

Investigating Metacognitive Think-Aloud Strategy in Improving Saudi EFL Learners' Reading Comprehension and Attitudes

Abdulaziz Ali Al-Qahtani¹

¹ Department of English and Translation, University of Jeddah, Jeddah, Saudi Arabia

Correspondence: Abdulaziz Ali Al-Qahtani, Department of English and Translation, University of Jeddah, Jeddah, Isfan, Saudi Arabia.

Received: July 15, 2020

Accepted: August 12, 2020

Online Published: August 13, 2020

doi: 10.5539/elt.v13n9p50

URL: <https://doi.org/10.5539/elt.v13n9p50>

Abstract

The current study's objective examines the effectiveness of using a Think-Aloud strategy in improving Saudi EFL learners' reading comprehension and attitudes towards learning. A quantitative study with a quasi-experimental design was implemented through applying two different instruments: Reading Comprehension Skills Test and Attitude Scale towards learning EFL. The study adopts a pre-post control group design where forty students were randomly assigned to either a control or an experimental group. Students of the experimental group were instructed by using metacognitive Think-Aloud strategy, whereas, the control group received traditional treatment such as skimming and scanning techniques. The findings of the study showed that the attitudes and reading comprehension skills of the experimental group improved significantly as opposed to the control group. The study gives more insight into the importance of applying a Think-Aloud strategy in teaching reading comprehension inside EFL educational context. The study also suggests recommendations for EFL teachers to increase the efficiency of applying this strategy through their teaching procedures.

Keywords: Metacognitive strategies, reading comprehension skills, reading strategies, attitude, teaching reading, EFL, Think-Aloud strategy

1. Introduction

Reading competencies are crucial requirements to the student's success and development. They do not only direct learners to gain productive lives, but they also keep them aware of new technologies, innovations and updated ideas. In addition, reading helps learners' imaginations to grow and to seek comfort and entertainment. Respectively, readers in general may thus have different goals, such as reading for joy, reading for knowledge, work, personal development and academic purposes. Furthermore, the students' comprehension of what they read receives an increased concern. Among these concerns, most of students know how to decode language through reading stages, however, a large number of them have major problems related to the level of the achieved comprehension. These concerns have witnessed great attention to detect an appropriate reading strategy that can suffice. The strategy of investigating how students comprehend, recall, and summarize the reading texts without an appropriate available schema reinforces the rationale for conducting research to study various reading comprehension strategies and skills.

In the educational context, teachers are in the front-line challenge. In their daily practices, they are expected to illustrate evidence of their students' success in reading competencies and comprehension often through developing deep understanding and self-learning (Soraya, 2017; Brandmo & Berger, 2013; Gonzalez-DeHaas & Willems, 2016; Yu, 2013). Conceptualizing the importance of teaching reading competencies, Hedge (2003) asserts that the components of the reading text in EFL teaching may constitute of learning objectives. These objectives are linked to the competency of reading a wide range of various English texts. According to the former study, this can be also identified as a long-term objective that most teachers strive to establish and to improve through their independent readers outside the EFL classroom environment. This can be achieved through different means such as language knowledge building that will promote reading competency's skills, reading style purposes' adaptation through skimming and scanning and finally written text-structure understanding's development by taking a critical view of the text's context.

In literature, metacognition was noticeably recognized and developed by (Flavell, 1979). It emphasized the role of reasoning in building knowledge that is related to cognitive events and dealing with the particular content as it

was illustrated in different studies such as (Hedge, 2003; Iverson, 2005). Metacognitive reading strategies have recently appeared in various literatures such as (Iwai, 2007; Ketabi, 2012; Khonamri & Ahmadi, 2014; Batang, 2015; Shang, 2017; Kirin, 2007). A recent research example is Alsheikh & Mokhtari (2011); who raised a critical question of how Arabic-speaking students used reading techniques when reading English texts. The conclusion they obtained was that raising awareness of reading approaches through specific teaching is extremely effective in conducting EFL reading lessons. Effective readers use metacognitive techniques to consider and to monitor the reading process before, during, and after reading a specific text. Students that do not make good use of their metacognitive abilities usually encounter many reading difficulties. Such students will be less inspired and will eventually stop trying if they think their efforts will not be acknowledged or noticed. Metacognition obviously includes more executive multi-function elements, which are defined by setting appropriate and pedagogic goals, choosing explicit strategies and tracking their efficiency in learning tasks. Kuhn (2000) believes that two components of metacognition strategies can be recognized; (1) the students' self-realization of a knowledge basis from which information regarding the reading text is internalized about how, when and where to use the anticipated cognitive strategies, and (2) their self-realization of possessing strategies that can guide the learning procedures. This study contributes to the existing literature on metacognitive reading strategies where the anticipated results may imply that the instruction of metacognitive Think-Aloud reading strategy has its merit and could have a place in the English language classroom teaching; as it facilitates the students' reading comprehension level.

2. Literature Review

Comprehending what is being read is the main objective of any kind of reading activity. Reading comprehension competency formulates construction of meaning from a selected text. In this respect, the author encodes his/her ideas and messages and the reader decodes the experienced language into understood thoughts. Now teachers and learners are encouraged to read more in many ways, and to practice and gain insights into their comprehension of literary texts. The literary aspect of reading literary materials is also sometimes given considerable constituent importance and this stresses awareness of the importance of reading particularly for learners.

There has been a growing interest among researchers since the late 1970s in investigating the reading process and how the strategies of readers can play a significant role in the meaning-construction process. The empirical research on reading strategies denote the complexity of understanding effective learners' metacognitive approaches which is demonstrated by various literature reviews in different educational contexts. Recent researches focus on metacognitive strategies and their application (Forbes & Fisher, 2018; Wang et al., 2018). According to Carnine et al. (1997), comprehension is an integral part of reading, therefore, they claim that efficient readers must be competent enough in the decoding stage in order to comprehend what is read. For Anderson (2000), reading involves interactions among the reader's interlanguage competence, personal characteristics and external contexts. Alqarni (2015) illustrated that teaching English reading as EFL is not an easy activity since teachers use different strategies to develop the reading skills for their pupils through applying these strategies to all three reading stages. Raising awareness among teachers of the importance of the relationship that exists between the three reading integral components; the text, the reader and the instructor, reinforces them to be more attentive to metacognitive reading approaches to improve the learners' comprehension. In addition, with the integration of metacognitive techniques, as an essential component of reading comprehension; the relation between these three elements will be strengthened. The elements will now have a positive impact on each other; ensuring that learners develop awareness, realize new ideas and understand texts clearly, or at least make an attempt to achieve that. Nejad & Mahmoodi-Shahreabaki (2015) argue that in order to meet the reading needs of EFL learners, educators are encouraged to build successful ways of teaching comprehension of reading and to use applicable reading strategy. In the same regard, Wright (2015) claims that skilled readers are often characterized as having more metacognitively-awareness than less efficient readers. Accordingly, Wichadee (2011) defines metacognitive approaches as powerful methods to help learners understand what they have learned. Alderson (2000), made the connection between metacognition and reading by explaining that an essential component of reading is to effectively deploy metacognitive skills and track one's own reading. Metacognitive strategies allow learners to monitor their own understanding. In other words, learners use multi-task functions such as organizing, preparing and assessing for different learning coordination contexts (Oxford, 1990; Oxford, 1995). Hassan (2017) Explained that reading metacognitive approach effectively leads to both L1 and L2 readability. This means that students are conscious of what constitutes efficient reading; meaning the higher their ability to read, the greater their knowledge of efficient reading. Readers who are metacognitively-aware are capable of dealing text they do not comprehend a text, as they have

alternative methods. Hence, the use of their metacognition stimulates one's thoughts and leads to a deeper learning and positive results. Roohani, et al. (2017) intended to explore reading metacognitive strategies of university level student. While skilled readers showed a positive interaction with the use of the high-frequency techniques, the less skilled readers did not use them as much. Even though both skilled and less skilled readers prioritized problem-solving strategies, the skilled readers preferred using global strategies whereas the less skilled preferred using supporting strategies. Rashid et al. (2016) assert that the Malaysian context often represents the superficial complexity of knowing successful learner's metacognitive strategies. Teachers equipped with such valuable skills will learn more on how to spark and develop the general reading capacities of poor learners and thereby contribute to a better comprehension of reading materials.

As for the advantages of teaching metacognitive technique, teachers can assist in improving their students' reading abilities by modeling various preparation, tracking, and assessment approaches while reading. These techniques are known as before, during and after reading strategies (Pressley & Afflerbach, 1995). Moreover, Rasekh & Ranjbar (2003) examined the impact of metacognitive strategy training on the growth of EFL students' lexical awareness through the use of explicit strategy guidance. The study reports positive effect of explicit metacognitive approach on increasing EFL students' vocabulary repertoire. Similarly, La-ongthong (2002) investigated the effectiveness of a model that infuses metacognitive strategies into reading comprehension instruction to undergraduates. Results revealed a significant positive effect on students' reading comprehension. Similarly, in a five-week program at a Taiwanese university, Cubukcu, (2008) taught metacognitive techniques in teaching reading in EFL classes. The research assessed the efficacy of systematic explicit instruction of different metacognitive techniques to help learners understand the purpose of texts. Results showed that metacognitive approaches were useful in engaging EFL learners and increasing their understanding of reading texts. This is also an indication that reading texts with high and moderate reading abilities require readers to deploy more metacognitive techniques (Akkakoson & Setobol, 2009).

There are different reading comprehension classifications proposed by different researchers. Day & Park (2005), for example, classified reading comprehension into: literal comprehension, reorganization, inferences, assumptions, judgments and personal responses. Roe & Ross (1999), discussed two levels of comprehension: literal and higher-order comprehension respectively. The literal level lays the foundation for higher-order comprehension which includes interpretation, criticism and creativity. The size of text, lexical terms used, and familiarity of the students with the topic can all affect reading comprehension. As a result, different types of reading models and techniques have been introduced to help learners understand reading materials.

Some of the well-known reading strategies are prediction, making connections, visualizing, inferring, questioning and summarizing. Oczkus (2003) states that skilled readers have a purpose for reading and predicting. It is a strategy that enhances comprehension, and it helps the readers establish a purpose for their reading. Visualization prompts the readers to create mental images of what the reading experience (Armbruster, 2010). Inferring, as explained by Serafini (2004), is reading through the lines. Students may use their own experience to draw their own conclusions along with information from the text. Questioning, which is used before, during and after reading, allows readers to ask themselves questions in order to create meaning, improve comprehension, find answers, solve problems, find knowledge and discover new knowledge (Harvey & Goudvis, 2000). Summarization helps readers decide what matters while reading and to be able to reproduce the information in their own words (Armbruster, 2010).

Nuttall (2000) argues that familiarizing learners with different text types could be a daunting task, however, teachers can train them to employ suitable techniques to approach texts of different genres. From the psychological perspective, some studies suggest that it is crucial for readers to have personal connection with knowledge and experiences of what they read (Nilsson (2003). Moreover, some researches concentrate on the relationship between explicitly metacognitive approaches for language learning, reading comprehension, and authenticity of the text (Smith, 2003). The study of Wichadee (2011) explored the efficacy of explicit metacognitive techniques training program to a group of 40 EFL learners over a period of 14-week at a private university in Thailand. A questionnaire and a reading test were administered, and the results showed that the groups' scores in reading and in metacognitive strategy use were significantly higher after the program. Moreover, Takallou (2011) investigated the potential of teaching two metacognitive strategies (planning and self-monitoring) in improving EFL learners' reading comprehension and metacognitive knowledge. The acquired data showed that two experimental groups receiving guidance on 'planning' and 'self-monitoring' outperformed the control group.

Readers, according to Pressley & Afflerbach (1995), can be classified as skilled readers and unskilled readers. Comprehension can be influenced by the personal characteristics of the readers as well as the way they employ

metacognitive strategies in the reading processes. Unlike skilled readers, readers with poor reading skills are not well informed of the effective strategies and are less effective in tracking their understanding of the text they read. As for metacognition and its integral elements, Wolters & Baxter (2000) maintain that metacognition has three key components: knowledge, monitoring and self-regulation. Wine & Hadwin (1998), on the other hand, proposed another classification of metacognitive strategies as having four phases; description of responsibilities, description of objectives, preparation, implementation and adaptation. In all, reading approaches can be very effective in helping the students learn and pass the techniques they use from one language to the other. Efficient readers often track their comprehension and typically pick and use a reading technique when they forget the sense of what they are reading that will help them reconnect with the texts' concept. It is therefore important to know further techniques for reading that show how readers understand the tasks they are reading.

Think-Aloud is one of the well-known strategies that teachers could use to teach metacognitive strategies. It was first proposed by Newell & Simon (1972) to evaluate learners' comprehension. A wide range of scholars have discussed the concept of Think-Aloud strategy implementation in teaching English as EFL (Ness, 2015, 2016, 2015; Lin & Yu, 2015; Karizak & Khojasteh, 2016; Dj & Ali, 2015; Chimics, 2015; Carioli & Peru, 2016; Bai, 2018; Afifah, 2017). For Siagian & Katemba (2016), Think-Aloud is the verbalization of learners' actual thoughts while they read. Alkhaleefah (2016) believed that EFL teachers would generate tasks in Think-Aloud reading by understanding the overwhelming variety of strategic processing. Language teachers may also be interested in undertaking action research that explore realistic reading challenges for learners and problem-solving approaches through the use of collaborative Think-Aloud exercises in the classroom. Richards & Vacca (2011) proposed, after forming groups, that there are five steps in implementing the Think-Aloud Strategy as formulated in figure below (1).

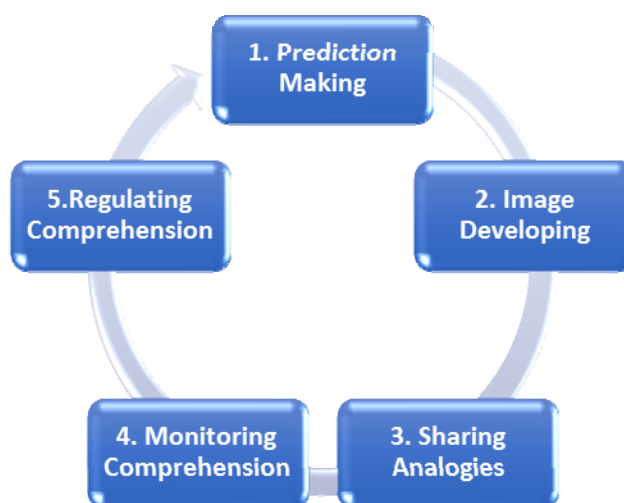


Figure 1. The Think-Aloud Strategy adopted from Richards & Vacca (2011)

In the first phase of Think-Aloud strategy as illustrated in figure (1), the students try to make predictions depending on the chapter titles and sub-headings observed. In the second phase, the students try to depict a mental picture of information extracted in the text. In the third step, the students use analogies to bridge the information they just have with their background knowledge. In the fourth step, students should control and verify the information that is difficult and that they are in doubt about or unsure of. Finally, the students try to keep on reading and skip their confusion and find out whether the next information can clear up their confusion.

Regarding the effect of metacognitive Think-Aloud strategy, Bentley (2013) investigated it on improving kindergarten pupils' reading comprehension. The researcher taught students how to implement Think-Aloud technique to improve their comprehension of stories. The findings showed that the metacognitive Think-Aloud strategy improved kindergarten pupils' reading comprehension. Furthermore, Alkhaleefah (2016) reviewed 41 studies using Think-Aloud reporting methods for the goal of highlighting the substantial overlap of taxonomies (think-aloud and think-out-loud) found in primary and second language studies, L1 and L2, respectively. Some other studies made a clear distinction between the concepts of Think-Aloud and Reading-Aloud. According to Pergams et al. (2018), Reading-Aloud is technique widely used with young students to help them improve their comprehension abilities and master their pronunciation, grammar, and intonation. Moreover, Siagian & Katemba, (2016) confirmed the effectiveness of Think -Aloud and Visual Imagery in substantially enhancing students'

reading comprehension through using comparative design, measuring students' understanding through pre-test, treatment, and post-testing.

In another educational context, Kurniadi (2018) also suggested the efficacy of using the Think-Aloud strategy in teaching EFL reading through focusing on the responses of the students in teaching EFL reading to the implementation of the Think-Aloud Strategy. Cabinda (2019) also argued that Think-Aloud methodologies appeared to be a reliable and trustworthy research tool in SLA and FL multilingual contexts to investigate and identify reading strategies, when the adequate instructions and precautionary measures are taken into account. Furthermore, Mofid (2019) attested to the usefulness of Think-Aloud Strategy in improving students' reading comprehension at the eighth grade. Additionally, Kung & Aziz (2020) studied the impact of teaching metacognitive reading strategies to help students understand the reading process. The Updated Reading Strategies Metacognitive Knowledge was found to be the key tool in defining students' needs and in keeping track of their progress. Furthermore, Channa et al. (2015) maintained that metacognitive strategies that emphasize preparation, tracking, and assessment seem to improve comprehension levels and empower readers competence.

Very limited research was carried out to address Think-Aloud strategy in the Saudi context. Of those limited sources is Alaraj's (2015) study who examined the effectiveness of introducing Think-Aloud as a reading strategy into a the Saudi middle school textbook, and how it would affect students' reading ability in terms of both retention of knowledge and content understanding. He concluded that implementing Think-Aloud strategy leads to positive results. The above discussed studies encouraged the current research to investigate the issue of metacognitive Think-Aloud strategy but with another education level. In sum, metacognitive strategies are the overarching mechanisms of consciousness that control cognitive processes. Because the sample of the present research is different from the samples of the previously mentioned studies in the literature review, the researcher believes that there is a need to investigate the effectiveness of metacognitive Think-Aloud strategy in improving Saudi secondary first-year school students' reading comprehension skills and their attitudes towards learning English.

3. Statement of the Problem

Although reading comprehension is a crucial element in developing EFL learners' language competence, some teachers spend a very limited amount of time teaching comprehension techniques. Rather, they focus on asking merely literal questions based on the observed reading text. Based on the researcher's first-hand field experience as an EFL supervisor for 15 years, many secondary school teachers in Taif City, Saudi Arabia are unaware of reading comprehension as a cognitive skill. In an informal interview with some of them, they showed lack of knowledge of how, when and why reading skills and strategies should be utilized. The teachers did not inform the students about the nature of the strategies they use and how these strategies could be used to improve their reading comprehension skills. Moreover, the types of tasks that are set for English reading classes frequently reflect potential objectives that depend mainly on grammatical exercises and simple answers for different questions based on a reading text. As a result, the students consequently cannot master reading comprehension skills, such as skimming, scanning and inferring meaning.

Saudi Arabia is an Arab country with the Arabic language as the mother tongue. Therefore, much effort should be paid to reinforce teaching EFL where most students still struggle to master reading in their first language. While previous studies have been useful and have contributed to the understanding of how to implement and conceive the Think Aloud strategy, a few were conducted in Saudi Arabia. In fact, there has been a lack of research into the effectiveness of reading comprehension strategies in the Saudi secondary level context, therefore, his study aspires to fulfill in the gap in the research.

Based on a pilot study, the researcher found out that most of the students showed poor achievement in their use of predicting, making connections, visualizing, inferring, questioning and summarizing, indicating that learners are in need of raising their awareness of such learning strategies and ways to utilize them. This study is therefore initiated to investigate whether successful learners make use of unique and efficient reading strategies to promote their reading comprehension. The study attempts finding answers as to whether using metacognitive Think-Aloud strategy enhances first-year Saudi secondary school students' reading comprehension skills or not and if there are any differences between learners' attitudes before and after the integration of metacognitive Think-Aloud strategy.

4. Methodology

This study is a quantitative study that uses a quasi-experimental design to test the students' comprehension level through pretest-posttest procedures. The purpose is to see whether Think-Aloud strategy has significant impact upon enhancing the students' reading comprehension ability skills and attitudes or not.

The sample of the study consisted of forty male students in the first-year from a secondary school in Taif City, Saudi Arabia (n=40). The students were assigned to either the experimental or the control group upon a random basis. Pre-test data on the reading comprehension skills test and on the attitude scale test was obtained to ensure group equivalence.

The variables of the study were formulated based on reviewing the different literature. Metacognitive Think-Aloud strategy represents the independent variable and using students' reading comprehension skills and attitude towards learning EFL as the dependent variables. The relations of the variables will be tested through two instruments which are a pre-test and a posttest for reading comprehension skills.

The study was pretested with a comparison group of 15 male students to determine the reliability of the reading comprehension study. Then, after analyzing the data obtained, three items were omitted from the entire study, and four more items were updated. After adjustment, approximate measurements of internal consistency showed that an acceptable study reliability of (0.78) was achieved. To assess the empirical validity of the reading comprehension test, Pearson Correlation between the reading comprehension tests (authentic and inauthentic) and TOEFL were measured as (0.68) and (0.63) respectively which are significant at $p \leq .05$ level. An English proficiency exam was additionally examined by all the students to familiarize them regarding language proficiency. Finally, the experimental groups received instruction using metacognitive Think-Aloud strategy for twelve sessions with forty minutes each. The teaching sessions were 12 sessions including 12 reading texts. The researcher adapted the material of these lessons from different sources considering certain criteria (according to the advice of the jury members) i.e. being interesting, challenging and appropriate to students' age, educational level, highlighting an appropriate length within their linguistic background. To achieve that end, the reading texts as well as the Reading Comprehension Skills Test were submitted to the judgment of a group of eleven jury members who agreed on their validity and suitability. Four jury members suggested some modifications and accordingly modifications have been made. Pre-test data on the pre-performance on reading comprehension skills test was obtained to ensure group equivalence. Pre-test data on the reading comprehension skills test showed group equivalence as the t-value (0.04) was insignificant at $p \leq .05$ level as in table (1).

Table 1. Means, standard deviations, t-value of means and significance of differences of the two groups in the pre-performance on reading comprehension skills test

Group	Number of Students	Means	Standard Deviation	Degree of Freedom	t -Value
Cont.	20	31.82	8.83	38	0.04
Exp.	20	31.90	7.11		

Maximum score = 100.

Pre-test data on the Attitude Scale towards learning EFL was obtained to ensure group equivalence. Pre-test data on the Attitude scale showed group equivalence as the t-value (0.48) was insignificant at $p \leq .05$ level as in table (2).

Table 2. Means, standard deviations, t-value of means and significance of differences of the two groups in the pre-performance on the Attitude Scale

Group	Number of subjects	Means	Standard Deviation	Degree of Freedom	t-Value
Cont.	20	30.01	7.41	38	0.48
Exp.	20	31.04	7.11		

Most students of the experimental group were successfully able to suggest titles, discover the item referred to by certain pronouns. However, it was not easy for many of them to guess the meaning of certain items or to predict certain events to finish the story. Later, they could do that job successfully. With more practice in reading, the students showed that they were more interested in reading the selected challenging reading texts and were successfully able to do the exercises based on each story.

5. Results

To answer the study objectives, two questions were formulated and two hypotheses were generated to be tested as following:

H1: There are statistically significant differences (favoring the treatment group) between means of scores of the control and the experimental groups in the post measurement of reading comprehension skills test.

H2: There are statistically significant differences (favoring the treatment group) between means of scores of the control and the experimental groups in the post measurement of the Attitude Scale towards learning EFL

The analysis of data using t-test showed that the experimental group achieved significantly higher scores than the control group on the post-performance of the test of reading comprehension skills, since t-value (9.44) is significant at $p \leq .01$ level.

Table 3. Means, standard deviations, t-value of means and significance of differences of the two groups in the post-performance Reading Comprehension Skills Test.

Group	Number of students	Means	Standard Deviation	Degree of Freedom	t-Value
Cont.	20	32.00	7.199	38	9.44 *
Exp.	20	55.11	11.61		

Maximum score = 100.

Analyzing data by using the t-test showed a significant difference favoring the experimental group post performance on the reading comprehension skills test where the experimental group in the post testing achieved a higher significant degree of improvement than on the pre-test. The experimental group surpassed the control group in the post-performance on the reading comprehension skills test. This result may be attributed to the effectiveness of the suggested reading texts and the use of the metacognitive Think-Aloud strategy.

The second hypothesis predicted that the experimental group would surpass the control group in scoring on the Attitude-Scale towards learning EFL. The analysis of the data by using t-test showed that the experimental group achieved significantly higher scores than the control group on the post-performance on the Attitude Scale, since t-value (10.33) is significant at $p \leq .01$ level as in table (4).

Table 4. Means, standard deviations, t-value of means and significance of differences of the two groups in the post-performance on the Attitude Scale

Group	Number of Subjects	Means	Standard Deviation	Degree of Freedom	t-Value
Cont.	20	36,10	7.83	38	10.33*
Exp.	20	55.19	9.21		

Analyzing data by using the t-test showed a significant difference favoring the experimental group post performance on the posttest of the Attitude Scale where the experimental group in the post testing achieved a higher significant degree of improvement than on the pre-test. It is worth mentioning that results obtained on the Attitude-Scale towards EFL, showed that students who scored high in their pre-attitude assessment were found to be scoring much higher in the post measurement on the same scale. Also, students who scored relatively low in the pre-scale tended to score higher in the post-performance on the same scale. This means that both successful and less successful students have benefited from the suggested reading texts as well as the metacognitive Think-Aloud strategy. That made them feel more positive about learning EFL. Thus, authentic challenging reading texts proved to be useful for foreign language learners because they could help the students to read with understanding and with pleasure. In short, based on the results of the study, there is clear and unambiguous evidence that the challenging reading texts-based program could successfully improve the students' reading comprehension skills and build positive attitudes towards learning EFL.

6. Discussion

The current study was designed to investigate and depicts whether the reading comprehension and attitudes of the first-year male students in secondary school in Saudi Arabia were improved through metacognitive Think-Aloud strategy. The study formed different questions, generated different hypotheses and tested them through implementing two different instruments. Pre-test data on the reading comprehension skills showed that the group equivalence as t-value (0.04) was insignificant at $p \leq .05$ level. Furthermore, Pre-test data on the

attitude scale showed that the group equivalence as the t-value (0.48) was insignificant at $p \leq .05$ level. The first hypothesis in this study predicts the existence of statistically significant differences (favoring the treatment group) between the means of scores of the control and the experimental groups in the posttest of reading comprehension skills. The analysis of data using t-test showed that the experimental group achieved significantly higher scores than the control group on the post-performance of the test of reading comprehension skills, since t-value (9.44) is significant at $p \leq .01$ level.

Initially, many students showed some hesitation, awkwardness and sometimes loss of confidence during reading. However, with time; they showed good level of fluency in reading. That indicates that students could read the texts properly, quickly and with understanding when they were encouraged. Those good readers could achieve that because they did not have problems with word recognition. As a result, they could focus on the meaning of what they read. Their achievement was significant as most of them were able to achieve better outcomes with regard to the three levels of reading comprehension: literal, referential, and critical. The students' most difficulties were found in the last level. In another regard, the improvement achieved by the control group students in post -testing cannot be neglected. This improvement may be attributed to the accidental discussions held by the students of both groups when they met each other.

The second hypothesis predicted that the experimental group would surpass the control group in scoring on the Attitude-Scale towards learning EFL. The analysis of the data by using t-test showed that the experimental group achieved significantly higher scores than the control group on the post-performance on the Attitude Scale, since t-value (10.33) is significant at $p \leq .01$ level. The study argues that both successful and less successful students have benefited from the suggested reading texts as well as the metacognitive Think-Aloud strategy. That made them feel more positive about learning EFL. Thus, authentic challenging reading texts proved to be useful for foreign language learners because they could help the students read with understanding and with pleasure. The privilege of the implemented instruments and the high scores in the results can be attributed to the wide number of possible advantages of the metacognitive Think-Aloud strategy, as discussed in previous research and the literature review. These advantages include many benefits such as increased metacognitive awareness, increased rapport between students and their teacher, a better understanding of what it takes to be a good reader, and effective recognition of questions' types to ask oneself when reading a passage, book, or story.

According to the researcher, teaching reading comprehension through applying metacognitive Think-Aloud strategy is challenging in EFL context. Saudi teachers face inseparable difficulties where they need to apply all the four skills of English in every class and in the same time apply different strategies to aid every skill. With the time limit and language barriers, the strategies applied to enhance reading comprehension sometimes are decreased or neglected. However, the advantages of metacognitive Think-Aloud strategy impose teachers to integrate it through their daily practices of teaching reading skills. The teacher's job is also not enough to use a technique to solve multi problems and complicated tasks. Each approach has to be analytically applied. Think-Aloud allows teachers to model this complex process for students.

Think-Aloud strategy is involved with metacognition and the way the mind works and processes information, which are very internal, difficult to be observed in actions. Therefore, it is extremely difficult to know how or which of the benefits of the strategy affected learning. Think-Aloud practical applications within the classroom are relatively easy and attributed to different techniques for making the students better readers. This can be achieved through rereading and observing the clues inside any reading text. The teacher needs to slow down the reading process allowing the students to take the lead and monitor their awareness and text's understanding. The teacher can also form guided questions to stimulate the students' thinking-aloud passion while monitoring the process. This will lead the students to formulate their own questions to aid their text understanding. When the students become familiar with the process of Think-Aloud, they will try work individually or in small groups. The former consumptions matched Pratt & Martin (2017) suggestion for teachers to follow and adopt unique instructional approaches during their professional development that have a significant effect on the achievement of their students, including the use of peer coaching by one teacher. As a result, the increase of Think-Aloud process integration led to a positive impact on the explicit metacognitive values perceived by students' reading awareness. The findings of this study support the conclusion that the Think-Aloud strategy of learning has significant positive impact on the reading comprehension and attitudes of students. This study focused on first-year secondary students and achieved the same findings that were approved by previous studies that noted that the Think-Aloud strategy promotes comprehension skills in the reading development among secondary students because they are in the highest motive of development, eager to graduate and encouraged to manifest proficiency in acquiring language.

According to the former literature review, teachers who used this strategy would easily identify the appropriate methods to improve the student's cognitive strategies, enable the students to interact more within the needed tasks. The outcomes of this study are constituent with a wide range of literature which has compiled by many scholars in the attempt to understand the metacognitive Think-Aloud concept. Mainly, the findings are dovetailed by the results which were undertaken by (Roohani, et al., 2017; Kung & Aziz, 2020; Mofid, 2019; Cabinda, 2019; Kurniadi, 2018; Alqahtani, 2015; Channa et al., 2015; Iwai, 2016). For elaboration, Alaraj (2015) holds that the introduction of the Think-Aloud strategy has great promise for integration into future curricula in Saudi Arabia since the findings showed that the students in the treatment group had strengthened their comprehension of reading; while the scores of the control group did not show any significant improvement. The current results are also in line with Alqahtani (2015) study where it asserted that Think-Aloud strategy has the prospect of being useful for the students' reading comprehension. Additionally, the results of Channa et al. (2015) indicated that the strategies used in reading comprehension are significant and revealed the teachers' attention to develop the students' reading and comprehending skills. The findings of Iwai (2016) also showed that the candidate teachers were more aware of metacognitive reading techniques after the intervention. They also expressed their positive attitudes about learning those techniques and intended to introduce them in their future classrooms. Mofid (2019) agreed that Think-Aloud strategy has improved the students' reading comprehension at joiner high school while Cabinda (2019) revealed the use of varied reading strategies by FL participants such as cognitive, metacognitive and essentially supply strategies to compensate for any gaps regarding the process of comprehension. Additionally, Kurniadi (2018) reinforced that the use of the Think-Aloud method increased the students' EFL reading scores compared to those students who were taught EFL reading by using a traditional reading strategy.

Implementing the traditional methods in teaching reading for EFL is not effective in Saudi Arabia because it does not include means and strategies that engage and activate students. Getting students into this kind of method of thinking-aloud enhances the classroom discourse and offers the teacher an important diagnostic and assessment tools for enhancing language acquisition.

7. Limitations and Study Forward

The system of Saudi Arabis school's education separates between males and females' schools and hence, this study was limited to male students and particularly; the first-year secondary school as a target. It was difficult to conduct such study in a wider scope with coordination with females' schools but this encouraged the researcher to formulate an agenda for future work project that stimulates both male and female students' cooperation in the field of EFL teaching. The following topics are suggested as areas that need further investigations:

1. Investigating the effects of using authentic texts in improving first-year Saudi secondary school students' reading comprehension skills.
2. Investigating the effects of using metacognitive Think-Aloud strategy in improving female Saudi secondary school students' reading comprehension skills.
3. Investigating the effects of using metacognitive Think-Aloud strategy in improving slow-learners' language skills in Saudi secondary schools.
4. Investigating the effects of using metacognitive think-aloud strategy in improving female learners' attitudes towards learning English.

8. Conclusion

This study empirically reinforces that first-year secondary school students' reading comprehension skills and attitude have been improved with the help of metacognitive Think-Aloud strategy. The current study is in line with the objective of metacognitive Think-Aloud strategy of enhancing reading competency and comprehension's methods to sustain the students' comprehension and attitude towards EFL. The study also asserts previous literature that encourage the students' implementation of metacognitive strategies with the support and guidance of their teachers inside the learning environment. Professional development may influence teachers' expectations regarding the students' ability to be more metacognitive, thereby influencing instructional approaches that further impact student reading progress. Eventually, encouraging students to become more metacognitive about their reading texts will reinforce the students' self-awareness and passion for reading purposefully and learning positively. The importance of implementing Think-Aloud strategy can be better understood in the context of illustrating its advantages for both teachers and students. Students who are encouraged to Think-Aloud are more successful than other students in the traditional educational contexts. If we try to better understand the teachers' beliefs relating to the metacognitive understanding of EFL learners, work

should consider not only the effect of professional development in the classroom's actual practices, but also the long-term aspects of teachers' beliefs, effort, time and resources. As the study indicates, teachers play a major role in directing students in their learning process to become more active-metacognitive learners through Think-Aloud strategy. Professional teaching development and training can assert the teachers' assumptions about their students' ability to be metacognitive-readers and therefore attain better reading comprehension and positive attitude towards their reading texts.

Recommendations

Based upon the findings of the current study, the following recommendations are presented:

1. Using authentic reading texts in reading classes.
2. Encouraging students' dialogue discussion based upon the discussed reading text in order to formulate an appropriate background of knowledge that sustain comprehension.
3. Using suitable reading texts to enhance first-year Saudi secondary school students' reading comprehension skills.
4. Holding workshops to train teachers on how to teach reading comprehension skills through using metacognitive Think-Aloud strategy.
5. Providing the library of the Saudi secondary schools with many different pedagogic reading English texts.

Acknowledgment

The acknowledgment is for public school teachers and students for their efforts and contribution in this study and their valuable recommendations.

References

- AFIFAH, M. A. (2017). *The effectiveness of think aloud strategy toward reading comprehension of the eighth-grade students at MTSN in academic year 2016/2017*. Retrieved from <http://repo.iain-tulungagung.ac.id/5694/b>
- Akkakoson, S., & Setobol, B. (2009). Thai EFL use of strategies in reading English texts. *The Journal of KMUTNB*, 19(3), 2009.
- Alaraj, M. (2015). *Using Think-Aloud Strategy to improve English reading comprehension for 9th grade students in Saudi Arabia* (Doctoral dissertation).
- Alderson, R. C. (2000). Research foundations to support wide reading. In V. Greaney. (Ed.), *Promoting reading in developing countries*. Newark, DE: International Reading Association.
- Alkhaleefah, T. A. (2016). Taxonomies in L1 and L2 reading strategies: A critical review of issues surrounding strategy use definitions and classifications in previous think-aloud research. *The Reading Matrix: An International Online Journal*, 16(2), 162-226. Retrieved from <http://readingmatrix.com/files/15-0785184z.pdf>
- Alqahtani, M. A. (2015). *The effects of Think-Aloud strategy to improve reading comprehension of 6th grade students in Saudi Arabia* (Doctoral dissertation).
- Alqarni, F. (2015). Collaborative strategic reading to enhance learners' reading comprehension in English as a foreign language. *Academic Journal of Interdisciplinary Studies*, 4(1), 161-161. <https://doi.org/10.5901/ajis.2015.v4n1p161>
- Alsheikh, N. O., & Mokhtari, K. (2011). An examination of the metacognitive reading strategies used by native speakers of Arabic when reading in English and Arabic. *English Language Teaching*, 4(2), 151-160. <https://doi.org/10.5539/elt.v4n2p151>
- Anderson, N. (2000). *Verify strategies: Exploring second language reading*. Boston, MA: Heinle & Heinle.
- Armbruster, B. B. (2010). *Put reading first: The research building blocks for teaching children to read: Kindergarten through grade 3*. Diane Publishing.
- Bai, B. (2018). Understanding primary school students' use of self-regulated writing strategies through think-aloud protocols. *System*, 78, 15-26. <https://doi.org/10.1016/j.system.2018.07.003>
- Batang, B. L. (2015). Metacognitive strategy awareness and reading comprehension of prospective pre-service secondary teachers. *Asia Pacific Journal of Multidisciplinary Research*, 3(4), 62-67.

- Bentley, Kristi L. (2013). *The effect of metacognitive think-aloud strategy on reading comprehension of kindergarten students*. Retrieved from <http://dspace.sunyconnect.suny.edu/handle/1951/58364>
- Brandmo, C., & Berger, J.-L. (2013). Fostering self-regulated learner: An introduction. *Journal of Cognitive Education and Psychology*, 12(2), 127–137. <https://doi.org/10.1891/1945-8959.12.2.127>
- Cabinda, M. (2019). Using think aloud methods (tam) effectively to identify the use of reading comprehension strategies in flmultilingual contexts: towards effective meaning construction (part ii). revista científica da uem: *Série Letras e Ciências Sociais*, 1(2).
- Carioli, S., & Peru, A. (2016). The Think Aloud Approach. A Promising Tool for Online Reading Comprehension. *Journal of Media Literacy Education*, 8(1), 49-61. Retrieved from <https://digitalcommons.uri.edu/cgi/viewcontent.cgi?article=1250&context=jmle>
- Carnine, D., Silbert, J., Kameenui, E. J., & Tarver, S. G. (1997). *Direct instruction reading*. Columbus, OH: Merrill.
- Channa, M. A., Nordin, Z. S., Siming, I. A., Chandio, A. A., & Koondher, M. A. (2015). Developing Reading Comprehension through Metacognitive Strategies: A Review of Previous Studies. *English Language Teaching*, 8(8), 181-186. <https://doi.org/10.5539/elt.v8n8p181>
- Chimics, S. (2015). *Putting our thinking caps on: utilizing the think-aloud strategy to promote metacognition with informational texts* (Doctoral dissertation, Moravian College).
- Cubukcu, Feryal. (2008). Enhancing vocabulary development and reading comprehension through metacognitive strategies. *Issues in Educational Research*, 18(1), 2008.
- Day, R. & Park, J. (2005). Developing reading comprehension questions. *Reading in a Foreign Language*. 17(1), 60-73.
- Dj, M. Z., & Ali, A. (2015). Think aloud pair problem solving (tapps) strategy in teaching reading. Indonesian EFL Journal: *Journal of ELT, Linguistics, and Literature*, 1(2), 131-149. Retrieved from <http://ejournal.kopertais4.or.id/mataraman/index.php/efi/article/view/944>. Accessed 23 Apr. 2020
- Fan, H. (2009). *The effectiveness of metacognitive strategies in facilitating Taiwanese university learners in EFL reading comprehension* (Doctoral dissertation).
- Flavell, J. H., (1979). Metacognition and cognitive monitoring. *American Psychologist*, 34, 906-911. <https://doi.org/10.1037/0003-066X.34.10.906>
- Forbes, K., & Fisher, L. (2018). The impact of expanding advanced level secondary school students' awareness and use of metacognitive learning strategies on confidence and proficiency in foreign language speaking skills. *The Language Learning Journal*, 46(2), 173-185. <https://doi.org/10.1080/09571736.2015.1010448>
- Gonzalez-DeHaas, A. R., & Willems, P. P. (2016). Self-regulated learners: Teacher, peer, and parental support of strategy instruction. *Educational Forum*, 80, 294–309. <https://doi.org/10.1080/00131725.2016.1173751>
- Harvey, S., & Goudvis, A. (2000). *Strategies that work: Teaching comprehension to enhance understanding*, 372. York, ME: Stenhouse Publishers.
- Hassan, F. (2017). Metacognitive strategy awareness and reading comprehension. *The English Teacher*, 18.
- Hedge, Tricia. (2003). *Teaching & Learning*. In *The Language Classroom*. UK: OUP.
- Iverson, K. J. E. (2005). *The instruction of language learning strategies for low-proficiency ESL learners*. Unpublished dissertation. Minnesota, Hamline University. Retrieved from https://digitalcommons.hamline.edu/hse_all/317
- Iwai, Y. (2007). Developing ESL/EFL Learners' Reading Comprehension of Expository Texts. *The Internet TESL Journal*, 13(7), 1-5. Retrieved from <http://iteslj.org/Techniques/Iwai-ExpositoryTexts.html>
- Iwai, Y. (2016). The effect of explicit instruction on strategic reading in a literacy methods course. *International Journal of Teaching and Learning in Higher Education*, 28(1), 110-118.
- Karizak, A. F., & Khojasteh, L. (2016). The effect of three kinds of reading strategies on EFL learners' reading comprehension and gender difference using think-aloud protocol. *International Journal of Applied Linguistics and English Literature*, 5(5), 6-14. <https://doi.org/10.7575/aiac.ijalel.v.5n.5p.6>
- Ketabi, S. (2012). Metacognitive strategies and reading comprehension enhancement in Iranian intermediate EFL setting. *Macrothink Institute*, 4(3). <https://doi.org/10.5296/ijl.v4i3.1684>

- Khonamri, F., & Ahmadi, M. (2014). The Impact of Metacognitive and Reading Comprehension Strategy Training on Iranian EFL learners' Reading Performance. *Standard Global Journal of Educational Research* 1, 3, 72-75.
- Kirin, W. (2007). *The effects of extensive reading plus activities on the development of reading and writing skills and perceptions of undergraduate students*. Dissertation, Chulalongkorn University. <http://doi.org/10.14457/CU.the.2007.1833>
- Kuhn, D. (2000). Metacognitive development. *Current Directions in Psychological Science*, 9, 178-181. <https://doi.org/10.1111/1467-8721.00088>
- Kung, L. Y., & Aziz, A. A. (2020). An Action Research on Metacognitive Reading Strategies Instruction to Improve Reading Comprehension. *International Journal of English Language and Literature Studies*, 9(2), 86-94. <https://doi.org/10.18488/journal.23.2020.92.86.94>
- Kurniadi, S. (2018). Think-Aloud Strategy for Teaching EFL Reading. *English Education Journal*, 9(1), 57-67. Retrieved from <http://www.jurnal.unsyiah.ac.id/EEJ/article/view/11510>
- La-ongthong, S. (2002). *A development of reading instructional model through metacognitive strategies for students at Rajabhat Burirum University*. Master's Degree Thesis, Rajabhat Burirum University.
- Lin, L. C., & Yu, W. Y. (2015). A think-aloud study of strategy use by EFL college readers reading Chinese and English texts. *Journal of Research in Reading*, 38(3), 286-306. <https://doi.org/10.1111/1467-9817.12012>
- Mofid, M. (2019). *The use of think aloud strategy to improve students' reading skill (a classroom action research at the second-grade students of SMP PGRI BENGKULU in academic year 2018/2019)* (doctoral dissertation).
- Nejad, B., & Mahmoodi-Shahrehabaki, M. (2015). Effects of metacognitive strategy instruction on the reading comprehension of English language learners through cognitive academic language learning approach (CALLA). *International Journal of Languages' Education and Teaching*, 3(2). Retrieved from <https://ssrn.com/abstract=3058349>
- Ness, M. (2016). Learning from K-5 teachers who think aloud. *Journal of Research in Childhood Education*, 30(3), 282-292. <https://doi.org/10.1080/02568543.2016.1178671>
- Ness, M. K. (2015). Building Preservice Teachers' Ability to Think Aloud in Literacy Methods Courses. *The Teacher Educator*, 50(4), 257-271. <https://doi.org/10.1080/08878730.2015.1072260>
- Newell, A., & Simon, J. A. (1972). *Human problem solving*. Englewood Cliffs, NJ: Prentice-Hall.
- Nilsson, K. (2003). *A meta search approach to locating and classifying reading material for learners of Nordic languages*. Unpublished thesis, Uppsala University.
- Nuttall, C. (2000). *Teaching reading skills in a foreign language*. UK: Macmillan Heinemann.
- Oczkus, L. D. (2003). *Reciprocal teaching at work strategies for improving reading comprehension*. Newark, DE: International Reading Association.
- Oxford, R. L., & Burry-Stock, J. A. (1995). Assessing the use of language learning strategies worldwide with the ESL/EFL version of the strategy inventory for language learning (SILL). *System*, 23(1), 1-23. [https://doi.org/10.1016/0346-251X\(94\)00047-A](https://doi.org/10.1016/0346-251X(94)00047-A)
- Oxford, R. L., Talbott, V., & Halleck, G. (1990). *Language learning strategies, attitudes, motivation, and self-image of students in a university intensive ESL program*. In 24th Annual TESOL Convention, San Francisco, CA.
- Pergams, O. R., Jake-Matthews, C. E., & Mohanty, L. M. (2018). A Combined Read-Aloud Think-Aloud Strategy Improves Student Learning Experiences in College-Level Biology Courses. *Journal of College Science Teaching*, 47(5). Retrieved from https://chep.teaching.vt.edu/content/dam/chep_teaching_vt_edu/2019chep/CombinedReadAloud-Pergams.pdf
- Pratt, S. M., & Martin, A. M. (2017). Exploring effective professional development strategies for in-service teachers on guiding beginning readers to become more metacognitive in their oral reading. *Reading Horizons: A Journal of Literacy and Language Arts*, 56(3), 5. Retrieved from https://scholarworks.wmich.edu/reading_horizons/vol56/iss3/5/

- Pressley, M., & Afflerbach, P. (1995). *Verbal protocols of reading: The nature of constructively responsive reading*. Hillsdale, NJ: Erlbaum.
- Rasekh, Z., & Ranjbary, R. (2003). Metacognitive strategy training for vocabulary learning, *TESL-EJ* [Online], 7(2). Retrieved from <http://www-writing.berkeley.edu/TESE-EJ/ej26/a5.html>
- Rashid, M. A., Chew, J., & Kabilan, M. K. (2016). Metacognitive reading strategies of good Malaysian Chinese learners. *Malaysian Journal of ELT research*, 2(1), 18.
- Richards, T., & Vacca, J. L. (2011). Content area reading: Literacy and learning across the curriculum. *Reading Research Quarterly*, 5(2), 18-25.
- Roe, B. D., & Ross, E. P. (1999). *Teaching reading in today's elementary schools: instructor's resource manual with test items*. Houghton Mifflin.
- Roohani, A., Sabzeali, R., & Mirzaei, A. (2017). Exploring Metacognitive Strategies in Reading Academic Texts Among More and Less Proficient EFL University Students. *Journal of Modern Research in English Language Studies*, 4(4), 142-123. <https://doi.org/10.30479/ELT.2017.1033>
- Serafini, F. (2004). *Lessons in comprehension explicit instruction in the reading workshop*. Portsmouth, NH: Heinemann.
- Shang, H. F. (2017). Exploring metacognitive strategies and hypermedia annotations on foreign language reading. *Interactive Learning Environments*, 25(5), 610-623. <https://doi.org/10.1080/10494820.2016.1171787>
- Siagian, S. W., & Katemba, C. V. (2016). Comparative study between think aloud and visual imagery in enhancing students' reading comprehension. *Acuity: Journal of English Language Pedagogy, Literature and Culture*, 1(2), 36-51. <https://doi.org/10.35974/acuity.v1i2.602>
- Smith, B. L. (2003). The use of why-questions to enhance college science students' comprehension of their textbooks. *Dissertation Abstracts International*, 64(1), 62A. (UMI No. 3078197).
- Soraya, M. (2017). *The Effects of Question-Answer Relationship and Think Aloud strategies on Reading Comprehension Ability (A study at the first-year students of UIN Ar-Raniry)* (Doctoral dissertation, UIN Ar-Raniry Banda Aceh).
- Takallou, F. (2011). The effect of metacognitive strategy instruction on EFL learners' reading comprehension performance and metacognitive awareness. *Asian EFL Journal*, -journal.com/PDF/March-2011-ft.pdf
- Wang, Y., Silvestri, J. A., & Jahromi, L. B. (2018). Selected factors in reading comprehension for deaf and hearing adults: Phonological skills and metacognition. *American annals of the deaf*, 162(5), 445-462. <https://doi.org/10.1093/deafed/enu026>
- Wichadee, S. (2011). The effects of metacognitive strategy instruction on EFL Thai students' reading comprehension ability. *Journal of College Teaching & Learning*, 8(5). <https://doi.org/10.19030/tlc.v8i5.4255>
- Winne, P. H. & Hadwin, A. F. (1998). *Studying as Self-regulated learning in D.J.* Hacker, J.
- Wolters, C., & Baxter, G. (2000). Assessing metacognition and self-regulated learning. In G. Schraw & J. C. Impara (Eds.), *Issues in the measurement of metacognition* (pp. 43-97). Lincoln NE: Buros Institute of Mental Measurements.
- Wright, J. M. (2015). *Metacognitive Awareness of Reading Strategies Reported by Emirati Learners Enrolled in Post-Secondary Education in the United Arab Emirates*. (Doctoral dissertation).
- Yu, E. (2013). Empowering at-risk students as autonomous learners: Toward a metacognitive approach. *Research & Teaching in Developmental Education*, 30(1), 35-45.

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).