-Foreign-Language students towards the learning usefulness and benefits of Google-Drive for Collaborative Writing. *Cinzontle*, 8(17), 21-28.
- Sanchez, R. A., & Hueros, A. D. (2010). Motivational factors that influence the acceptance of Moodle using TAM. *Computers in Human Behaviour*, Vol. 26.
- Son, J. B. (2011). Online tools for language teaching. *TESL-EJ*, Vol 15, Number (1). Available at <http://www.tesl-ej.org/wordpress/issues/volume15/ej57/ej57int/>
- Syakur, A. (2020). The Effectiveness of English Learning Media through Google Classroom in Higher Education. *Britain International of Linguistics Arts and Education (BIO LAE) Journal*, 2(1), 475-483.
- Taj, I. H., Ali, F., Sipra, M. A., & Ahmad, W. (2017). Effect of technology enhanced language learning on EFL reading comprehension at tertiary level. *Arab World English Journal (AWEJ)*, 8(1), 108-129.
- Taylor, C. W., & Hunsinger, D. S. (2011). A study of student use of cloud computing applications. *Journal of Information Technology Management*, 22(3), 36-50.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53-55, DOI: 10.5116/ijme.4dfb.8dfd.
- Yang, G. (2020). Application of Cloud Teaching in Higher Vocational English Teaching—Take the MosoInk Cloud Class as an Example. In *IOP Conference Series: Materials Science and Engineering*, 750, (1), p. 012211. Available at <https://iopscience.iop.org/article/10.1088/1757-899X/750/1/012211/meta>
- Yasin, A. H., Shaupil, W. M. H., Mukhtar, A. M., Ghani, N. I., & Rashid, F. (2010). The English Proficiency of Civil Engineering Students at a Malaysian Polytechnic. *Asian Social Science*, 6, 161-170. www.ccsenet.org/ass

Yunus, M. M., Hashim, H., Embi, M. A., & Lubis, M. A. (2010). The utilization of ICT in the teaching and learning of English: 'Tell Me More'. *Procedia-Social and Behavioral Sciences*, 9, 685-691.