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Implementing Active Reading Strategies in Virtual Settings: High School Students' Experience During Remote Learning

Ana Quinonez-Beltran , Paola Cabrera-Solano 
and Luz Castillo-Cuesta 
Universidad Técnica Particular de Loja, Ecuador

Abstract. This quantitative study aimed to analyze the impact of using active reading strategies on students' learning in virtual settings during remote learning, which has special relevance after the Covid-19 pandemic. The participants included 273 English as a foreign language (EFL) students from Ecuadorian high schools located in 22 provinces. The age range of the participants was 12 to 14 years, and their language proficiency level aligned with the A1 level on the Common European Framework of Reference for Languages (CEFR). A quasi-experimental design was employed. A pre-test, post-test, and online survey were administered to collect data. Furthermore, four reading workshops based on active reading strategies, such as predicting, using graphic organizers, summarizing, brainstorming, and scanning, were offered through Zoom meetings during the Covid-19 pandemic. The findings demonstrate that active EFL reading strategy implementation in virtual settings improved students' reading skills. Students perceived that the strategies used were motivating and enhanced their reading comprehension during remote learning instruction. Certainly, the effective implementation of active reading strategies and inspirational stories during remote learning instruction motivated students to continue fostering their reading habits in the future.

Keywords: active reading strategies; EFL reading; high school students; remote learning

1. Introduction

Teaching English as a foreign language (EFL) in virtual settings constitutes a challenge for instructors. Moreover, teaching reading skills is not an easy task, especially under the remote learning conditions provoked by the Covid-19 pandemic, which required educational institutions all over the world to temporarily adapt instruction through online systems (Hodges et al., 2020). Education underwent significant adaptations, whereby teaching had to be delivered remotely or virtually (Alghizzi & Elyas, 2022). In this context, the teaching of reading skills in remote education was not an easy task, since this

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receptive skill involves a complex process that does not necessarily need active communication among students (Tümen-Akyıldız et al., 2021). In fact, reading stands as a paramount skill for learners' academic achievement, recognized as a crucial source for acquiring language input in the language acquisition process (Calet et al., 2019; Rassaei, 2017).

Reading is a cognitive skill that allows readers to comprehend the messages conveyed through written language, which involves actively extracting information from the text and interpreting its meaning (Hariyati & Syakur, 2018). Habók and Magyar (2018) defined reading as a dynamic process that plays a vital role in academic and everyday life. For English language learners, reading is one of the essential skills because it involves nearly all the crucial elements needed for mastering a foreign language. Furthermore, reading allows students to immerse themselves in the target language and to improve their linguistic skills (Khan et al., 2020). Therefore, reading strategies constitute a crucial element for understanding a text.

Al-Din and Al-Afoun (2022) asserted that reading strategies are very important for developing comprehension skills and learning, because they enhance understanding, stimulate self-education, and activate the role of students in the learning process. Croner (2003) affirmed that active reading strategies involve metacognition or the awareness of learners regarding the different reading stages. In fact, active readers interact with the text to create meaning because they make predictions, ask questions, and enthusiastically search for answers.

Based on the aforementioned aspects, teaching EFL through active reading strategies constitutes a challenge for EFL instructors in remote learning settings, because learners are not completely motivated and have many distractors. Teachers need to promote engagement and participation among students to help them understand meaning from different contexts. In alignment with this issue, some studies have been carried out on the implementation of active reading strategies. Gamboa-González (2017) examined reading comprehension processes within an EFL context by employing reading strategies, including the Interactive Model of Reading. Rianto (2021) explored the utilization of online metacognitive reading strategies in the context of the Covid-19 pandemic. Likewise, Setyowati et al. (2021) analyzed students' perceptions regarding the implementation of the reading-to-write activity for essay writing in EFL settings. Sun (2023) studied how differentiated instruction was reflected in the extensive reading implementation of two online EFL programs during the pandemic. However, in the Ecuadorian context, the use of active reading strategies in virtual settings during remote learning has not been explored in research. Therefore, this study aimed to determine the impact of using active reading strategies on students' learning in virtual settings during remote learning, addressing the following research questions:

1. What is the effect of using active reading strategies in virtual settings during remote learning?
2. What are students' perceptions of using active reading strategies in virtual settings during remote learning?

2. Literature Review

2.1 Teaching EFL During Remote Learning

The Covid-19 outbreak significantly affected all countries around the world. An important impact of this disease was social and physical distancing, which was a measure implemented in an attempt to reduce contact rates between individuals (Atmojo & Nugroho, 2020). The pandemic also changed the education scenarios, where institutions were forced to close for a long period of time (Amin & Sundari, 2020; Khatoony & Nezhadmehr, 2020). This led to the integration of technological tools in teaching to help instructors and learners to continue with the learning process (Khatoony & Nezhadmehr, 2020). In the field of EFL teaching, the use of ICTs provided several opportunities for language instructors, who faced the challenge of helping learners enhance their proficiency level during the difficult situation caused by the pandemic (Khatoony & Nezhadmehr, 2020). Certainly, the use of information and communication technologies (ICTs), such as online platforms, social media, or broadcasts, was not merely an option for ensuring quality education but rather a vital requirement during the pandemic (Li, 2022).

With respect to the possibilities offered by technology, Pellegrini et al. (2020) affirmed that technology-based education has been very useful in reducing the difficulties caused by the pandemic. In addition, Khatoony and Nezhadmehr (2020) stated that the rapid advancement of technology has transformed traditional methods of teaching and learning. Similarly, Patil (2020) mentioned that the use of technological tools has also created many opportunities for language learning. In this regard, it is evident that the integration of technology in the EFL classroom has afforded teachers new opportunities to create engaging and active learning environments for teaching all language skills, which is possible through the application of high-quality learning activities (Patra et al., 2022). It is worth mentioning that incorporating technology into the EFL classroom, particularly in remote learning conditions, adds a layer of engagement and interactivity that caters to the digital-native generation. As technology continues to evolve, educators have a growing array of tools at their disposal to foster engaging and active language-learning experiences for their students (Martins & Gresse, 2022).

2.2 EFL Reading Skills

Reading is a crucial skill that must not be underestimated in EFL teaching. According to Al-Jarrah and Ismail (2018), reading allows people to obtain information for different purposes, including educational. Certainly, reading imparts wisdom (Sadiku, 2015) and engages individuals in an interactive process of constructing meaning of knowledge (Shihab, 2011). As Samiei and Ebadi (2021) remarked, reading is a dynamic and demanding process that involves recognizing written symbols, comprehending the context underlying those symbols, and uncovering the connection between words and concepts. Likewise, Nation and Macalister (2020) affirmed that reading serves as a fount of learning and enjoyment and helps in the achievement of other academic objectives. In addition, Usman et al. (2019) affirmed that reading comprehension is important for success in the educational field; on the other hand, someone who does not like reading will fail to develop a reading habit and might have difficulties succeeding

academically. In fact, reading is considered the foundation of instruction in all areas of learning (Munzur, 2017). Furthermore, reading is an indispensable skill in the process of acquiring language, having a beneficial impact on learners' vocabulary and spelling proficiency (Harmer, 2007). As Munzur (2017) asserted, EFL students need to attain the necessary reading skills and strategies to not only deal with academic texts but also with their real-life reading.

2.3 Teaching EFL Reading Through Active Strategies

Teaching EFL reading skills involves the use of active learning strategies to engage students in the learning process. These strategies are actions that the readers use to enhance their process of text comprehension (Maarof & Yaacob, 2011). Strategies play a significant role in the reading process as they help readers engage more meaningfully and deeply with the information they read (Wilawan, 2022). Therefore, reading strategies are considered one of the factors that positively impacts the development of students' reading skills (Sun et al., 2021; Yapp et al., 2021). These strategies are divided into two groups – cognitive and metacognitive – both of which should be implemented together during the reading process to enhance understanding of the author's message (Kopcikova, 2019). One reading strategy is predicting, which is a pre-reading strategy that allows readers to use their previous knowledge or experience to guess what will happen next in a story (Block & Israel, 2005). Predicting is considered one of the most important strategies for improving students' reading comprehension skills, because it helps readers both understand and retain the content they have read, which strengthens their ability to remember and learn the information (Küçükoğlu, 2013). Another strategy is brainstorming, which, according to Sharafi-Nejad et al. (2016), is used by readers to generate ideas related to a specific topic in a certain time-lapse. This pre-reading strategy allows readers to use their background knowledge and information. In addition, brainstorming boosts active and spontaneous thinking towards developing novel opinions or points of view.

Asking questions is another strategy used by readers to find main ideas or details, learn new information, and clarify their doubts about what they have read (Harvey & Goudvis, 2007). According to Harvey and Goudvis (2007), asking questions during the reading process helps learners to focus their attention and to become more engaged with the content. Furthermore, this strategy allows learners to assess themselves and to improve their reading comprehension. Scanning can also be used as a reading strategy to help readers quickly look for and identify a specific piece of information in the passage, which implies that they do not need to read the whole text (Brown, 2003). Scanning is an effective strategy to improve students' reading skills, because it helps students to develop their competence to comprehend texts and improve their reading speed (Fauzi, 2018).

Another reading strategy is mapping, which allows readers to create their own visual representation of the passage by using figures, diagrams, images, or charts (Budiharso, 2014; Phantharakphong & Pothitha, 2014). Mapping helps students to think creatively, connect previous with new knowledge, use logic to relate ideas in the text, comprehend passage structure and its organization, and understand main ideas (Budiharso, 2014). Moreover, Budiharso (2014) asserted that this

effective strategy can be applied before or after the reading process takes place. In addition to the above strategies is summarizing, which, according to Khoshsima and Tiyyar (2014), allows students to synthesize the main information of a text. Summarizing information requires readers to analyze the whole text, differentiate between important and unimportant ideas, and construct a new coherent text that incorporates the most relevant facts from the source material. Farstrup and Samuels (2002) explained that summarizing is a process in which readers should minimize repetition and unnecessary information, use synonyms, and create sentences reflecting the main idea of the text.

2.4 Previous Studies

Rianto (2021) conducted a study that explored the utilization of metacognitive online reading strategies among 244 Indonesian EFL learners at Borneo Tarakan University before and during the Covid-19 pandemic. The study employed the Online Survey of Reading Strategies (OSORS). The results reveal that before the pandemic, support strategies were more frequently employed, whereas global strategies were less commonly used. However, during the pandemic, the support and problem-solving strategies became more prominent, while the use of global strategies remained minimal. The findings indicate that students exhibited moderate strategy usage before the pandemic, transitioning to high usage during the pandemic. This underscores the importance of EFL students possessing metacognitive awareness to enhance their comprehension of online reading materials, emphasizing the necessity for active engagement in employing reading strategies.

Setyowati et al. (2021) conducted a study to analyze students' perceptions regarding the implementation of the reading-to-write activity for essay composition within EFL contexts. The participants were university students in an English education study program. A case study design with three types of teaching scenarios (pre-activity, during activity, and post-activity) was implemented. To enhance the participants' reading skills, techniques such as silent reading activity, skimming, and scanning were employed. As for the writing section, techniques related to planning, drafting, revising, and publishing were implemented. The results show that the majority of the participants had positive perceptions regarding the different types of reading techniques used as part of the study. This is because they not only learned a lot about the course contents but also improved their technological skills.

Sun (2023) examined the application of differentiated instruction (DI) in the context of extensive reading within two programs. The study also explored how this approach was adapted to the online learning of foreign or second languages (L2) due to the global Covid-19 pandemic. This research was carried out through an exploratory design in which data were gathered for a period of six months based on interviews, a survey, reflective journals, and some documents related to the two reading programs. The results show that despite the online teaching mode, DI was not fully reflected by the participants, since they considered that reading during the lockdown period was easier than before the pandemic. Furthermore, a gap between higher and lower achieving students was found in

relation to engagement with extensive-reading activities due to some differences in self-regulation and inadequate parent supervision. It was also found that students missed an atmosphere of learning together, which is an essential aspect in terms of enhancing language skills.

Sucena et al. (2022) assessed the impact of a reading skills consolidating program (RSCP) on students during the Covid-19 pandemic and diagnosed their reading performance. The study involved 446 Second Grade students from 19 public schools located on the north coast of Portugal. The research was conducted over five weeks, during which a pre-test and post-test were administered (before and after the intervention, respectively) to assess students' reading skills. The test comprised thirty incomplete sentences, requiring participants to read and select one out of four provided alternatives to complete each sentence. The collected information was analyzed using SPSS version 26.0. Based on analysis, results show that the RSCP had a positive impact on learners because they significantly improved their reading skills.

In a qualitative action research study conducted by Gamboa-González (2017), an analysis of the reading comprehension processes of Sixth Grade students within an EFL context was carried out. This study involved the utilization of strategies rooted in the Interactive Model of Reading, with the aim of describing and analyzing these processes. The sample consisted of 20 learners (10 male and 10 female) who studied in a private high school in Bogota. They participated in the intervention for 6 months (16 sessions). Data were gathered through pre- and post-questionnaires, students' journals, artifacts, and field notes. The primary discoveries indicated that the exercises grounded in the Interactive Model of Reading supported learners in comprehending information and constructing significance by conjecturing about the reading material. In addition, the findings demonstrate that learners effectively engaged their schemata by utilizing prior knowledge and experiences, enabling them to make predictions and validate their conjectures.

3. Method

3.1 Research Design

A quantitative method using a quasi-experimental design was used in which a pre-test and post-test were administered before and after the intervention, respectively. According to Creswell (2014), quasi-experimental research is a type of approach in which the research subjects are not likely to be assigned randomly.

3.2 Setting and Participants

This study was carried out in 22 provinces in Ecuador, involving 273 students from public high schools as participants. Participants were aged between 12 and 14 years, with Spanish as their native language. The participants were enrolled in General Basic Education and received EFL classes five times a week. According to the Common European Framework of Reference for Languages (CEFR), their proficiency in English was assessed at A1 level.

3.3 Instruments

A pre-test was administered to determine the participants' reading comprehension skills before starting the reading workshops. It contained five sections, including multiple choice, true and false, and completion questions. This instrument was administered online through Zoom meetings.

A post-test was administered at the end of the reading workshops to measure the participants' progress in their reading comprehension skills. It had a similar structure as the pre-test and was also administered online through Zoom meetings.

Lastly, an online survey was administered to all the participants in the workshops to determine their perceptions regarding the effectiveness of the reading workshops. It contained a five-point Likert scale with 10 statements. The survey was administered through Zoom meetings.

All the instruments were piloted and validated with 32 students with similar age and proficiency level to the ones who participated in the reading workshops. The Cronbach alpha value of the pre- and post-tests was 0.74, which means that the instruments were reliable. The data from the pre- and post-tests were statistically analyzed, with a confidence level of 95% using the SPSS software.

3.4 Procedure

In the implementation stage of the intervention, the participants received an introduction to the reading workshop methodology. The teachers then conducted four reading workshops (each lasting one hour) based on active reading strategies such as predicting, confirming predictions, using graphic organizers, summarizing, brainstorming, and scanning. Inspirational stories were used as a resource for implementing these strategies. The workshops, in which some activities were completed by students using different ICTs and materials, were conducted online through Zoom meetings over a period of 20 weeks due to the restrictions provoked by the Covid-19 pandemic. The reading workshops were used to measure the students' progress in their reading comprehension skills.

In the last stage, a post-test was administered to determine the participants' reading comprehension level at the end of the intervention. It had a similar structure as the pre-test and was also administered online through Zoom meetings. Finally, a perceptions survey was administered to the students who participated in the reading workshops. The aim of the survey was to identify participants' opinions regarding the strategies used for enhancing their reading skills, and to determine the effectiveness of the intervention, that is, the active reading strategies, as perceived by the participants. All the instruments were piloted and validated with 32 students with similar age and proficiency level to the ones who participated in the reading workshops.

4. Results and Discussion

4.1 Effect of Using Active Reading Strategies in Virtual Settings During Remote Learning

The mean scores of the pre-test (7.05) and post-test (8.20) show that there was a significant statistical difference after the intervention (Table 1). This means that the use of active reading strategies in the workshops was effective to improve the participants' reading skills in virtual settings. These results are aligned with a study conducted by Par (2020), who found that the utilization of reading strategies allows EFL readers to effectively comprehend the content of reading materials and enhances their ability to understand different types of text in the target language. Similarly, Habók and Magyar (2018) stated that EFL learners who actively employ reading comprehension strategies can effectively comprehend and retain information from their reading, thereby augmenting their level of language proficiency.

Table 1: Pre- and post-test results

	Pre-test	Post-test
Mean	7.0568	8.2086
SD	1.523	1.2587
Mean difference	1.1518	
<i>t</i> -test computed value	23.0404	
<i>p</i> -value	$\alpha = 0.05$ level of significance	
Confidence interval	95% confidence interval	

* $p < .05$

4.2 Participants' Perceptions of Using Active Reading Strategies in Virtual Settings During Remote Learning

Table 2 presents the participants' rating of their perceptions of using active reading strategies in virtual settings during remote learning. These included strategies to complete outlines, predict information, and identify main ideas and supporting details.

As shown in Table 2, the participants' perceptions regarding the quality of active reading strategies used in the workshops were diverse. In this regard, 95.24% of the participants strongly agreed and agreed that the use of active reading strategies helped them improve their English reading skills during remote learning instruction. As for the reading strategies to enhance students' comprehension, 95.24% of the participants perceived that they were motivated because, among other factors, most of the reading strategies were effective (84.98%). Furthermore, 84.62% of the participants could complete an outline with the ideas of the text they read in English, and 91.94% indicated that they could predict information from texts by looking at images related to them. With respect to participants' ability to identify main (88.28%) and supporting ideas (84.62%) from passages in English, most of them had positive perceptions about these strategies to enhance their reading skills. Sun et al. (2018) asserted that active reading strategies help readers improve their comprehension levels, particularly

individuals who possess limited prior knowledge about the subject matter. Likewise, Banditvilai (2020) affirmed that active reading strategies are useful to improve students' reading comprehension skills because they help them understand, store, and retrieve the author's message. In addition, reading strategies allow learners to become actively involved as well as to know how to read effectively.

Furthermore, regarding the use of inspirational stories as a resource for implementing active reading strategies, 92.01% of the participants felt motivated to read in English. In addition, 93.77% agreed that inspirational stories helped them improve their reading level during remote learning instruction. Therefore, most of them (93.41%) were willing to continue reading them in the future.

Table 2: Participants' perceptions of using active reading strategies

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The reading strategies used in the workshops helped me improve my English reading skills	0	0	4.76%	53.49%	41.75%
The reading strategies provided by the teacher were motivating to enhance my comprehension	0	0	4.76%	45.42%	49.82%
The reading strategies were effective	0	0.73%	14.29%	46.15%	38.83%
It is easy to complete an outline with the ideas from the texts I read in English	0	0	15.38%	44.69%	39.93%
I can predict what the text is about by looking at images related to it	0	0	8.06%	45.05%	46.89%
I can identify the main idea of a reading passage	0	0	11.72%	44.32%	43.96%
I can identify the supporting ideas of a reading passage	0	0	15.38%	50.54%	34.08%
The inspirational stories were motivating to read	0	0	8.07%	43.22%	48.79%
The inspirational stories helped me improve my reading level	0	0.37%	5.86%	45.42%	48.35%
I would like to continue reading inspirational stories in English	0	0	6.59%	43.58%	49.83%

These results must imply that the participants enjoyed the reading workshops and enhanced their reading skills in the target language. In this respect, Lucarevschi (2016) affirmed that stories are motivating and useful to help learners enhance their language skills, since they offer comprehensible input and promote social interaction. In addition, Chamberlain et al. (2020) affirmed that stories can open opportunities for learners to talk about emotions, while enhancing their linguistic skills. Furthermore, Dania (2020) asserted that the use of stories promotes

students' reading habits and motivates them to read more. Similarly, Turan and Seker (2018) asserted that stories can increase learners' motivation in the language acquisition process.

5. Conclusions

The aim of this research was to determine the impact of using active reading strategies on students' learning in virtual settings during remote learning. The findings show that active reading strategies were effective to improve EFL students' reading skills in virtual settings during the Covid-19 pandemic. This is because they allowed them to understand the content of different types of text and to recall information from the reading passages, which enhances their language proficiency level and improves their reading experience. Outlining ideas, predicting information, and identifying main and supporting ideas were the most helpful active reading strategies according to the participants' perceptions. These strategies permitted participants to improve their reading speed, think creatively, and keep being engaged by working on interactive activities that enhanced their levels of understanding. Participants perceived that the use of active reading strategies through inspirational stories had a positive impact on their motivation, because they helped them to improve reading comprehension when analyzing different topics in English. Certainly, the effective implementation of active reading strategies and inspirational stories during remote learning instruction motivated participants to continue fostering their reading habits in the future. Finally, it seemed that some participants did not have good reading skills in their mother tongue and the target language.

6. Recommendations

This study assessed the effectiveness of using active reading strategies in remote learning workshops, considering only the pre-test and post-test performance of the participants and their perceptions towards the active reading strategies. Since the variables investigated in this study were quite limited, future research might be conducted to further prove the effectiveness of these strategies and resources in onsite settings. Different variables might be used, such as different age ranges and other variables. Nevertheless, proficiency level and innovative resources must be considered when applying the aforementioned strategies and materials.

Due to the circumstances of the Covid-19 pandemic, the reading workshops were carried out using Zoom meetings. This situation restricted some participants' internet connection, especially in rural areas. Moreover, they were exposed to several distractions, which affected their concentration levels during the reading activities. Furthermore, the active reading strategies can be further evaluated in a face-to-face setup.

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