

## Investigating the Effects of Critical Reading Skills on Students' Reading Comprehension

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### Abstract

Critical reading is an indispensable learning skill that students need both inside and outside the classroom. Even though many attempts have been made to unravel the impact of critical reading on Second Language (L2) reading, there is a paucity of investigations examining the effect of critical reading combined with students' active role. The study raises three questions. They are: 1) What are the students' views about reading comprehension and critical reading skills? And2) What difficulties do students encounter when they read? And3) how can critical reading strategies improve students' reading comprehension? Therefore, the aim of this study is to investigate how critical reading skills can enhance students' reading comprehension while working in groups. For the sake of this study, data were gathered from an open-ended questionnaire distributed to university students before intervention, learning logs, and participant observations. The results of the study revealed significant effects of critical reading skills on students' reading comprehension at different levels. Students viewed reading as an active dynamic process that motivated the activation of higher order thinking skills and helped students tap into their prior experiences to approach the reading materials. It also showed how implementing a rich repertoire of critical reading skills enabled students to overcome reading problems as they could read not just what is directly stated but what is being communicated between and beyond the lines. The findings offered several pedagogical implications and recommendations for further research.

*Keywords:* critical thinking, reading skills, group work, critical reading skills, reading comprehension

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## Introduction

Critical thinking and reading are key skills that EFL students need the most to expedite and promote the learning process. This is primarily because reading plays a pivotal role in developing English in general and is the principal activity through which students learn in English in their academic courses. The strong relationship between the ability to read critically, academic success, and the need for critical thinking in the workplace or daily lives have been observed by researchers (Edman, 2008; Ennis, 2018; Hervás & Miralles, 2006; Huijie, 2010; Wade, 2008). Unlike poor readers, students who are good readers often pass their exams with high marks because they implement a rich repertoire of strategies to approach reading texts and overcome textual difficulties (Kim, 2020). Deploying these strategies properly turns students into critical readers who apply higher-order thinking skills. Meanwhile, in some contexts, being critical might be ambiguous. In the language learning context, the word “critical” does not imply negative meanings, i.e., looking for mistakes and flaws; Milan (1995) stated that being critical entails “using careful evaluation, sound judgment, and reasoning powers” (p. 218).

However, the issue of power relations inside the classroom must be considered because students' active role is endangered by their teachers' role (Harmer, 2015; Richards & Rodger, 2014; Surkamp & Viebrock, 2018). Students should be more independent and develop a critical stance about the knowledge they receive and produce when they read. The authoritative role played by teachers in foreign-language pedagogy might deprive students of the potential to have more freedom, engagement, and empowerment over their learning due to some cultural, social, or political reasons.

In Saudi Arabia, there are standards in any educational programme that should be met to raise the quality of Saudi university education. The National Commission for Academic Accreditation and Evaluation (NCAAE) (2008) clearly stated and defined these standards which include the teaching and learning process. Teachers must vary their teaching strategies with a focus on those that invite higher order thinking skills and encourage students to be active, making learning student-centered. In teaching reading in a Saudi context, Khojah and Thomas (2021) assert that using different strategies has a positive effect on students' reading motivation. Nevertheless, not all English teachers abide by these standards and still implement traditional teaching methods where there is no room for students to have more capacity and become active participants (Richards & Rodgers, 2014).

Hence, teachers need to cede some of their control to students to enable them to hone critical reading skills in a systematic framework (Paul & Elder, 2005). Critical reading requires students to think more actively and deeply to understand a text and analyze it, i.e., to read between the lines and beyond the lines rather than focusing on just reading the lines. Group work is an effective strategy that gives students active roles to play when they read and, therefore, cultivates their critical reading skills. Beside improving reading comprehension, students who work in groups develop certain collaborative skills such as being more sensitive and able to make more effective decisions due to high-level participation and interaction (Gonzales & Torres, 2016).

The study will be useful for student to improve their reading comprehension by combining critical reading with their active role. Upon completion of this study, it is hoped that teachers incorporate critical reading skills into the curriculum and teach them explicitly to

students. Also it is hoped that researchers conduct further research to explore the impact of introducing critical reading skills with different sexes, ages, and fields of study at different stages in a Saudi context. Therefore, this study aims to investigate how critical reading skills can enhance students reading comprehension while working in groups. Three research methods were used to collect data. An open-ended questionnaire was distributed to students to determine their views about their role in the classroom, students' learning logs as a way to help students to stimulate their reflections and to increase their cognitive control over their learning and participant, and observations carried out by the researcher to gain insight into what was taking place while students were working on assigned tasks. The study raises three questions. They are: 1) What are the students' views about reading comprehension and critical reading skills? And2) What difficulties do students encounter when they read? And3) How can critical reading strategies improve students' reading comprehension?

## Literature Review

### *Critical Thinking*

Improving the critical thinking ability of students has become more than just a fad, it has become central to their learning. Edman (2008) pinpointed that although faculty members see the need for teaching critical thinking to their students in different institutions and see it as an important educational goal, they do not state exactly what they mean by "critical thinking." Students must be able to think critically inside the classroom for academic purposes and outside the classroom as well. Students are exposed to a vast volume of authentic materials, most noticeably, while surfing the net. Students also need critical thinking to deal with the challenges they encounter in their workplace after graduation or in their daily lives. Another benefit of introducing critical thinking is that it can enable students to deal with the technological world and keep up with emerging trends in technology (Edman, 2008; Ennis, 2018; Hervás & Miralles, 2006; Huijie, 2010; Wade, 2008).

Several definitions have been provided by various authors to define critical thinking. For example, Facione (2011) defined critical thinking as "purposeful, self-regulatory judgment which results in interpretation, evaluation, and inference as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which judgment is based" (p. 826). A similar definition is suggested by Astleitner (2002), who viewed critical thinking as a higher-order thinking skill which includes evaluating arguments, and is a purposeful, self-regulatory judgment that ends in interpretation, analysis, evaluation, and inference. It is clear from the two definitions that critical thinking requires many things to be achieved. This is shown by Halonen & Gray (2000), who maintain that critical thinking is not one activity; rather, the term refers to a collection of thinking skills that advance intellectual focus, motivation, and engagement with new ideas. These thinking skills include the ability to recognize patterns; to solve problems in practical, creative, or scientific ways; to engage in psychological reasoning; and to adopt different perspectives when evaluating ideas or issues. Teaching students to think critically inside or outside the classroom improves their abilities to observe, infer, question, decide, develop new ideas, and analyze arguments. However, students have to be involved in different activities to hone their critical thinking skills. Astington and Olson (1995) asserted that it is hard to tell how students process thinking in their minds because thinking has no behavioral standards, but rather you can deduce how students process thinking by observing their actions as they are involved in different tasks. In the case of reading, reading

is challenging to students because teachers ask students to read academic and scientific materials most of the time without telling them what they are supposed to read and knowing how students have read the assigned materials (Manarine, 2022). Alfflerbach (2022), in his description of critical reading adds “ knowing that one is allowed -and expected- to read critically is as important as how to read critically” (p. 158).

Many of the skills associated with critical thinking are inherent and practiced in the processes of critical reading which falls into the category of higher order thinking processes.

### ***Critical Reading and Critical Reading Proficiency in ELT***

In English as a Foreign Language Setting (EFL), there is little interest in critical discourse analysis and critical reading in specific. Three issues might be the reasons for not having much research: feasibility, ethicality, and necessity. How can L2 learners analyze and critique a foreign language without having the core features of that target language? How can teachers and students balance their discussion of different topics raised by authors? And what is the actual need for critical language and critical reading for L2 learners? For beginners, reading is viewed as a bottom-up process which conceptualizes reading as a decoding process of the text with a focus on letters and words recognitions. For advanced learners, reading is viewed as a top-down process that conceptualizes how a whole text is accessed and understood (Wallace, 2003). However, many definitions have been given for critical reading by researchers. According to Huijie (2010), in the past, the definition of critical reading had to do with the readers' ability to discuss and question the written materials for analysis and evaluation. Later, the definition of critical reading turned to focus on viewing reading as an active and interactive process that requires a dialogue between the reader, text, and author at different levels using different higher order thinking skills. Considering reading as an active process requires readers to take active positions by being involved in the reading process. Readers should develop a distance between the writer's arguments and the written materials after making a rigorous analysis to reach sound conclusions (Pennycook, 2000; Priozi, 2003). One thorough and clear definition is given by Priozi (2003):

Critical reading can be defined as a very high-level comprehension of written materials requiring interpretation and evaluation skills that enable readers to separate important from unimportant information, distinguishing between fact and opinions, and determine the writer's purpose and tone. (p. 325)

For Wallace and Wray (2011), critical reading is about being skeptical to examine how the author can justify his or her argument or if the reader knows more about a given topic. The above definition clarifies that critical reading is different from literal reading which focuses only on surface meaning to find out the main ideas and supporting details. Critical reading is more complex and requires the readers to read the lines, between lines, and beyond lines, employing different skills several times to approach the texts (Huijie, 2010). However, many researchers give diverse descriptions on approaching critical reading proficiency and assure that there is a necessity for systematic explicit teaching aimed at improving students' critical reading abilities.

For example, Wallace and Wray (2011) recommended five questions to gauge students' critical reading. These five critical synopsis questions are as follows:

1. Why am I reading this?
2. What are the authors trying to do in writing this?
3. What are the authors saying that is relevant to what I want to find out?
4. How convincing is what the authors are saying?
5. In conclusion, what use can I make of this?

DiYanni (2017), give descriptions to approach critical reading proficiency by offering checklists containing descriptions of how to teach critical reading. DiYanni added that by teaching students how to know what the text says and how it transmits these pieces of information, students move to achieve the larger goals of critical reading, i.e., to assess the author's purpose, to identify the tone, evaluate the evidence, and the assumptions underlying the author's position and grasp the point of view of the author. Similarly, Carrigus (2002) suggested two levels of skills needed for approaching critical reading. The first is basic critical reading skills at the paragraph level focusing on how to get the main ideas, how to identify idea patterns, and how to know transitional signals in sentences and paragraphs. The second is higher-level critical reading skills focusing on making inferences, synthesis, summarizing, and evaluation of the materials. Huijie (2010) provided a hierarchical framework of critical reading proficiency consisting of four levels: structural analysis, rhetoric analysis, social relevance, and holistic evaluation. The first and the second levels are similar to what DiYanni (2017) and Carrigus (2002) have proposed in that they deal with understanding the paragraph and evaluating the text. The third level activates the social relevancy with cultural background knowledge of the reader and writer with the text and the situational context and intertextual context with the text as well. The fourth refers to reading from a critical stance, including weighing the pieces of evidence, examining the sources and the text's ideology, and distinguishing between materials representing facts and opinions. However, there are some important factors that teachers have to reconsider, i.e., the way they test students' reading ability. Huijie (2010) asserted that the items of the test that focus on facts and memorizing details do not encourage students to read between and beyond lines and do not call for higher order thinking ability.

Another important factor that enables students to foster critical thinking is the way teachers perceive and demonstrate critical thinking while they teach, within a systematic framework of teaching (Paul & Elder, 2005).

### ***The Role of Teacher-Learner inside the Classroom in ELT***

In English Language Teaching (ELT), the role played by students is determined by the different roles the teachers take inside the classroom. These roles are essential in creating the desirable conditions that facilitate learning and guide what the teachers want to achieve (Harmer, 2015). If teachers decide to empower students to take a more active role in classrooms, reflectively linking their knowledge and positions with the newly learned materials, then they have to abandon spoon-feeding education and give more freedom to their students to be active learners. In the ELT context, however, language teaching and learning practices used in the past might not be as effective as teachers hope for many reasons: the status of English as a global language, the early time at which young children learn English, getting a better job and technological innovations, and viewing English as the main means of instruction in the university level.

Among the approaches and methods in language teaching is the communicative approach, which was a reaction to the dominant language teaching approaches in the 1960s and before. It is based on the premise that the main goal of language teaching is meaningful communication for the real world. This approach to teaching carries several advantages to learning. One of its implications is that it shifts the focus of instruction from the student to the teacher to put students at the center of the learning process. Accordingly, teachers and students should play different roles from those found in traditional classrooms settings, where teachers are the only givers of knowledge. Students learn best when they are given more capacity to work collaboratively and be active participants, not only passive respondents (Richards & Rodgers, 2014). When students interact with one another and with teachers during communicative tasks, they become more willing to take risks and not afraid of making mistakes, able to express themselves while using the target language (Surkamp & Viebrock, 2018).

According to Jacobs and Farrell (2003), to best reach a communicative view in our classrooms, a paradigm shift is needed in our thinking about teachers, learning, and teaching. For example, when the focus of teaching-learning moves from teachers to students, this requires greater attention to be given to the processes of learning rather than the product of learning, and students best learn when they engage in meaningful situations socially and practice critical thinking skills. One way teachers can expand the abilities of students to practice critical skills in language teaching and learning is to be engaged in open dialogue with their students (Abdin, 2021).

Breen and Candlin (1980) added that when students play the role of negotiators at different levels in working together and with the teacher, they become more independent learners. On the other hand, teachers' roles are seen as facilitators and organizers who manage the communication process among students and the learned materials and provide help if needed. Similarly, Weimer (2002) emphasized that when students are involved in various activities and work together, they learn at their own pace and ask critical questions to each other, and they are more likely to learn best. She adds that in student-centered classrooms, learning is not just about gathering grades but rather about promoting learning because students find many opportunities to practice what they have learnt and expect what will be on exams.

### ***Studies on Critical Thinking Skills and Critical Reading***

A growing body of literature has investigated the positive impact of integrating critical thinking skills in the English as a foreign language context (EFL) to improve reading comprehension. In this context, Wilson (2016) carried out a study to investigate how critical reading was implemented by three English teachers in three English-for-academic-purposes teaching-learning contexts. His study revealed that teaching critical thinking skills and critical reading enabled students to be good readers and hone more cognitive and metacognitive skills to approach the texts. However, Wilson noted that although teachers deployed different methods to teach critical reading, there was a need to combine these skills with a balanced framework of critical thinking dispositions such as character, attitude, self-efficacy, and being open-minded. Similarly, Bağ and Gürsoy (2021) conducted a study to incorporate critical thinking into the curriculum of EFL learners and to explicitly teach them critical thinking skills. The results indicated that the integration of critical thinking both improved students' critical thinking skills as well as language proficiency. Another finding was that the practice of critical thinking made

learning motivating to students because of the authenticity of materials and supporting learning environment. Also Moeiniasl; Taylor; deBraga; Manchanda; Huggon & Graham (2022) examined the critical thinking skills of EFL undergraduate students studying a psychology course. The findings of this study showed that students performed lower in critical thinking skills tests due to their low English proficiency level. For this reason, students needed to develop a critical approach to reading and teachers had to teach a curriculum which cultivate critical thinking skills. Salameh; Salameh; & Al-Emami (2019), in another study, investigated how cognitive and metacognitive strategies improve students' comprehension in the three sub-skills of reading, i.e., understanding, critical thinking, and quality schema. The study revealed that cognitive and metacognitive strategies improved students reading abilities and cultivated their critical thinking skills by relating their previous knowledge with existing information. In addition, students were able to answer questions they had predicted after reading the target text. Gao (2019), with EFL university students, conducted a study to examine how an analytical reading mode affects students' thinking skills. The study concluded that an analytical reading mode had a positive impact on students thinking skills. Students were able to move from the first level of relevance, clarity, and logic to the higher and more challenging level of profundity and flexibility more easily. The study emphasized the need for analytical reading strategy training because mastering a skill requires a procedure followed by practice. In another study, Wong (2016) investigated the effectiveness of incorporating critical thinking skills with reading strategies to improve the academic reading comprehension of Saudi learners. The researcher found out that after reviewing documents, Saudi students found it difficult to cope with degree programmes in the US due to the educational background they came from, in which critical thinking abilities were not sufficiently honed. For this reason, he designed a critical thinking resource guide to help teachers address students' reading difficulties with different reading activities practiced inside the classroom and via online texts to be practiced outside the classroom. These activities required students to be involved in a variety of critical reactions toward the texts being communicated, including analyzing, interpreting, and sometimes evaluating. Ozensoy (2021), investigated the impact of introducing critical reading skills on students' academic success in social studies courses. He found that there was a significant difference in students' academic progress who practiced critical reading skills compared with another group who did not. Another finding was that in teaching critical skills, there were other factors to be considered such as the school, the classroom environment, and how activities were integrated within the curriculum. In a recent study, Karakoc, Ruegg & Gu (2022) carried out a study to explore the reading requirements for undergraduate students. The study showed that students had to be exposed to a wide range of reading materials such as academic book chapters and journals. However, for students to meet the demands of university courses, they need to learn more complex reading skills to be able to read more deeply and critically. Finally, Olifant; Cekiso; & Rautenbach (2020) did a study to understand the critical reading perceptions and actual practices of English learners. The results revealed that learners had high self-perceptions when they reported their reading ability, i.e., implementing a rich repertoire of reading strategies when answering reading comprehension questions. However, their claims to have different strategies did not reflect their actual practice inside the classroom when working on reading passages. Their reading ability could deal with only what was clearly stated in the lines but failed to capture what was stated between lines and beyond lines.

## Methods

### *Participants*

The participants of the study were chosen purposively, consisting of 80 Saudi male students from a Saudi university enrolled in a pre-professional programme for health sciences. The study was carried out in the English language department of King Saud bin Abdulaziz University for Health Science, Riyadh, Saudi Arabia. They study different English courses as a mandatory fulfillment of the demands of mainstream university courses. Before beginning the research, the students' permission was obtained to take part. In the data analysis, their names were concealed to keep them anonymous.

### *Research Questions*

To fulfill the objectives of the current study, the following research questions are proposed:

- RQ1. What are students' views about reading comprehension and critical reading skills?
- RQ2. What difficulties do students encounter when they read?
- RQ3. How can critical reading skills improve students' reading comprehension?

### *Data Collection and Analysis*

Three research methods were used to collect data. An open-ended questionnaire was distributed to students to determine their views about their role in the classroom and views about reading comprehension and critical reading skills prior to the intervention. Another source of data was students' learning logs as a way to help students to stimulate their reflections and to increase their cognitive control over their learning about critical reading skills. Mackey and Gass (2015) note that learners' diaries can provide insights into learning processes as students gain a better understanding of the way they learn and look for what works best for them. The third was participant observations by the researcher to gain insight into what was taking place while students were working on assigned tasks. The observed data were recorded by taking notes. For data analysis, the findings were triangulated as possible with students' views discussed earlier in the first and second research questions for in-depth findings. Students' answers and learning patterns were coded and categorized into themes and related to the research questions.

### *Research Procedures*

This study was based on a hierarchical framework of critical reading proficiency consisting of four levels: structural analysis, rhetoric analysis, social relevance, and holistic evaluation, as suggested by Huijie (2010). As a preparation before the intervention, one reading passage was chosen as an example to practice different reading skills in the three reading stages, i.e., pre-reading, during reading, and post-reading, by modeling, role-play, and teacher thinking aloud. It was also explained how each skill fit into each reading stage by the teacher such as getting the main idea, figuring meanings out of context, making inferences, and so on. After that, short reading passages followed by a set of questions were handed to students, who were given an allotted time to practice the critical reading strategies and show their answers. The researcher circulated and provided help and guidance needed and suggested some tips for the coming activity. For the intervention, students were to work on 14 reading passages and answer the questions that follow in their books. They had to work individually first and record their answers and comments in a learning log and then in groups to share and present their answers in front of the other groups. The learning log schedule was distributed beforehand to students, which



showed how critical reading skills were used to complete different reading activities, in what reading stages they were working, and how reading difficulties were tackled.

**Findings**

Table 1. *Students' views about reading and critical reading skills*

Reading is viewed as:	
	A separate subject A separate skill A word recognition A process
Critical reading skills are viewed as:	
	A way of thinking A set of questions A different point of views

Table 1 provides an account of the main findings to the first research question about students' views concerning reading and critical reading skills, "*What are students' views about reading comprehension and critical reading skills?*" many themes emerged from their replies while defining reading comprehension and critical reading skills. Students defined reading comprehension in different ways. They looked at reading as a separate subject, a skill, recognizing the unknown vocabulary and a process. With respect to defining critical thinking skills, students considered critical reading skills a way of thinking or a set of difficult questions.

Table 2. *Students reading difficulties*

Main reading difficulties
<ul style="list-style-type: none"> <li>• Dealing with difficult vocabulary</li> <li>• No enough exposure to written texts</li> <li>• Problems with vocabulary learning and building</li> <li>• No enough training and practice on reading</li> <li>• Not able to figure out the main idea</li> </ul>

Table 2 is related to the second research question about reading difficulties, "*What difficulties do students encounter when they read?*" students reported their main reading difficulties after answering the first research question. These difficulties had to do with recognizing unknown words and identifying the main ideas of reading passages.

Table 3. *The effects of critical reading skills on students' reading comprehension*

Students have learnt the following:
<ul style="list-style-type: none"> <li>• Being able to guess meaning out of context</li> <li>• Being able to make inferences</li> <li>• Being able to create a dialogue with the text</li> <li>• Being able to activate background knowledge</li> </ul>

Table 3 answers the third research question, “*How can critical reading skills improve students' reading comprehension?*” participant observations and students' learning logs were used to gather information for this stage. By implementing critical reading skills, students improved their reading comprehension to understand new words and make use of the contextual clues. In addition, students were able to be involved in the read materials and resort to their prior knowledge to approach the texts and make inferences.

## Discussion

Students while providing answers to the first research question, “*What are students' views about reading comprehension and critical reading skills?*”, provided multiple points of view. First, some considered reading either a separate subject or a skill. For example, students gave replies like “it is a very basic important subject,” “it is a subject that uses more than linguistic aspects,” and “it is a subject that includes new vocabulary and helps you to learn new things.” By giving reading this reductive definition, reading is dealt with as any other studied subjects like physics, mathematics, and geography, not as an active, complex process that requires engagement with the text at different levels (Huijie, 2010).

Other replies viewed reading as a skill such as “it is an essential skill for obtaining knowledge” and “reading is a skill to understand a paragraph or a sentence to get the main idea.” Presenting reading as a skill is more precise than seeing reading as a subject because it means that it can be learned and improved upon as a cognitive and metacognitive ability by having certain knowledge and receiving proper training. Reading skills represent the automatic deployment of linguistic levels such as word recognition and syntactic processing, while strategies represent the conscious control readers have over their reading. Both good skills and strategies are associated with fluent readers (Grabe & Stoller, 2019).

Another common answer focused on word recognition to define reading, using some aspects of the text such as typological features. A student indicated that reading means to read word by word to finish what is written. However, he thinks this is unhelpful. He asserts “... the passage is too long. I cannot concentrate and cannot answer questions that follow.” By doing this, students believed that meaning only could be found in words.

A few defined reading as a process or a way to communicate with the text, but their definition was incomplete or inconsistent because it overlooked the dynamic involvement among the reader, text, and activity (Koda, 2007). One student stated that “it is a method of communication and gaining information that you develop by time,” “it is a process of recognizing words,” and “it is a process to gain knowledge to understand the text.”

Taking into account the above replies, students had different interpretations of critical reading as well, which might be a result of their definitions of reading comprehension. In one reply, a student reported: “critical reading means a more advanced way of thinking. It is to understand the deep meaning of the text.” However, accepting that the read text had both surface and deeper meanings did not stop students' worry about not being able to tackle critical reading questions. This was clearly shown in the following: “critical reading means a set of questions that are written in a complicated way. In order to answer critical reading questions, your English

proficiency should be high.” “Some questions have more than one correct answer, how will I know which one is the correct.” Or “Some questions are about opinion, not about specific facts, so we have lots of argument.” Also, “Some questions ask me about my point of view. How will I know that my answer is correct especially on the exam?” Part of the problem could be related to the fact that students are not used to expressing themselves and saying what they think about what they have learned. One plausible reason for viewing critical reading this way is that students deal with the reading process as a one-way process, which makes them passive. By doing this, students are prevented from taking active positions when they are engaged in the reading process (Pennycook, 2000; Priozi, 2003).

Concerning the second research question about reading difficulties, “What difficulties do students encounter when they read?” students earlier had unclear definitions of reading comprehension and critical reading, and it is not surprising that they provided answers like the following to show their struggle with answering critical reading.

A common problem encountered by students when reading has to do with new vocabulary in the text. They faced either difficult vocabulary or words that have multiple meanings or words that were easily forgotten later. In one repose, a student suggested a solution to this problem. He asserted “I asked the teacher to pronounce it for me to relate meaning with the pronunciation.” The student might know its meaning because they listen to it on TV or on the radio but are not sure of its spelling. However, while this might be helpful in the classroom, it is not on the exam when students cannot ask any questions during silent exams or outside the classroom. Also not having proper practice and training is another reading problem. A student pinpointed that “some sentences have multiple meanings. How can I figure out that main idea? I do not know how.” Again, this illustrates the need for introducing critical reading skills to students explicitly (Paul & Elder, 2005).

In attending to the third research question, “How can critical reading skills improve students' reading comprehension?” the findings of the present study are consistent with those of Salameh et al., (2019), Gao, (2019), Wong, (2016), Ozensoy, (2021), and Olifant et al., (2020), who found that critical reading skills positively impact students' reading ability.

The learning logs and the class discussions showed how critical reading skills improved students' reading comprehension in several ways. First, while working on the first two reading passages, students focused more on linguistic levels for most of the discussions they were involved in after each passage, and much of their talk was about asking questions related to the meanings of unknown words. In the learning logs, the activity they worked on the most was difficult vocabulary, and they provided no information for critical reading skills used in the learning log. They did not try to figure out the meanings from the context nor to use what other words they knew in the lines to catch what they do not know. Students also did not make use of the contextual clues available in the passage. This finding agrees with how they defined reading in the interviews when they emphasized the importance of knowing the meanings of every single word in the text without referring to grammatical or lexical properties essential to explaining the text. By limiting reading to word recognition, students will not be able to achieve the high-level comprehension needed for critical reading (Priozi, 2003). Later, after practicing critical reading strategies, students reported in the learning log that they could guess a meaning of a difficult

word, for example, “affluent,” by reading the sentence before which talked about rich people and by looking at the title of the passage which was about the life of rich people. Another example was students' ability to make inferences and differentiate between information. In their attempt to answer a question about whether this piece of information was stated or implied information, they all agreed that this sentence was implied: “Subways are more expensive than buses.” They gave different reasons why they came to this conclusion. For instance, one student suggested that in the text, “Curitiba had traffic problems although they had buses system.” His reply was that “Curitiba is located in a developing country, i.e., Brazil, which means the government there cannot afford to build a subway system.” Another student added that “subways need more maintenance and people to look after.” It is clear from the above talk that students were able to provide different options in order to deal with problems they encountered and developed their interactional skills while working collaboratively (Surkamp & Viebrock, 2018).

Second, students were able to create a dialogue with the text on several occasions when trying to answer different questions. In the interview before the intervention, some students told the researcher that they had difficulty with the unknown vocabulary leading to information gaps because they looked at words in isolation and thought that meaning was located only in the text; they used neither their background knowledge nor experiences to understand the reading material. After practicing critical reading skills, students were involved more in the text by having a dialogue, discussing the information provided, and attending to their own experiences and culture. On one occasion, students were examining the universal association of home with the hearth, and there was information that was acceptable in their culture, like the association of hearth with food. However, some ideas were open for debate. In the following quote, students had difficulty accepting some portions of the passage, so they started to critically evaluate the ideas.

S1: Here it says, “in a cold winter night in Japan, a family gathers around a heater ...”

S1: Why do they sit around the fireplace?

S2: Maybe it is so cold there. Here we have a long summer season, and in winter it's not so cold.

S3: That's right in the coming sentence: they sit with the blanket over their legs.

S4: Also, in winter we prefer going to the desert and camping.

In the above conversation, all members took part in the conversation and shared their own experiences and looked at the reading material from their own perspectives. They all wondered why in Japan a family would sit around a heater and this led to a discussion to show their different viewpoints. After activating their background knowledge, they were able to make their evaluation by making use of their own culture.

Another example took place while practicing a brainstorming activity; a conversation between the teacher and students showed how students were able to interact with the text by expecting what might be the reading is about. The teacher asked this question and then students provided their answers, reading from their learning log: “How do today's attitudes about homes and their inhabitants compare with past ideas about human needs?”

S1: In the past, they were looking for what is necessary.

S2: Yes, you mean practice, only things they need.

T: Can you give examples?

S1: They made a fireplace and strong doors to protect themselves.

T: So? We do the same today.

S3: Yes, but in the past, they used what they got without considering decoration.

S1: That is correct; they did not have expensive furniture because they were poor.

S3: Yes, my grandfather told me they used to make tents from camels' skins.

S4: That is cool. In my village, a long time ago, we built our homes using stones from mountains.

It is clear from the conversation above that students implemented information activated in their minds and resorted to their cultural perspectives to answer the given question. Students jotted down their ideas and built on them by interacting with each other's responses. Students also were able to generate new ideas when the teacher interacted with them, who asked more questions for elaboration and clarification. Another thing was that although students had the same cultural community, they had different background knowledge depending on the background they came from, like S3, whose grandfather used to live in a desert. Such an activity allowed students to tap into their background knowledge and think more critically, which made their learning more effective because the new information to be studied would be meaningful and, to some extent, familiar to them. When students start to read about the new topic, they are more likely to actively link their prior knowledge they discuss with upcoming new information. It will be easier for them to know more about the target culture, i.e., English, and accept it as they see the differences in their culture, as with what happened in the responses of S3 and S4. Before the intervention, students reported clearly in the interview that although they could interact with the information linguistically in the text, they still found it difficult to understand some cultural ideas.

Third, students were able to read from a critical stance by offering several answers when they were discussing this question: "In your opinion, why wasn't sick building syndrome a problem in the past?" In the following conversation, they gave various answers.

S1: I think people in the past did not stay home most of the time.

S2: What do you mean? Why?

S1: Because they were busy looking for food.

S2: I see.

S3: I agree. I think they just came home to sleep.

S4: Ok, and for sick building syndrome, you need to spend a long time [there].

S5: I think in the past they lived primitive lives, without much furniture or chemicals.

Moreover, when students provide different answers to the same questions to justify what they are saying, and in return ask different questions to challenge others about their answers, this enables them to deepen their understanding about the passage and create a safe environment for everyone to express themselves. When S2 asked S1 a question for clarification, he was specific, and this led to constructive feedback although it looked like being negative, as S2 did not agree at first. Because S2 did not accept S1's contribution at face value, he helped other students to get S1's message across and built on his answer, and all students after that became more aware of the development of this understanding in their minds.

## Conclusion

This study aimed to investigate how critical reading skills can enhance students reading comprehension while working in groups. The study revealed the following findings. First, students' responses to the open-ended questions at first made it clear that the majority of them defined reading in a way that places emphasis on the linguistic level. Few of them defined critical reading as an active dynamic process that required the implementation of higher order thinking skills. As a result, they reported many reading obstacles they were used to encountering while approaching reading texts. After introducing critical reading skills, students were able to read in a more effective way by considering reading as a completely dynamic process that requires many skills to be in operation. These skills assisted students in relying on their previous knowledge, validating existing knowledge to create new knowledge. It also enabled students to use contextual clues surrounding the text to guess the meaning of unknown words and to identify the main ideas of the text and make inferences and synthesis of the materials. Second, working in groups while practicing critical reading required the teacher to relinquish his dominant role and gave room for students to be responsible for their learning. It also added additional value to students' reading comprehension. Students were encouraged to vary between their answers and provide more alternatives to get their message across when they were placed at the center of the learning process. Finally, it is recommended for ESL teachers to incorporate critical reading skills into the curriculum and teach them explicitly to students. But before doing that, teachers should be acquainted with the appropriate methods to teach these skills and most importantly to give students an active role to play when they read by working in pairs and groups. If teachers do so, students will be able to hone critical reading skills and read more proficiently. Finally, it would be worthwhile for further research to be conducted to explore the impact of introducing critical reading skills with different sexes, ages, and fields of study at different stages in a Saudi context.

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