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Intervention in EFL Learners' Reading Comprehension, Motivation, and Anxiety: A Team-Based Multi-Strategy Instruction

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Abstract

Reading education and reading affective factors significantly affect school-age students' academic achievement. Nevertheless, most teachers disregard scientific strategy-based reading instructions and scholars have recently regarded L2 reading affective factors, namely reading motivation and anxiety. Moreover, technology-aided EFL reading courses for primary schoolers have been neglected. Accordingly, the current study aimed to implement seven L2 reading strategies suggested by Yapp et al. (2021a), and evaluate the effect of these strategies on English reading comprehension, motivation, and anxiety at virtual environment by using online team-teaching. The EFL fifth graders and pre-service teachers of the study were selected via volunteer sampling. The students (n = 28) were randomly assigned to two groups (n = 14 for each group) and the teachers (n = 4) were randomly assigned to two groups (n = 2 for each group) as well. One group was given Traditional Instruction (TI) and taught by two instructors whereas the other group received Strategy-Based Instruction (SBI) and was taught by the other two instructors. To assess L2 reading motivation and anxiety, the questionnaires by Dhanapala (2008) and Saito et al. (1999) were administered. The within- and between-group analyses using paired-sample t-tests and ANCOVAs indicated that although both groups' reading comprehension, motivation, and anxiety were enhanced, the SBI participants outperformed the TI participants. Moreover, the interview with the SBI group demonstrated their positive attitudes toward the SBI course. The current study would encourage EFL teachers to base reading instruction upon reading strategies when teaching young EFL learners.

Keywords: reading strategies, technology-aided instruction, online team-teaching, reading motivation, reading anxiety

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1. Introduction

The comprehension of texts is gained by using cognitive and metacognitive skills (Kintsch, 2002), which could be facilitated by learning reading strategies (Yapp et al., 2021b). A reading strategy is a cognitive tool used for comprehending texts and monitoring reading process, which could become automatic if practiced frequently (Afflerbach et al., 2008; Afflerbach & Cho, 2009). Students do not acquire reading strategies incidentally (Artelt & Dorfler, 2010). They need to be instructed in reading strategies explicitly (Pressley et al., 2006). This instruction is of paramount significance in second language (L2) classrooms since first language (L1) strategies might not transfer to L2 (Snowet al., 2005). The mentioned transfer effect has remained obscure (Bimmel et al., 2001).

To enhance the effectiveness of reading strategy instruction, teachers are encouraged to implement wide-ranging strategies and multi-strategy instruction (Guthrie & Humenick, 2004; Pressley, 2002; Yapp et al., 2021b). Although reading strategies are believed to improve academic achievement (Poole, 2019), these strategies might not benefit some L2 learners because the learners could employ inappropriate strategies (Wood et al., 1998). The inappropriate use of strategies causes frustration and difficulties in understanding texts for learners (Nalliveettil, 2014). Students who do not have acceptable reading skills may feel disappointed (Lei et al., 2010). Their poor reading knowledge would affect their academic life which might result in college attrition (Allen & Bir, 2012).

Apart from the effective instruction of reading, reading affective factors should not be neglected by teachers. Affective factors such as reading motivation and anxiety have recently captured researchers' attention (Akbari et al., 2019; Graham & Weiner, 2012; Zaccoletti et al., 2020). Previous studies have indicated that motivation is an indispensable part of reading (Afflerbach et al., 2013; Gambrell et al., 1996). Establishing the relationship between motivation and L2 reading strategy use needs further research (Akbari et al., 2019; Han, 2021). Additionally, existing studies have corroborated that L2 reading anxiety can impede L2 reading process and cause difficulties in learners' personal and social life as well as textual comprehension (Rajab et al., 2012).

Despite the magnitude of reading comprehension, motivation, and anxiety, no study has investigated the effect of L2 reading strategies on the mentioned three variables in a virtual learning environment along with using team-teaching for English as a foreign language (EFL) elementary school students. When team-teaching is used, two or more teachers instruct students in the same classroom (Quinn & Karter, 1984). Moreover, instructors need to display collaboration, peer observation, joint evaluation, and co-constructed lesson plans (Smith et al., 2020; Wang, 2010). The present study aimed to fill the previously mentioned gap by training pre-service EFL teachers to team-teach seven L2 reading strategies to EFL fifth graders in the online classroom. The strategies were derived by Yapp et al. (2021a) via conducting a meta-analysis on 46 L2 reading strategy studies. The primary purpose of using a virtual learning environment, electronic materials, and online co-teaching was to present a pleasant learning environment which was different from regular schools that might seem tedious to very young learners.

2. Literature Review

2.1 L2 Reading Strategies

Reading is of paramount significance for children and adolescents and can be used in their daily life, leisure time, and education (Bimmel et al., 2001). Reading is essential for life-long learning (Koch & Sporer, 2017) and high-quality early education can lead to long-lasting benefits (Bowman et al., 2000; Shonkoff & Phillips, 2000). In this regard, educators' and policy makers' main questions are which abilities students need to learn to become good readers and which methods can be used to prevent students' reading difficulties (Strickland & Shanahan, 2004).

Even though reading comprehension is a complex process, learning strategies can ease it (Yapp et al., 2021b). Strategies are deliberate and goal-oriented tools aiding learners to decode texts, understand words, and form meanings (Afflerbach et al., 2017). These strategies can become automatic through practice and frequent use (Afflerbach et al., 2008). Should students learn reading strategies, they can imitate the process employed by masterful readers (Pressley, 2002; Pressley et al., 2006). It has been suggested that there is a difference between reading skills and reading strategies. This difference is mostly ignored by teachers. The former is an automatic process while the latter is the deliberate control of reading, both of which should be instructed by teachers (Afflerbach et al., 2008). Since L1 strategies are not guaranteed to transfer to L2, reading strategies should be incorporated in formal education (Baddeley et al., 2009; Snow et al., 2005).

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Studies have shown that L2 learners with poor L2 knowledge could use as many strategies as proficient learners (Alsamadani, 2009; Gurses & Bouvet, 2016). Using the right L2 strategies is more vital than the frequency of the strategies used by learners (Griffiths & Incecay, 2016; Oxford, 2017). Accordingly, low-frequency strategy use does not indicate the strategy is inefficient, and high-frequency does not always show the strategy is effective (Oxford, 2017). Several studies have implemented reading strategies for learners from various age groups and education levels. Reading strategies have been effective in enhancing the reading comprehension of university students (Yapp et al., 2021b). Other studies have strongly suggested the positive effects of reading strategies for young adults (Duffy, 2002), adolescents (Amirabadi & Biria, 2016; Bimmel et al., 2001; Milliano et al., 2016), elementary students (Englert & Mariage, 2020, Pressley et al., 2006), and student teachers (Koch & Sporer, 2017).

Research has shown the effectiveness of the explicit instruction of reading strategies for EFL very young learners. Chinpakdee and Gu (2021) showed that SBI can promote EFL secondary school students' reading scores and confidence in their ability to autonomously process English texts. Fu et al. (2014) integrated technology into reading strategy instruction. Their study corroborated that electronic story book-based reading strategy instruction helped EFL elementary school students in the treatment group outperform the control group in terms of reading comprehension and strategy use. Additionally, the treatment group held positive attitude toward the treatment. Accordingly, SBI can be implemented for very young EFL learners, be technology-assisted, and result in enhanced L2 reading comprehension. A meta-analysis by Liet al. (2021) has indicated the potential benefit of using a variety of reading strategies for EFL learners across different school levels. According to the meta-analysis, when reading strategies are used together, they can have a better effect on reading comprehension than using one strategy throughout lessons. Additionally, the meta-analysis showed that the longer strategies are used, the stronger their effect will be on students' reading comprehension.

Regrettably, despite the advantages of reading strategy instruction, it is absent from many classrooms (Becirovic et al., 2018) and scientifically based reading programs are not widely used by teachers (Koch & Sporer, 2016). Some findings revealed that teachers neither implement the explicit instruction of strategies nor concentrate on how students can tackle their reading problems individually (Magnusson et al., 2018). It is suggested that running workshops and seminars can raise teachers' awareness of the importance of reading strategies instruction (Becirovic et al., 2018).

2.2 L2 Reading Motivation

Motivation is a willingness to engage and persist in an activity in spite of difficulties (Urdan & Schoenfelder, 2006). Studies have shown that there is a connection between motivation and achievement (Gambrell et al., 1996). Furthermore, research points out that it is plausible to link reading motivation to reading strategy use (Han, 2021). Learners who are motivated tend to read more than unmotivated learners (Guthrie et al., 1999). As a result, interested and motivated students can become better readers and consequently, become better students (Guthrie & Humenick, 2004).

It has been pointed out that children's reading motivation might decline as they grow older, which necessitates teachers adopting effective instructional approaches (Wigfield et al., 2016). One study has shown that EFL third graders' L2 reading motivation is strongly associated with their L2 reading comprehension (Hwang & Duke, 2020) and third graders at-risk for reading comprehension difficulties can benefit from motivational reading instruction (McBreen & Savage, 2020). Interestingly, it has been suggested that students' reading environment can play a role in their comprehension and motivation. Kaban and Karadeniz (2021) concluded that a different reading environment such as e-reading and screen reading promoted sixth graders' reading motivation, reading comprehension, and perceptions toward electronic reading lessons. The significant relationship between students' reading and their motivation is bidirectional and early reading has been known as the predictor of later reading motivation for K-12 students (Toste et al., 2020).

Sadly, one survey has revealed that most fourth-graders did not get any enjoyment or learning outcome from reading (Donahue et al., 2005). In this respect, increasing students' reading motivation has been teachers' priority, and should literacy activities match students' values, needs, and goals, students are more likely to have their interests sustained (Pitcher et al., 2007). Assessing reading motivation improves effective teaching, which can be done at the beginning, in the middle, and at the end of the course to record changes, identify problems, and modify the instruction (Malloy et al., 2013). L2 reading motivation has been a recent topic requiring further investigations, most of which have been inspired by the studies in L1 reading motivation (Akbari et al., 2019). Research has shown the positive effect of reading strategy instruction on both L2 reading comprehension and motivation (Cho & Ma, 2020). By perusing the

relevant literature, the paucity of research on the relationship between motivation and L2 reading strategy use can be easily revealed (Han, 2021).

2.3 L2 Reading Anxiety

Foreign language reading anxiety is a particular type of anxiety caused by unseen vocabulary, unfamiliar topics, imperfect reading comprehension, and learners' diffidence in reading (Cheng, 2017; Saito et al., 1999; Yamashita, 2007). According to Rajab et al. (2012), anxiety can obstruct L2 reading process and cause poor comprehension resulting in personal and social problems for learners. Rajab et al. (2012) asserted that L2 tasks are more demanding and accordingly, they cause anxiety for L2 readers who must deal with unknown spellings, sentence structures, syntax, words, complicated semantic relations, unseen linguistic elements, unfamiliar text culture, and the absence of L2 background knowledge.

Rajab et al. (2012) found that although reading is less stressful than speaking, reading anxiety exists and should be fully regarded. Affective factors are important in predicting EFL reading comprehension (Chow et al., 2021). These factors could be best noticed in the case of children negatively comparing themselves with their peers as they grow up (Wigfield & Tonks, 2004). As a result, if these learners struggle with their language skills including reading, they might consider themselves inferior to their peers resulting in low motivation and great anxiety. Zaccoletti et al. (2020) believed that teachers ought to instruct reading strategies to students, ask students to attribute their failure to inadequate use of strategies, and help students regulate their anxiety, which can all promote learners' reading comprehension.

Due to the significance of improving reading and regulating reading motivation and anxiety for very young learners, the following research questions were posed.

1. Do SBI and TI differ in their effectiveness in terms of improving L2 reading comprehension, increasing L2 reading motivation, and decreasing L2 reading anxiety?

2. How do SBI teacher and student participants perceive the treatment sessions and the use of L2 reading strategies?

3. Methodology

3.1 Participants

The learner participants of the study were 28 female fifth graders who were 10 years old. On average, they had been learning English for two years and came from different private language schools in Tehran, Iran. Their first language was Persian and their English proficiency level was A2 according to the Common European Framework of Reference for Languages (CEFR). Their parents had agreed to their children's participation in the study and had been assured about the participants' privacy protection and confidentiality of information. None of the participants had previously been instructed in English reading strategies and had no idea what reading strategies were.

The participants were selected by using volunteer sampling. At the outset, 35 female volunteers who were fifth graders claimed to have known English at A2 level, believed they were struggling EFL readers, and announced their interest in taking part in the study. All of the volunteers were required to take the online placement test for young learners developed by Cambridge Assessment English. After gaining the results of the online placement test, the volunteers whose language proficiency was not A2 were excluded from the study. Finally, 28 participants who knew English at A2 level were selected.

The teacher participants were four female pre-service teachers (age mean = 22.75) who had done a bachelor's degree in Teaching English as a Foreign Language (TEFL) and had recently finished EFL teacher training courses. They had taken the mentioned courses at the same language school. They were Persian volunteers who willingly took part in the study and had high hopes to become competent L2 reading instructors by participating in the current study. Additionally, they were assured about their privacy protection and information confidentiality. After selecting the participants, the 28 learner participants were randomly divided into two groups of 14. One group (treatment group) received SBI and the other group (control group) was given TI to enhance their L2 reading comprehension. The four teacher participants went through randomization as well. Two of them were randomly assigned to teach the SBI group and the other two teachers were randomly selected to instruct the TI group. It should be noted that the teacher participants had not taught the student participants prior to joining the study.

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3.2 Materials and Instruments

3.2.1 Pre-test and Post-test

The pre-test and post-test were the same English reading comprehension test selected from the reading section of A2 Key for Schools (see 9781108718325_excerpt.pdf (cambridge.org) for a sample), which is a Cambridge English Qualification for school-age students whose English proficiency level is A2. Importantly, the participants had never studied for A2 Key for Schools qualification prior to participating in the study. The reading test was in five parts and included multiple choice questions (6 items), multiple matching questions (7items), multiple choice questions (5 items), multiple choice cloze (6 items), and open cloze questions (6 items). Each correctly answered item was given one mark. As a result, the total score was given out of 30.

3.2.2 Classroom Exercises

The participants practiced the reading comprehension tests of the book *A2 Key for Schools Authentic Practice Tests 1* (Cambridge University Press, 2019), which included four authentic exam papers. According to the details provided by Cambridge University Press, the four exams are exactly like the real exam and go through the same process. The electronic files of the classroom material were emailed to the teacher and student participants before every session. The students were required to read on their computer screens and were not allowed to use printed materials. During each session, all the reading questions were answered and the learners wrote the correct answers on their electronic files. Owing to the learners' very young age, they needed to be thoroughly checked by the teachers. As a result, at the end of each session, the learner participants were asked to email their answers to the teachers so that the teachers could check their answers

3.2.3 L2 Reading Motivation Questionnaire

To measure the participants' levels of L2 reading motivation, the questionnaire developed by Dhanapala (2008) was employed. The questionnaire is in English and has 47 items on a five-point Likert scale (not at all true of me = 1, fairly untrue of me = 2, neither true of me nor untrue of me = 3, true of me = 4, completely true of me = 5) and was virtually given to the participants in two rounds. The first round was before the treatment and the second round was after the last session of the treatment. The aim was to measure the participants' initial L2 reading motivation and monitor any changes in their motivation level after attending all the treatment sessions. The questionnaire items were explained by the teachers and if needed, the Persian translations were given to the students.

3.2.4 L2 Reading Anxiety Questionnaire

To measure the participants' L2 reading anxiety, the Foreign Language Reading Anxiety (FLRA) questionnaire designed by Saito et al. (1999) was implemented. The questionnaire is in English and has 20 items on a five-point Likert scale (strongly agree = 5, agree = 4, neither agree nor disagree = 3, disagree = 2, strongly disagree = 1) and was virtually given to the student participants in two different rounds. The questionnaire items were explained by the teachers and if needed, the Persian translations were given to the students.

3.2.5 Interview

After the last treatment session, two interviews with both SBI teacher and learner participants were virtually conducted to evaluate their attitudes toward the SBI sessions. The teachers were interviewed separately from the learners. The interviews were semi-structured and conducted in groups. All the respondents were interviewed in Persian, which was their first language. Being interviewed in their first language, the participants could give their opinions effortlessly and without having foreign language barriers.

3.3 Treatment Sessions

Each week, every group had two sessions on different days and the whole treatment lasted for four weeks (seven sessions, 10.5 hours). In each session, the two teachers of each class had to share the same virtual class, have full collaboration with one another, and divide teaching duties to team-teach the participants. In the educational context in Iran, traditional English reading instruction means asking students to simply read each reading comprehension question and read every paragraph of the text to look for the answer. In other words, in Persian context, EFL students are taught English reading with the limited learning of reading strategies. In the TI class, no strategies were taught to the participants and L2 reading was traditionally taught. After answering reading questions, the TI participants had to share their answers with their classmates and teachers. In contrast, in the SBI class, reading was taught by employing

L2 reading strategies. It should be noted that the two groups had the same treatment length and used the same materials and classroom exercises. The only difference between the treatment group and control group lies in the reading instruction method. The two groups were instructed in English reading in two different ways.

The day before each treatment session, the SBI teachers were virtually taught one L2 reading strategy and were required to teach the recently learned strategy in the coming treatment session. To answer reading comprehension questions in every session, the learners were required to use the reading strategy that they learned in that session along with the strategies that they had learned in the previous sessions. The SBI learner participants were instructed in only one L2 reading strategy per session to avoid being overloaded. Yap et al. (2021b) suggested that reading strategy classes follow four distinct stages. Accordingly, in the SBI class, the following four stages were considered by the two teachers in each session.

1. Direct instruction of L2 reading strategies: The strategies are explicitly instructed to raise awareness, underline the importance of strategies, and improve strategies identification. The teachers need to state how, when, and why to use the strategies.

2. Teacher modeling: The teachers model the strategies by employing think aloud techniques. While reading a text out loud, the teachers need to illustrate how they are using the strategies to comprehend the text.

3. Scaffolding and practice: The students should apply reading strategies to texts and answer reading questions. Meanwhile, the teachers need to scaffold the students and remodel the strategies if one student has difficulties using them. The teachers' and peers' feedback and scaffolding need to continue until the student succeeds in fulfilling the reading task independently.

4. Evaluation and expansion: After answering the questions, the learners need to evaluate their success in using the right strategies. They should take part in evaluative discussions, question themselves about the use of strategies, indicate what strategies have been the most useful, and implement the most useful ones in the future.

The seven reading strategies had been collected by Yap et al. (2021a) via conducting a meta-analysis on 46 L2 reading strategy studies. It was decided to teach the seven strategies in the descending order of the effect sizes of the strategies reported by Yapp et al. (2021a,b). The following explanations of the reading strategies were given by Yapp et al. (2021b).

1. Connecting new knowledge to what is already known (d = 1.08): The learners link what textual information they have comprehended to what they already know, helping them make inferences and understand the meaning.

2. Asking questions while reading (d = 1.07): The learners ask themselves questions while reading the texts to develop their understanding and predict the texts outcome.

3. Activating background knowledge (d = .92): The learners' previous knowledge is activated by using mind-mapping (Block & Duffy, 2008) or asking them some relevant questions (Deshpande, 2016).

4. Paying attention to text structure and signal words (d = .77): By regarding the texts structure and signal words, the learners can understand the authors' opinions and purposes.

5. Making predictions while reading (d = .64): The learners predict what they are about to read in advance, promoting faster and more efficient reading.

6. Skimming and scanning (d = .64): The learners read the texts to grasp the gist (skimming). In contrast, they read the texts, neglect the unnecessary parts, and look for the pieces of information which help with doing the reading tasks (scanning).

7. Visualization (d = .42): The learners make visual images of what they are reading, which enhances their reading engagement.

3.4 Data Collection Procedure

Firstly, the learner participants of both groups answered the pre-test of English reading comprehension which was selected form A2 Key for Schools test, L2 reading motivation survey by Dhanapala (2008), and L2 reading anxiety questionnaire by Saito et al. (1999) in a virtual learning environment. After the last treatment session, the same comprehension test was used as a post-test, and the same questionnaires as post-treatment surveys were administered

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to the two groups. While the participants were taking the pre-tests, post-tests, and responding to the questionnaires, the teachers explained the items of the tests and questionnaires clearly to the students. Furthermore, the participants and teachers were required to turn on their webcams so that the students could be observed by their teachers. By doing so, rapport could be better established between the students and teachers and the students were discouraged from cheating on the tests. After the last treatment session, the SBI teachers and learners were virtually interviewed to elicit their attitudes toward L2 reading strategies and the experience gained from teaching or attending the class.

3.5 Data Analysis

The dominant phase of the present study was quantitative (analyzing the pre-test and post-test as well as pre-treatment and post-treatment questionnaires) which was followed by a qualitative phase (analyzing the interviews). Before the first treatment session, when the control and treatment participants answered the reading comprehension pre-test, L2 reading motivation survey, and L2 reading anxiety questionnaire, their means were statistically compared using three independent-samples t-tests. After the last session of the treatment, for each group, three paired-sample t-tests were utilized to measure whether each group's reading comprehension had been improved, L2 reading motivation had been enhanced, and L2 reading anxiety had been reduced.

Next, the learner participants' initial scores on the pre-test and the two pre-treatment surveys were taken as covariates. Three ANCOVAs were run to measure if the two groups were statistically different from one another in terms of their reading comprehension post-test scores, and L2 reading motivation as well as anxiety post-treatment questionnaire scores. To interpret the effect sizes, Cohen's (1988) interpretation was employed which indicates that d = .01, d = .06, and d = .14 represent small, moderate, and large effect respectively for between-group and within-group differences.

Lastly, the interviews with the SBI teacher and learner participants were analyzed to assess their attitudes toward L2 reading strategies and the treatment sessions. The teacher participants were interviewed separately from the learner participants. The interviews were conducted online and in groups. The participants were interviewed in their first language, which was Persian. The interview data were manually analyzed by using qualitative inductive coding resulting in getting themes. For each theme, a short summary was written in Persian by using the interviewees' related expressions, which was then translated into English and used as the results.

4. Results

At the outset, the two groups' mean scores on the pre-test of reading comprehension and the pre-treatment questionnaires of L2 reading motivation and anxiety were compared. The three independent-samples t-tests revealed that the two groups were no different from each other in terms of their reading comprehension (t (26) = - 1.01, p = .31 > .05), L2 reading motivation (t (26) = - .75, p = .45 > .05), and L2 reading anxiety (t (26) = .37, p = .71 > .05). After the last treatment session, the two groups' mean scores on the post-test of reading comprehension and the post-treatment questionnaires of L2 reading motivation and anxiety were measured. The aim was to measure between-group differences to assess which reading instruction was more effective, and within-group differences to evaluate both groups' improvements. Table 1 shows the treatment and control group's scores of reading comprehension on pre-test and post-test.

Table1. Descriptive statistics for SBI and TI groups by the pre-test and post-test of reading comprehension

Group	Pre-Test		Post-Test	
	M	*SD*	*M*	*SD*
SBI (*N* = 14)	12.78	1.67	22.71	1.77
TI (*N* = 14)	13.35	1.27	17.64	1.59

As shown in Table 1, before the treatments, the two groups' mean values were close with the SBI group gaining 12.78 and the TI group getting 13.35. When they had received the instructions, the treatment group's mean score increased by roughly 10 points while that of the other group grew by approximately 4 points.

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To assess whether the two forms of instruction had positively affected the participants' reading comprehension, a paired-sample t-test was run for each group. The t-test results revealed that the SBI group's (t (13) = - 25.81, p = 0 < .05, d = .98 > .14) and TI participants' (t (13) = - 15.00, p = 0 < .05, d = .93 > .14) reading comprehension had been enhanced, which suggests that both methods were effective. Additionally, the two effect sizes tabulated using eta squared formula were interpreted to be above .14 and large.

To measure whether the two groups differed from one another regarding their post-treatment reading comprehension, their post-treatment mean scores were compared using ANCOVA while taking their pre-test scores as covariates. The ANCOVA result demonstrated that the mean difference was statistically significant (F (1, 25) = 131.34, p = 0 < .05, partial eta squared = .84 > .14), which suggests that teaching L2 reading by using reading strategies was more effective than the traditional instruction. Moreover, the effect size was interpreted to be above .14 and large.

Next, the effect of reading strategies on reading motivation was considered. Table 2 shows the treatment and control groups' scores on pre- and post-treatment L2 reading motivation questionnaire.

Table 2. Descriptive statistics for SBI and TI groups by the pre-test and post-test of L2 reading motivation

Group	Pre-Test		Post-Test	
	M	*SD*	*M*	*SD*
SBI (*N* = 14)	54.50	6.04	159.85	5.61
TI (*N* = 14)	56.07	4.95	73.00	17.00

According to Table 2, after the instructions, the SBI participants' mean score had considerably grown by roughly 105 points whereas the other group's mean increased by moderately less than 17. To measure within-group differences, a paired-sample t-test was run for each group. Based upon the t-test results, the SBI participants' (t (13) = - 74.57, p = 0 < .05, d = .99 > .14) and the TI learners' (t (13) = - 5.26, p = 0 < .05, d = .68 > .14) L2 reading motivation had been increased, which shows that both teaching methods positively affected reading motivation. The effect sizes tabulated using eta squared formula were above .14 and large.

To evaluate if the mean difference between the two groups was statistically significant, ANCOVA was conducted and the pre-treatment motivation scores were taken as covariates. The ANCOVA result revealed that there was a statistically significant difference (F (1, 25) = 516.76, p = 0 < .05, partial eta squared = .95 > .14) with a large effect size corroborating that reading strategies instruction had increased the participants' L2 reading motivation more than the traditional instruction. Finally, L2 reading anxiety was considered. Table 3 indicates the SBI and TI groups' scores on pre- and post-treatment L2 reading anxiety questionnaire.

Table 3. Descriptive statistics for SBI and TI groups by the pre-test and post-test of L2 reading anxiety

Group	Pre-Test		Post-Test	
	M	*SD*	*M*	*SD*
SBI (*N* = 14)	71.71	8.40	45.35	9.51
TI (*N* = 14)	70.57	7.92	56.64	9.91

As can be seen in Table 3, after the treatment, the SBI and TI groups' L2 reading anxiety diminished by 26.36 and 13.93 points respectively. To measure whether the mentioned differences were statistically significant, one paired-sample t-test was conducted for each group. The t-test results indicated that for both control group (t (13) = 10.26, p = 0 < .05, d = .89 > .14) and treatment participants (t (13) = 9.76, p = 0 < .05, d = .87 > .14), the reductions in the

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anxiety level were significant which suggests that both reading instructions had positively affected L2 reading anxiety. Moreover, the effect sizes tabulated using eta squared formula, were interpreted to be above .14 and large.

To evaluate which reading instruction was more effective in decreasing L2 reading anxiety, ANCOVA was run while taking the pre-treatment anxiety scores as covariates. The ANCOVA result demonstrated that there was a statistically significant difference (F (1, 25) = 16.68, p = 0 < .05, partial eta squared = .40 > .14), showing that using strategies were more effective in reducing the participants' L2 reading anxiety. Furthermore, the effect size was interpreted to be above .14 and large.

After the last session of the treatment, the SBI learner and teacher participants were interviewed. According to the students, they used to have many difficulties understanding English texts. Although their parents bought them several English storybooks, they were reluctant to read them. They always found English reading hard and tedious, and lost their confidence to read English texts out loud. They stated that they used to mispronounce many words, be slow at English reading, and not fully understand what they read. Accordingly, the lack of reading competence had caused severe apprehension for them and made them feel inferior to their classmates who were good English readers. When asked about the benefits that they gained from the intervention, the learners stated they learned that they were not struggling readers as labeled by their school teachers. They realized that they could learn to read, enjoy English reading, and were as talented and intelligent as other learners. Being interviewed, they were of this opinion that they had gained more faith in themselves and did not doubt their capabilities.

When asked about the online team-teaching, the learners reported that they had never been instructed by more than one teacher in the same classroom and viewed it as a positive experience preventing boredom they usually felt in regular classrooms. They believed using electronic materials, virtual environment, and doing the exercises on computers gave them an enriching experience. Additionally, the participants stated that they would keep practicing reading by reading English storybooks and employing reading strategies. They showed interest in recommending the strategies to their classmates even the good readers and believed that the instruction of reading strategies should be integrated into school classrooms.

When asked about the changes in their reading fluency and vocabulary knowledge, the learners responded that they used to mispronounce many words while they were unaware of those mispronunciations. They believed that they had learned new words, which eased their reading comprehension. Additionally, they reported that they could read English texts at a higher speed and pronounce words correctly.

Beyond the learners' positive attitudes toward the course, the teacher participants supported the multi-strategy instruction as well. They believed that they would apply the strategies to their EFL classes and recommend the instruction to their future colleagues. According to the teachers, at the beginning, the students seemed uninterested in reading. They were not even willing to participate in the classroom activities. However, gradually, they changed positively. They started to seem more motivated and keener to improve their English reading. When asked about their opinion on the learners' post-treatment reading fluency, the teachers expressed that the learners slowly began to mispronounce words to a less extent and became able to read at a faster speed. According to the teachers, after the treatment sessions, most of the students could read at a rather normal rate with fewer pauses and hesitations. Interestingly, the teachers claimed that their own English reading comprehension had been improved after teaching the course. They responded that they had been applying the reading strategies to various English texts and had witnessed improvements in their own English reading comprehension. They added that teaching a skill could result in enhancing the teacher's skill.

5. Discussion

The results appeared to show that both methods were effective in enhancing L2 reading comprehension. This effectiveness could be tied to the enough hours of the treatments (10.5 hours). EFL students in schools of Iran are usually instructed in L2 reading with the limited learning of reading strategies. As a result, they are accustomed to learning English reading without employing any strategies which makes traditional instruction familiar and unproblematic to them. Despite the effectiveness of TI, the SBI was shown to be far more satisfying regarding the improvements in the participants' reading comprehension than the traditional instruction.

The superiority of SBI to TI can be explained by the advantages of the seven strategies and four teaching stages adopted by the present inquiry. It has been indicated that using a variety of reading strategies as implemented in the current study, can positively affect students' reading comprehension (Li et al., 2021). Many studies have concluded

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that the explicit instruction and explanation of reading strategies as done by the present study, can improve the reading comprehension of struggling readers (Chinpakdee & Gu, 2021; Jitendra et al., 2011; Yapp et al., 2021b). It was revealed that reading instructions using modeling, scaffolding, and activating background knowledge (Duffy, 2002; Strickland & Shanahan, 2004) as utilized in the present inquiry, would enhance reading comprehension. Some scholars have pointed out that explaining why and how to use reading strategies as done by the SBI teachers of this study, would work better than omitting the why and how factors (Milliano et al., 2016; Pressley et al., 2006). Additionally, increasing students' self-monitoring and self-regulation during reading as considered by the current scrutiny, results in positive effects on reading comprehension (Amirabadi & Biria, 2016; Cohen, 2014; Zaccoletti et al., 2020). Furthermore, asking questions during reading and making predictions, which were among the strategies used by the present inquiry, can enhance reading comprehension (Pressley, 2002).

In the SBI classroom, the learners were encouraged to relate their newly gained textual knowledge to their relevant schemata, draw inferences, skim and scan the text, ignore irrelevant parts, and regard signal words to grasp the author's intentions. Similarly, it has been asserted that accomplished readers decide which parts to read and which to ignore (Poole, 2014), relate the text to what they already know (Duke & Pearson, 2002), regard what is important and what is stated implicitly (Harvey & Goudvis, 2007), understand the gist, draw inferences, identify the author's purpose, and bridge the gap between the text and their background knowledge (Shanahan, 2012).

There have been studies demonstrating the positive effects of strategies on very young learners' reading comprehension. Duffy (2002) indicated that the strategies of modeling, scaffolding, and explaining why and how to use strategies as used by the present study, enhanced very young learners' reading comprehension. Moreover, Englert and Mariage (2020) concluded that reading strategies can improve elementary students' comprehension of main ideas. They used students' background knowledge, modeled strategies, implemented guided practice, collaborative practice, independent practice, and modifications, which were all employed by the present inquiry.

Koch and Sporer (2017) corroborated that teachers' reading would improve after teaching reading strategies. The same statement was made by the teacher participants of the present study during the interview. Teacher education programs which allow teachers to instruct reading strategies during their training would encourage the teachers to use the strategies in their future classrooms (Drechsel et al., 2014; Guskey, 2002). The SBI teacher participants of the current inquiry, who were pre-service teachers and trained by the researcher to use the reading strategies, opened up that they were willing to apply the strategies to their future classrooms which supports the remarks made by Drechsel et al. (2014) and Guskey (2002).

Furthermore, it has been shown that reading fluency correlates with reading comprehension (Fuchs et al., 1988; Fuchs et al., 2001). According to the SBI teacher and learner participants, the reading speed and pronunciation of the learners were gradually enhanced during the SBI treatment. Drawing on the results attained by Fuchs et al. (1988, 2001), the reading strategies resulted in better comprehension and led to improved reading fluency.

The results also showed that L2 reading motivation increased for both groups. This improvement might have been aided by the pleasant learning environment in the current study, which was very different from that of regular classrooms. According to the interview, the SBI participants enjoyed virtual education, electronic materials, and online team-teaching. They believed that these features provided a positive and enriching experience for them. Earlier studies also showed participants' positive attitudes toward e-reading (Kaban & Karadeniz, 2021) and electronic materials (Fu et al., 2014). In one study, the participants reported their positive attitudes toward co-teaching and attributed their language achievement to team-teaching and complementary teaching behaviors (Rao & Yu, 2019). It has also been argued that students' motivation is affected by their learning environment (Naeghel et al., 2012) and the format of the texts they work with (Mckenna et al., 2012). Research has shown that a different reading environment such as screen reading and using electronic materials as used by the present study, can promote learners' reading motivation (Kaban & Karadeniz, 2021).

Although both groups' reading motivation increased, the SBI participants developed a higher level of L2 reading motivation than the TI participants. One of the main teaching stages in the SBI classroom was virtual collaboration among the participants in addition to the interaction between the participants and instructors. It has been argued elsewhere that classroom collaborations would enhance students' motivation (Guthrie, 2008) and the higher motivation can encourage higher reading achievement (Guthrie & Wigfield, 2000). Interestingly, the SBI participants who enjoyed reading strategies and classroom collaboration scored more highly for reading motivation and comprehension than the TI participants. L2 reading motivation has been associated with reading comprehension,

achievement, and strategies (Cartwright et al., 2016; Han, 2021; Huan & Duke, 2020; Toste et al., 2020; Wigfield et al., 2016) and the relationship between reading and motivation is believed to be bilateral (Toste et al., 2020). Students who are motivated in literacy classrooms are strategically engaged and instructed in reading strategies (Cho & Ma, 2020; Malloy et al., 2013). Drawing upon the previous studies, it is not surprising that the SBI participants who used the reading strategies had higher reading comprehension and motivation than the TI group.

Although the anxiety of both groups reduced, that of the SBI group experienced a greater reduction. It is believed that students who have not acquired good reading skills may feel disappointed (Lei et al., 2010) and assume they lack intellectual capacity which exacerbates their anxiety (Qun & Onwuegbuzie, 2003). The same expression was made by the SBI participants who had considered themselves as reading haters, incompetent readers, and inferior to their classmates causing apprehension for them before the treatment. As a result, it is defensible that the improved reading comprehension and increased motivation diminished the anxiety of both groups. Moreover, it has been suggested that teachers should instruct reading strategies, which help students approach reading easily and diminish their anxiety (Zaccoletti et al., 2020). Accordingly, the higher reading comprehension of the SBI participants gained by learning strategies resulted in a more reduction in reading anxiety than the TI group.

6. Conclusion

This study demonstrated the superiority of multi-strategy instruction to the traditional instruction regarding reading comprehension, motivation, and anxiety of EFL fifth graders. Most educational materials are written in English, which can pose problems for non-native speakers (Van Weijen et al., 2012). Fortunately, instructing reading strategies and enhancing reading behavior would improve reading ability (Mokhtari et al., 2008; Pressley et al., 2006). Thus, it is essential to teach reading strategies to L2 learners given that L1 reading strategies do not transfer to L2 (Yapp et al., 2021b). Unlike some common beliefs, reading strategies can be used for students who are not proficient readers and lack required language skills (Koda, 2007) such as the EFL fifth graders of the current study. Accordingly, even children need to be instructed in reading strategies and know what to do with them and why to use them, which is mostly neglected by teachers (Afflerbach et al., 2008).

Beyond improving students' reading, strategies could positively affect reading motivation and anxiety as shown by the present inquiry. Different elements invoked by L2 texts such as students' imperfect reading comprehension can lead to anxiety (Rajab et al., 2012). Additionally, the strong tie between reading motivation and reading achievement should not be overlooked (Taboada et al., 2009). As a result, should students' reading improve thanks to reading strategies, their reading motivation and anxiety could be enhanced as well. Besides the pedagogical benefits of reading strategies for students, fully regarding these strategies can help material developers design more effective materials for struggling readers (Shoerey & Mokhtari, 2008).

The present study would inspire EFL teachers to employ L2 reading strategies to sharpen EFL learners' reading regardless of their L2 knowledge or age. Having perused the outcomes of the current study, English teachers could feel encouraged to integrate technology and team-teaching into their education. Although the current study implemented reading strategies for students who did not require special education, future inquiries should use these strategies to improve disabled, autistic, or emotionally disordered learners' reading. Furthermore, future studies should employ reading strategies to improve EFL students' comprehension of disciplinary texts which could enhance their domain knowledge.

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