Exploring the Effects of Tool-Assisted Paraphrasing Strategy Instruction on EFL Learners' Paraphrasing Performance

Ying-Hsueh Cheng

National Chung Cheng University, Taiwan // folyhc@alum.ccu.edu.tw

ABSTRACT: Many students who study English as a foreign language (EFL) often find it challenging to paraphrase while writing from source texts. Lacking such an ability can lead to different meanings as well as copying another person's ideas, words or work. However, little research has been done to integrate tool consultation to assist students in paraphrasing. To address this gap, this study explored whether guided tool consultation with paraphrasing strategy instruction can help students improve their overall paraphrasing performance. During an 18-week course, a class of students were trained to use three different e-tools to find synonyms: *Microsoft Word* thesaurus, *Oxford Living Dictionaries* synonyms (now called *Thesaurus.com*), and *Linggle*. Adopting a mixed-method approach, data sets included: pre-posttest drafts (summary writing), surveys, screen recordings, and interviews. The results showed significant differences between the pre- and post-tests. The majority of the lexical and phrasal paraphrases was suitable, while only a few were inaccurate. The students demonstrated the ability to consult the tools for changing synonyms and were able to apply taught strategies to restructure and restate the original sentences. Although students revealed different perceptions of the usefulness of the three tools for finding synonyms, they generally agreed that paraphrasing strategies combined with tool training were beneficial for learning. Pedagogical implications and research suggestions are provided based on the findings.

Keywords: EFL, Paraphrasing, Tool consultation, Second language writing, Instructional design

1. Introduction

Paraphrasing is one of the essential skills for successful academic writing (Shi, 2012). It is a cognitively demanding process since it involves both reading and writing skills when integrating source information into a new text (Hirvela & Du, 2013). Many English as a foreign language (EFL) writers often have difficulties using their own words to restate certain parts of the ideas from original texts (Li & Casanave, 2012). Their inappropriate use of source texts and evident instances of textual borrowing are frequently considered plagiarism by disciplinary professors and writing instructors (Pecorari & Shaw, 2012). To help these learners move beyond reliance on copying from source texts, many writing educators have provided pedagogical solutions such as explicit teaching, concept building, and paraphrasing strategies (e.g., using synonyms, changing the sentence structure) (Liu et al., 2016).

With the emergence of reference resources, a growing number of researchers have suggested that teachers provide learners with training on how to use these e-tools (Yoon, 2016). Research has shown the benefits of data-driven learning (DDL), "where learners examine naturally-occurring language and discover patterns on their own" (Boulton, 2010, p. 2). That is, through DDL, learners can utilize corpora or concordancers to check if a word is frequently used in a certain context by observing its patterns. However, some researchers have argued that DDL may be too demanding for EFL learners to understand the monolingual concordance lines (Mizumoto & Chujo, 2016). When learners write from source texts, they may turn to web resources (e.g., Google, dictionaries, or concordancers) to find synonymous words/phrases for replacement. Despite the increase in DDL studies, little research has been conducted to examine how EFL students consult concordancers when paraphrasing. To what extent DDL can be introduced to assist synonym finding during paraphrasing remains unclear. Addressing this gap, the current research aimed to introduce a variety of e-tools, including concordancers and non-concordancers, to assist EFL learners' synonym finding. Moreover, it integrated paraphrasing strategy instruction to help students improve their overall paraphrasing skills.

2. Literature review

2.1. EFL paraphrasing at the college level

Studies have reported that EFL students' difficulty in paraphrasing is mainly due to a lack of lexical and grammatical knowledge. Loh (2013) found that when Malaysian EFL students were asked to paraphrase two quotations, they made more linguistic errors (grammar, syntax, and lexis) than writing and paraphrasing conventions errors and semantic errors (content of message). Na et al. (2017) found that Vietnamese EFL students encountered difficulties understanding the source text, and had insufficient vocabulary to use when paraphrasing. These studies imply that there is room to help EFL writers tackle linguistic challenges while paraphrasing.

Factors regarding the paraphrasing difficulties among EFL students have also been discussed. First, students' paraphrasing ability may be related to their English proficiency levels. Liao and Tseng (2010) found that undergraduates copied more excerpts from source texts than graduate students did. Liou (2016) found that higher-proficiency students produced longer essays with better quality and advanced vocabulary. The students also showed better paraphrasing skills than the low-proficiency group. These studies suggest that the lower the students' proficiency levels are, the more likely they are to struggle when writing from source texts. Second, readability of source texts may influence EFL students' paraphrasing performance. Sun (2012) revealed that college students tended to do more substantial paraphrasing from the higher-readability texts than from the low-readability texts. This indicates that when providing paraphrasing training, teachers need to take readability of source texts into consideration. Last, limited instructional time and lack of explicit teaching may deter students from practicing paraphrasing (Marr, 2019). The general assumption is that students can learn how to paraphrase through online resources or from one-shot instructional practice. However, much has been underestimated in terms of the situations where the teachers are not there to help students. This is also the case in many educational contexts in Taiwan.

Some have suggested providing concept-building and strategy training since learning of paraphrasing requires a "host of interconnected subskills" (Hirvela & Du, 2013, p. 88). Developing an online writing tutorial system (DWright), Liu et al. (2018) found that Taiwanese EFL students' paraphrasing quality improved together with their plagiarism avoidance knowledge and citation abilities. Escudero et al. (2019) recommended teaching strategies such as learning synonyms, changing word order and word class, changing sentence structure, enhancing reading strategies, and developing lexical fluency to enhance students' paraphrasing skills. These studies indicate that step-by-step instruction is needed to help students cite the original source accurately and to reshape the original source using different grammar structures and vocabulary while maintaining the original meaning. Based on this, this study included the teaching of paraphrasing strategies prior to tool training.

2.2. e-tools for paraphrasing

Evaluation of automated paraphrasing tools and their paraphrasing quality has been discussed in the literature. Fitria (2021) suggested that automated paraphrasing tools (e.g., *QuillBot*) can be employed by EFL students to practice paraphrasing because they have various features such as allowing users to choose synonyms, change the word order, change the word form, and change between active and passive voice. However, Prentice and Kinden (2018) contended that these paraphrasing tools may not be suitable because they tend to rely on synonym substitution without changing the syntactical structure of the sentence and thus often produce inappropriate synonyms and incomprehensible texts. The application of word matching software such as *Turnitin* was also investigated. Kostka and Maliborska (2016) noted that the originality checker feature in *Turnitin* could identify whether the student only substituted synonyms without changing the structure of the original sentence. However, Rogerson and McCarthy (2017) cautioned that *Turnitin* only "detects some but not all cases of synonym replacement" (p. 6) and it also fails to identify the similarities between the original source materials and the output generated by automated paraphrasing tools. Prentice and Kinden (2018) compared the output of automated paraphrasing tools with those produced by *Google Translate* and found that paraphrasing tools tend to use inaccurate synonyms to replace accepted medical terminology, whereas *Google Translate* can preserve these terms intact. In addition to the aforementioned tools, Bailey and Withers (2018) investigated how L1 and L2 students utilized *Microsoft Word* default settings (i.e., spell check, grammar check, and synonym finder) and reported that synonym finder was the most frequently used tool during a paraphrasing task.

2.3. DDL for paraphrasing

In L2 writing research, learners' direct use of corpora or reference tools (i.e., concordancing) has been examined. This line of research is called *data-driven learning* (DDL). Some studies have shown that DDL can facilitate L2 writing due to its inductive nature and authentic linguistic examples that provide learners with opportunities to experience discovery learning (Lee & Lin, 2019). However, others have revealed that the abundant information presented in corpora/concordancers often make it difficult for learners to observe the patterns from the examples and to extract relevant information (Mueller & Jacobson, 2015). Thus far, DDL has been investigated with various learning purposes: collocations (Li, 2017), error correction (Cheng, 2021), paraphrasing (Han & Shin, 2017), and thesis writing (Crosthwaite et al., 2019). Of these, studies have shown positive effects on DDL for paraphrasing. For instance, Chen et al. (2015) developed a Chinese-English corpus-based paraphrasing system called *PREFER* (PREFabricated Expression Recognizer) and compared its effectiveness with a dictionary (*Longman English Dictionary Online*) and a thesaurus (*Theasarus.com*). Their findings showed that PREFER helped students make significant progress in the paraphrasing task, and most students felt satisfied with the paraphrases generated by PREFER. In another study, Han and Shin (2017) taught Korean EFL students how to use *Google* for paraphrasing with a focus on using quotation marks (" ") and a wildcard (*). After training, students found it easier to find synonyms, although they still had difficulty paraphrasing. These studies showed the potential of DDL for paraphrasing. They also indicated that a variety of e-tools, not only concordancers, can be introduced to learners so that they can conduct lexical searches and identify appropriate synonyms effectively while paraphrasing.

2.4. Research gaps

Based on the above, some gaps in the research can be found. First, empirical studies on tool consultation for paraphrasing are scant. Only a handful of studies were identified. However, they were conducted either as a one-shot task or within a short period of time. Except for Han and Shin's (2017) research, the studies did not provide step-by-step instructional procedures regarding using e-tools to find synonyms and then restating and restructuring the original sentences after tool consultation. Second, existing DDL studies tended to adopt only one tool to help students paraphrase. Few explored how different tools can complement each other and the fact that learners may have different learning styles during tool consultation (Cheng, 2021). For example, some learners might consider exploring the concordances too much work, while others favor DDL and tend to make more use of the corpus/concordancer (Bridle, 2019). The fact that DDL may not be suitable for all learners should be considered (Boulton, 2009).

To fill these gaps, this study aimed to integrate tool consultation with paraphrasing strategy instruction. In this paper, multiple e-tools were introduced to facilitate synonym finding in order to help learners with different needs to make effective lexical modifications. Also, paraphrasing strategies were provided to increase students' fluency of restating so that they could make syntactical changes successfully.

The rationales for choosing the e-tools include: (1) They must allow users to find synonyms with abundant search results; (2) one of them must be a concordancer while the others can be non-concordancers suggested by previous studies or based on learners' preferences; (3) they should be freely accessible and easy to use without requiring log-in. Based on these criteria, the current research introduced three different e-tools (i.e., a concordancer, a word processor, and a dictionary): (1) *Linggle (Synonyms),* (2) *Microsoft Word* thesaurus*,* and (3) *Oxford Living Dictionaries (Synonyms)*. Specific reasons regarding why these tools were selected are explained as follows.

Linggle (Synonyms) (hereafter Linggle) was introduced because it contains naturally-occurring language data for learners who prefer DDL to explore concordance lines and discover patterns on their own. Linggle was developed by National Tsing Hua University in Taiwan (Boisson et al., 2013). It retrieves lexical bundles in response to a given query which can contain synonyms, keywords, wildcards, and wild parts of speech. By typing in a wave symbol (~) in front of a word, results with synonymous words will show up in a list for users to select. More crucially, it provides frequency counts of a word and allows multi-word input. These features were noted in prior studies (Lai & Chang, 2020; Zhu, 2015) and thus were considered useful for the purpose of this study.

Microsoft Word Thesaurus (hereafter MW) was adopted because students can simply click their mouse on the word whose synonyms they wish to search for and select the most suitable one by clicking on the drop-down menu. MW allows them to compare multiple options of synonyms without having to open a webpage for further searches. These features were noted by Bailey and Withers (2018) who found that students frequently consulted MW synonym finders in a paraphrasing task. Unlike Linggle, MW does not consist of concordances and nor does it provide words in context. It only presents a list of synonymous suggestions which can be considered convenient for learners who do not like DDL and prefer to view synonyms through a list.

Oxford Living Dictionaries (Synonyms) (hereafter OLD) was selected because learners can type not only a word but also a phrase to find its synonyms. Also, it offers definitions and sentences to help learners identify suitable synonyms. For learners who prefer consulting online dictionaries, OLD should be considered user-friendly. Similar to MW, OLD does not require users to observe the concordance lines as is required in Linggle. Differing from MW, OLD provides multiple example sentences which allow learners to differentiate how a certain word is used in different contexts, and thus helps them to identify suitable synonyms for substitution. (Note that OLD has undergone drastic change and has been called *Dictionary.com* since 2019. The current interface is different from the one used in this study. *Thesaurus.com* is the database used for finding synonyms.)

In sum, three tools were included in this study to allow learners to cross-check the search results. These tools have varying functions that are considered complementary and should be sufficient for students to query, compare, and identify appropriate synonyms for substitution and ultimately make syntactical changes during paraphrasing.

2.5. Research questions

The present study was guided by the following research questions:
- What are the effects of tool-assisted paraphrasing strategy instruction on EFL students' paraphrasing performance?
- How do the students use the three tools during paraphrasing?
- What are the students' perceptions of the tool-assisted paraphrasing strategy instruction?

3. Methodology

3.1. Settings and participants

This study was conducted in an intermediate-level EFL writing class, which is required for all English-major students studying at the university in southern Taiwan. Adopting a single-group design, an intact class of 21 students in their second year of study was invited to participate in this research. These students had taken two required writing courses in their first year of study. According to a pre-course survey, all the participants reported that they had web consultation experience during L2 writing but had little experience of tool consultation or concordancing for paraphrasing.

3.2. Instructional procedures

In this study, two stages of practices were included: (1) paraphrasing strategies, and (2) tool consultation. In the first stage, *paraphrasing strategies*, students were taught about the concepts of paraphrasing, summarizing, citing, and quoting. To help the students build these concepts, they were guided to do exercises in their textbook (Unit 3 of *Great Writing 5* by Folse & Pugh, 2015). The students learned to distinguish the best paraphrasing, those that were too similar, and those that had different meanings or wrong information. Then, how paraphrasing is different from summarizing was discussed. Moreover, handouts extracted from *Engaging Writing 2* (Fitzpatrick, 2011) were provided with the focus on seven paraphrasing strategies. These included: (1) changing the synonym, (2) changing the form of words, (3) changing the subject of the sentence, (4) changing the connectors, (5) changing parts of the sentence, (6) combining or dividing sentences, and (7) omitting unnecessary words. Exercises were offered for students to discuss and compare strategies used in different paraphrases. These seven strategies were later employed to guide the students in the tool training sessions so as to remind them to make not only lexical but also syntactical changes during paraphrasing. To assist students in practicing the first strategy (i.e., changing the synonym), three tools were introduced. See below for details.

During the second stage (i.e., *tool consultation*), three tool training sessions and a combined review session of the three tools were offered to teach students how to use the tools for finding synonyms. Each session took place for about 90 minutes in a computer lab. One trained assistant was present to provide immediate help. See Figures 1 to 3 for the three tools. The students were first guided to use Microsoft Word thesaurus (Figure 1), and then Oxford Living Dictionaries (Figure 2) for finding synonyms. Following these, they then experienced DDL with the use of Linggle (Synonyms) (Figure 3). When they utilized Linggle for finding synonyms, they were told to examine authentic language examples to identify appropriate synonyms.
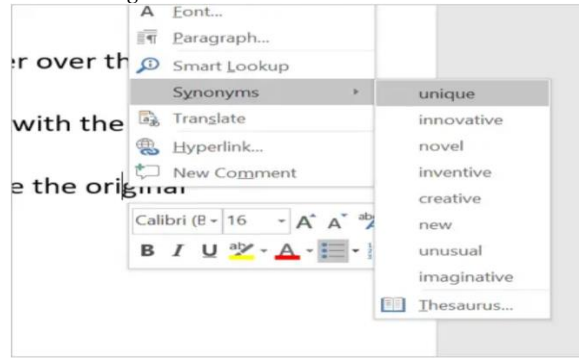
Figure 1. Microsoft Word Thesaurus

Figure 2. Oxford Living Dictionaries (synonyms)

Figure 3. Linggle (synonyms)

Table 1. Instructional design

Weeks	Content	Tasks
1~3	Course orientation & Process essay	Essay writing
4~6	What is Paraphrasing and how?	Concept building
7~9	Introducing 7 paraphrasing strategies: Quoting, citing sources, summarizing	Paraphrasing strategies
10	Tool training 1: *Microsoft Word Thesaurus* (Worksheet 1)	Tool consultation for
12	Tool training 2: *Oxford Living Dictionaries-Synonyms* (Worksheet 2)	finding synonyms
14	Tool training 3: *Linggle-Synonyms* (Worksheet 3)	(students were reminded
16	Combined review of 3 tools (Worksheet 4)	to practice using paraphrasing strategies)

Table 1 shows the content and tasks included in the 2-stage instructional procedures. Of note is that process essay writing was taught at the beginning of the semester. The students were asked to write about a hunting process of an animal. It was assumed that the learners would need to do some research on the Internet and some might do

verbatim copying for composing their essay drafts. To help students increase their paraphrasing awareness, the course was designed as presented in Table 1.

Figure 4. Three-step instructions in worksheets 1 and 2

1. Decide what words you want to search for synonyms. Highlight the words you searched for synonyms.
2. Write down equivalent synonyms you found (one synonym for each highlighted word).
3. Restate and restructure the sentence. (When you change the sentence structure, try to use the 7 strategies[1] you have learned in the handout of *Engaging Writing 2*, pp. 119-201).

Example   [Step 1]

Original sentence: *Selling* a *product* successfully in another country often *requires* changes in the product.   [Step 2]

Synonyms found: *Exporting / merchandise / needs*

Sentence re-structured: Oftentimes, changes are needed when a company wants to succeed in exporting merchandise in another country. [Step 3]

Figure 5. Four-step instructions in worksheets 3 and 4

1. Highlight the words you searched for synonyms. (You can decide what words you want to search for synonyms.)
2. Write down the suitable synonym for replacing the original word (one synonym for each highlighted word).
3. Restate and restructure the sentence. (When you change the sentence structure, try to use the 7 strategies[1] you have learned in the handout of *Engaging Writing 2*, pp. 119-201).
4. Include the author(s)' names and year of publication in the restructured sentence

Example

Step 1: Highlight the words you searched

It is quite obvious that healthy people are happier than unhealthy people. What is now becoming increasingly evident through study is that the reverse is also true: happy people are healthier than unhappy people. It appears that happiness, which simply means having happy thoughts most of the time, causes biochemical changes in the brain that in turn have profoundly beneficial effects on the body's physiology.
Chopra, Deepak. *Creating Health: How to Wake Up the Body's Intelligence*. Boston: Houghton Mifflin, 1987. (Original text from Engaging Writing, p. 208)

Step 2: Synonyms searched and found:

Synonyms searched	Tool used	Synonyms found
it ~appears that	Linggle	reveals
happy ~thoughts	Linggle	thinking
have ~profoundly beneficial	Linggle	enormously
have profoundly ~beneficial	Linggle	positive

Step 3: Restate and restructure the sentences:

we all recognize that people with good health are happier than those whose health is not as good. Research is revealing that the opposite is true as well: Happy individuals enjoy better health than unhappy individuals. Happiness, or the quality of thinking positively most of the time, probably stimulates biochemical reactions in the brain that protect one's physical health.

Step 4: Paraphrased texts and included author's name and year of publication:

Deepak Chopra (1987) wrote that ….

In total, four worksheets were created for the three tool training sessions and a combined review session. The development of the training worksheets was based on Han and Shin's (2017) directions for paraphrasing. In the

first and second worksheets for MW and OLD, only single sentences were provided for practicing searching for synonyms when paraphrasing. From the third to the fourth tool training worksheets (i.e., Linggle and combined review of the three tools), however, paragraphs consisting of two to three sentences were provided to enhance students' fluency of rewriting.

In the first two training worksheets, three-step instructions were introduced: (1) highlight the words you searched for, (2) write down synonyms found, and (3) restate and restructure the sentence (see Figure 4). In the last two worksheets, the students not only had to follow the above three-step instructions, but also needed to include one more step, i.e., citing the name(s) of author(s) and year of publication of the paraphrased text (see Figure 5).

3.3. Data collection

To understand whether and how these three tools influenced the students' paraphrasing performance and their perceptions of using these tools, both quantitative and qualitative data were collected. These included: (1) pre- and post-test drafts, (2) surveys completed after the four tool training sessions, (3) screen recordings from the post-test, and (4) interviews conducted near the end of the course.

3.3.1. Pre- and posttests

In the pre- and posttests, summary writing tasks were administered. Summary writing was adopted for two reasons. First, a summary task requires students to focus on the main ideas discussed in one source text rather than including a personal opinion like writing an argument. Thus, it is more likely to "elicit paraphrases of specific excerpts of the source text than other writing tasks" (Keck, 2006, p. 264). Moreover, summary writing was chosen since it is close to the actual practice where EFL students read multiple source texts and paraphrase sentences when writing their assignments. Although students sometimes read Chinese sources, they tend to locate more English than Chinese source texts. In light of these considerations, summary writing was thus adopted.

Following the summary writing tasks described in Keck's study (2014), one source text published by *Time Magazine* in 2015 was selected (number of words: 667; title: *Can Brain Games Keep My Mind Young?*). That means, the same source text (an argumentative text) was used in the pre- and posttests to avoid differences among text length, topic familiarity, and writing outcomes (Zhang, 2013). Being mindful of the impact of text difficulty and topical familiarity on the production of paraphrasing (Sun, 2012), two methods were employed to ensure text readability: a readability checker (Flesch Reading Ease; score: 57.7) and consultation with one instructor from the same department. Based on the evaluation, the text was considered suitable for the participants in terms of its topic, content, and comprehensibility.

During the pre- and posttests, the students were given 45 minutes to read and write a one-paragraph summary (with a word limit of 200). The students were guided with these instructions in their pre- and post-tests: "Explain the most important main ideas (or arguments) of the essay in your own words" and "do not include your personal opinion" (Keck, 2014, p. 8). Of note is that during the posttest, participants were encouraged to use the three tools for finding synonyms: (1) *Microsoft WORD Thesaurus*, (2) *Oxford Living Dictionary (synonyms)*, and (3) *Linggle (~)*. To avoid students' familiarity with the same source text, the pre-test was provided in Week 1 while the post-test was carried out in Week 17. Moreover, no indication was made regarding the post-test to prevent learners from researching the source text online.

3.3.2. Surveys

A total of four online surveys were distributed in this study. After each tool training session, the students were required to fill out one survey. The first three surveys were related to the three respective tool training sessions, while the last survey was used to gather students' perceptions of the combined tool review session. The development of the first three surveys was based on Chen et al.'s (2015) study, whereas the last survey was newly created. In these surveys, both closed-ended and open-ended items were included. Chen et al.'s (2015) survey items were adapted because the researchers developed a paraphrase tool to improve Taiwanese EFL college students' writing skills, which was similar to the purpose of the current study. By doing so, it could help us understand Taiwanese EFL learners' perceptions of using tools for paraphrasing.

3.3.3. Screen recordings

The screen capture software called *scre.io* (https://scre.io/) was employed. It is easy to use and freely available. Users can choose to record online or download it for use. When the recording is completed, the user needs to download a video (.webm). In this study, before the posttest began, the students were instructed to do a test recording for a few minutes to learn to download their own video recordings.

3.3.4. Interviews

All students were invited to take part in a 15-minute interview after the completion of the post-test. The participants could use either Chinese or English during the interviews. The interviews were audio-recorded and later transcribed for analysis and comparison. The interview questions included students' perceptions of the tools, satisfaction with the training sessions, and experiences of using these tools for paraphrasing practice.

3.4. Data analysis

3.4.1. Test data

To examine whether students' paraphrasing performance was improved through tool consultation, the two summary writing drafts in the pre- and posttests were constantly compared to identify the changes and evaluate the quality of paraphrasing. To ensure high inter-coder reliability, two experienced EFL writing teachers were asked to score the students' summary writing drafts based on the scoring rubric developed by Yamanishi et al. (2019). This scoring rubric was chosen because it included two paraphrasing dimensions: *paraphrase (quantity),* and *paraphrase (quality).* It also contained three other dimensions for assessing summary writing: *content, language use*, and *overall*. According to Yamanishi et al. (2019), this five-dimensional rubric featured analytic and holistic assessments which were based on the teacher raters' evaluation and comparison with the rubric developed by the Educational Testing Service (ETS). This rubric was considered appropriate for evaluating EFL students' paraphrasing since it could be used to assess L2 summaries with a focus on paraphrasing skills. In terms of the scores, each dimension ranged from 1 to 4 points (*poor* to *very good*), with a total score of 20. For convenience of analysis, all the points were converted to 100. Specific descriptions were provided for each dimension (see the Appendix).

An orientation was offered for the two raters to ensure that they understood each specific description. After the rating process, disagreements were resolved through multiple discussions. To answer research question 1, descriptive statistics together with a paired sample *t* test were computed to understand whether the students made improvement in the posttest.

3.4.2. Survey data

Pre- and post-surveys were tabulated first. For the analysis of the Likert-type data, the mean scores and *t* test of the students' responses were computed relative to the 5-point scale. The internal reliability of the instrument was also checked using Cronbach's alpha. Other questions such as multiple-choice questions or open-ended questions were computed separately for comparisons of the Likert-type data.

3.4.3. Screen recordings

Since one of the purposes of the study was to understand the type of information the students looked for when using the tools, screen recordings of students' tool consultation processes were coded and triangulated with their summary writing drafts in the pre- and posttests.

3.4.4. Interview data

Once all the interviews were fully transcribed, notes and indexes were made in the margins. The interviews explored the reasons underlying students' perceptions of tool consultation and their self-assessments of the value of tool consultation in paraphrasing. Constant comparisons among the three tools were also made.

4. Findings and discussion

4.1. What are the effects of tool-assisted paraphrasing strategy instruction on EFL students' paraphrasing performance?

The participants' pre- and post-test of summary writing drafts were analyzed to answer this question. The overall average mean scores in the posttest ($M = 14.74$) were higher than those in the pre-test ($M = 11.86$). In other words, most of the students made progress in their paraphrasing abilities with an average of 2.88 gained in the post-test.

A paired sample t test showed a significant difference between the pre- and post-test scores with the use of the three tools for paraphrasing. Table 2 shows the mean scores and standard deviation of students' writing performance in the pretest and posttest. (The minimum point value in each dimension is 1; the maximum point value is 4 (* $p < .05$, ** $p < .01$.) Results of average mean scores revealed that the students progressed in the posttest across the five dimensions of summary writing performance: content (+0.52), paraphrase (quantity) (+0.64), paraphrase (quality) (+0.83), language use (+0.48), and overall (+0.43). The results of the paired sample t test were significant across these five dimensions: content ($t = -3.13$, $p < .01$), paraphrase (quantity) ($t = -4.37$, $p < .01$), paraphrase (quality) ($t = -5.80$, $p < .01$), language use ($t = -4.48$, $p < .01$), and overall ($t = -2.76$, $p < .05$). In sum, 19 of the 21 students made progress in the post-test. Among them, S6 and S8 made the most progress with 7 points on average. This indicates that with the use of the three e-tools plus strategy instruction, students made significant progress in paraphrasing. These findings lend support to the assertion that tool consultation positively affected students' searches for synonyms and increased their paraphrasing performance, which were also reported in prior studies (Bailey & Withers, 2018; Chen et al., 2015). Moreover, the results showed that teaching paraphrasing strategies such as using synonyms, changing word order, and changing sentence structure could enhance students' paraphrasing performance as was noted by Escudero et al. (2019). Altogether, the findings highlight the possibility of offering guided tool consultation with strategy instruction for effective paraphrasing. By consulting e-tools for synonym searches, students can take the first step to make lexical substitutions rather than relying on copying from the source text. Through strategy instruction, they can be guided to practice a "host of interconnected subskills" (Hirvela & Du, 2013, p. 88) so as to increase their overall paraphrasing ability.

Table 2. Pre- and post-test results of summary writing ($N = 21$)

Dimensions	Test	Mean	*SD*	*df*	*t*	Sig. (2-tailed)
Content	Pre-test	2.40	0.63	20	-3.13	.005**
	Post-test	2.92	0.58	20		
Paraphrase (Quantity)	Pre-test	2.50	0.71	20	-4.37	.000**
	Post-test	3.14	0.51	20		
Paraphrase (Quality)	Pre-test	2.36	0.83	20	-5.80	.000**
	Post-test	3.19	0.64	20		
Language Use	Pre-test	2.40	0.61	20	-4.48	.000**
	Post-test	2.88	0.43	20		
Overall	Pre-test	2.19	0.61	20	-2.76	.012*
	Post-test	2.62	0.53	20		

Note. *$p < .05$; **$p < .01$.

To gain further information, S8, Cathy (pseudonym), was chosen as a representative case based on her scores, frequency of consulting the tools, and paraphrasing outcomes. As shown in Table 3, her scores increased in all five dimensions, with the highest scores in the dimension of content, followed by the dimension of paraphrase (quantity).

Table 3. Cathy's scores in the pretest and posttest

Dimensions	Content	Paraphrase (quantity)	Paraphrase (quality)	Language use	Overall	Total scores
Pretest	2	1	2	2	2	9
Posttest	4	3	3	3	3	16

As can be seen in Figure 6 as shown below, Cathy demonstrated improved paraphrasing skills in her posttest with longer text and better paraphrasing quality. Analysis of screen recordings also revealed that Cathy revisited the original source text, highlighted some words, pasted chunks of source text information, and then changed the original sentences. Cathy consulted all the three introduced tools (a total of 14 times), and mainly used MW for most of the searches (13 times). She was able to search and replace most of the selected words with synonyms. She

substituted 11 words based on MW search results (see the blue highlights in Figure 6). She made changes not only at the lexical level but also at the syntactical level. She adopted strategies taught in class for making syntactical changes. As shown in the second example in Table 4, the original sentence in the source text, "*There's just no solid evidence*" was changed into "*no solid proof supports that brain games can…*" (Strategy: changing the subject of the sentence). In instance No. 6, she combined two sentences and produced a new paraphrased sentence without changing the original meaning. The original sentence, "*…a product that helps people improve cognitive abilities…online-based brain training can improve thinking*" was changed to "*brain games advance people's mental abilities and thinking*" (Strategies: sentence combining; omitting unnecessary words). Taken together, from these examples, we could learn that Cathy was able to identify appropriate synonyms based on tool consultation, apply the strategies to restructure the sentence, and produce a comprehensible text different from the original text.

Figure 6. Cathy's drafts in pre- and post-tests
(Original source text: https://time.com/3706689/can-brain-games-keep-my-mind-young/)

Table 4. Cathy's MW consultation records in the posttest

	Original sentence	Paraphrased sentence in the posttest
1.	***sharpen*** your memory and slow the inexorable decline of your mental functions.	brain games ***improve*** our memories
2.	There's just no solid ***evidence***.	no solid ***proof*** supports that brain games can…
3.	…sharpen your memory and slow the inexorable decline of your mental ***functions***	brain games can improv[e] aspects of mental ***capability***
4.	"It has become more ***capable*** of doing exactly the tasks it was practicing."	brain game players' brain become more ***skilled*** of practicing just the tasks
5.	It has become more capable of doing ***exactly*** the tasks it was practicing.	brain game players' brain become more skilled of practicing ***just*** the tasks
6.	…a product that helps people ***improve*** cognitive abilities…online-based brain training can ***improve*** thinking.	brain games ***advance*** people's mental abilities and thinking
7.	…a product that helps people improve ***cognitive*** abilities…online-based brain training can improve thinking.	brain games advance people's ***mental*** abilities and thinking
8.	***More than*** 70 prominent brain scientists	***Over*** 70 important brain scientists
9.	***prominent*** brain scientists	Over 70 ***important*** brain scientists
10.	brain games do have the ***benefit*** of being fun	the ***advantage*** of entertainment of brain games was admitted
11.	The ***issue*** most scientists have with people playing the games frequently is the opportunity cost	Opportunity cost of playing brain games is the ***topic*** discussed by most scientists

An analysis of Cathy's paraphrasing outcomes revealed her recursive practice of reading, searching, and revising which demonstrated her ability to apply paraphrasing strategies with tool consultation. Although some changes remained at the lexical level by substituting synonyms, Cathy attempted to make syntactical changes by adopting strategies such as combining sentences, changing the subject, and omitting unnecessary words. This finding indicates that by providing strategy-based tool consultation training, students can learn to paraphrase not only at the lexical level but also at the syntactical level, which has rarely been discussed in previous studies related to tool consultation for paraphrasing.

4.2 How do the students use the three tools while paraphrasing?

To answer this research question, four sets of data were analyzed: the students' posttest summary writing drafts, screen recordings, surveys, and interviews. Analysis of the screen recordings showed that the total number of times the students used the three tools was: MW ($N = 72$), OLD ($N = 60$), and Linggle ($N = 13$). This indicates that most students tended to use MW and OLD, while few used Linggle for finding synonyms. Moreover, it was found that the majority ($N = 15$) used more than one tool to search for the synonyms they found. The students seemed to start with one tool to search for synonyms and if they could not locate suitable synonyms, they would continue to use other tools for better search results.

Regarding the use of MW thesaurus, many students noted in the posttest survey and the interviews that MW was convenient because they did not have to open a webpage to find synonyms. They could simply search for synonyms by clicking on words in the source text. Four students also mentioned that they used the built-in thesaurus on MW to find more synonyms for replacement since it provides more options for them to choose. As for those who used OLD frequently, they indicated that OLD offers synonyms based on different meanings so that they were able to select the synonyms they wanted. Although few students used Linggle in the posttest, three students commented that Linggle was easy to use since it provides frequency of word usage and its interface is simple and clean, making it efficient to scroll up and down for the search results.

Among the total number of times ($N = 145$) the students used the tools for searching for synonyms, the majority of the lexical and phrasal paraphrases were suitable ($N = 135$) with only 10 examples identified as unsuitable and inaccurate. This could mean that the participants were fairly discriminating when choosing synonyms. Table 5 presents successful examples from participants' drafts using the three tools.

Table 5. Successful examples of using the three tools

Tool used	Frequency	Original word	Replaced word
MW	**67** out of 72 (93%)	**sharpen** your memory	improve
		benefits of brain games	advantages
		concrete proof	tangible
		improve thinking	advance
		a **worthwhile** way	valuable
		the industry has **grown**	expanded
		cognitive **ability**	capability
		our **intention** was to…	purpose
		convince them of their **merit**	value
OLD	**58** out of 60 (98%)	were frequently **exaggerated**	overstated
		prominent brain scientists	leading
		the primary **investigator**	researcher
		the **primary** investigator	chief
		no **solid** evidence	dependable
		improve cognitive abilities	enhance
		the **issue** most scientists have…	matter
		argued that claims on …	stated
		claims … were **misleading**	deceptive
Linggle	**10** out of 13 (77%)	**sharpen** your memory	improve
		no **solid** evidence	strong

While the above showed suitable replacement through the use of the three tools, results of unsuitable replacements (*N* = 10) are shown below (see Table 6).

Table 6. Unsuccessful examples with the three tools

Tool used	Frequency	Original word	Unsuitable replacement
MW	**5** out of 72 (6.9%)	Brain games can only make people …because they lack **transfer**.	transmission
		for people of any **age**	oldness
		unstoppable **decline** of your mental functions will be much slower	failure
		sharpen your memory	refine
		According to a **report** from…	convey
OLD	**2** out of 60 (3.3%)	slow the **inexorable** decline of your mental functions	relentless
		in a way that **necessarily** slows aging	automatically
Linggle	**3** out of 13 (23.1%)	**slow** aging	accelerate
		cognitive functions	theological
		More than 70 brain scientists…	Better than

It was found that some words provided by MW seemed unable to ensure good quality of paraphrasing (*N* = 5). For example, *transmission* for *transfer*, *oldness* for *age*, and *failure* for *decline*. Moreover, *refine* was not suitable for replacing *sharpen,* and *convey* (as a verb) is not an accurate replacement for *report* (as a noun). Noticing these errors, the participants mentioned in the interviews that although MW provided numerous synonyms, they often struggled to identify appropriate results. Similarly, in terms of the use of OLD, we also observed two instances where synonym selection appeared to be undiscriminating and unnatural (i.e., *relentless* for *inexorable*; *automatically* for *necessarily*). The difference in the meanings of these words is subtle, and so it could be difficult for participants to differentiate. Additional efforts were needed by either consulting other tools or relying on personal knowledge to avoid unsuitable replacement. Regarding the use of Linggle, three search results seemed misleading (i.e., *accelerate* for *slow*; *theological* for *cognitive*; *better than* for *more than*), causing the participants to choose the wrong words. In one instance, S10 failed to select a suitable word due to the misleading results provided by Linggle. She began with OLD and learned the synonymous word, *discernment*. She later searched *discernment* with Linggle, but ended up selecting *theological*, which was listed as the top search result. Mistakenly, she replaced the phrase, *cognitive functions* with *theological functions*. Altogether, these instances indicate that learners need to discriminate between suitable and unsuitable synonyms so that the replacement can fit the context of the sentences.

To answer the second research question, the above findings revealed that a few of the synonymous replacements were inaccurate and unsuitable, indicating the issue of synonym context when students explore with the tools (Bailey & Withers, 2018). Although these inappropriate collocations only occurred for 10 out of 145 synonyms, it may be useful for students to explore the unsuccessful examples in Table 6 and discuss why they do not work as appropriate synonyms. Unlike native English speakers, EFL students are often not able to discard inappropriate suggestions automatically based on intuition. Through finding and comparing synonyms with different tools, they can learn to be selective and critical.

Moreover, analysis of screen recordings showed that MW was used most frequently, followed by OLD, and then Linggle. MW was commonly used because the participants could simply right-click on a word in the source text and did not have to open a new webpage to find synonyms. This was also found in the study conducted by Bailey and Withers (2018). In their study, only one student used the MW built-in thesaurus, while the rest of the students tended to right-click on the word to access the synonym finder. In the current study, however, five students used the built-in thesaurus when they could not retrieve suitable results after the right-click, while the rest of the participants only accessed the synonym finders with the right-click. This indicates individual differences regarding the functions they preferred to use as well as how they searched, consistent with previous studies (e.g., Cheng, 2021). Bridle (2019) investigated corpus use and learner types, and found that some learners ("reflectors") might consider exploring the concordances too much work, while others ("pragmatists") tended to make more use of the tool. Liou (2019) indicated that learners' writing development may be influenced by individual and contextual factors. If writing instructors can take these into consideration, students' motivation for tool consultation can be increased and their anxiety can be reduced.

The synonym function of OLD was considered helpful since it provides example sentences for users to locate the most appropriate synonyms close to the context. EFL students' preferences for online dictionaries were also discussed (Lai & Chen, 2015). In this study, although most students acknowledged the benefits of the OLD synonym finder, some mentioned that OLD did not provide bilingual definitions and thus they needed to spend time browsing the example sentences. These students also noted that they would turn to Cambridge Dictionary since it offers both English-Chinese and Chinese-English definitions.

Linggle was used least frequently (N = 13) among the three tools. In this study, some participants noted that Linggle was useful since it provides percentage of usage and it allows users to search for synonyms in multiple-word phrases (e.g., *it ~appears that*; *have ~profoundly beneficial*). As a concordancer, Linggle provides naturally-occurring language which may benefit learners who favor DDL. However, in this study, the participants who used Linggle did not indicate difficulties of exploring monolingual concordances. Instead, they noted that they found it inconvenient to add the wave (~) symbol in the search queries, and indicated that the search results were oftentimes either irrelevant (e.g., *theological* for *cognitive*) or unsuitable (e.g., *accelerate* for *slow*) which thus discouraged them from using it. Based on this result, it is difficult to conclude whether DDL should be recommended for teaching paraphrasing. Although Linggle was less consulted by the students, it could provide synonym searches just like the other two tools could offer. To make Linggle a useful tool, perhaps more guidance is needed so that more relevant search results can be generated.

4.3. Perceptions of the tool-assisted paraphrasing strategy instruction

Overall, the students felt positive about the course design which combined tool consultation and paraphrasing strategies for assisting paraphrasing. See Table 7. (Note for the item response scale: 1: strongly disagree; 2: disagree; 3: somewhat disagree; 4: agree; 5: strongly agree.)

Table 7. Survey responses regarding the course design

Item	Mean	*SD*
1. After receiving the paraphrasing tool training, I feel more confident that I can search for synonyms to replace the words/phrases in the source text.	4.1	1.02
2. The paraphrasing strategies combined with the 3-tool training increased my paraphrasing ability.	4.0	0.97
3. In the future, when I paraphrase, I will apply the paraphrasing strategies and the 3 tools introduced in this course to vary my expressions in writing.	4.1	0.99

Table 8. Tool training 1 survey results (MW)

Items	Mean	*SD*
1. The training helped me to find synonyms and vary my expressions.	4.3	0.50
2. The training time was enough to learn "Microsoft WORD Thesaurus."	4.5	0.71
3. I will try to use "Microsoft WORD Thesaurus" to vary my expressions in the future.	4.6	0.57
4. Overall, I learned a lot from today's training.	4.6	0.60

Table 9. Tool training 2 survey results (OLD)

Items	Mean	*SD*
1. I can use "Oxford Living Dictionary-Synonyms" to find synonyms and vary expressions.	4.3	0.61
2. The training time was enough to learn "Oxford Living Dictionary-Synonyms."	4.1	0.80
3. I will try to use "Oxford Living Dictionary-Synonyms" to vary my expressions in the future.	4.3	0.85
4. Overall, I learned a lot from today's training.	4.3	0.60

Table 10. Tool training 3 survey results (Linggle)

Items	Mean	*SD*
1. I can use "Linggle" to find synonyms and vary expressions.	3.2	1.26
2. The training time was enough to learn "Linggle."	3.8	0.94
3. I will try to use "Linggle" to vary my expressions in the future.	3.1	1.22
4. Overall, I learned a lot from today's training.	3.6	0.96

The results also showed that more students seemed to favor MW and OLD, while some were uncertain about the potential of using Linggle for finding synonyms. See Tables 8 to 10. (Note for the item response scale: 1: strongly disagree; 2: disagree; 3: somewhat disagree; 4: agree; 5: strongly agree.). In spite of that, most students agreed that

the tool training sessions were helpful and the training time was sufficient for them to learn how to use these tools for finding synonyms. Many reported that they would try to use these tools to vary their expressions in the future.

To gain insights into students' perceptions of the three tools, their responses to the open-ended survey items were further analyzed. The students mentioned how they could benefit from using these tools for synonym searches because of the distinct features and functions provided by these tools. They also indicated drawbacks which hindered them from effective consultation. Despite that, most students considered it beneficial to learn to use these tools for finding synonyms so that they could have options when they needed to locate more suitable search results. See Table 11.

Table 11. Perceived benefits and drawbacks of the three tools

Tool	Benefits	Drawbacks
MW	Microsoft WORD thesaurus function is the most useful tool for me because it can be searched on the Word page directly, so I don't have to switch to other web pages. And most of the vocabulary I looked for so far was useful and correct. (S4) It's the easiest one to operate. (S8) Microsoft WORD synonyms is built in WORD so I don't have to open a new page. (S15)	Too many options; don't know how to choose the right synonyms. (S1) Because Microsoft thesaurus can only provide the words but no examples, we need to think about whether we can use it to replace the original one or not. (S5)
OLD	The synonyms are more accurate. (S16) Oxford shows not only the synonyms but also the definition or explanation, and more importantly, it provides us with some examples so that we can clearly understand whether that's the word we're looking for. (S5) OLD provides different synonyms of different meanings. (S15)	Searching on OLD was a little bit distracting today. The server might not be able to serve so many people at one time. (S3)
Linggle	The steps are simple. (S2) Linggle provides some examples. (S12) It shows the number of usage of the word, which makes the word more reliable. (S6)	I couldn't find particular words on Linggle. (S3)

In response to the third research question, the majority agreed that tool consultation combined with paraphrasing strategies could enhance their paraphrasing awareness and ability. They noted that with guided tool training, they were able to use the three tools to find synonyms for word/phrase replacement. More crucially, the paraphrasing strategies helped them to move beyond lexical substitutions, allowing them to re-order or restate with syntactic changes. Irrespective of students' frequency of consultation and preferences, it can be concluded that by offering students more than one tool, they can be motivated to search for and compare synonyms in order to vary expressions. This finding can be added to L2/EFL paraphrasing studies regarding combining paraphrasing strategy instruction with the facilitation of e-tools like the ones provided in this research. Moreover, the result can contribute to the growing DDL literature concerning the potential of teaching both concordancers and non-concordancers to EFL learners in order to meet their needs and preferences so as to encourage their consultation (Bailey & Withers, 2018; Boulton, 2009; Han & Shin, 2017; Yoon, 2016).

5. Conclusion

This study examined the effects of integrating tool consultation with paraphrasing strategy instruction for enhancing EFL students' paraphrasing performance. Three tools were provided: (1) *Microsoft Word thesaurus,* (2) *Oxford Living Dictionaries (Synonyms),* and (3) *Linggle (Synonyms).* The results showed that the students made significant progress in the posttest when tool consultation was integrated with the paraphrasing strategy instruction. The majority of the lexical and phrasal paraphrases was suitable while only a few were inaccurate. Although students regarded *Microsoft Word* thesaurus and *Oxford Living Dictionaries* more useful for finding synonyms than *Linggle*, they held positive attitudes toward using the three tools for practicing paraphrasing. As was presented, the case study student, Cathy, and several students in this study demonstrated the ability to consult the three tools for finding synonyms, apply paraphrasing strategies, and make lexico-grammatical changes to restructure and restate the original sentences. These findings can be added to the growing body of literature on data-driven learning with the focus on a structured, step-by-step tool consultation training as a scaffolded approach, which encourages students to make use of the tools at their disposal while paraphrasing. Moreover,

considering the fact that DDL may not be suitable for all learners, this study showed the possibility of including both concordancers and non-concordancers to give students options in terms of tool selection rather than forcing them to experience DDL. For learners with lower-level English proficiency, introducing more than one tool for finding synonyms is important since it can develop their ability to evaluate the appropriateness of word usage and justify the word context. With guided tool consultation plus strategy instruction, students can learn to make both lexical and syntactical changes. The results of this study can contribute to the literature by highlighting tool consultation combined with paraphrasing strategies as learning processes to raise students' awareness of plagiarism and to avoid patchwriting.

6. Limitations and implications

This study demonstrated how strategy-based tool consultation could help students improve paraphrasing. However, there are some limitations. First, based on a single-group design, this study did not include a control group. The findings might have been different if a control group could have been included. Second, this study only examined the effects of the three e-tools for paraphrasing. It did not look into the process regarding how students evaluate results and identify the most suitable synonyms for replacement. Differentiating nuances such as how synonymous one word is with another may be challenging. Therefore, future studies can explore learners' tool usage, including evaluating results and identifying suitable synonyms through using the think-aloud approach. Finally, the duration of this study was just one semester. Since learners' preferences may vary, it is suggested that a longer period of time should be allowed in future research.

Several pedagogical implications can be drawn from this study. First, the three tools introduced in this study seemed to benefit the students differently. Teachers can choose the tools according to students' learning needs and proficiency levels and offer training and opportunities for discussion regarding the difficulties they encounter. Second, to facilitate the EFL students' paraphrasing, we developed step-by-step strategy instruction with tool consultation for paraphrasing. Writing teachers can engage students in this practice to raise students' lexical and semantic awareness, monitor their paraphrasing process, and improve their paraphrasing quality. Noteworthy was that searching for synonyms constantly may influence the paraphrasing process. Students may need to focus on higher-order thinking skills (e.g., structuring main ideas in their own words) and reduce their frequency of searching to avoid interruption. Third, some technical terms may not be found with the three e-tools. In this study, screen recordings revealed that some participants searched for technical terms such as *aerobic* but failed to find suitable synonyms with the use of the three tools. It is suggested that during training, teachers can inform students that technical terms like this may not be found and often do not need to be replaced. Last, before the tools are introduced, they should be tested to avoid any unexpected situations. In this study, during the tool training, OLD could not be accessed in the lab and the students could only use their cell phones to consult this dictionary for finding synonyms. The problem was also noted by two students when they used OLD at home. This is worth noting so that more effective instructional guidance can be offered in the classroom settings.

Acknowledgment

References

Bailey, C., & Withers, J. (2018). What can screen capture reveal about students' use of software tools when undertaking a paraphrasing task? *Journal of Academic Writing*, 8(2), 176-190.

Boisson, J., Kao, T. H., Wu, J. C., Yen, T. H., & Chang, J. S. (2013). Linggle: A Web-scale linguistic search engine for words in context. In *Proceedings of the 51st Annual Meeting of the Association for Computational Linguistics: System Demonstrations* (pp. 139-144). Association for Computational Linguistics.

Boulton, A. (2009). Corpora for all? Learning styles and data-driven learning. In M. Mahlberg, V. Gonzalez-Díaz, & C. Smith (Eds.), *Proceedings of 5th corpus linguistics conference*. http://ucrel.lancs.ac.uk/publications/cl2009/150_FullPaper.doc

Boulton, A. (2010). Data-driven learning: Taking the computer out of the equation. *Language Learning*, 60(3), 534-572.

Bridle, M. (2019). Learner use of a corpus as a reference tool in error correction: Factors influencing consultation and success. *Journal of English for Academic Purposes*, 37, 52-69.

Chen, M. H., Huang, S. T., Chang, J. S., & Liou, H. C. (2015). Developing a corpus-based paraphrase tool to improve EFL learners' writing skills. *Computer Assisted Language Learning*, *28*(1), 22-40.

Cheng, Y.-H. (2021). EFL college students' concordancing for error correction. *English Teaching & Learning*, *45*(4), 431-460.

Crosthwaite, P., Wong, L. L., & Cheung, J. (2019). Characterising postgraduate students' corpus query and usage patterns for disciplinary data-driven learning. *ReCALL, 31*(3), 255–275.

Escudero, I., Fuertes, N., & López, L. (2019). Paraphrasing strategy in EFL Ecuadorian B1 students and implications on reading comprehension. *English Language Teaching*, *12*(1), 56-66.

Fitria, T. N. (2021). QuillBot as an online tool: Students' alternative in paraphrasing and rewriting of English writing. *Englisia: Journal of Language, Education, and Humanities*, *9*(1), 183-196.

Fitzpatrick, M. (2011). *Engaging writing 2: Essential skills for academic writing*. Pearson Longman.

Folse, K. S., & Pugh, T. (2015). *Great writing 5: From great essays to research* (3rd ed.). Cengage.

Han, S., & Shin, J. A. (2017). Teaching Google search techniques in an L2 academic writing context. *Language Learning & Technology, 21*(3), 172-194.

Hirvela, A., & Du, Q. (2013). "Why am I paraphrasing?": Undergraduate ESL writers' engagement with source-based academic writing and reading. *Journal of English for Academic Purposes*, *12*(2), 87-98.

Keck, C. (2006). The Use of paraphrase in summary writing: A Comparison of L1 and L2 writers. *Journal of Second Language Writing*, *15*(4), 261-278.

Keck, C. (2014). Copying, paraphrasing, and academic writing development: A Re-examination of L1 and L2 summarization practices. *Journal of Second Language Writing*, *25*, 4-22.

Kostka, I., & Maliborska, V. (2016). Using Turnitin to provide feedback on L2 writers' texts. *TESL-EJ*, *20*(2), 1-22.

Lai, S. L., & Chang, J. S. (2020). Toward a pattern-based referencing tool: Learner interactions and perceptions. *ReCALL, 32*(3), 272-290.

Lai, S. L., & Chen, H. J. H. (2015). Dictionaries vs concordancers: Actual practice of the two different tools in EFL writing. *Computer Assisted Language Learning*, *28*(4), 341-363.

Lee, P., & Lin, H. (2019). The Effect of the inductive and deductive data-driven learning (DDL) on vocabulary acquisition and retention. *System*, *81*, 14-25.

Li, S. (2017). Using corpora to develop learners' collocational competence. *Language Learning & Technology, 21*(3), 153–171.

Li, Y., & Casanave, C. P. (2012). Two first-year students' strategies for writing from sources: Patchwriting or plagiarism? *Journal of Second Language Writing, 21*, 165–180.

Liao, M. T., & Tseng, C. Y. (2010). Students' behaviors and views of paraphrasing and inappropriate textual borrowing in an EFL academic setting. *Journal of Pan-Pacific Association of Applied Linguistics*, *14*(2), 187-211.

Liou, H. C. (2016). Exploring source use by different EFL students: Text quality, lexical profiles, and citation features. *Asian Journal of English Language Teaching*, *26*, 55-84.

Liou, H. C. (2019). Learner concordancing for EFL college writing accuracy. *English Teaching & Learning*, *43*(2), 165-188.

Liu, G. Z., Lin, V., Kou, X., & Wang, H. Y. (2016). Best practices in L2 English source use pedagogy: A Thematic review and synthesis of empirical studies. *Educational Research Review*, *19*, 36-57.

Liu, G. Z., Lu, H. C., Lin, V., & Hsu, W. C. (2018). Cultivating undergraduates' plagiarism avoidance knowledge and skills with an online tutorial system. *Journal of Computer Assisted Learning*, *34*(2), 150-161.

Loh, Y. L. (2013). Errors in paraphrasing and strategies in overcoming them. *Journal of Creative Practices in Language Learning and Teaching*, *1*(1), 4-17.

Marr, J. W. (2019). Making the mechanics of paraphrasing more explicit through Grammatical Metaphor. *Journal of English for Academic Purposes*, *42*, 1-7.

Mizumoto, A., & Chujo, K. (2016). Who is data-driven learning for? Challenging the monolithic view of its relationship with learning styles. *System*, *61*, 55-64.

Mueller, C. M., & Jacobsen, N. D. (2015). A Comparison of the effectiveness of EFL students' use of dictionaries and an online corpus for the enhancement of revision skills. *ReCALL, 28*(1), 3–21.

Na, C. D., Nhat, C. M., & Nguyen, X. (2017). Paraphrasing in academic writing: A Case study of Vietnamese learners of English. *Language Education in Asia, 8*(1), 9-24.

Pecorari, D., & Shaw, P. (2012). Types of student intertextuality and faculty attitudes. *Journal of Second Language Writing*, *21*(2), 149-164.

Prentice, F. M., & Kinden, C. E. (2018). Paraphrasing tools, language translation tools and plagiarism: an exploratory study. *International Journal for Educational Integrity*, *14*, 1-16.

Rogerson, A. M., & McCarthy, G. (2017). Using Internet based paraphrasing tools: Original work, patchwriting or facilitated plagiarism? *International Journal for Educational Integrity*, *13*, 1-15.

Shi, L. (2012). Rewriting and paraphrasing source texts in second language writing. *Journal of Second Language Writing*, *21*(2), 134-148.

Sun, Y. C. (2012). Does text readability matter? A Study of paraphrasing and plagiarism in English as a Foreign Language writing context. *Asia-Pacific Education Researcher (De La Salle University Manila)*, *21*(2), 296-306.

Yamanishi, H., Ono, M., & Hijikata, Y. (2019). Developing a scoring rubric for L2 summary writing: A Hybrid approach combining analytic and holistic assessment. *Language Testing in Asia*, *9*(1), 1-22.

Yoon, C. (2016). Concordancers and dictionaries as problem-solving tools for ESL academic writing. *Language Learning & Technology*, *20*(1), 209-229.

Zhang, C. (2013). Effect of instruction on ESL students' synthesis writing. *Journal of Second Language Writing*, *22*(1), 51-67.

Zhu, P. (2015). N-Grams based linguistic search engine. *International Journal of Computational Linguistics Research*, *6*(1), 1-7.

Appendix

Rubric for Scoring Summary Writing

Dimension	Score & Level		Criteria
1 Content	4	very good	Can grasp all of the main ideas. Can develop the main point substantially by occasionally using secondary information.
	3	good	Can grasp most of the main ideas. Includes somewhat incorrect information or information beyond the original text, but it does not substantially deviate from the main point.
	2	fair	Can grasp only limited main ideas. Cannot demonstrate an adequate development of the main point. Noticeably includes incorrect information beyond the original text.
	1	poor	Cannot identify main ideas. Cannot grasp main idea correctly.
2 Paraphrase (Quantity)	4	very good	Can paraphrase 80% or more of the expressions included in the summary in one's own words.
	3	good	Can paraphrase from 50 % to less than 80% of the expressions included in the summary in one's own words.
	2	fair	Can paraphrase only from 25% to less than 50% of the expressions included in the summary in one's own words.
	1	poor	Can paraphrase only less than 25% of the expressions included in the summary in one's own words.
3 Paraphrase (Quality)	4	very good	Can actively attempt to paraphrase. Can demonstrate effective paraphrases where both sentence construction and vocabulary choice are different from the original text.
	3	good	Can actively attempt to paraphrase. Can paraphrase using vocabulary different from the original text. Seldom changes sentence construction from the original text.
	2	fair	Includes few expressions consisting of more than 4 words in a row copied from the original text. Can only demonstrate paraphrases using vocabulary from the original text. Deletes expressions partially or changes word order.
	1	poor	Includes a number of expressions consisting of more than 4 words in a row copied from the original text. Cannot demonstrate effective paraphrases.
4 Language Use	4	very good	Can demonstrate a sophisticated range of vocabulary with effective words/idiom choice and usage. Can demonstrate effective and complex sentence construction with few grammatical errors.
	3	good	Can demonstrate an adequate range of vocabulary with good words/idiom choice and usage. Can demonstrate simple but effective sentence construction. Includes minor and occasional errors.
	2	fair	Can demonstrate only a limited range of vocabulary, words/idiom choice and usage. Can demonstrate simple sentence construction. Meaning is obscure due to frequent major errors.
	1	poor	Can demonstrate little knowledge of vocabulary, idioms, and word form. Can demonstrate little knowledge of sentence construction rules and English writing conversations. Meaning is obscure due to a number of minor and major errors.
5 Overall Quality	4	very good	As a response to this task, the overall quality of this summary is….
	3	good	
	2	fair	
	1	poor	

Note. Adapted from Yamanishi et al. (2019).