The Role of Cubing Strategy in Improving Iraqi EFL Intermediate Learners' Reading Comprehension and Attitude

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Reading can be considered an important skill as it extends the knowledge that learners need to learn a language. As a cognitive process, comprehension requires learners to create mental illustrations through active understanding within the content of the reading texts. Iraqi EFL intermediate learners face many difficulties in comprehending reading texts, therefore teachers need to demonstrate new active strategies in teaching reading. Thus, an experimental study was conducted. The study purpose was to detect the impact of using cubing strategy in teaching Iraqi EFL intermediate learners' reading comprehension and evaluate to what extent it affects their attitude toward reading. The sample of the present study was distributed into two separate groups: experimental and control, with thirty learners for each category . The control group learners were tutored reading according to the prescribed method followed in the classroom, whereas learners in the experimental group were tutored according to the cubing strategy suggested. The study hypotheses state that the learners' mean scores were not significantly different in the reading comprehension post-test and reading attitude questionnaire post-administration for the two groups. Depending on the final results, it is concluded that teaching reading through the use of cubing strategy has a prominent role in improving Iraqi EFL intermediate learners' reading comprehension and attitude towards reading.

Keywords: *Cubing strategy, reading comprehension, reading attitude, EFL intermediate learners.*

Introduction

Reading can be considered to be one of the four English skills that is important to be grasped by students. Its significance is related to the role it plays in helping students attain new knowledge and information (Sari,2017, p.10). Reading may can be considered as the most crucial skill in any educational setting as it can be an indication for the overall ability of students' language skills. Students need to possess a good capacity for understanding since reading comprehension a prerequisite in each subject where reading is a critical component of success (Brown, 2007) as cited in (Sari, 2017, p.10). Understanding a written text is a complex activity for learners. It entails two connected processes: word recognition and comprehension. Word recognition refers to "the process of perceiving how written symbols correspond to one's spoken language,"   whereas comprehension is "the process of making sense of words, sentences and connected text.". through these two processes, readers need to use their previous knowledge, vocabulary, grammatical knowledge, familiarity with text and other relevant skills and strategies that might assist them to grasp the written text (Pang et. al , 2003, p.6).

Unfortunately, in the EFL Iraqi context, learners are generally slow readers. Abdulameer (2016, p.11-14) and Abdulmajeed and Muhammad (2015, p. 93) agree that most Iraqi EFL learners are "word by word" passive readers who rarely use effective strategies in reading comprehension to be active readers. The difficulties they face in reading comprehension might be attributed to the absence of skills and strategies used by teachers of the English language that can support the process of activating students' reading. Iraqi teachers of English language typically teach students to read texts and translate unusual vocabulary based on an incorrect idea that these are the only required strategies used in tutoring reading comprehension. They give grades for word pronunciation and reading fluency without considering the meaning of reading passages. No additional advanced support is provided for students.

Bearing this mind and in order to get rid of the obstacles that block Iraqi EFL learner' reading comprehension, new strategies which might activate reading comprehension need to be considered in teaching reading, with the hope of enabling readers to focus on comprehension and motivated to improve their reading skills. Hence, the current study attempts to develop a new strategy in teaching reading, i.e., the cubing strategy, as one of the active strategies that can help Iraqi EFL learners improve their reading comprehension. Moreover, it investigates the impact of using this strategy on their attitudes towards reading. More specifically, we require responses to the following research questions:

Q1: What is the effect of using cubing strategy in teaching reading on Iraqi EFL intermediate learners' reading comprehension?

Q2: What is the effect of using cubing strategy in teaching reading on Iraqi EFL intermediate learners' attitudes toward reading?

Research Hypotheses

Based on the research questions above, the null hypotheses formulated were as follows:
1. Teaching reading through the use of cubing strategy does not significantly affect Iraqi EFL intermediate learners' reading performance.
2. Teaching reading through the use of cubing strategy does not significantly affect Iraqi EFL intermediate learners' attitudes toward reading.

Literature Review
Reading Comprehension

Reading is "the third language skill that we learn at schools, it comes after listening and speaking and is followed by writing." It can be defined as the process of looking at sequences of known and familiar signs which can be letters or punctuation marks then attempting to obtain meaning from them. It assists learners in speaking and widens their vocabulary, therefore, it is regarded as a valuable skill (Cziko et. al., 2000 as cited in Elradii, 2014, p.12-13). Reading comprehension is "the process of simultaneously extracting and constructing meaning through interaction and involvement with written language" (Rand Reading Study Group, 2002, p.11). Similarly, it can be defined as the complex interface between the text and the reader associated with the reader's previous knowledge, experiences and attitude (Elradii,2014, p.13). Al-Khateeb (2010) as cited in (Ryandani, 2017, p. 4) defines reading comprehension as an active interactive process between readers and the reading material in which comprehension characterises readers' ability to assimilate information in the text at the highest level. As result, readers use diverse complex processes and skills when engaged with the text. Richards and Schmidt (2013) as cited in (Sari, 2017,p.17) maintain that the intended meaning comprehension for any written / spoken communication needs a dynamic process based on both the contained information within any message "bottom-up processing" along with background knowledge, context and information obtained from the intentions of the listener/speaker through "top-down processing." Elradii, (2014, p.14-15) outlines that modern theories of comprehension ensure the idea that, meaning can be learned by making "sense of words from their context, using what is known to comprehend and learn the unfamiliar," on the part of the readers Despite disagreement amongst writers about the skill of reading comprehension, it is necessary for "meaningful and effective reading to retell information accurately, to make personal references, to identify the main idea and supporting details, ask questions, make and revise predictions based on outcomes, evaluate and express opinions, draw conclusions, visualise and use sensory information, summarise information and analyse the story elements and narrative" (reference missing).

Cubing Strategy

Cubing is a strategy originally designed by Cowan & Cowan, (1980) to assist students to approach reading and writing from different angles. Since a cube contains six sides, student brainstorming will conclude in six approaches to the topic (Chalish, 2013, p. 5). When applied to reading, cubing strategy can result in focused reading and helps students to deepen their comprehension of texts (Richardson, Morgan and Fleener, 2009, p.355) as it supplies students with opportunities to share their cognitive abilities in relation to the topic given. This can be done undertaken by the teacher' application for various levels of cognitive dimensions in the taxonomy outlined by Bloom by applying different types of questioning methods (Chapman and King, 2003, p.77; Perez, 2008, p. 94). Wormeli (2006, p. 66) states that when adapting cubing activities to Bloom's taxonomy, each face of the cube requires students to interact with the topic through one of Bloom's six levels of understanding: knowledge, comprehension. application, analysis, synthesis and evaluation.

In explaining the procedures followed in using cubing strategy, it is maintained that higher and lower levels of complexity can provide to learners with different readiness levels. Each group rolls their own cube level , then each group participant needs to interact with the selected topic according to "whatever face is on top of the cube, once it stops rolling. "Advanced level readiness groups may have cubes with advanced activities, while low level readiness groups may have cubes with less advanced activities (ibid.).

 As far as the current study is concerned, each of the six verbs of Bloom's revised taxonomy by Anderson and Krathwohl,)2001) are used: "remembering, understanding, applying, analysing, evaluating and creating," where each verb is placed on one of the sides of the cube, followed by different questions that help learners use their cognitive abilities (see Figure 1).

Figure 1. Cubing Strategy
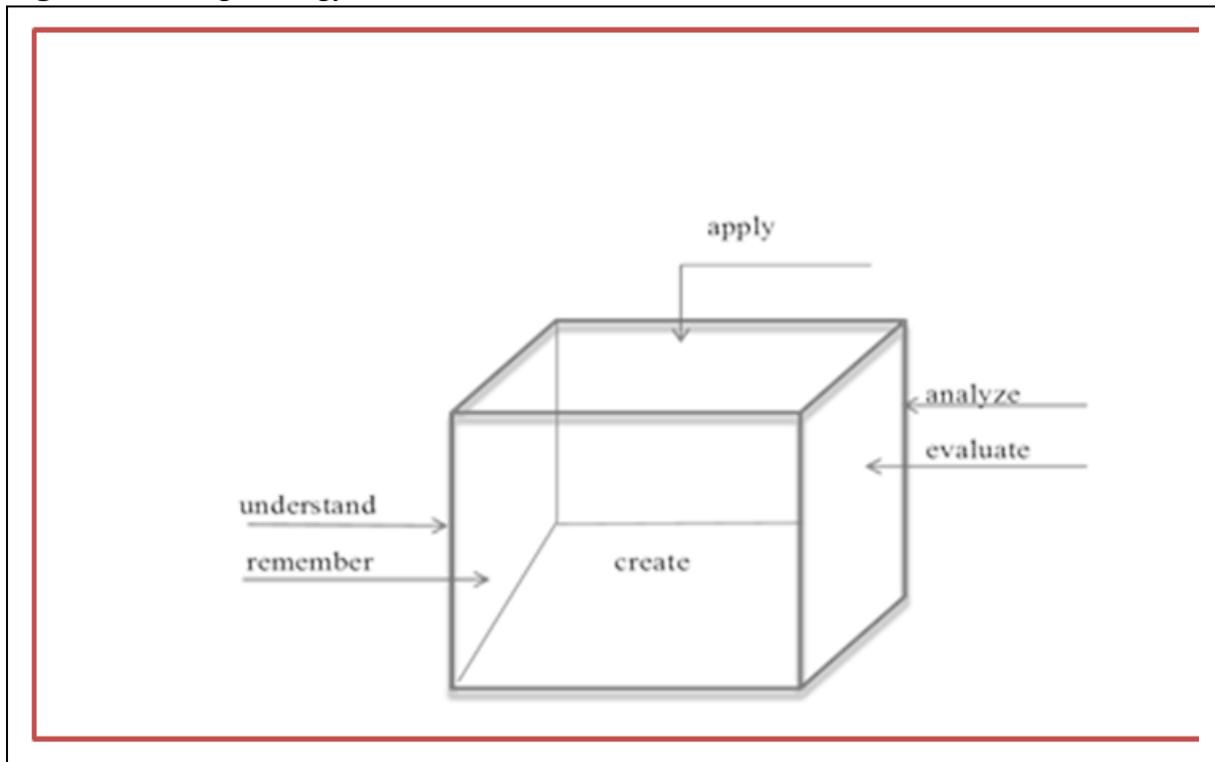
The six (6) sides of the cube are described in the correct sequence as follows:

1. Remembering: to brainstorm students' ideas which describe what the subject looks like by recalling stored knowledge and linking it to new material.
2. Understanding: to grasp meaning from reading the text by making comparisons, explaining, translating, interpreting, summarising, classifying, stating main ideas, etc.
3. Applying: to apply a procedure to a task that is familiar or to use a procedure to solve an unfamiliar but related task.
4. Analysing: to break down material into components. This may include the identification of parts and analysis of the relationship between them.
5. Evaluating: Giving judgements through checking and critiquing built on given criteria and standards.
6. Creating: forming a coherent whole through locating elements .

The Significance of Using Cubing Strategy

In showing the significance of using cubing strategy, Richardson, Morgan and Fleener (2009, p. 355) report that when a cube is made by the teacher as a visual object, it can lead to advanced rapid comprehension of the reading text. Gregory and Chapman (2013, p.142), believe that this strategy is an effective tool to be used when students "are locked into a particular way of

thinking." Moreover, Chalish (2013, p. 6) maintains that cubing strategy can engage students in learning because it differentiates various levels of readiness, interest or learning styles. Chapman and King (2003, p.77) declare that for the sake of reflecting students' various abilities, it is better to have these cubes coloured, where each colour may represent a group of students with specific abilities or learning styles. Since the strategy is adapted to tap into different abilities, in this way it can "strengthen the strength" and "strengthen the weakness." Cubing activities can be stimulating, interesting and motivating to learners. They teach and challenge problem solving and thinking skills.

Methodology
Research Design

This research is a quantitative study where non-equivalent groups design with a pre-test-and post-test were chosen. In the light of the mentioned design, the experimental and control groups were submitted to reading comprehension pre and post-tests and a pre-post administration of reading attitude questionnaire. Both groups' scores of the post-test and post-administration of the reading attitude questionnaire are then compared and if the experimental groups' scores are found to be significantly different from those of the control group, the difference is attributed to the independent variable (using the cubing strategy). Accordingly, two groups were randomly selected . The experimental group was provided with an intervention to practise using the cubing strategy in reading, whereas the control group was tutored by using the prescribed method of teaching reading comprehension, i.e., (without the cubing strategy).

Participants

The 60 learners participated in the study were randomly selected from Al-Uloom intermediate school for girls. Section (A) was randomly selected to represent the experimental group and (B) as the control, with thirty learners each. The two groups' equivalence is checked according to average age ranging between 13 and14. The two groups' level of reading comprehension, and their attitude towards reading were also checked before giving the intervention (using the cubing strategy). The statistical treatment of the sample equivalence in these two variables is indicated in Tables 1 and 2.

Table 1: The Pre-test Statistics for Control and Experimental Groups' Reading Comprehension Level

Variable	Control group		Experimental Group		t-value	Level of sig.	Levene's Test	Level of sig.
	Mean	S.D.	Mean	S.D.				
Reading Comprehension	10. 067	3.982	9.867	3.401	0.209	0.835	0.284	0.596

Table 2: Statistics for Control and Experimental Groups during pre-administration of the Reading Attitude Questionnaire - Attitudes towards reading

Variable	Control		Experimental		t-test	Sig.(2-tailed)	Levene's Test	Sig
	Mean	S.D.	Mean	S.D.				
Reading Attitude	36.333	2.845	37.567	2.921	1.657	0.103	0.127	0.723

Instruments

Data for the present study came from three instruments. The first and second one are two separate authentic versions of the Cambridge IELTS Practice reading tests that were adopted by the researchers as the pre-test and post-test. Experts in English language and ELT reviewed the tests for suitability, level, accuracy and content validity. Pre-test and post-test reliability was measured through Alpha Cronbach. The results were 80, and 82 respectively, which indicates that the tests were reliable.

The third instrument which is used to assess participants' attitude toward readings is a reading attitude questionnaire that constructed by the researchers (see Appendix A). A jury of experts decided on its suitability to the study aims and all agree that the questionnaire is suitable except for some alterations that have been considered. The reading attitude questionnaire reliability was checked by the use of Alpha Cronbach. Internal consistency coefficients is 0.78, which is reliable.

Procedures

The experiment started on the 1st of March, 2017 and ended on the 15th April, 2017. It lasted for six weeks. The researchers taught both groups. The lessons were arranged for both groups as one session per week. The participants in both groups studied the same reading comprehension texts found in *English for Iraq, 1st intermediate student's book.* Researchers instructed the control group according to the steps recommended *in English for Iraq, 1ˢᵗIintermediate Teacher's book* as follows:

1. Introducing the text: preparing students for the topic before they read the text. Focusing on the title.
2. Introducing the task: introducing various tasks that enable the practice of various skills and techniques.
3. Reading silently: students read the text silently.
4. Checking: students check each other's work.

The steps which were followed in teaching the experimental group as follows:

A. Pre-activity Phase
1. The teacher made six cubes. Each side of the cube presents a cognitive skill of Bloom's revised taxonomy.
2. The teacher divided the class into six groups, with six learners each. The learners in each group are homogenized according to their readiness level by giving them a handout in which they decided the types of activities they like to do in advance.
3. The teacher models reading using the cube.

B. Activity phase
The teacher hands a cube for each group. Each group begins rolling the cube, and each learner chooses to roll the activity that best fits his or her readiness, identified by a certain colour by the teacher. When any of the learners give their answer, it is followed by a discussion by other learners within the same group. Once all learners finish rolling all the faces of the cube, they can repeat rolling it 2-3 other times for further enjoyment and comprehension (see Appendix B).

C. Post-activity phase
1. The teachers provides an opportunity the learners to ask some questions if they do not understand something in the text.
2. The teacher gives homework to the learners to be written in their activity books.

Final Administration

At the completion of the experiment, a post-test and post-administration for reading attitude questionnaire are given to both groups. They are administrated to measure the role of cubing strategy on the experimental group's reading comprehension and attitude towards reading compared with learners from the control group who were tutored in reading through the use of the prescribed teaching method of reading comprehension .

Results

The results of each questions are as follows:
1. What is the effect of using the cubing strategy in teaching reading on Iraqi   EFL intermediate learners' reading comprehension?
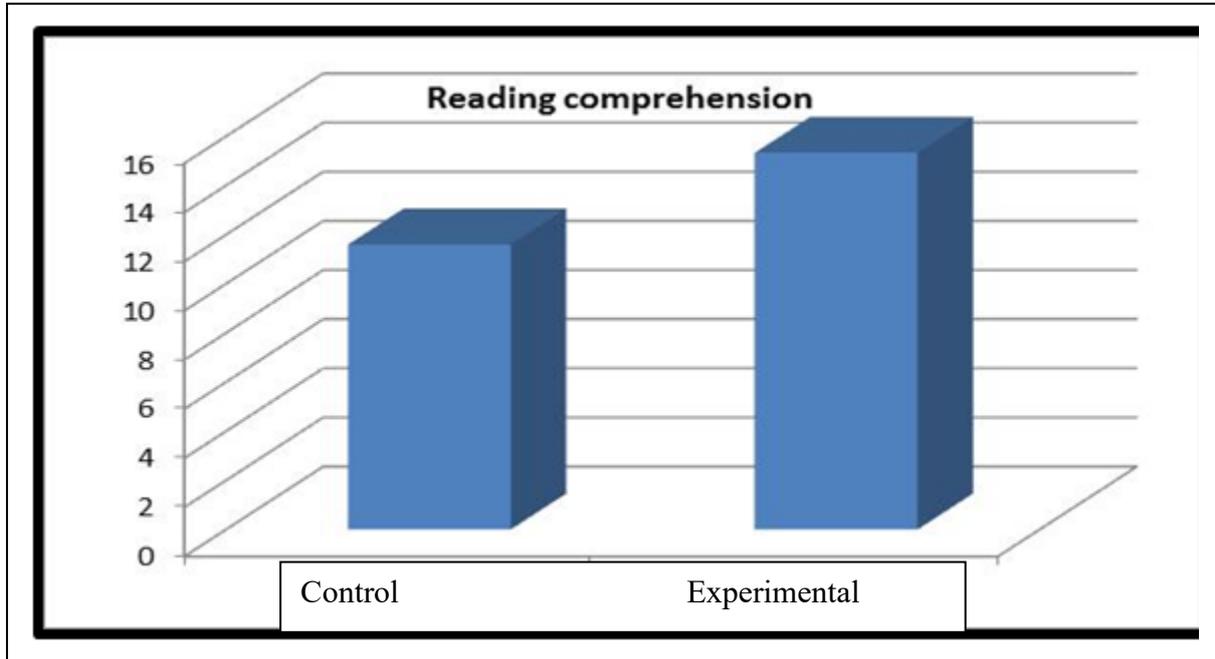
In order to examine the first aim of the study, the "t-test formula" for two independent samples has been used (see Table 3).

Table 3: The Participants' Reading Comprehension Performance in the Post-test for the Experimental and Control Groups

Variable	Control group		Experimental Group		t-value	Computed value	D.F.	Level of sig.
	Mean	S.D.	Mean	S.D.				
Reading Comprehension	11. 600	3.450	15.333	2.482	2.001	4.811	58	0.000

Table (3) indicates that the experimental group's mean score is (15.333) and for the control group it is (11.600). The computed value (4.811) is higher than the t-value (2.001) at the significance level of 0.000 and 58 freedom degrees. This result illustrates that a statistically significant difference is found between both groups in reading comprehension performance in the post-test in favour of the experimental group (see Graphic 1).

Graphic 1. The Post-Test Mean of the Experimental and Control Groups
Reading Comprehension Performance

Thus, the first null hypothesis which states that teaching reading by using cubing strategy does not significantly affect Iraqi EFL intermediate learners' reading comprehension performance is rejected.

2. What is the effect of using cubing strategy in teaching reading on Iraqi EFL intermediate learners' attitudes towards reading?
In order to examine the second aim of the study, the "t-test formula" for two independent samples has been used (see Table 4).

Table 4: The Participants' Attitudes towards reading in the Post-administration of the Questionnaire for Experimental and Control Groups

Variable	Control group		Experimental Group		t- test value	Computed value	D.F.	Level of sig.
	Mean	S.D.	Mean	S.D.				
Attitudes towards reading	39.767	3.775	48.200	3.890	2.001	8.521	58	0.000

Table (4) shows that the experimental group's mean score is (48.200) and the control group's is (39.767). The computed (8.521) is higher than the t-value (2.001) at (0.000) significance

level and (58) degrees of freedom. This result indicates that a statistically significant difference is found between both groups in reading attitudes in the post-administration of the reading attitude questionnaire in favour of the experimental group (see Graphic 2).

Graphic 2. Mean of the Experimental and Control Groups' Attitudes towards Reading in the Post-administration of the Reading Attitude Questionnaire
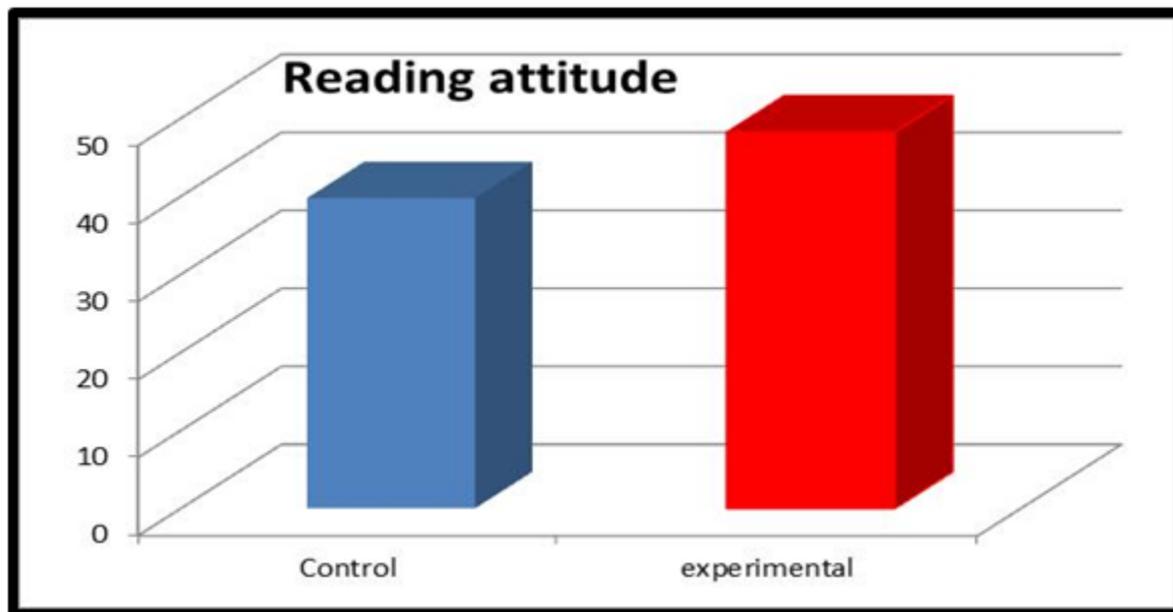
Thus, the second null hypothesis which states that teaching reading through the use of cubing strategy does not significantly affect Iraqi EFL intermediate learners' attitudes towards reading is rejected.

Discussion

The post-test results reveal that there is a clear indication that the experimental group students' performance is higher than that of the control group students and the use of cubing strategy in reading comprehension tutoring is more rewarding than tutoring through the prescribed method of teaching. This is due to the fact that the cubing strategy is adaptive to differentiating instruction. It taps into different intelligences and provides special attention to each participant in the experiment, depending on his or her level and learning style. It provides them with a helpful environment until participants become self-confident, self-regulating and skilful in using their reading skills which in turn improves their comprehension . Moreover, cubing strategy engages participants to use many senses at the same time, which makes reading an easy and enjoyable skill, which can help to increase motivation and a positive attitude towards reading which in turned assists low-level participants in breaking the routine of reading. This

enables them to direct themselves towards achieving higher cognitive skills such as application, analysis, evaluation and creation.

Conclusions

With reference to the results obtained, the researchers have made the following conclusions. The proposed cubing strategy has an influential role in developing the reading comprehension level of learners in the experiment within this particular EFL context. Much more convincing evidence for this conclusion comes from the general picture emerging from the post-test results which reflect a significant statistical difference in learners' level of reading comprehension, in favour of the experimental group instructed by and exposed to the proposed cubing strategy. Moreover, the post-administration of the reading attitude questionnaire findings provides evidence of the role of cubing strategy in positively affecting EFL learners' attitudes toward reading.

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