The Effect of Moodle E-Learning Material on EFL Reading Comprehension

Hijril Ismail; Aceng Rahmat; Emzir

Universitas Negeri Jakarta, Indonesia

Abstract

Reading comprehension depicted as the most important skills and a complex cognitive process for the achievement of success or learning outcome in both school and society where reader's prior knowledge and experiences serve central roles in the interpretation of a text or the interaction of the reader, the text, and the context. The purpose of the exploratory study was to investigate the effect of the Moodle e-learning on EFL reading comprehension. 27 EFL college students were participating in the study. Data were collected through the pretest and posttest of reading comprehension. Data analysis involved three stages: normality test, homogeneity test, and hypothesis testing by utilizing software statistical package for social science (SPSS) for the window. Results indicate that the use of Moodle e-learning has a significant effect on improving students' reading comprehension.

Keywords: *English as Foreign Language; Reading Comprehension; Moodle E-Learning*

Introduction

E-learning (as the term is widely used) strategies have been widely adopted by educators around the world (Rohwer, Motaze, Rehfuess, & Young 2017). E-learning can be defined as the delivery of training material via information and communication technology (ICT), including the internet, CD-ROM, DVD, smartphones, and other media, both inside and outside of the classroom (Ruggeri et al., 2013, Frehywot et al., & Ruiz, 2006). E-learning can support active learning without time and space barriers. With e-learning, content can be managed through various learning activities and the quality of teaching can be improved, for examples, learning management system (LMS) can influence students' engagement with the environment, change collaboration and communication, and help access learning materials (Ergun and Adıbatmaz, 2020). E-learning has also introduced significant innovation for educational environments in the twenty-first century, benefiting from web-based communication, collaboration, multimedia, and information transfer (Motaghian Hassanzadeh, & Moghadam, 2013). As a final point, it is evident that the usefulness of the use of e-learning mentioned above can be evaluated regarding the utilization of the teaching and learning process of reading comprehension.

Reading comprehension is a complicated process for EFL learners (Yakuta and Aydın, 2015). Reading comprehension is also considered to be a highly complex skill, which involves both lower-level processing concerns "automatic" word recognition and higher-level processing pertains to a reader being to assemble clause-level information into a text model of their understanding and to build an interpretation of the text that conforms to their goals, attitudes, and background knowledge

(Abdolrezapour & Tavakoli, 2011). And Babapour, Ahangari, and Ahour (2018) assert that reading comprehension is a key skill that can influence the learning outcome and further language development.

Literature Review

Reading skill

Reading is one of the most important (Zhang, 2004; Parvaresh and Nemati, 2008; Alsamadani, 2011; Kung, 2017; Aziz, Daud, & Ismar, 2019) element for effective language learning (Kung, 2017), skill for ESL/EFL learners (Parvaresh and Nemati, 2008), skill to be acquired (Alsamadani, 2011), often promoted as a good way to improve learners proficiency (Al-homoud, 2014), a significant and viable means of developing foreign language ability (Gorsuch, 2010), one of the most useful sources of acquiring new vocabulary by learners (Rassaei, 2015), helps EFL learners build their vocabulary, leading them to enduring learning and improvement in L2 learning skills (Nuttall, 1996), an interactive process that goes on between the reader and the text resulting in comprehension (Tavakoli, Dabaghi, & Khorvash, 2010), as a source of knowledge, and it is undeniably important in the second language learning process. For this reason, developing reading comprehension skills is essential. To master reading comprehension, a learner needs to have some intellectual abilities. These intellectual abilities are what experts identify as factors affecting reading comprehension (Aziz, Daud, & Ismar, 2019), and as a result of a wide variety of cognitive processes in our minds (Ismail, Petras, Mohamed, & Eng, 2015).

Reading has several aims such as survival, learning, and pleasure. Reading for survival refers to our response to the environment to obtain information (e.g. street signs, advertising, and timetables); reading for learning is considered to be the type of reading which undertaken by students in a certain classroom setting with goal-orientated; while reading for pleasure refers to the reading that does not need to be carried out for any requirements (Berardo, 2006). According to Nuttall (1996), there are five central ideas behind reading such as the idea of meaning, the transfer of meaning from one mind to another, the transfer of a message from writer to reader, how we get meaning by reading, and how the reader, the writer, and the text all contribute to the process. The process of reading is comprised of both bottoms up and top down processes (Mcneil, 2011).

Reading Comprehension

Reading comprehension is important to keep in mind because attending to the meaning of the massage is just as important as attending to the linguistic forms (Labrozzi, 2014). Supported by Calet, Pérez-morenilla, & Santos-Roig (2019), Reading comprehension is one of the most important transversal skills for the achievement of success in both school and society Reading comprehension is the process of simultaneously extracting and constructing meaning through interaction and involvement with written language (Rassaei, 2015). Babapour et al (2018) define reading comprehension is a complex cognitive process where the reader's prior knowledge and experiences serve central roles in the interpretation of the text. Gani, Yusuf, and Susiani (2016), reading comprehension is a complicated, cognitive, meaning constructing process which involves the interaction of the reader, the text, and the context. Gough and Tunmer (1986), reading comprehension encompasses the interpretation of lexical information (i.e. word), sentences, and discourses. Good comprehension of a text demands a coherent representation of the text in memory (Machida, 2011). In EFL reading comprehension, vocabulary knowledge plays a pivotal role (Zhang, 2020).

The Reading Process Model

The reading process is characterized as a give-and-take between the reader and the text. Nunan (2003) puts forward there are three reading process models, *Bottom-up model*, the model consist of lower-

level reading processes. By applying these category students start with the fundamental basics of letter and sound recognition, which in turn allows for morpheme recognition followed by word recognition, building up to the identification of grammatical structures, sentences, and longer texts. Letters, letter clusters, words, phrases, sentences, longer text, and finally meaning is the order in achieving comprehension. The reader begins with the smallest elements and builds up to comprehension of what is being read. Within a bottom-up approach to reading, the most typical classroom focus is on intensive reading. Intensive reading involves a short reading passage followed by textbook activities to develop comprehension and/or particular reading skill. Most textbooks are used to teach first and second-language reading using an intensive reading approach (Nunan, 2003). Berardo (2006) states that bottom-up processing is when the reader builds up meaning by reading world for word, letter for letter, carefully scrutinizing both vocabulary and syntax. This is often associated with poor or slow readers, but can sometimes occur when the readers own schema knowledge is inadequate; *Top-down model*, the model is begun by the idea that comprehension resides in the reader. The reader uses background knowledge, makes predictions, and searches the text to confirm or reject the predictions that are made. A passage can be understood even if all of the individual words are not understood. Within a top-down approach to reading the teacher should focus on meaning generating activities rather than on mastery of words recognition. The reader begins with the largest elements and works down towards smaller elements to build comprehension of what is being read (Nunan, 2003). Berardo (2006), the top down process is the opposite, where a global meaning of the text is obtained, through "clues" in the text and the reader's good schema knowledge. This is often associated with a good reader, who does no read word for word but quickly and efficiently. The top-down process is characterized as the intake of information based on the reader's prior knowledge and expectations (Goodman, 1994); and *Interactive model*, The model that are combining top-down model and bottom-up model of learning (Reffertt, Ellen and Barnard, 2012), accepted as the most comprehensive description of the reading process to reach comprehension (Nunan, 2003 & Banardo, 2006), in which every component in the reading process can interact with other components (Berardo, 2006),and always a primary ingredient in successful teaching reading methodology because both processes are important (Brown, 2001). An interactive approach to reading would include aspects of both intensive and extensive reading. Teachers need to provide learners which shorter passages to reach specific reading skills and strategies explicitly. Teachers also need to encourage learners to read longer texts without an emphasis on testing their skills. Extensive reading provides opportunities to practice strategies introduced during intensive reading instruction (Nunan, 2003).

Type (genres) of Reading

Each type of genre of written text has its own set of governing rules and conventions. A reader must be able to anticipate those conventions to process meaning efficiently.With an extraordinary number of genres present in any literate culture, the reader's ability to process texts must be very sophisticated. Consider the following abridged list of common genres, which ultimately form part of the specification for assessments of reading ability (Brown, 2004).

Brown (2004) puts forward there are 3 genres of reading, namely academic reading (e.g. General inters articles likes magazines and newspapers, Technical reports like lab reports and professional journal articles, textbook and thesis, essays and papers, test direction, and editorials and opinion writing); Job-related reading (e.g. Messages likes phone messages, Letters/emails, Memos likes job evaluations and project reports, schedules, labels, signs, announcements, forms, applications, questionnaires, financial documents likes bills and invoices, Directories likes telephone and office, Manual and direction), and Personal reading (e.g. newspapers, magazines, letters, emails, greeting cards, invitations, messages, notes, lists, schedules, recipes, menus, maps, calendars, advertisements, novels, short stories, jokes, drama, poetry, financial documents, forms, questionnaires, medical reports, immigration documents, comic trips, and cartoons).

E-learning Model

E-learning (as the term is widely used) strategies have been widely adopted by educators around the world (Rohwer, Motaze, Rehfuess, & Young 2017). E-learning can be defined as the delivery of training material via information and communication technology (ICT), including the internet, CD-ROM, DVD, smartphones, and other media, both inside and outside of the classroom (Ruggeri et al., 2013, Frehywot et al., & Ruiz, 2006). E-learning can support active learning without time and space barriers. With e-learning, content can be managed through various learning activities and the quality of teaching can be improved, for examples, Learning management system (LMS) can influence students' engagement with the environment, change collaboration and communication, and help access learning materials (Ergun and Adıbatmaz, 2020). E-learning has also introduced significant innovation for educational environments in the twenty-first century, benefiting from web-based communication, collaboration, multimedia, and information transfer (Motaghian Hassanzadeh, & Moghadam, 2013). E-learning is interactive education tools formatted to run on a computer, mobile phone, or computer table (Bringman-Rodenbarger & Hortsch, 2020).

Pure e-learning refers to the use of e-learning material only, without any face to face classroom methods. Although it seems to be synonymous with completely online learning, the difference between pure e-learning and fully online learning refers to the delivery platform. While online learning relies on a web-based delivery platform and requires internet access, pure e-learning can take place without internet access, for example, by using DVDs to deliver the educational content. Blended learning combines the e-learning component with another traditional face to face, lecture-based learning in and outside of the classroom (Frehywot, Vovides, Talib, Mikhail, Ross, Wohltjen, Badada, Korhumel, Koumare, & Scott, 2013).

E-learning in this paper refers to the e-learning moodle. The words Moodle was originally an acronym for *Modular Object Oriented Dynamic Learning Environment* (Brandl, 2005 & Soliman, 2014). It has two main components, namely activities and recourses. The activities include assignment, chat, choice, database, external tool, Forum, glossary, hotpot, lesson, Quiz, SCORM package, survey, wiki, and workshop. While recourses include book, file, folder, IMS content package, label, page, and URL (Soliman, 2014). While researchers (Sun, 2014 & Brandl, 2005), Moodle is known as a Learning Management System (LMS) and a free source e-learning software platform (Brandl, 2005; Dvorak, 2011; Costa et al., 2012; Sun, 2014 & Rice, 2015).

Advantages of E-Learning

Alexander (2001) points out, there are seven positive learning outcomes that resulted from students' use of e-learning, including:(1)the opportunity for students to interact with others internationally and gain a more sophisticated and global understanding of complex international political issues, while gaining information technology literacy in the process; (2) improved understanding of concepts which students are known to have difficulty within a range of disciplines, through the use of interactive multimedia animations, simulations, and micro worlds; (3) the development of information and technological literacy in the context of learning to solve real-world problems through the uses of databases and e-mail; (4) Enhanced communication between part-time students and their lecturer, through the use of a computer-based conferencing tool over the internet; (5) the acquisition of information such as language learning, where a high component of factual recall is required; (6) learning the skills and knowledge of a particular discipline in the culture of its uses in a working organization. Through participation in simulation over the internet; (7) the facility for students to assess their learning of concepts, through computer-based qualitative and quantitative assessment modules.

The other advantages of e-learning include improved accessibility of educational material at a time convenient to the learner; individualized or personalized learning, where the learner decides on the amount, pace, and place, which allows personal tailoring of the learning experience and meeting of individual learner activity; and provision of consistent and standardized training to a larger number of learners all over the world (Clark, 2002; Welsh et al., 2003; Ruiz et al., 2006; & Ruggeri et al., 2013).

Ruggeri (2013) states the proponents of e-learning have advanced several ostensible benefits deriving from both electronic only and blended forms of e-learning. Including time and location flexibility and accessibility, lower training costs and time commitment, self-directed and self-paced learning by enabling learner-centered activities, collaborative learning environment, builds universal communities, standardized course delivery, allows unlimited access to e-learning material, private access to learning, just-in-time learning, workforce training monitoring, and allow knowledge to be updated and maintained in a more timely and efficient manner.

Disadvantages of E-learning

Although e-learning has advantages over the traditional learning environment, it can also have a significant limitation. In the traditional classroom, learning communities can be seen by the teacher, the students can easily communicate with their friends. However, in the e-learning environment, students are often isolated from each other and the educator, and it may be difficult to develop community feeling (Daniel, B., & Schwier, 2010)

Disadvantages of e-learning costs related to the technologies as well as the staff needed, although most costs seem to occur at the development stage of the e-learning course; and social isolation or the lack of interaction among the participants of the e-learning activity or course. The lack of face to face networking and peer interaction can be seen as a huge drawback, making e-learning less attractive and less useful. Poor instructional design, technical problems, and de-individualized instruction can also be regarded as disadvantages of e-learning (Welsh et al., 2003).

Methodology

Participants

The participants in the current study were EFL students who were joining in reading comprehension course at the English education program, faculty of teacher training and education, Muhammadiyah University of Mataram (UMMAT). The total number of participants was 27, and they ranged between 19 and 22 years of age. In the teaching and learning process of reading comprehension, they were learned by applying Moodle e-learning material which consists of eight units of material as a tool for facilitating and enhance learning.

Hypotheses

The hypothesis is that Moodle e-learning contributes to the cultivation of students interest in learning reading comprehension course and improve EFL reading comprehension of college students.

Instrument

The instruments used for data collection in this study were pretest and posttest EFL reading comprehension. The pretest was conducted at the beginning of the semester to know the students' initial comprehension, was composed of three reading passage followed by 30 multiple-choice questions. While posttest was distributed at the end of the semester after the completion of the experimental intervention. The number of posttest questions and reading passage was the same with the pretest, namely 30 multiple choice questions, but different in the form of questions.

Data Collection Procedures

The date was gathered during a six-month period of time. The first, distributing the pretest before treatment was undertaken. The students completed the instrument in about 20-30 minutes. The second, implementing the Moodle e-learning material on students' EFL reading comprehension. It was carried out during a six-month period of time; and the third, distributing of the posttest. The students completed the instrument in about 30 minutes.

Data Analysis Techniques

As a first step, each of the student's comprehension scores was calculated. Then, the score for pretest and posttest were then compared using a t-test and analyzed by using *Software Statistical Package for Social Science* (SPSS) for the window to know the effect of Moodle e-learning material on EFL.

Results

In order to answer the research question regarding the effect of moodle e-learning material on EFL reading comprehension, a limited experiment was conducted in the English Education Study Program, Faculty of Teacher Training and Education, Muhammadiyah University of Mataram. The selection of the university because this product was applied in the university and based on discussion results with education observers and lectures at the university, they have not maximally utilized moodle e-learning in learning EFL reading comprehension. Another reason was the researcher did not find the right place to implement this product except the university.

The results of the students' pretest and posttest were different. The results can be seen from the following table 1.

Table 1 Reading Comprehension Pretest and Posttest Value

No	Pretest	Posttest	No	Pretest	Posttest
1	70	73.3	15	70	76.6
2	63.3	70	16	76.6	96.6
3	76.6	86.6	17	70	73.3
4	66.6	70	18	56.6	70
5	73.3	86.6	19	56.6	70
6	60	70	20	73	93.3
7	73.3	83.3	21	63.3	73.3
8	73.3	80	22	73.3	76.6
9	73.3	76.6	23	66.6	73.3
10	76.6	80	24	63.3	70
11	70	80	25	56.6	70
12	76.6	96.6	26	66.6	73.3
13	76.6	80	27	76.6	83.3
14	73.3	76.6			

After obtaining the pretest and posttest value, it was important to examine normality and homogeneity by using Statistical Package for Social Sciences (SPSS) software program for windows. The normality and homogeneity examination was undertaken as a requirement for conducting hypothesis examination.

Normality TEST

The normality test was carried out as a prerequisite for conducting data analysis and to prove that the data is normally distributed or not.

Table 2 Normality Test

		Unstandardized Residual
N		27
Normal Parameters(a,b)	Mean	.0000000
	Std. Deviation	5.32833164
Most Extreme Differences	Absolute	.171
	Positive	.171
	Negative	-.147
Kolmogorov-Smirnov Z		.888
Asymp. Sig. (2-tailed)		.409

Table 2 shows the results of the normality test ware significance value (0.409). It means that the value is greater than 0.05. So, it can be concluded that the residual values are normally distributed.

Homogeneity Test

The homogeneity test is carried out to find out whether students have homogeneous variances or not.

Table 3 Homogeneity Test

Levene Statistic	df1	df2	Sig.
.733	1	52	.396

Table 3 shows the homogeneity test obtained a significance value was 0.396. It illustrates that the value is greater than 0.05. So, it can be concluded that the data distribution is homogeneous.

Hypothesis Testing

Hypothesis testing is carried out after examining of normality and homogeneity with normal and homogeneous distributions, and then the analysis is continued with hypothesis testing by using the one-sample t-test.

Table 4. Hypothesis Testing

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Upper	Lower	T	df	Sig. (2-tailed)
Pair 1	Pretes – Postes	-8.78889	5.34965	1.02954	-10.90514	-6.67264	-8.537	26	.000

Table 4 shows the means and the standard deviation in this study was -8.78889 (SD = 5.34965). The t-test value was -8.537 and the significant value (2 tailed) is smaller than a = 0.05, which is 0.000, meaning that the hypothesis Ho is rejected and Ha is accepted because there is a significant difference between learning outcomes at the pretest and posttest. Thus, learning using the moodle e-learning material on EFL reading comprehension is effective in improving student learning outcomes.

Discussion

This study investigated the effectiveness of the moodle e-learning material EFL reading comprehension, the experiment began with a pretest and ends with a posttest. The initial hypothesis was that moodle e-learning material contributes to the cultivation of students interest in learning reading comprehension course and improve EFL reading comprehension of college students. The statistical hypothesis used is $H0 = \mu1 \leq \mu2$ and $H1 = \mu1 > \mu2$. With $\mu1$ is after learning by using moodle e-learning. Furthermore, $\mu2$ is before. To measure the final result, the t-test was analyzed statistical package for social sciences (SPSS) software program for windows. The data processing steps taken were normality test, homogeneity test, and hypothesis testing.

Hypothesis testing is carried out after testing for normality and homogeneity with normal and homogeneous distributions, then the analysis is continued with hypothesis testing using the one sample t-test.

The t test value obtained is -8.537 and the significant value (2 tailed) is smaller than a = 0.05, namely 0.000, which means that the hypothesis Ho is rejected and Ha is accepted because there is a significant difference between learning outcomes at pretest and posttest. Thus, teaching using the Moodle e-learning material effective in improving students' learning outcomes on EFL reading comprehension.

Conclusion

E-learning is defined as the delivery of training material via information and communication technology (ICT), including the internet, CD-ROM, DVD, smartphones, and other media, both inside and outside of the classroom which has been widely adopted by educators around the world. E-learning in the study was an e-learning moodle used in teaching EFL reading comprehension. Moodle was originally an acronym for *Modular Object Oriented Dynamic Learning Environment* and known as a Learning Management System (LMS) as well as a free source e-learning software platform. The result shows that the e-learning moodle material effective in improving students' learning outcomes on EFL reading comprehension. Therefore, the researcher recommended to educators to utilize the e-learning moodle in teaching EFL reading comprehension.

References

Abdolrezapour, P., & Tavakoli, M. (2011). *The relationship between emotional intelligence and EFL learners' achievement in reading comprehension*. *May 2014*, 37–41. https://doi.org/10.1080/17501229.2010.550686

Al-homoud, F. (2014). *Extensive reading in a challenging environment : a comparison of extensive and intensive reading approaches in Saudi Arabia*. *4*(2009), 383–401.

Alexander, S. (2001). E-learning developments and experiences. *Education + Training*, *43*(May), 240–248. https://doi.org/10.1108/00400910110399247

Alsamadani, H. A. (2011). *The Effects of the 3-2-1 Reading Strategy on EFL Reading Comprehension*. *4*(3), 184–191. https://doi.org/10.5539/elt.v4n3p184

Aziz, Z. A., Daud, B., & Ismar, R. T. (2019). *Morphological Awareness and Its Correlation With EFL Reading Comprehension of Senior High School*. 121–136. https://doi.org/http://dx.doi.org/10.15639/teflinjournal.v30i1/121-136

Babapour, M., Ahangari, S., & Ahour, T. (2018). The effect of shadow reading and collaborative strategic reading on EFL learners ' reading comprehension across two proficiency levels. *Innovation in Language Learning and Teaching*, *0*(0), 1–13. https://doi.org/10.1080/17501229.2018.1465059

Berardo, S. A. (2006). *The Reading Matrix Vol. 6, No. 2, September 2006*. *6*(2), 60–69.

Brandl, K. (2005). Are you Ready to "moodle"? *Language Learning & Technology*, *9*(2), 16–23.

Bringman-Rodenbarger, L., & Hortsch, M. (2020). How students choose E-learning resources: The importance of ease, familiarity, and convenience. *FASEB BioAdvances*, *2*(5), 286–295. https://doi.org/10.1096/fba.2019-00094

Brown, H. D. (2001). *Teaching by Principles* (2nd ed.). New York: Addison Wesley Longman, Inc.

Brown, H. D. (2004). *Language assessment principles and classroom practices*. White Plains, NY: Person Education, Inc.

Calet, N., & Pérez-morenilla, M Carmen & Santos-Roig, M. D. L. (2019). *Overcoming reading comprehension difficulties through a prosodic reading intervention : A single-case study*. https://doi.org/10.1177/0265659019826252

Clark, D. (2002). Psychological myths in e-learning. *Medical Teacher*, *24*(6), 598–604. https://doi.org/10.1080/0142159021000063916

Daniel, B., & Schwier, R. A. (2010). Analysis of Students' Engagement and Activities in a Virtual Learning Community: A Social Network Methodology. *International Journal of Virtual Communities and Social Networking (IJVCSN), 2(4)*, 31–50. https://doi.org/10.4018/jvcsn.2010100103

Ergun, Esin and Adıbatmaz, F. B. K. (2020). *Exploring the Predictive Role of E-Learning Readiness and E-Learning Style on Student Engagement*. *12*(2), 175–189.

Frehywot Seble, Vovides Yianna, Talib Zohray, Mikhail Nadia, Ross Heather, Hannah Wohltjen, Selam Bedada, Kristine Korhumel, Abdel Karim Koumare, & Scott, J. (2013). E-learning in medical education in resource constrained low-and middle-income countries. *Human Resources for Health*, *11*(4), 1–15. https://doi.org/10.2471/BLT.08.051599

Gani, S. A., Yusuf, Y. Q., & Susiani, R. (2016). Progressive outcomes of collaborative strategic reading to EFL learners Kasetsart Journal of Social Sciences Progressive outcomes of collaborative strategic reading to EFL learners. *Kasetsart Journal of Social Sciences*, *37*(3), 144–149. https://doi.org/10.1016/j.kjss.2016.08.004

Goodman,K.(1994).*Reading,Writing, and Written Texts:A Transactional SociolinguisticView*.In R.B. Ruddell.

Gorsuch, G. (2010). *Developing reading fluency and comprehension using repeated reading : Evidence from longitudinal student reports*. *1*. https://doi.org/10.1177/1362168809346494

Gough, P. B., & Tunmer, W. E. (1986). *Remedial and Special Education*. https://doi.org/10.1177/074193258600700104

Ismail, S. A. M. M., Petras, Y. E., Mohamed, A. R., A., & Eng, L. S. (2015). *Compensatory Reading among ESL Learners : A Reading Strategy Heuristic*. *8*(8), 46–55. https://doi.org/10.5539/elt.v8n8p46

Kung, F. (2017). Teaching second language reading comprehension : the effects of classroom materials and reading strategy use. *Innovation in Language Learning and Teaching*, *0*(0), 1–12. https://doi.org/10.1080/17501229.2017.1364252

Labrozzi, R. M. (2014). *The effects of textual enhancement type on L2 form recognition and reading comprehension in Spanish*. https://doi.org/10.1177/1362168814561903

Machida, S. (2011). *Reading Foreign Language Text – What Separates Skilled and Unskilled FL Readers ? 8*(2), 141–153.

Mcneil, L. (2011). *knowledge and reading comprehension strategies to L2 reading comprehension : an exploratory study*. 883–902. https://doi.org/10.1007/s11145-010-9230-6

Motaghian, H., Hassanzadeh, A., & Moghadam, D. K. (2013). Factors affecting university instructors' adoption of web-based learning systems: Case study of Iran. *Computers and Education*, *61*(1), 158–

167. https://doi.org/10.1016/j.compedu.2012.09.016

Nunan, D. (2003). *Practical English Language Teaching. North America*. North America: McGraw Hill/Contemporary.

Nuttall, C. (1996). *Teaching Reading Skills in a foreign language (New Edition)*. Oxford: Heinemann.

Parvaresh, Vahid and Nemati, M. (2008). Metadiscourse and Reading Comprehension : The Effects of Language and Proficiency. *Electronic Journal of Foreign Language Teaching*, *5*(2), 220–239.

Rassaei, E. (2015). *Effects of three forms of reading-based output activity on L2 vocabulary learning*. https://doi.org/10.1177/1362168815606160

Reffertt, Ellen and Barnard, E. (2012). *Improving Reading Proficiency via Interactive Online Lessons*. *9*, 366–380.

Rice, W. (2015). *Moodle E-Learning Course Development* (3rd ed.). UK: Packt Publishing Ltd.

Rohwer, A., Motaze, N. V., Rehfuess, E., & Young, T. (2017). E-learning of evidence-based health care (EBHC) to increase EBHC competencies in healthcare professionals: a systematic review. *Campbell Systematic Reviews*, *13*(1), 1–147. https://doi.org/10.4073/csr.2017.4

Ruggeri, K., Farrington, C., & Brayne, C. (2013). A global model for effective use and evaluation of e-learning in health. *Telemedicine and E-Health*, *19*(4), 312–321. https://doi.org/10.1089/tmj.2012.0175

Soliman, N. A. (2014). *Using E-Learning to Develop EFL Students ' Language Skills and Activate Their Independent Learning*. *June*, 752–757.

Sun, L. (2014). Investigating the effectiveness of Moodle-based Blended Learning in College English course. *Information Technology and Management*, *13*(1), 83–94.

Tavakoli, M., Dabaghi, A., & Khorvash, Z. (2010). *The Effect of Metadiscourse Awareness on L2 Reading Comprehension : A Case of Iranian EFL Learners*. *3*(1), 92–102.

Welsh, E. T., Wanberg, C. R., Brown, K. G., & Simmering, M. J. (2003). E-learning: emerging uses, empirical results and future directions. *International Journal of Training and Development*, *7*(4), 245–258. https://doi.org/10.1046/j.1360-3736.2003.00184.x

Yakuta, A. D., and Aydın, S. (2015). *An experimental study on the effects of the use of blogs on EFL reading comprehension. September 2015*. https://doi.org/10.1080/17501229.2015.1006634

Zhang, R. (2004). *Using the principles of Exploratory Practice to guide group work in an extensive reading class in China*. *3*(269), 331–345.

Zhang, S. (2020). *The relationship between vocabulary knowledge and L2 reading / listening comprehension : A meta- analysis*. https://doi.org/10.1177/1362168820913998

Copyrights