



## Examining the effectiveness of online resources in developing English as a Foreign Language (EFL) reading skills autonomously

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**Abstract:** *The purpose of this mixed methods study is to investigate the effectiveness of online resources in developing English as a Foreign Language (EFL) reading skills autonomously among undergraduate students at the Faculty of Letters and Humanities Fes-Agdal as a representative of the socio-cultural and higher education system of Morocco. The sample consisted of an experimental group and a control group. The experimental group consisted of 120 students that were exposed to three main online tools (Newsela.com, mrunussbaum.com, and rewordify.com) and virtual meetings and instruction provision using Facebook. The control group consisted of 120 students that benefited only from the university's regular reading courses. The experimental intervention period was followed by interviews with a sample of 25 students from both groups providing a qualitative perspective. The overall results show that online resources had a positive effect on the development of metacognitive skills. Students tended to appreciate the inclusion of online resources in the classroom without devaluing the role of their EFL teacher – the students did not expect online resources to fully replace the role of their teachers.*

**Keywords:** *Mixed-Methods; Learner-Autonomy; Post-Secondary education, Online Learning*

### INTRODUCTION

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Kasper (2003) explains that technology enables students to develop their overall knowledge concerning language and literacy skill development. Online resources tend to enable learners to go beyond the curriculum and the classroom to new features and elements that might enrich the overall components of the class. Online resources might also enable teachers to add some features to the classroom such as the use of text-based computer-mediated communication, intensive online reading, and conducting research using online resources (Sweeny, 2010).

Eskey (2002) defines reading as “a process of acquiring information from a written or printed text and relating it to what you already know to conduct a meaning of the text” (p. 6). Nuttal (1998) states that “reading has been described as the most studied and the least understood process in education” (p. 2). Kaplan (2002) adds another definition to this by explaining that reading is “a rapid, strategic, interactive, and purposeful process.” He explains that this process requires “a sufficient amount



of knowledge of the language and the world, continuous time on task, in addition to strategic processing” (p. 15).

Studies have illuminated different issues associated with learning autonomy in developing target languages. Some studies focus on the course content and how it has a direct effect on developing skills (Elmunyah et al., 2019; Firat, 2016; Kim, 2014; Ramirez, 2015; Tsai et al., 2018). Other studies have focused primarily on the role of the teacher and different teaching methods in developing or hindering students learning autonomy while developing target language skills (Valencia-Arias et al., 2019; Vieira et. al., 2008; Yang, 2016). Finally, other studies have focused on the way technology contributes to the development of general aspects of learning autonomy (Rodl, 2016; Szöcs, 2017; Wulandari, 2017).

Teaching a language with the help of computers and the internet is characterized by the internet’s multifaceted, sophisticated nature. This includes the various aspects associated with it such as age of the learners, access to technology, the course content, the role of the teacher, and the socio-cultural perspective. Hence, learning autonomy research is still prevalent in current academia. The case of Morocco with respect to research on learner autonomy has been under-studied. This can be explained by how new this issue is to a developing country like Morocco (Chik, 2014). The study intends to provide answers to the research question: “Does the use of online resources enable learners to develop EFL autonomous reading skills?”

It tests the related hypothesis using the appropriate statistical procedures. The null hypothesis and alternative hypothesis for this study are:

H0= Exposing students to online resources (the treatment) does not have an effect on developing students’ EFL autonomous reading skills.

H1= Exposing students to online resources (the treatment) has an effect on developing students’ EFL autonomous reading skills.

Upon addressing this research question through mixed methods research, it will be possible to generate better understanding of how online resources enable students to develop reading skills autonomously and what students’ attitudes about the process are.

## **METHODS**

The methods used in this paper are outlined below. A detailed description of the methods used to test whether online resources have a significant role in developing students’ reading skills autonomously follows. This section describes the participants, the setting, and the mixed methods research methodology, and design of the study. Additionally, the measures used to maintain the validity and reliability of the data collection instruments are described.



### *Describing the Research Design*

The study follows a deductive approach, which means that it starts with the assumption that online resources would enable learners to efficiently develop EFL reading skills autonomously. Then, evidence is gathered to support or refute this assumption. This quasi-experimentation involves; first, the manipulation of the independent variable (using online resources tools in developing reading skills); and second, to observe the effect of that change on the dependent variable (the promotion of EFL reading skills autonomously) (Porte, 2002).

### *Describing Participants in the Study*

The study includes first-year English major students who were placed in two different Facebook groups: one group for the experimental group, and one for the control group. Facebook was chosen as the best platform for delivering the experimental treatment. Including students in the Facebook groups is done with the intention of working with them using different tools to develop reading comprehension skills independently. To verify the effectiveness of such tools in the development of learner autonomy, the study is composed of a pre-test-post-test quasi-experimental design. Brown and Rodgers (2002) define quasi-experimental design as: “studies that compare group behavior in probabilistic terms under controlled conditions using intact groups” (p.12).

The EG (Experimental group) consists of 120 students in their first year in the English department of Dhar El Mehrnaz faculty Fes. Their age range is 18-26. The CG (Control Group) is composed of 120 students. Their age group range is 18-25. The researcher chooses the same number of participants to take part in this experiment to increase aspects of validity. Colman (2019) further explains this idea stating: “If one wants to keep to a minimum the possibility that alternative explanations can explain the results of one’s experiments, then ensuring that the experimental groups are of the same size is a useful first step to take.” (p.5).

As the EG and the CG are first-year students at the English department of Dhar El Mehrnaz faculty, they are exposed to the different subjects that are taught in the English Language including reading comprehension, speaking skills, and literary studies. These courses are designed to enable first-year students to develop their language proficiency before pursuing their degree in English studies.

### *Research Instruments*

For measuring the extent of development of reading skills autonomously, the questionnaire is adopted from two instruments. First, Yang’s (2007) “Learner Autonomy Inventory,” a tool that is tested for validity with a Cronbach’s value of 0.87 ( $\alpha = .87$ ). This questionnaire is based on Likert-scale for all items of the questionnaire. This scale was designed to be used among university students. The items have a 5 point Likert-type scale. The second questionnaire adopted in this study



is the e-Learning Autonomy Scale (eLAS) developed by Firat (2016). It measures the effect of online resources in developing students' language skills autonomously. This scale was designed to be used among university students. It has 10 items and uses a 5 point Likert-type scale. Overall, the items within this survey are reported to have internal consistency ( $\alpha = 0.952$ ).

For both instruments, the participants are required to respond to each item to describe their believed level of autonomy using online resources. To respond to each statement, the participants have to choose from the response category that represented an interval level of measurement, ranging from "strongly agree" to "strongly disagree." The response categories are coded as follows: (Strongly Disagree=1); (Disagree=2); (Neutral=3); (Agree=4); (Strongly Agree=5). It is worth mentioning that the wording of some items were changed to match the purpose of the study. For example, the item in Yang's (2007) survey: "I clearly understand the teacher's intention during in class learning activities" was modified to read: "During reading classes, the teacher explains hard reading concepts." Further, the item in Firat's (2016) survey was re-worded from: "In e-learning environments, I control my own learning process" to: " in e-learning environments, I control development of effective reading strategies."

#### *The Interview*

The interview is the second post-test instrument used for collecting data. The interview is used as the second post-test instrument used for collecting data on the way online resources enable learners to develop reading skills autonomously. The interview is based on ten items (Appendix C). Each examines the students experience with the online resources they have been exposed to and if it supported students in the development of autonomous reading skills.

#### *Setting of the Study*

The study took place in a physical setting and virtually, within the study's Facebook groups. It mainly targeted students enrolled in the Department of English studies at Sidi Mohamed Ben Abdellah University in Fes. The setting included adult undergraduate first-year EFL learners. The study specifically included first year students due to the two-year experimental period. Access to the participants was facilitated by the researcher's role as a student teacher within the university. This made access to different groups of students taught by different teachers easier. The researcher introduced the two groups to the Facebook groups which were used to provide students with instructions about the activities they are required to work on and motivating them to work on the required tasks. The process of including all students to the Facebook groups took about a month and was completed prior to starting the study.



### *Description of the Online Tools*

A description of tools used to promote students' autonomous reading skills is presented here. The first tool used with the students in the Experimental Group is "Newsela.com." It is a website that provides up-to-date news articles with the possibility of changing the difficulty of the text based on the level of the learner. Online tasks were assigned through this website, and the questionnaires and interviews later assessed the effectiveness of this tool in enabling the learners to develop reading comprehension skills autonomously.

The second online reading comprehension website used in this experimental study is <http://mrnussbaum.com/>. This online reading comprehension development website is directed to both the teachers and the learners. This website provides a variety of reading texts on different topics. The researcher assigned different tasks using the website based on the participants' interest, and the participants are asked to do tasks related to each text independently.

The third and last website used in this study is "rewordify.com." This website is famous among learners of English as a second or foreign language, and is based on the idea of matching texts to the level of the learner. Learners can import any text to this online tool which analyzes the text and replaces any potential ambiguous phrase or vocabulary. It also offers a variety of quizzes that can be corrected immediately, which enables the learners to assess their reading comprehension progress.

### *The Training/Experiment Procedure*

The researcher organized four meetings with the two groups (Experimental and Control group) during their first semester. During these meetings, the researcher talked to the two groups about the experiment and introduced the two groups to the Facebook groups that were used for this experiment. The Facebook groups are used as a way of interacting with the students, providing them with instructions about the activities they are required to work on, and motivating them to work on the required tasks. In addition to the online activities the researcher provided to the experimental group he made different interactive live videos for the students. In these videos, he received the students' questions and talked to them about issues related to learning using online resources, and motivated them to keep working on the experiment.

### *The Statistical Analysis Procedure for Calculating Results Obtained from Autonomy Test Questionnaire*

The t-test is used to test whether two means are significantly different from one another. In this case, it was used to test whether using online resources had an effect on the promotion of learning autonomy in developing reading skills in the EG (experimental group). The means of the EG (Experimental Group) and those of the CG (Control Group) at the pre-test (before training) and the post-test (after training) were compared. This analysis method is influenced by the work of Seliger et al.





(1989) who suggested that the t-test “determine[s] how confident the researcher can be that the differences found between two groups (experimental and control) as a result of treatment are not due to chance (p.231).”

The five response categories on the scale represented an interval level of measurement ranging from ‘Strongly Disagree’ to ‘Strongly Agree.’ To quantify the results, the coding of the frequency adverbs is as follows: Strongly Disagree (1), Disagree (2), Neutral (3) Agree (4), and Strongly Agree (5). The lowest level of frequency corresponds to mean (1) and the highest level correspondents to mean (5).

The software SPSS for Windows was used to perform statistical operations. Descriptive statistics were employed to compute the measure of the mean and the standard deviation. The mean index (M) is calculated to describe how scores cluster about the center of a distribution.

It is essential to verify whether both groups are similar at the pre-test/post-test questionnaire. Verifying this similarity required testing the null hypothesis (H<sub>0</sub>), which postulated that there is no significant difference between the EG and CG at the pre-test and the post-test. This type of hypothesis is two-tailed. This means that the direction of the null hypothesis is not specified as there is no evidence indicating which group might score higher or lower as far as developing reading skills autonomously is concerned.

H<sub>0</sub>: MEG  $\approx$  MCG against another alternative hypothesis H<sub>1</sub>.

H<sub>1</sub>: MEG  $\neq$  MCG, where MEG  $\geq$  MCG or MEG  $\leq$  MCG

MEG is the arithmetic mean of the EG, whereas, MCG is the arithmetic mean of the CG.

Descriptive statistics are employed to compute the mean (M), the measure of dispersion or standard deviation (SD) and the T-test (t). The mean index is computed to describe how scores cluster about the center of a distribution. The SD is calculated to describe the measure of the dispersion of the data. In other words, the SD indicates how far the participants scored away from the mean. The more these scores differ from the mean, the higher the standard deviation is. For descriptive and comparative purposes, t indicates whether the difference between the mean computed for the EG and that for the CG for a given item is significant.

The significance level is set at  $p < 0.05$ , which means that the degree of chance or error that is tolerated is 5%. Data from the pre-test questionnaire showing comparison between the EG and CG in relying on the teacher and classroom activities to develop reading skills is computed and displayed in the following tables with Mean (M)= 5: max, Mean (M)= 1: min, and T<sub>crit</sub> for Df= 238,  $\alpha = 0.05 = 1.972$ . The acronyms for the measured items are found in Appendix D.

### *The Analysis Procedure for Analyzing the Students' Interviews*

The answers of the EG participants are analyzed implementing "thematic analysis." This analysis is performed within qualitative research to examine and engender themes within data. As Bryman (2008) suggests, this method emphasizes organization and detailed description of the data set. "Thematic analysis" does not merely rely on counting phrases or words in a text, but identifies implicit and explicit ideas within the data. The analysis focuses on including verbatim evidence from the interviews to support the claims suggested by the participants.

## **RESULTS**

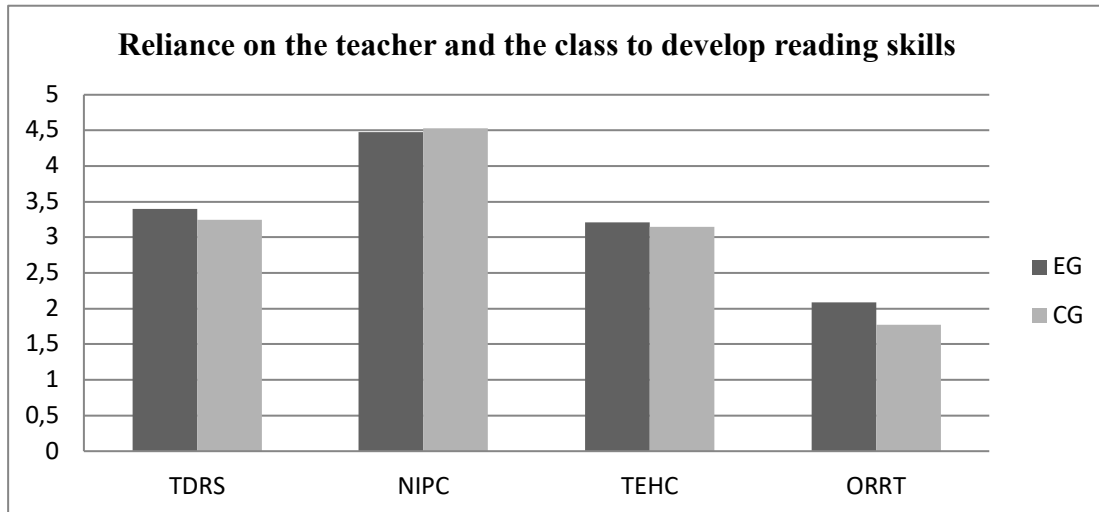
**Table 1.** *Reliance on the teacher and the course content to develop reading skills*

	M EG	SD EG	M CG	SD CG	t	Mean difference
Develop reading skills through the help of the teacher TDRS	3.40	0.938	3.25	1.047	-1.169	0.392
All important information are provided in the classroom NIPC	4.48	0.722	4.53	0.673	0.463	0.042
Relying on the teacher to understand hard reading concepts TEHC	3.21	1.137	3.15	1.113	-0.402	-0.058
Online Resources can replace the role of the teacher ORRT	2.09	1.108	1.77	0.695	-2.723	-0.325

**Table 2.** *The development of reading skills autonomously using online resources*

	M EG	SD EG	M CG	SD CG	t	Mean difference
Online resources to practice reading comprehension tasks ORRC	2.35	2.160	2.23	1.170	-0.578	-0.125
Online resources to read about topics of interest ORRI	2.08	1.086	2.11	1.083	0.238	0.033
Online Resources develop reading and language skills due to their interactive nature ORIN	3.20	0.967	3.07	1.027	-1.036	-0.133
Online Resources develop effective reading strategies (Scanning) OERS	2.23	1.163	2.12	1.047	-0.759	-0.108
Online resources activities can replace classroom activities ORRC	2.12	0.881	2.03	0.983	-0.761	-0.092
Online resources activities have the same value as the classroom activities ORSC	1.96	0.929	1.87	0.685	-0.870	-0.092

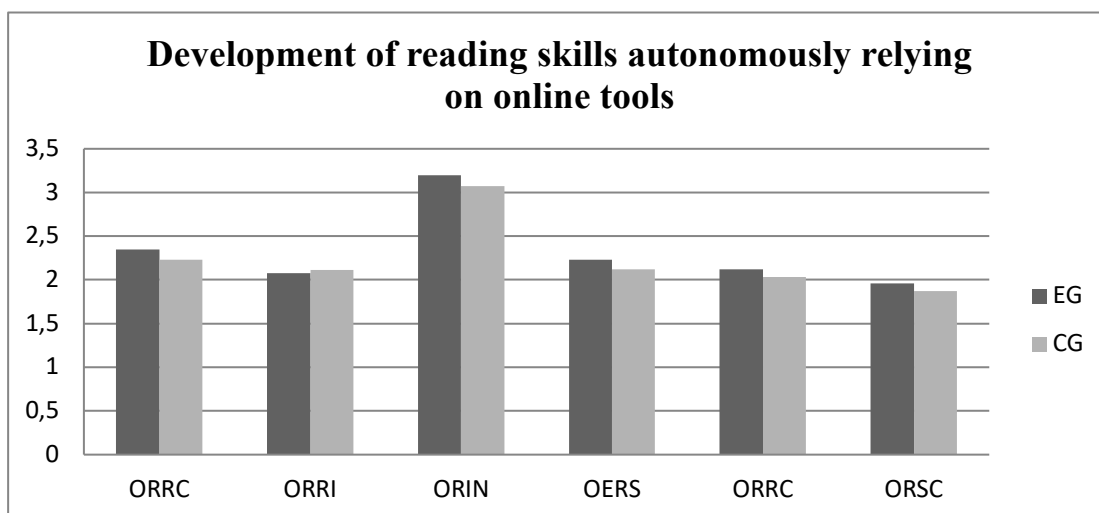
*Reliance on the Teacher and the Course Content to Develop Reading Skills autonomously*



**Figure 1.** *Reliance on the teacher and the course content to develop reading skills autonomously*

Analysis of the data from item ORRT shows that the participants from both groups at this stage of the experiment rely to a great extent on the teacher and class content to develop aspects of reading skills.

*Development of Reading Skills Autonomously Relying on Online Tools*



**Figure 2.** *The development of reading skills autonomously using online resources*





Participants from both groups scored lower means (tended to disagree) for items ORRC, ORRI, OERS, ORRC, and ORSC. This shows that the participants rely heavily on teachers' explanations and attending regular classes to develop their reading skills autonomously. The results also demonstrate that the participants lack the notion of independent learning through online resources to develop language skills. The participants score higher means for item ORIN, demonstrating that the participants believe that online resources tend to provide learning material of a different nature than what they would receive in the classroom. The overall results obtained from the data presented in this section can be explained by participants' lack of exposure to online resources as well as the feeling that information from the classroom is sufficient.

### *Students' Post-Test Questionnaire*

**Table 3.** *Reliance on the Teacher and the Classes to Develop Reading Skills*

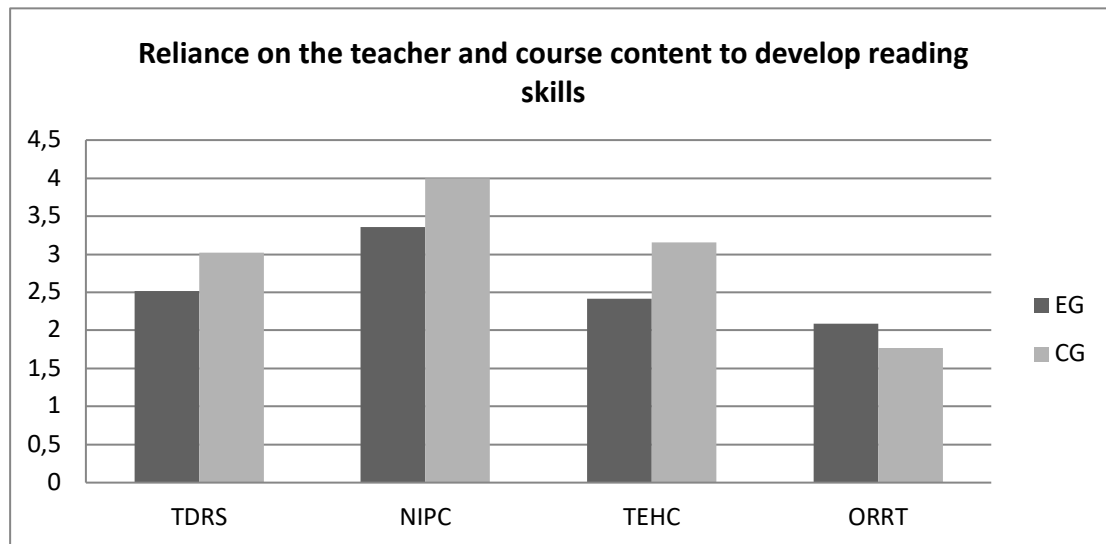
	M EG	SD EG	M CG	SD CG	t	Mean difference	Sig (2-tailed) p-value
Develop reading skills through the help of the teacher TDRS	2.52	1.021	3.02	1.061	3.720	0.500	.029
All important information are provided in the classroom NIPC	3.36	1.114	4.00	0.0953	4.796	0.642	.030
Relying on the teacher to understand hard reading concepts TEHC	2.42	0.875	3.16	1.108	5.755	0.742	.032
Online Resources can replace the role of the teacher ORRT	2.09	1.108	1.77	0.695	-2.723	-0.325	.065

**Table 4.** *Development of Reading Skills Autonomously Relying on Online Tools*

	M EG	SD EG	M CG	SD CG	t	Mean difference	Sig (2-tailed) p-value
Online resources to practice reading comprehension tasks ORRC	3.03	1.181	2.58	1.234	-2.887	-0.450	.039
Online resources to read about topics of interest ORRI	3.05	1.180	2.20	1.227	-5.469	-0.850	0.032
Online Resources develop reading and language skills due to their interactive nature ORIN	3.92	0.845	3.23	1.051	-5.598	-0.691	0.042
Online Resources develop	3.32	1.053	2.44	1.091	-6.322	-0.875	0.038

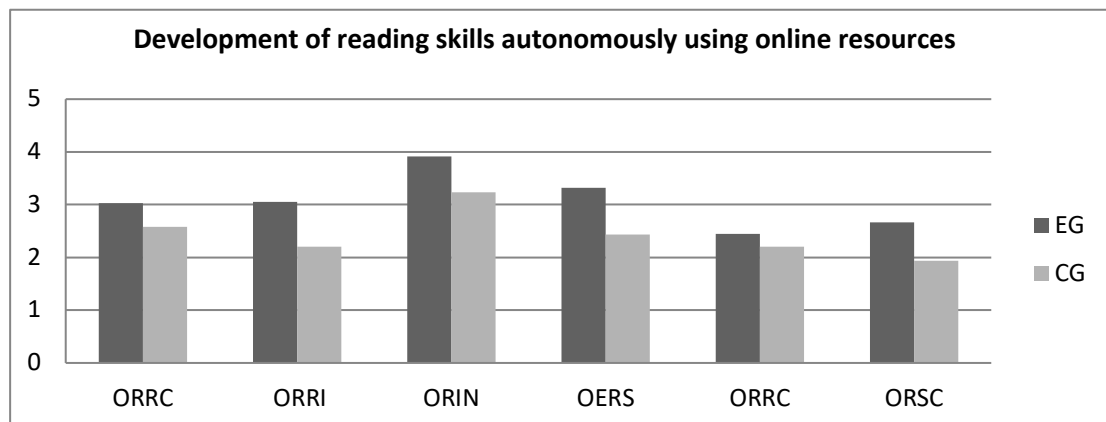
effective reading strategies (Scanning) OERS							
Online resources activities can replace classroom activities ORRC	2.45	0.906	2.20	0.826	-2.234	-0.250	0.065
Online resources activities have the same value as the classroom activities ORSC	2.66	0.939	1.94	0.981	-5.779	-0.717	0.046

*Reliance on the Teacher and the Course Content to Develop Reading Skills*



**Figure 3.** *Reliance on the teacher and course content to develop reading skills autonomously*

*Development of Reading Skills Autonomously Relying on Online Tools*



**Figure 4.** *The development of reading skills autonomously using online resources*



The findings suggest that exposing students to online resources enables students to autonomously select topics of their interest, which might not be available while developing reading skills in traditional settings. The interactive nature of reading material available through online resources are among the aspects that make participants opt for developing reading skills autonomously through online resources. This encourages the learners to act more autonomously while developing skills, as these formats attract the attention of students and encourage them to keep working on their reading skills.

These results demonstrate that despite the effectiveness of online resources in developing reading skills autonomously, the participants still reject the possibility of complete independence from the classroom setting. These results can be explained by the fact that students still trust the teacher and classroom setting to guide their learning process and primarily to provide the information necessary to study for exams.

#### *Students' Post-Test Interviews*

##### Students' Perceptions of Using Online Resources to Develop Reading Skills Autonomously

The obtained results can be summarized as follows. First, the majority of the participants agree on the idea that online resources enable them to develop aspects of their language skills in general, and their reading skills in specific. One of the participants stated: "I use online resources to develop my English skills and add more practice to what I learn during regular classes." [SIC] Another participant provided an answer related to the development of the reading skill by stating that "Yes, time is limited in classroom, so teacher cannot give us all reading skills but through online resources we can find what we look for." [SIC] Another participant provided a detailed answer in relation to the way he uses online resources to develop reading skills autonomously, stating: "I develop reading skills through online resources as it allows students to get the most from their education and some examples include: 1/Utilize various reading materials 2/Relate reading to other areas of the students' interest 3/Have fun and develop vocabulary." [SIC] The responses generated from the participants in the EG show that they rely to a great extent on the platforms used during the experiment, and they depend on them to develop aspects related to their reading skills. These results can be explained by the interactive and informative nature of the reading activities provided by the platforms suggested by the researcher.

The gathered responses show that the online resources used in this experiment enable the participants not only to develop their reading skills, but also to read about topics of their interest. For example, one of the participants suggested "Yes, the online tools introduced to me is very helpful in many ways; as mentioned in the answer above, such websites help me broaden my knowledge about certain topics that



don't take the deserved time to be discussed in class." [SIC] Another example is provided by a participant who stated that: "they are very helpful in reading comprehension and they also help enlarge general knowledge." [SIC] These results can be explained by the variety of topics that online reading platforms contain which enable the participants to select topics that might be of their interest. Hence, the participants become capable of developing their reading skills autonomously and at the same time develop their general knowledge.

#### Students Perceptions of the Advantages and Disadvantages of Online Resources in Developing Learning Autonomy

With regard to the variety of learning opportunities, the respondents suggest that online platforms enable them to have different learning opportunities outside the classroom. They support that claim by mentioning the interactive nature of the reading material provided online, in addition to the tools that come with online reading activities including dictionaries to check the meaning of hard concepts and interactive activities to check understanding, which all contribute to developing reading skills autonomously. This is illustrated by one participant's response: "In fact online resources make me more active and provides me with knowledge that is related to my interests, especially texts about topics of my interest. All of this combined in an easy, advanced way of learning." [SIC] Another respondent suggests: "I like to use online resources to develop my reading skills as it [online resources] is rapid and you can use the online dictionary at the same time which helps you to read faster." [SIC] The quotes taken from some of the respondents' answers demonstrate that the interactive nature of online resources can be beneficial to the participants. They keep learners motivated and interested in developing reading skills and being motivated to read more. It is interesting to see that one of the participants used the word "easy" to describe the process of developing reading skills in a direct and straightforward way.

The decisive advantage that the participants mention in their responses is the flexibility to work outside the classroom that online resources provide, and the ability to opt for different methods to understand a given reading task. The answers gathered from the participants suggest that another important advantage of online resources is the possibility of developing reading skills outside the traditional contexts, which stipulate the presence of a teacher to be in charge of the learning process. One participant mentions, "thanks to the internet a person can learn a foreign language him/herself without the guidance of teacher." [SIC] Another respondent also suggests, "online resources enable you to study aspects that are not included in the classroom curriculum; it also helps in developing new reading skills that might not be available in the classroom." [SIC] The gathered responses demonstrate that the participants perceive that a main advantage of online resources is the ability to develop language skills outside the classroom context, developing reading skills using different methods, and learning about topics of their interest. All the points

mentioned by the participants confirm the fact that they see the potential of online resources in enabling them to develop reading skills autonomously.

## **DISCUSSION**

The results obtained from the post-test questionnaire provide significant differences between the EG and CG as an outcome of the experiment's treatment. Concerning the use of online resources to practice reading comprehension, the questionnaire results show that the EG scored higher than the CG. This idea is illustrated in item ORRC. Additionally, the questionnaire results demonstrate that the interactive nature of online resources is among the main factors that encourage students to use them as a way to develop reading skills autonomously. Item ORRI shows that students in the EG opt for online resources to develop reading skills as a result of their interactive nature. The obtained results tends to align with the findings introduced by Elmunsyah et al., (2019) and Firat (2016) as both studies showed the effectiveness of online resources in developing reading skills autonomously. However, the obtained results add to those studies by revealing that the interactive nature of online resources is among the main factors that contribute to the development of students' autonomous reading skills.

In addition to the interactive nature of online resources, the questionnaire results reveal that online resources enhance the development of reading skills as they allow students to read about topics of their interest. Results obtained from item ORIN confirm the belief that online resources can have a direct influence on the development of reading skills. Such results add to what was proposed in some studies such as Szöcs (2017) and Wulandari (2017) about the significance of reading choice in developing students' autonomous reading skills. The obtained results support the idea that the more students' feel that they can choose to read about topics of their interest, the more they are willing to act more autonomous in reading and developing related reading skills.

With regard to the reading skills developed through online resources, the results attained from item OERS show that scanning is amongst the main skills that students develop using online resources. Accordingly, these results are shown from the high frequency obtained from this skill in comparison to the other skills, such as skimming. This last finding can be explained by the fact that the websites used for the treatment rely mainly on scanning tests to answer reading comprehension questions (Newsela.com for instance); hence, the period of treatment supports the development of such skills autonomously while using online resources. The obtained results complement what was mentioned in the work of Wulandari (2017) as they show that students tend to develop specifically the reading skills of skimming and scanning while reading texts online.

Despite the previous finding that indicates improvement of reading skills such as scanning, it is of crucial importance to test students' attitudes towards the idea that



online resources can replace the reading classes they are taking at the university level. Results from item ORSC demonstrate that students from both groups disagree with the idea that online resources can be a replacement of their physical reading classes. The results show that while students acknowledge the advantages that online resources have with respect to the development of online resources autonomously, they cannot replace the actual in-class reading sessions. Two main factors can explain these results. The first one is associated with the presence of the teacher within reading classes. Students' preference for offline reading classes might be linked to the essential role that teachers play in the learning process, which is lacking within the online context. The second one is the organized nature of reading classes within the offline context. Such results add to what was mentioned in the work of Valencia-Arias et al. (2019) and Yang (2016) showing that while students support the use of online resources to develop different aspects of reading skills autonomously, it can be a complete alternative to reading classes presented offline.

In light of the obtained results and the available literature (Elmunsyah et al., 2019; Firat, 2016; Szócs, 2017; Wulandari, 2017), this section discussed how the training procedure done as part of this study has a direct effect on the EG in relation to the development of their reading skills autonomously. The findings reinforce the idea that engaging students in making use of online resources can contribute to the developing reading comprehension skills outside the classroom. The results show that this can be done by providing students with the possibility of selecting topics of interest, as well as being exposed to a reading comprehension content that has an interactive nature.

The interview findings confirm this idea. The responses gathered from questions 3, 4, and 5 show that students notice the potential effectiveness of the websites in developing their reading skills. Different responses indicate that this effectiveness is linked to several factors including using online resources to complement what is provided in the classroom, having the possibility of gaining more insights with regard to a given reading skill, and not having any restrictions concerning time and space. The obtained results support the finding of Marzben (2011) about the significance of online resources in developing students' reading skills. However, the obtained results suggest more specifically that having no restrictions of time and space as well as complementing what is provided in the classroom make online resources more effective in enabling students to develop reading skills autonomously.

The interview results demonstrate that the wide variety of topics within online resources encourages learners to use them. The interview responses reveal students' appreciation of reading about topics pertaining to their interest through the websites used in the experiment. This factor can contribute to the development of their overall interest in reading activities. These results show that the richness of online resources concerning reading material can have a direct effect on developing students'





motivation to read and do more reading activities. Hence, students will rely more on themselves to read more in the target language and develop their reading skills autonomously with access to online resources. The results above support prior studies such as Marzben (2011), Wang (2010), and Wu (2010) that focused on how online reading material can motivate students to do more reading in the target language.

The results demonstrate that students refute the possibility of replacing traditional reading classes with the ones available through online resources. These results support the idea that students believe in the significant role the teacher and classroom setting play in guiding their learning process. These results refute the main findings of a recent study conducted by Koç et. al. (2018). Different explanations can explain these results. First, the structured nature of traditional classes allows students to develop language skills in an organized manner. Second, students' belief that classroom content is dependent upon examinations, which force students to focus on content covered in the classroom to be prepared for exams. Finally, another reason might be that teachers are trained specifically for face to face and online teaching.

## **CONCLUSION**

The overall results of this study show that various factors, ranging from personal, contextual, and social, contribute to learning autonomously. Teachers tend to have a significant role in enabling students to act more autonomously in their learning process. Students can be encouraged to depend on their previous learning experiences and the learning strategies they accumulated in their previous levels. Students should be encouraged to make use of the strategies that match their preferences and learning styles. Additionally, they can be encouraged to negotiate with their teachers to utilize their chosen learning strategies when needed. Due to its importance in the process of developing learning autonomy skills while developing target language skills, students should have opportunities to reflect on their performance and adjust it as required (Dam, 2001, Little, 2017). In the case of reading activities, students can be encouraged to develop receptive language skills, and at the same time, enhance their learner autonomy capacity (Lamb, 2010). To be able to implement these actions successfully, it is necessary to offer teachers professional development opportunities, as these approaches might be unfamiliar to them (Reinders & Balcikanli, 2011).

The findings of the study indicate that the pedagogy of language teaching within higher education needs to include the use of technology in general and online resources in particular as a way to foster learning autonomy in the context of teaching target language skills. The general nature of online resources provides opportunities for the already autonomous to gain more support in respect to their preferred learning styles, and the less autonomous to understand their most effective learning styles. In that respect, teachers need to adopt inclusive flexible methodologies while making use of online resources to develop students' autonomous skills. Such methods can be



based on seeing students' feedback on the learning process, providing clear instructions, and matching the content offered online to the students' interests. Reynard (2003) confirms this point by stating: “both the design of instruction and the learning environment itself must provide various levels of communication, interaction, and, in the case of language, learning, practice and production” (p. 5). This inclusive methodology should be implemented by teachers to achieve the primary goal of online resources, which is developing students' autonomous skills while learning in general, and more specifically while developing target language skills, such as reading skills.

The study is restricted to university students learning EFL in Moroccan public universities only. Their English proficiency ranges from upper intermediate to pre-advanced levels. It excludes students of other levels of English proficiency, students in other schooling levels, students in different types of universities, and other age ranges. Additionally, the participating students are located in one of the biggest cities in Morocco. As a result, the conclusions are only valid for comparative purposes within the study. Generalization of the study findings is restricted to the population with the same criteria. Other follow-up studies focusing on students from different levels, of varying age groups, and from different types of universities will be necessary for a more comprehensive understanding on how learner autonomy is perceived and exercised within the Moroccan educational system.

The focus of the study resulted in the limited consideration of other factors that might have a direct or indirect effect on the examined variables. These factors include learning preferences, computer access, the role of the parents, teaching styles, the content of the reading courses, and direct instruction about learner autonomy that the participants might have received prior to the study. Exclusion of these factors from consideration is done mainly to give maximum attention to the development of learner autonomy metacognitive skills with respect to exposure to online resources. The significance of the associated variables is recognized and constitutes an area for future study.

## LIST OF ABBREVIATIONS

**Table 5.** *List of abbreviations*

<b>Name of item</b>	<b>Abbreviation</b>
Develop reading skills through the help of the teacher	TDRS
All important information is provided in the classroom	NIPC
Relying on the teacher to Teacher explains hard reading concepts	TEHC
Online Resources can replace the role of the teacher	ORRT
Online resources to practice reading comprehension tasks	ORRC
Online resources to read about topics of interest	ORRI



Online Resources develop reading and language skills due to their interactive nature	ORIN
Online Resources develop effective reading strategies (Scanning)	OERS
Online resources activities can replace classroom activities	ORRC
Online resources activities have the same value as the classroom activities	ORSC

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