Enhancing reading achievement through a timed reading approach: A quasi-experimental study in the Saudi EFL context

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Abstract

This study implements a timed reading (TR) approach as a scaffolding teaching and learning method to enhance reading achievement and strategies within the Saudi English as a foreign language (EFL) context. The study adopted TR intervention in which processes of EFL reading are scaffolded with those of getting a driving license. The study employs a quasi-experimental design among preparatory year (PY) students at Najran University. The control group consists of 1628 students enrolled in 2023. The quasi-experimental group consists of 1218 students enrolled in 2024. In this intervention, the syllabus breakdown was modified to serve TR. Both language instructors and the students of the experimental group were oriented and trained on the techniques of TR. The data was collected from the course portfolios of 2023 and 2024 for a quantitative report of the results. The results showed that TR has positively enhanced students' reading achievement. The average achievement level of the course learning outcomes of the experimental group reached 84% compared with 70.49% in the control group. As for the reading strategies, the experimental group outperformed those of the control group in terms of vocabulary building (+22.05%), inferring meaning between the lines (+23.45%) skimming and scanning (+14.92%). However, the control group outperformed the quasi-experimental group (−1.10%) in paragraph understanding. This study has insights into the feasibility and benefits of TR in EFL reading instruction, with implications for curriculum development and language learning strategies in Saudi Arabia and beyond.

Keywords: achievement; EFL reading; preparatory year; quasi-experimental design; timed reading, training

Introduction

Achieving proficiency in English as a foreign language (EFL) reading skills is widely regarded as a crucial gateway to increase learning opportunities and improve the quality of life (Milliner, 2021). Hence, acquiring fluency in reading allows learners to process textual information
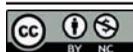
in a quicker and more efficient manner (Shimono, 2019). Reading skills encapsulate both understanding and speed (Mahdizadeh & Aminafshar, 2018). Yet, teachers and trainers work to develop these reading competencies. Reading speed or what is called reading rate, typically measured in words per minute, is a common way to operationalize in research and assess in teaching EFL reading fluency (Kramer & McLean, 2019).

Scholars and specialists in the field of teaching reading have provided several approaches to help students overcome the reading difficulties that they face (Brysbaert, 2019; Chang, 2012; Grabe, 1991, 2009; McBreen & Savage, 2021; Rayner & Reichle, 2010). Timed reading (TR) is a psycholinguistic approach in which TR processes and exercises can help enhance the reading performance of individuals of any age (Hamersly, 2015). Combining extensive reading, TR, and oral re-reading can be beneficial for nurturing EFL learners' reading fluency (Milliner, 2021). TR deals with reading rate as words/characters per minute. TR examined how character count, rather than just word count, impacts EFL reading fluency (Kramer & McLean, 2019). Implementing TR in a classroom setting can help students develop fluency in their reading and speaking (Hamersly, 2015).

In the Saudi EFL context, universities continuously update their curricula to develop students' literacy. EFL reading proficiency is an essential part of language learning. High achievers develop their skills and knowledge through extensive reading. Fostering reading proficiency is a crucial aspect of language education (Alshenqeeti & Alrahaili, 2020). The development of reading skills is often a challenge due to various factors such as limited exposure to authentic English texts and insufficient practice opportunities (Alharbi, 2022). To address such challenges, timed reading activities (TRAs) involve graded activities in which EFL students monitor the progress of their reading rate and understanding while learning how to speed up reading and understand better. The effectiveness of TRAs in improving EFL students' reading rate and comprehension is an interesting research area in the Saudi EFL context. TRAs were generally effective in improving reading rate and comprehension among EFL mixed ability classes (Hazaea & Almekhlafy, 2022). Furthermore, the difficulty levels of the reading texts are of great importance in such activities Hazaea & Almekhlafy (2023). In these two studies, Hazaea and his colleague focused on the impact of TR on students' reading comprehension, reading rate and the difficulty level of the texts.

While extensive research has been conducted to enhance the understanding of EFL students in the reading ability development (Brysbaert, 2019; Hazaea & Almekhlafy, 2022, 2023; Kirin, 2010), few studies have explored the potential role of sustained engagement in reading in the advancement of reading achievement (Allington & McGill-Franzen, 2021). Furthermore, another study compared the reading comprehension performance of monolinguals and bilinguals, and the factors, linguistic or otherwise, contributing to their success in this area remain understudied (Peets et al., 2022). Due to this dearth of empirical and experimental research, this study tries to examine the role of TR in reading achievement.

Unlike previous studies, the current study looks at the impact of TR on reading achievement. It broadly aims to measure the effectiveness of TR in enhancing reading achievement and strategies among EFL students in the Saudi tertiary context. It specifically addresses the following two research questions:

1. To what extent does TR enhance reading achievement among EFL students in the Saudi context?
2. What is the effect of TR intervention on the reading strategies of these students?

Literature Review

Reading Achievement

Reading achievement is essential for language learners to comprehend texts, expand vocabulary, and develop critical thinking skills (Talebı & Talebı, 2015). One of the factors that influences the success of language learning is the use of learning strategies as they enable learners not only to achieve better learning outcomes, but also to enhance their language skills (Gustanti & Ayu, 2021). Reading achievement can be achieved through training processes.

EFL reading is a skill that requires constant training and efforts. In this regard, Grabe (2009) and Cartwright and Duke (2019) pointed out that reading a text is like driving car. Drivers need to get a driving license to drive their vehicles. This statement argues that EFL reading is a skill that is not inherently granted but developed through practice and effort (Grabe, 2009). Like any other skill, reading improves with consistent effort and engagement. The processes for getting a driving license can be used as a motivational and scaffolding technique with adults for better reading achievement. In the same way and processes, readers in EFL contexts can be trained for better achievement.

Reading Strategies

Reading strategies and reading skills are used interchangeably by educators to refer to the techniques used to develop reading comprehension (Mokhtari & Reichard, 2002). Strategies are theoretical knowledge in which readers first consciously learn them and then apply them subconsciously while reading a text. The simultaneous use of reading strategies becomes skills by the passage of time (Eskey, 2005; Nunan, 2015). While reading, EFL learners are required to use several reading skills. *Previewing* is a skill in which language instructors encourage students to discover what the topic of the reading text is about. Students are also trained on scanning and skimming. Language instructors help students to *ask question while reading;* something to help them stay focused and remember what they read. Language instructors also encourage students to guess the meaning of new words. Furthermore, language instructors also help students to identify the topic and the controlling idea of the reading text and to understand the way the text is organized, and the way signal words are used in the text (Jeffries & Mikulecky, 2005).

Timed Reading Approach

Timed reading deals with reading as timed processes. It refers to a measurable continuous assessment of reading comprehension and rate (Brysbaert, 2019). In line with TR, schema theory perceives reading comprehension as the interaction between readers' existing knowledge and the reading passage (Rumelhart, 1980). This theory posits valuable roles of instructors to activate students' schemata in pre and while-reading activities in both first and second language (Stott, 2007). As processes, TR involves learning some pre and while reading strategies such as previewing, scanning, skimming, making predication and inferences, building vocabulary and understanding paragraphs and their patterns. It also involves activities for reading faster and understanding better. TR serves as a kind of recognition of an individual's reading ability. Implementing TR among EFL students could provide them with a clear goal and motivation to improve their reading achievement.

TR is a comprehensive technique that enables students to enhance both their reading speed and reading achievement (Atkins, 2010; Chang, 2010; Kramer, 2015; Milliner, 2021; Shimono,

2019), which are integral components of reading fluency (Hamersly, 2015). Hazaea and Almekhlafy (2022) pointed out that TRAs may be beneficial in helping EFL students in mixed-ability classes develop their reading skills. By incorporating TRAs into English language reading instruction, students could potentially acquire effective reading strategies, improve their reading speed and comprehension, and foster a more enjoyable experience when reading English texts.

Existing Studies on Timed Reading

Existing studies on TR operationalized reading in several ways. TR is linked with word count (Brysbaert, 2019; Hazaea & Almekhlafy, 2022, 2023; Kramer & McLean, 2019). TR is also investigated in relation to reading fluency (Atkins, 2010; Chang, 2010; Kramer, 2015). Some studies probed TR from different perspectives. They examined the impact of character count on students' fluency (Brysbaert, 2019; Kramer & McLean, 2019). The same studies also reviewed existing literature on the reading rate per minute, the effects of TRAs on the reading rate of students with mixed abilities (Hazaea & Almekhlafy, 2022), or on low and intermediate levels (Atkins, 2010), and the role of TRAs in enhancing students' fluency in speaking, reading and thinking (Chang, 2010; McLean & Kramer, 2015; Shimono, 2019).

Brysbaert (2019) analysed 190 studies on TR involving 18,573 participants to estimate the reading average per minute. The study reported that for adults reading English, it is estimated to be 238 words per minute for non-fiction texts and 260 words per minute for fiction texts. This difference in reading rate can be attributed to the word length, with non-fiction texts generally containing longer words compared to fiction. The estimated reading rates are lower than the figures often reported in scientific literature and popular media. Furthermore, Kramer and McLean (2019) examined how character count, rather than just word count, impacts L2 reading fluency. Two studies with Japanese university students showed that texts with more characters took longer to read, even when word counts were equal. The findings suggest that character-based measures should be used alongside word-based metrics when assessing L2 reading rates and amounts. These results highlight the importance of considering word length when analyzing reading fluency in second-language learners.

Other studies scrutinized TR with students of mixed abilities (Atkins, 2010; Hazaea & Almekhlafy, 2022, 2023). Hazaea and Almekhlafy (2022) found that TRAs were generally effective in improving the reading comprehension and reading rate of EFL students with mixed abilities. Moreover, TRAs also helped raise the students' awareness of their use of ineffective or potentially problematic reading strategies. The same authors and in the same context (2023) found that reading texts used in TRAs had simplified content, characterized by high narrative elements. Atkins (2010) investigated whether regular TR exercises lead to improvements in reading fluency for students in intermediate and low proficiency classes. Additionally, the study examined whether the amount of extensive reading completed by students has a statistically significant interaction effect with their reading fluency development. The findings revealed that extensive reading completed by students has a statistically significant interaction effect on their reading fluency development.

Furthermore, TR is explored with students' fluency level (Chang, 2010; McLean & Kramer, 2015; Shimono, 2019). McLean and Kramer (2015) examined how TR exercises in a classroom setting can help students develop fluency in their reading, speaking, and thinking. Research has shown that TR can improve and increase students' reading fluency, reading rates, and comprehension of the material. These TR practices can enhance the characteristics of reading performance for individuals of any age. While TR is commonly used in elementary classrooms, it has also been proven effective in increasing the reading rates of adult learners. Chang (2010) investigated the impact of TR on developing reading fluency and on improving students' read-

ing rates. A 13-week timed reading activity was integrated into the regular curriculum. The participants were 84 college students divided into an experimental group and a control group. The assessment involved pre-tests and post-tests to measure reading speed and comprehension. Student perceptions were also collected through a final written report at the end of the course. The results showed that the students who completed the TR activity increased their reading speed by an average of 29 words per minute; i.e. 25% and their comprehension by 0.63 words; i.e. 4%. The differences in the experimental group's performance across the two time periods were statistically significant. The participants felt more confident in their reading abilities and were impressed by the amount of reading they were able to complete without the teachers' guidance. Shimono (2019) also investigated the effects of repeated oral reading and TR on the oral reading fluency of Japanese university students over 12 weeks. The participants were divided into three groups: Group 1 practised both repeated oral reading and TR, Group 2 only did TR, and Group 3 was the control group. The results showed that both treatment groups made significant improvements in fluency, but Group 1 outperformed the others. Group 1 also exhibited the greatest gains in rhythmic aspects, while Group 2 saw the most improvement in reading speed. These findings provide empirical support for combining repeated oral reading and TR as effective methods for developing L2 oral reading fluency.

A close reading of the above studies shows that none of them has measured the impact of TR to enhance reading achievement among EFL students. Still, the present study did not come across an intervention study which promotes awareness about processes of TR as processes for getting a driving license.

Methods

Research Design

This study aims to measure the effectiveness of TR in enhancing reading achievement among EFL students. It employs a quasi-experimental design to analyse the content of the reading course portfolios. Quasi-experimental designs allow for the investigation of interventions in natural settings, making the results more generalizable to real-world educational contexts (Chow, 2024). Being the course coordinator for eight years now, the researcher's experience allowed him to find solutions for developing students' reading abilities. EFL students who enrolled in the PY of Najran University in the academic years 2023–2024 were recruited in TR intervention.

Settings and Context

Preparatory year (PY) is a foundational while-college program that aims to prepare newly enrolled students for academic study in some competitive undergraduate programs. The program involves English language skills including a course in EFL reading. Reading Skills is a two-credit and four-contact hours course. As a foundational and bridging course, it aims to fill in the existing gap between the school reading outcomes and the demands for reading at a university level. The course has five learning outcomes and uses Reading Power 1 (Jeffries & Mikulecky, 2005). The textbook is designed in a way that trains students in some comprehension and thinking skills. By mastering these skills, the students have a chance to practice reading faster in the form of TRAs. Therefore, by the end of the course, students are expected to achieve the following learning outcomes (LO):

- LO1 to recognize topics, the controlling ideas and details of the reading passages;
- LO2 to build academic vocabulary using prediction and contextual clues;

- LO3 to scan and skim for information in a reading passage;
- LO4 to infer meaning between the lines; and
- LO5 to participate in academic tasks (reading faster) while learning about reading culture and habits.(source: the course specifications).

These learning outcomes are measured based on continuous, formative and summative assessment methods.

Participants

This study recruited EFL male and female students who enrolled in the PY of Najran University for two successive years. Every year, hundreds of EFL students need to pass this course before they join their competitive programs. Following the Saudi education system, male and female students study in separate groups and buildings. As Table 1 shows, the control group includes the enrolled students of 2022–2023 academic year. Male students (N = 840) are distributed in 42 classes where the mean of a class size is 20 students. Female students (N = 788) are divided into 22 classes with a mean class size of 36 students in a class. The total number of the control group is 1628 students. These students are divided into 64 classes where the mean of the class size is 25 students in a class.

As for the experimental group, it consists of those students who enrolled in the academic year 2023–2024. 564 male students are distributed in 33 classes where the mean of a class size is 17 students. 654 female students are divided into 24 classes with a mean of class size of 24 students in a class. The total number of the quasi- experimental group is 1218 students. These students are divided into 60 classes where the mean of the class size is 20 students in a class.

The control group and the quasi-experimental group share several characteristics. These students are enrolled in the university following the same admission criteria. The students' ages range between 18 and 21, an age in which they usually apply for a driving license. English is a foreign language for them whereas Arabic is their L1. They are taught by the same language instructors and follow the same assessment system. They share the same cultural backgrounds. They came from the same school education system. These characteristics make them appropriate and natural data for quasi-experimental research design.

Course Portfolios

Course portfolios are a great source for data collection (Smith & Tillema, 2003). The present study used course portfolios as instruments for data collection in this study. A course

Table 1 *Participants recruited in this study*

Research design	Gender	Classes	Students	Mean of class size
Control group 2022–23	Male	42	840	20
	Female	22	788	36
	Total	64	1628	25
Quasi-experimental group 2023–24	Male	33	564	17
	Female	27	654	24
	Total	60	1218	20

portfolio typically includes a comprehensive collection of materials that document the design, implementation, and outcomes of a course. It generally contains course specifications, course reports, assessments and continuous improvement records. These reports serve as a valuable tool for self-assessment, peer review, and continuous enhancement of teaching practices. On conducting this study, the researcher got the ethical approval letter from the ethical research committee at Najran University.

Course specifications provide information about the design of the course including intended learning outcomes, teaching strategies, syllabus breakdown, suggested textbook and assessment plan. The syllabus breakdown is updated every semester by the course team. Course assessment follows a unified assessment criterion: continuous assessment, midterm and final exam. Continuous assessment is manifested in four e-assignments (20%). Midterm (30%) and the final exam (50%) are the assessment tools used in the course. These tools are prepared by the course team and the exam committee. In so doing, these instruments pass through systematic processes. The course instructors submit proposals to the course coordinator who prepares a suggested draft for the exam committee who validate and finalize the tools. At the end of the course, the course report is prepared by the course team in coordination with the exam committee and the statistics unit. Course report provides statistics about students' results, grades, achievement of learning outcomes and improvement plans. These documents provide rich portfolio data.

The Intervention

This study proposes a step-by step process for teaching and learning skills of reading based on TRAs. It applies the suggested steps in a coursebook "reading power 1" (Jeffries & Mikulecky, 2005) which is widely used in several learning contexts at the college level. TR is operationalized as a teaching and learning method to enhance EFL reading achievement. The intervention was implemented on two techniques of the reading course: the syllabus breakdown and training of both language instructors and students.

In the first technique, the syllabus breakdown has been modified to serve TR. Before the intervention, the syllabus used to be delivered in chronological order as per the table of contents of the textbook. The course starts with Part 2 where students learn comprehension skills in eight units for eight weeks. After that, students go on with the content where they move to Part 3 which takes one week for thinking skills. Finally, the course moves to TR activities where students along with the language instructors complete three units of 40 passages followed by eight multiple-choice questions. These passages contain about 13000 words.

For the sake of the intervention, the syllabus breakdown was modified to serve TR. In so doing, a training session for the language instructors was conducted at the beginning of the course where they were orientated about the new approach to reading license, Table 2.

As Table 2 shows, the syllabus breakdown was modified to serve the interests of TR. In so doing, Part 3 (Thinking Skills) and Part 4 (Reading Faster: Unit 1) were introduced soon after Unit 5 of Part 2. Then units 6, 7 and 8 of Part 2 were delivered hand-in-hand with exercises in Part 3, Unit 2 and Unit 3 of Part 4. The notion behind this shift is to let students practice fast reading at an early stage while learning comprehension skills; something that closely matches with the analogy of the processes for getting a driving license.

The other technique used in this interventional study is training sessions with language instructors and students. The idea of getting a license has become a common culture in the Saudi official system where teachers are expected to get a teaching license, and government workers are expected to get a working license for their jobs. Fresh students who join university are of an age that is usually allowed to apply for a driving license. Building on this background

Table 2 *Syllabus breakdown and assessment before and after orientation towards reading license*

Content	Topics	Week		Remarks
		Before training	**After training**	
Orientation	Instructors introduce and discuss course learning outcomes, content, assessment plan.	1	1	Training session to instructors
Part 2 Comprehension Skills	Units 1 to 5 (Previewing and Making Predication, Scanning, Making Inferences, Building Powerful Vocabulary and Learning to Look for the Topic)	2–6	2–6	No change until unit 5
	Unit 6: Understanding Paragraphs	7	10	Shift from Unit 5 of Part 2 to Part 3
	Midterm	8	8	
	E-assignments	4, 7, 9,11	4, 7, 9,11	Continuous assessment
	Part 2: Unit 7: Finding the Pattern of Organization	9	11	
	Part 2: Unit 8: Skimming	10	13	
Part 3: Thinking Skills	Part 3: Thinking Skills	11	7	Training session for students
Part 4: Reading Faster	Unit 1: Fiction – The Dimond Family	12	9	After training, language instructors activate progress chart
	Unit 2: Biography – Two Popular Authors	13	12	
	Unit 3: Non-fiction – Reading Power Magazines	14	14	
All parts	Final Exam	15/16	15/16	Content (Parts 2, 3 and 4)

knowledge of language instructors and students, TR was presented in analogy with car driving and getting a driving license. While a text is mirrored with a road, reading strategies are linked with those skills that new drivers learn before they get their driving license (Cartwright & Duke, 2019). TRAs are linked with the training sessions for getting a driving license. Reading rate is mirrored with a car speed meter. While drivers use kilometers per hour, EFL readers use words per minute. With this analogy in mind, the author trained both language instructors and students. The training sessions linked fast reading and reading autonomy with learning outcomes. Language instructors were encouraged to engage students in understanding the importance of balancing reading speed and comprehension, like driving a car safely.

This study reports the analysis of course portfolio documents. The statistics unit measures course learning outcomes. It follows a systematic approach for generating students' learning outcomes using an Excel database which provides frequency information, means, grades and pipe figures. Yet, in comparing the results of the two portfolios, the present study used simple statistics using an Excel sheet to generate the differences between the control group and the experimental group. In so doing, the study measured the differences in the means of the two groups, and the study created comparative tables; something that best serves the report of this study. According to the grading system at the context of this study, the target achievement level for a learning outcome is 60%. A learning outcome is considered "Achieved" in case it scored 60% and above.

Results and Discussion

This section presents the results and integrates them with relevant research results. In the first sub-section, this study presents and discusses the results associated with the first research question. In the second sub-section, the study presents and discusses the results associated with the second research question.

Reading Achievement

Reading achievement is manifested in the learning outcomes. The results showed that TR has positively enhanced students' reading achievement (Table 3).

As Table 3 shows, all learning outcomes in the two groups have passed the target achievement level; 60% and above. However, in the experimental group, the students outperformed their peers in the control group. 84% of the experimental group achieved the learning outcomes compared with 70.49% of the control group. The highest improvement has been achieved with

Table 3 *Experimental group's achievement in the reading course*

Reading achievement	Control group	Experimental group	Status
LO1	66.10%	65%	Achieved
LO2	68.95%	91%	Achieved
LO3	65.08%	80%	Achieved
LO4	64.55%	88%	Achieved
LO5	87.79%	96%	Achieved
Total	70.49%	84%	Achieved

LO4 in which 88.00% of the experimental group achieved LO4 compared with 64.55% of the control group. Furthermore, the experimental group outperformed the control group in LO2, LO3, and LO5 with (91%, 80% and 96%), respectively; while the control group scored (68.95%, 65.08% and 87.79%), respectively; in the same learning outcomes. However, the control group slightly outperformed the experimental group in the LO1 in which 66.10% of them achieved LO1 while 65% of the experimental group achieved LO1. These findings show a positive effect of TRAs in improving students' reading achievement over four learning outcomes. Despite this great improvement, TRAs should be developed in ways to help students read fast and comprehend the controlling ideas and topic better.

These results coincide with previous studies which revealed the positive impact of TRAs on students' reading comprehension (Brysbaert, 2019; Chang, 2010; Hazaea & Almekhlafy, 2021; Kramer & McLean, 2019; Shimono, 2019). TRAs as Hazaea and Almekhlafy (2022) found were generally effective in improving the reading comprehension skills of EFL students with mixed abilities. Furthermore, McLean and Kramer (2015) supported the present findings; they reported that TRAs can enhance the characteristics of reading performance for individuals of any age. While TR is commonly used in elementary classrooms, it has also been proven effective in increasing the reading achievement of adult learners. Likewise, Atkins (2010) showed that extensive reading completed by students has a statistically significant interaction effect on their reading fluency development. Chang (2010) showed that the students who completed the TRAs increased their comprehension level by 0.63 (a 4% increase). Shimono (2019) showed that providing empirical support for combining repeated oral reading and TR as effective methods for developing L2 oral reading fluency.

Reading Strategies

The results showed that TR has enhanced students' reading strategies (Table 4).

As Table 4 shows, students who received the treatment scored higher than their peers in the control group. The experimental group achieved reading strategies with an average range mounted 13.51%. The average achievement of the experimental group in the reading strategies confirmed the positive impact of TRAs in boosting EFL students' achievement. The intervention helped students to master the reading strategies, and this led them to score high by about average 13.5 scores over their peers in the control group. This result is much higher than that result reported by Chang (2010) where the EFL students who received treatment in TR improved their reading comprehension by 4%.

The highest improvement has been achieved with the strategy of inferring meaning between the lines, a rage of 23.45%. Inferring the meaning has been developed because of the students

Table 4 *Experimental group's level of enhancement in each reading strategies*

Reading strategies	Range between the two groups
Building academic vocabulary using prediction and contextual clues.	22.05%
Scanning and skimming information in a reading passage	14.92%
Inferring meaning between the lines	23.45%
Fast, autonomous, and accurate reading	8.21%
Identifying topics, the controlling ideas and details	−1.10%
Average of all strategies	13.51%

fast reading without stopping. Yet, continuing reading the text enables students to link ideas and reach the intended meaning. This result aligns with Debbabi et al. (2019) who showcased that training Saudi EFL students on TR participate in uplifting their reading their comprehension skills. Yen (2012) also found that indulging in TR develops students' reading comprehension. However, there is a kind of backwardness (-1.10%) of the experimental group in terms of identifying topics, the controlling ideas and details.

When it comes to specific reading strategies, an enhancement occurred in four strategies. First, the strategy of building vocabulary is enhanced where the range in development in students' predicting of new vocabulary was 22.05%. This result indicates that TR enables students to predict the meaning of the unknown vocabulary based on the context. This finding coincides with Browning's (2003) notion that TR enables readers to develop vocabulary and grasp comprehension skills automatically. Another reading strategy that has been enhanced is the students' strategy to scan and skim information which was increased by 14.92%. Hamersly (2015) confirmed that TR develops students' reading fluency among adult students. Finally, TR develops students' autonomous reading ability and fast reading where the quasi-experimental group outperformed the control group by 8.21%. This result is in agreement with Mahdizadeh and Aminafshar (2018) who affirmed that using TR impacted the reading comprehension of Iranian EFL students. These results are not in agreement with Bhooth et al. (2015) who reported that Yemeni EFL students perceived the most fundamental problem of reading is associated with vocabulary mastering followed by sentence grammar and fast reading. This contradiction can be attributed to different adopted approaches. Bhooth et al (2015) applied the learning by design approach while this study used TR. Therefore, following two different approaches lead to different findings. Moreover, the studies were conducted at two different settings, i.e., Yemen and Saudi Arabia where different learning facilities and environment.

However, TR has a negative effect on the strategy of understanding paragraphs. The control group outperformed the quasi-experimental group (-1.10%) in terms of students' comprehension to topic, the controlling ideas, and details of the reading text. This backwards in enhancement may be due to the less time they spent to identify the topic, the controlling ideas and details of the text. TR generally hinders paragraph understanding. It specifically hinders the sub-strategies of identifying the topic, controlling idea and details. This variation in mastering some of the reading strategies over others aligns with Paris's (2005) ideas that some of the reading skills can be mastered quickly due to their constrain while others require long time to be developed. Similarly, Mahdizadeh and Aminafshar (2018) reported that TR has not significant effect on developing Iranian reading comprehension skills.

Conclusion

The study examined the effectiveness of TR on reading achievement and strategies in the Saudi EFL context. Employing a quasi-experimental research design, the course portfolios of two successive years were analyzed and reported. In this interventional study, two modifications have been conducted to serve the interests of TR: modifications in the syllabus breakdown and conducting training sessions on TA for both language instructors and EFL students. The results indicated positive improvement in reading achievement and strategies with the exception of the strategy of paragraph understanding of the topic, controlling idea and details. Improvement in students' reading strategies has been witnessed in previewing, scanning, skimming, building powerful vocabulary and fast reading. However, identifying the controlling idea and details was hindered by TR. TR did not participate in developing this important part of reading.

This study has some pedagogical implications. TR is applicable for teaching and reading in the adult foundational programs in the Saudi context and beyond. Instructors of reading can

adopt this approach to enhance students' reading comprehension. Yet, this study has some limitations. Because this study employed a quasi-experimental research design in this natural educational setting, it cannot have a clear-cut control of the variables that make two totally homogeneous groups. This limitation invites other researchers to recruit experimental research designs for better control on the variables of the two groups. Another limitation is the assessment texts. This study depended on local tests prepared by the language instructors as well as the exam committee. It would have been more reliable should TA based international tests are adopted.

This study recommends that language instructors could implement more activities along the course for training students to comprehend the controlling ideas of the texts. Instructors may also add supplementary materials to boost students' ability in this strategy. TR can be used in various learning contexts to enhance EFL students' reading achievement and strategies. Further research could explore the relationship between TR and the strategy of identifying the controlling idea and details of reading paragraphs.

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