The Effect of the Directed Reading Thinking Activity through Cooperative Learning on English Secondary Stage Students' Reading Comprehension in Jordan

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Abstract

This study aimed at investigating the effect of the directed reading thinking activity through using cooperative learning on English secondary stage students' reading comprehension in Jordan. This study answered the following research question:

- *What is the effect of the directed reading thinking activity through cooperative learning on English secondary stage students' reading comprehension in Jordan?*

The subjects of the study were chosen purposefully from public schools in Amman Second Directorate of Education. It consisted of 42 students who were enrolled in two sections in one school. The experimental group encompassed 22 students and the control group encompassed 20 students.

The teaching program was based on a strategy which included the direct reading thinking activity through using cooperative learning designed to teach four units to the experimental group. The units were taken from the English course textbook "Jordan Opportunities" prescribed for the Eleventh Grade in Jordanian public schools during the second semester of the scholastic year 2007/2008. The same units were taught to the control group through the traditional strategy.

For the purpose of the current study the researcher used:

- *A reading comprehension test.*

Means, standard deviations and analysis of Covariance (ANCOVA) were used to reveal the findings of the study which were as follows:

- *There is a statistically significant difference at (α= 0.05) in reading comprehension in favor of the experimental group among English secondary stage students in Jordan due to the instructional strategy.*
  At the end of this study, the researcher proposed several recommendations and suggestions.

Introduction

Reading skills are necessary when students want to further their study, especially at the secondary level. They need good reading skills for acquiring knowledge and learning new information. Reading is a complex cognitive process and mastery of all aspects of reading is crucial for academic success and achievement.

The requirements of reading comprehension increase as students attain higher grades when they are expected to comprehend more complex materials that are often concrete to requiring well developed reasoning skills as well as an ability to apply appropriate background knowledge in a variety of contexts (Gardill & Jitendra, 1999). Reading experts agree that a systematic and research-based instructional model that directly and explicitly teaches students the skills and strategies to comprehend text is necessary if students are to comprehend what they read (Almanza, 1997; Richeck, 1987).

The effective reading comprehension models involve both the teachers and the students in an active, on-going pursuit of meaning construction. Unfortunately, conventional and text-centered classrooms do not provide instruction in the skills and strategies necessary for students to learn how to comprehend text(Tivnan & Hemphill, 2005

However, practices in Jordanian schools showed that most students' reading abilities are not good enough to do so. For students, much of the reading will be to learn assigned material or accomplish school assignment. All students get information from materials they read and yet many of them do not read everything for the same reason or in the same way or at the same rate (Al Debes, 2005).

Many researchers have been interested in doing research to investigate appropriate reading strategies to help students who have better understanding when they read in Jordan. The results of some studies show that some strategies are successful with a particular group of students but some are not (Salameh, 2008; Abu Khater, 2006; Al Debes, 2005).

As a result, the researcher is trying to use a combination of two strategies together, the directed reading thinking activity and the cooperative learning, as one strategy to teach Jordanian secondary stage students reading, to enhance students' achievement in reading comprehension **.**

Statement of the Problem

This study aimed at investigating the effect of the directed reading thinking activity through using cooperative learning on English secondary stage students' reading comprehension in Jordan.

Question of the study

This study aimed to answer the following research question:

1. What is the effect of the directed reading thinking activity through cooperative learning on English secondary stage students' reading comprehension in Jordan?

Research Hypotheses

To answer the questions of the study, the researcher tested the following statistical hypotheses:

1. There is no statistically significant difference at (α= 0.05) in reading comprehension among English secondary stage students due to the instructional strategy (Directed reading thinking activity through cooperative learning compared with conventional strategy).

Significance of the Study

The combination of the two strategies provide further support for the directed reading thinking activity through cooperative learning practice by projecting its content and procedures to teach real situations at the secondary level in Jordan.

The Directorate of English language Curricula may introduce a variety of teaching and learning activities based on the directed reading thinking activity through cooperative learning stressing on reading comprehension through students' textbook, teachers' guide and train teachers how to apply them inside the classroom.

The findings of the study should be of particular significance to the teachers who participated in this study and to Jordanian teachers who teach in similar situations as they select instructional strategy and engage in the decision-making process related to reading comprehension instruction. It is hoped that this study may help Jordanian teachers use effective means for teaching reading comprehension.

Operational Definitions

For the purpose of the study, the following terms are defined operationally:

1. Directed Reading Thinking Activity: A strategy that is intended to develop students' ability to read critically and reflectively. The directed reading thinking activity attempts to equip readers with the ability to determine the purposes of reading, the ability to extract, comprehend, and assimilate information, the ability to make predictions to examine reading materials based on the purposes of reading, the ability to pass judgments, and finally the ability to make decisions based upon information gleaned from reading.

2. Cooperative Learning: is a teaching strategy in which small groups of four or five students of different levels of ability, use a variety of learning activities to improve their understanding of a subject.

Each member of the group is responsible not only for learning what is taught but also for helping group mates learn; thus creating an atmosphere of achievement. Students work through the assignment until all group members successfully understand and complete it.

3. Directed Reading Thinking Activity through Cooperative

Learning: Two strategies together, the directed reading thinking activity and the cooperative learning, are intended to develop students' ability to read critically and reflectively were designed for the purpose of this study to teach reading skills as one strategy.

4. Reading comprehension: is a process that requires how to decode through the development of an extensive repertoire of sight words, learning the meanings of vocabulary words encountered in the texts, and learning how to abstract meaning from text. It represents how well readers understand literal comprehension which concentrates on explicit meaning and inferential comprehension which concentrates on implicit meaning in the reading text.

Limitations of the Study

This study was subject to the following limitations:

1. The study is limited to eleventh grade male students of Aljobeiha Secondary Public School of Amman city during the second semester of the scholastic year 2007/2008; therefore, the results cannot be generalized for other male and female students.
2. Reading comprehension levels are measured and limited to three skills: literal, inferential and critical; therefore, the results cannot be generalized for other levels of reading comprehension.
3. The reading component was limited to some units (9, 11, 12, and 13) which were taken from English course textbook "Jordan Opportunities"; therefore, the results cannot be generalized for other units of the English text book.

Review of Literature and Related Studies

This Chapter consists of two parts. The first part reviews the theoretical Background related to the reading comprehension, the directed reading thinking activity, cooperative learning and critical thinking; and the second part reports a number of related studies.

Part One: Review of Theoretical Background

Reading comprehension

The development of comprehension skills is a long term developmental process which depends on language and text experiences from early stage of life. Learning how to decode and learning how to abstract the meanings of vocabulary words are commonly encountered in texts (Pressley, 2000).

Reading comprehension is measured by three types of recall scores: recall scores for common ideas, main ideas, and non-main ideas of a text. Reading comprehension usually refers to the amount of understanding readers have when they read the text. That is, it represents how well readers understand the implicit and explicit meaning of the contents of the text they read (Sung-Hyun, 2003).

The more effortlessly students can recognize words, the more attention they can devote to comprehension. The more time students spend in reading, the better their reading rate is (O'Connor et al., 2007). Becoming a good reader requires practice in reading and constant exposure to text (Pressley& Block, 2002).

The literature review indicates that a major cause of poor reading comprehension skills is curricular deficiencies and ineffective teaching models. The social context influences what one reads, how one reads, and why one reads (Whitaker et al., 2004). It is important, therefore, that teachers address this issue by making reading relevant to students and establishing a purpose for reading a text.

There are three achievement level definitions: basic, proficient, and advanced. Recent research has suggested that the students who are most likely to experience reading difficulties throughout their school years are those who attend a low achieving school, have limited English proficiency, are unfamiliar with Standard English dialect, or live in communities of poverty (Reis et al., 2007) .

Thus, the levels of proficiency must match stages of reading development. Moreover, the emphasis on reading instruction continues to be a focus for those students who are less proficient in reading, especially in the younger grades.

Bloom's Taxonomy of educational objectives (Anderson et al., 2001) provides a similar framework of objectives from lower order to higher order skills based on the level of complexity in thinking. In recent years, Anderson et al. (2001) recognized the hierarchical frameworks, and made it two-dimensional. The first dimension is almost identical to that of Bloom's Taxonomy but is now labeled 'cognitive processes'. The added dimension of "knowledge" is not included in the Bloom's original Taxonomy. Each will be discussed separately.

Text comprehension is improved when teachers use a combination of reading comprehension techniques such as question answering, question generation, and summarization. When students are able to use them successfully, they perform better in recall, answering questions, generating questions, and summarizing texts (Farstrup & Samuels, 2002).

Directed Reading Thinking Activity

The directed reading thinking activity is associated with the DRA (Directed Reading Activity) developed by Stauffer (1969). The directed reading thinking activity is ["a lesson plan which involves (a) preparation/readiness/motivation for reading a lesson; (b) silent reading; (c) vocabulary and skills development; (d) silent and/or oral reading; and (e) follow-up or culminating activities."] While this is a useful plan for some reading lessons and is essentially synonymous with the basic reading lessons of the elementary grades (Tierney, Readance & Dishner, 1990). The directed reading thinking activity is a much stronger model for building independent readers and learners. Almasi (2003) stated that the goal for using the directed reading thinking activity is to foster students' independence when reading. It engages students in an active process where they must use their reasoning abilities and their own ideas.

The value of directed reading thinking activity is to make predictions before reading each section. Requiring students to make predictions encourage use of context clues and establishes a purpose for reading. This cycle requires students to use their background knowledge to set purposes for reading and develop their questioning ability. Verifying predictions while reading extend thoughts and promotes interactive learning. The power of the directed reading thinking activity strategy increases when the teacher guides students to check their predictions after reading (Allen, 2004).

Cooperative Learning

Cooperative learning is one of the most remarkable and fertile areas of theory, research, and practice in education. Cooperative learning exists when students work together to accomplish shared learning goals (Johnson , Johnson & Stanne, 2000). Cooperative learning is defined by a set of processes which help students interact together in order to achieve a specific goal of instruction or an outcome which is usually content specific.

Nagel (2006) emphasized that cooperative learning must be intellectually demanding, creative, open-ended, and involve higher order thinking tasks. For cooperative learning to be successful in the secondary social studies classroom, five essential elements are needed: 1. Positive Interdependence; 2. Face-to-Face Interaction; 3. Individual and Group Accountability; 4. Interpersonal Skills; 5. Group Processing (Kagan, 1995).

The Learning Together model organizes instruction according to the principles of positive interdependence, individual accountability, promoting face-to-face interaction, social and collaborative skills, and group processing. Specifically, positive interdependence means that the success of students is linked with the success of their team members and may be structured through mutual goals, joint rewards, shared resources, complementary roles, and a common team identity. Individual accountability means that the performance of each member is assessed and results are given to the team and the individual so that team members cannot get a free ride on the efforts of their teammates. Yet, team members still help, share, encourage, and support each other's efforts to succeed through encouraging interaction within their groups. Furthermore, they use and develop their interpersonal and small-group skills of leadership, decision making, trust building, and conflict management. Finally, the team members perform group processing to reflect how well the team is functioning and how its effectiveness may be improved. (Huss, 2006)

As such, the main difference between the Learning Together and other cooperative learning models is that this model is less discrete and less prescriptive than the Structural and the Student Team Learning models that employ specific steps in lesson planning and somewhat "prepackaged curricula, lessons, and strategies in a prescribed manner" (Johnson et al., 2000). Rather, the learning together model provides a conceptual framework for teachers to plan and tailor cooperative learning instruction according to their circumstances, student needs, and school contexts (Johnson & Johnson, 1998).

1. Compared to a whole class format, in cooperative learning, students have more opportunities to talk and to share ideas. This interaction with group mates encourages students to restructure their ideas. For instance, they may need to summarize, elaborate, exemplify, defend, and explain their ideas.
2. Disagreement, if carried out constructively, pushes students to clarify and rethink their ideas, potentially leading to cognitive restructuring.
3. By working in groups, students enjoy more opportunity to see how their peers think and create new ideas. Witnessing this process can provide useful models.
4. Discussing, creating, and thinking in a group, rather than in a whole class context, can provide a less anxiety-producing context. If group mates feel positively interdependent with one another, a supportive atmosphere can develop. In such an atmosphere, students may feel freer to try out new ideas.
5. The multiple perspectives of others in their heterogeneous groups may spark new ideas in students' minds.
6. The greater achievement that cooperative learning can foster provides students with a stronger knowledge base from which to explore concepts.

Previous research involving students learning English has suggested that cooperative learning may encourage higher self-esteem and lower feelings of alienation at school.

Part Two : The related Studies

This part is devoted to the reporting of related studies carried out on reading comprehension, directed reading thinking activity, and cooperative learning .

The main percentage of students with learning difficulties has been reported as being 16% across Australia with a higher prevalence of difficulties in literacy than numeracy (Department of Education, Training and Youth Affairs, 2000). Studies of reading comprehension difficulties in New Zealand have reported that 10 to 15% of students aged seven to eight years are experiencing difficulties with reading comprehension (Dymoch & Nicholson, 1999). If teachers are to develop instructional approaches that improve reading comprehension, it is important to review the proposed causes of reading comprehension deficit and then to investigate remedial strategies.

Chung- Shan (2000) research was an empirical and descriptive exploration of English as a foreign language (EFL). Taiwanese college students of low reading comprehension scores on the secondary level English Proficiency Test were scheduled for interviews. Forty-five subjects took part in the interviews and their responses were tape-recorded, transcribed, and analyzed both qualitatively and quantitatively. The results indicate that there are certain concepts about EFL reading which is shared by the subjects. Generally, they showed little awareness of independent, internally generated repair strategies, tended to process EFL reading word level in a rather analytical fashion, and mainly viewed EFL reading as a language learning exercise. Several strategies reflecting this restricted view of reading are identified. The study concludes with a discussion of pedagogical implications.

Rabren, Darch and Eaves (1999) also studied the effects of comprehension on character motives among students with reading comprehension difficulties. They employed and compared two methods of instruction; (a) a rule-based, explicit strategy instruction founded on direct instruction methods and (b) a basic-reader activity based instruction program. The subjects were 40 fourth grade students with reading comprehension difficulties from four schools. The results of the study indicate that there was a significant improvement in the direct instruction group in all text types.

Many and Flyfe (1996) examined the effect of using directed reading thinking and writing activities to promote reading achievement and higher order thinking skills. The researchers applied an achievement reading test and a writing test on 51 students. The result indicated significant gains in both reading achievement and writing skills. The study concluded that students' achievement can be improved if the appropriate reading strategies were used.

Renn (1999) investigated the relationship of reading comprehension scores in a second-grade classroom where reading instruction was provided using the traditional directed reading approach (DRA), to the reading comprehension scores in a second-grade classroom where reading instruction was provided using the directed reading thinking activity approach.

Dougherty Stahl (2004) explored the effects of three instructional strategies, the directed reading thinking activity on the reading comprehension and science content acquisition of novice readers. The participants were 31 second-graders with an instructional reading level that was approaching grade level. Each of 4 groups received each treatment. Results indicated that the directed reading thinking activity yielded statistically significant effects on fluency as measured by a timed maze task and effects on reading comprehension and science content acquisition. The components of directed reading thinking activity, generating and justifying predictions, verifying predictions after reading, engaging students in a social context around a text, seemed to provide the necessary scaffolding for facilitating the reading comprehension and science content acquisition among novice readers.

Riley (2006) investigated the effect of directed reading thinking activity on low reading achievement first grade students. The study results indicated the possibility of correcting most of the errors made by students while reading when they use directed reading thinking activity. The study emphasized the importance of using directed reading thinking activity to increase achievement and promote thinking among low achievers.

Slavin (1994) emphasized that out of 63 studies of the achievement effects of cooperative learning, thirty-six (57%) of them have found significantly greater achievement in cooperative than in control classes. Twenty-six (41%) found no differences, and in only one study did a control group out-perform the experimental group. However, the effects of cooperative learning vary considerably according to the particular methods used. In studies of the student team learning methods, which incorporate group goals and individual accountability, effects on achievement have been very consistently positive; thirty-four out of 41 of such studies (83%) found significantly positive achievement effects on student achievement.

Ghaith (2003) investigated the effects of the learning together with cooperative learning model on improving English as a foreign language (EFL), reading achievement and academic self-esteem and in decreasing feeling of school alienation. Fifty-six Lebanese high school learners of EFL participated in the study. The results of this study indicated no statistically significant differences between the control and experimental groups on the dependent variables of academic self-esteem and feelings of school alienation. However, there was a statistically significant difference in favor of the experimental group on the variable of EFL reading achievement.

Gillies (2008) investigated the effect of structured and unstructured cooperating groups on students' behaviors, discourse and learning in junior high school. One hundred and sixty-four grade 9 students participated in the study. The students were videotaped as they worked in three to four persons, mixed-gender and ability groups on a science-based categorization activity. The results show that the students in structured cooperating groups demonstrated more cooperative and helping behaviors such as giving more elaborated help and guided directions to assist understanding than their peers in the unstructured groups. Moreover, they demonstrated more complex thinking and problem-solving skills both in their discourse and their responses on the follow-up learning probe. These findings are discussed in the context of the importance of structuring cooperative learning experiences if students are to attain the benefits widely attributed to this approach to learning.

Recently, Bilgin and Geban (2006) studied the effects of the cooperative learning approach over traditional instruction on 10th grade students which was created to assess the conceptual understanding and achievement. The subjects of this study consisted of 87 tenth grade students from two classes. One of the classes was randomly assigned as the experimental group, which was instructed by the cooperative learning approach and the other class was assigned as the control group, which was instructed by traditional instruction. The results showed that students in the experimental group had better conceptual understanding, and achievement.

Almanza (1997) examined a study which compared the effectiveness of cooperative learning and the directed reading thinking activity during reading stories. Fifty three students from sixth grade were taught stories during the 8-week instruction. Findings, based on a reading comprehension test, indicated that the majority of children scored higher in the cooperative reading groups than their counterparts from the directed reading thinking activity groups. The study suggested the use of cooperative learning as an instructional strategy.

The previous finding from Almanza does not mean that students can just be put into a group and assigned a project to complete. There are very specific methods to assure the success of group work, and it is essential that both teachers and students be aware of them. Knowing that cooperative learning can significantly increase student achievement (compared with competitive and individualistic learning) when properly implemented does not mean, however, that all operationalizations of cooperative learning will be effective or that all operationalizations will be equally effective (Johnson, Johnson, 2001).

Research has shown that cooperative learning techniques:

1. Promote student learning and academic achievement.
2. Increase student retention.
3. Enhance student satisfaction with their learning experience.
4. Help students develop skills in oral communication.
5. Develop students' social skills
6. Promote student self-esteem.
7. Help to promote positive race relations.

Comments

The previous review of related literature has clearly stressed the importance of using the directed reading thinking activity which may help teachers use effective means for teaching reading comprehension. Furthermore, cooperative learning can significantly increase student achievement. None of these efforts paid attention to the use of the directed reading thinking activity and the cooperative learning in reading as one strategy.

This research has been conducted on the benefits of directed reading thinking activity through cooperative learning. One area that has not yet been researched involves how well directed reading thinking activity through using cooperative learning affects English students' reading comprehension. Hence, it remains unknown whether students instructed through this particular strategy will be able to be better readers and acquire higher reading comprehension. Thus, this study hopes to address a new frontier.

Method and Procedures

This chapter introduces subjects of the study, instruments, material, and design of the study and variables, as well as procedures, and statistical analysis.

Subjects of the Study

The subjects of the study were chosen purposefully from public schools in Amman Second Directorate of the Ministry of Education. It consisted of 42 students who were enrolled in two sections in one school (Aljobeiha secondary school). The experimental group was 22 students and the control group was 20 students. The experimental group was taught by directed reading thinking activity through cooperative learning**,** while the control group was taught by the conventional strategy.

Instruments of the Study

For the purpose of the study, the researcher developed Reading Comprehension Test to be used for the experimental and the control groups.

1. **The Reading Comprehension Test**: This test is one of two instruments used in this study to examine Jordanian Eleventh Grade English students in reading comprehension. The test consisted of two passages. Each passage was followed by questions with a total of 22 questions for the two passages. The reading Comprehension test was divided to eleven questions of literal comprehension that concentrated on direct and explicit information, while the other eleven questions were inferential which concentrated on extending explicit information and drawing conclusions from the information stated in the reading text.

Test Scoring

It is a multiple-choice test in which students were asked to select one answer only from four options. Each question in the test took one point; therefore, the total reading comprehension score was twenty two points.

Validity of the Test

To assess the validity of the reading comprehension test, it was distributed to fifteen experts in the fields of language instruction and measurement and evaluation (Teachers, supervisors and university professors) to examine its appropriateness. Their comments were taken into consideration before editing the final copy of the test (e.g.: the inferential questions were more than the literal ones, so the researcher made them equal according to the experts' suggestions. 2. Some questions were also reworded). Furthermore, the experts were kindly requested to assess the suitability of the two passages for Jordanian Eleventh grade English students and to judge the questions in terms of measuring reading comprehension. The jury confirmed that the final copy of the test was convenient and appropriate for the study. Moreover, the language used was appropriate to the students' level.

Reliability of the Test

The reliability of the test was verified through the test/retest method on a group of fifteen EFL Jordanian students of the Eleventh grade outside the sample of the study. The time span between the two tests was two weeks. The reliability coefficient for the test was 0.89 which was suitable for the purpose of the study.

Material of the Study

Four units(9, 11, 12, and 13) were taken from the English course textbook "Jordan Opportunities" prescribed for the Eleventh Grade in Jordanian public schools during the second semester of the scholastic year 2007/2008 . The teaching program is based on a strategy which includes the directed reading thinking activity through using cooperative learning.

The directed reading thinking activity was designed based on the following steps:

1. Developing readiness to read the selection. In this first step, the teacher is concerned with:
A. Building a rich conceptual background and/or activating schema for the selection.
B. Identifying and presenting any crucial vocabulary items (one or two words) in context.
C. Helping students establish some purpose/s for reading the selection.
2. Applying the directed reading thinking activity cycle which contains the following components:
A. Students set purposes and make predictions.
B. Silent reading.
C. Students verify predictions and prove set purposes. Students were encouraged to explain what caused them to confirm or revise prior predictions, and what caused them to make the new predictions they were making (Conner, 2006).
3. Comprehension check: The silent reading of the selection was also followed by a discussion of the material read. The aim of the discussion period is to help interpret the material. Students were led to discuss related concepts, and to consider the content of the selection in light of their own experiences. This was related to the purposes set and done informally.
4. Rereading the selection for purposes specified by the teacher.
Rereading for specific purposes was done either silently or orally; however, the purpose was different from the purpose(s) for the first silent reading.
5. Evaluation and enrichment activities. In order to document the effectiveness of the lesson for each student, some form of evaluation activity was provided. Follow-up activities can do much to encourage further reading **(**Gipe, 1995).

General guidelines were designed for the purpose of the study to teach reading through cooperative learning in directed reading thinking activity strategy as follows:

1. Group size and formation: Each group consisted of four students. The groups were heterogeneous with regard to academic achievement in the previous semester in English language course.
2. Duration: The groups remained together through the implementation of the directed reading thinking activity strategy.
3. Distributing roles: Each member in the groups was assigned a task to achieve. In this programme, there were four roles. One of each was assigned to a student in a group:
A. Facilitator: Makes certain that every one contributes and keeps the group on task.
B. Recorder: Keeps notes on important thoughts expressed in the group. Also, he writes the final summary.

C. Reporter: Speaks for the group, not just expressing his own personal opinion**.**
D. Checker: Checks for accuracy and clarity of thinking during discussions, and written work.

4. Management tips: Noise: Get the group members in each group close to each other. The closer they are the less noise there could be.
5. Dead-lining and task structure: Give students specific tasks to finish within a predetermined time limit (assigned in this program for each activity/task).
6. Questions: Answer team questions only. Individual questions can be discussed within the group.
7. Circulate: Monitor discussions to check understanding and to be aware of collaborative skills that may need to be addressed.
8. Social objectives: In addition to the academic objectives: enhancing reading habit, promoting critical thinking in reading, and creating a continuous reader, there should be social objectives. You can adopt some of these objectives:
   A. Enhance interpersonal relations among group members.
   B. Promote positive interdependence.
   C. Build individual accountability and personal responsibility.
   D. Encourage cooperation among the group member
   E. Increase the interaction among the students in one class.

F. Give shy students the opportunity to appear and show their abilities with help from group mates (Halpern, 2000).

Validity of the Material of the Study

To ensure the validity of the material, the researcher prepared lesson plans for each unit. Then they were given to the experts in the fields of curricula and strategies of teaching EFL and EFL supervisors. Their recommendations were taken into consideration to ensure that the objectives of the program were appropriate to lesson plans .

Description of the Conventional Strategy Procedures

1. Encourage students to do pre-reading activities.
2. Encourage students to try to guess the meaning of words.
3. Encourage inference focus on style.
4. Help students use their dictionaries.
5. Discuss the texts and task with students after they have done them.
6. Only focus on key words in texts.
7. Encourage students to read outside the class.
8. Use strategies boxes for revision. (Michael, David, &Anna, 2006)

Design of the Study and Variable

The study employed a quasi-experimental design in which the dependent variable is reading comprehension. The independent variable is the instructional strategy (directed reading thinking activity through cooperative learning and the conventional strategy).

The participants of this study were assigned one of the study conditions: one represents the experimental group taught by the directed reading thinking activity through cooperative learning, and the other represents the control group taught by the conventional strategy. Both the pre- and post-tests were administered to the students in the two groups to measure their reading comprehension in English. Consequently, the following experimental, pre-test, post-test design was carried out in this study:

Experimental Group1	**O1**	**X**	**O2**	
Control Group		**O2**	**--**	**O2**

Where:

1. O1: represents the pre-tests given to the students in the two groups.
2. O2: represents the post-tests given to the students in the two groups.
3. X: represents the treatment of the directed reading thinking activity through using cooperative learning.
4. --: represents teaching through the conventional strategy.

Procedures

The study was carried out according to the following sequential procedures over the second semester of the scholastic year 2007/2008 as follows:

1. Reviewing the literature connected with directed reading thinking activity, cooperative Learning and their effects on reading comprehension.
2. Using the English course material prescribed for Jordanian Eleventh grade students as a basis for selecting the reading texts .
3. Identifying and analyzing the reading texts in the units to be compatible with directed reading thinking activity requirements and cooperative learning.
4. Designing the content based on the directed reading thinking activity through using cooperative learning proposed for the purpose of study for each unit .
5. Validating the content by referring the reading texts to the panel of judges for further validation .
6. Designing the reading comprehension test.
7. Measuring the validity and the reliability of the two tests.
8. Getting the permission from the Ministry of Education in order to conduct the study.
9. Visiting the targeted school and explaining to the English teacher the aim of the study and training them on how to conduct both pre- and post-tests.
10. Implementing a workshop for the responsible teacher who teaches the experimental group for five days.
11. Administering the pre-test one day prior to the commencement of teaching students in both experimental and control groups.
12. Administering the instructional units of the directed reading thinking activity and cooperative learning to the students in the section that represented the experimental group, and employing the instructional sequence of the conventional strategy in teaching the same lessons to the students in the section that represented the control group. The teaching of the four lessons in both the experimental and control groups were lasted three months (from 28/2/2008 to 29/5/2008) during the second semester of the scholastic year 2007/2008.
13. Administering the post-tests similar to the procedures followed in pre-tests by the teacher to all students in both the experimental and control groups.
14. Analyzing data using the statistical package of social sciences (SPSS) to test the study hypotheses.
15. Discussing the results and presenting recommendations.

Statistical Analysis

The researcher used the appropriate statistical analysis such as mean scores; standard deviations, adjusted means, and analysis of Covariance (ANCOVA), which was employed as the main statistical procedure in this study for data analysis. This procedure was conducted using the (SPSS) to examine the impact of directed reading thinking activity through cooperative learning on Eleventh grade English students in reading comprehension in Jordan.

Findings of the Study

This chapter provides general descriptive results of the students' performance in reading comprehension tests followed by a description of the study results according to the following research hypotheses:

1. There is no statistically significant difference at (α= 0.05) in reading comprehension among English secondary stage students due to the instructional strategy (Directed reading thinking activity through cooperative learning compared with the conventional strategy).

Table 1: Mean scores and standard deviations for both reading comprehension.

Group		pre Reading	post Reading
Experimental	Mean	10.45	14.00
	Std. Deviation	2.703	2.294
Control	Mean	13.35	13.68
	Std. Deviation	2.739	1.644

The descriptive results of the experimental group taught by the directed reading thinking activity through cooperative learning indicated that this group performed better compared with the control group taught by the conventional strategy. Table 1 shows that post scores are higher in both dependent variables compared with the pre scores.

Table 2: Mean scores and standard deviation of reading comprehension scores across groups.

Group		pre Reading	post Reading
Experimental	Mean	10.45	14.00
	Std. Deviation	2.703	2.294
Control	Mean	13.35	13.68
	Std. Deviation	2.739	1.644

Results of the First Question

The means of post-test scores are higher for the experimental group than those of the control group as shown in Table 2 which reveals that students taught by the directed reading thinking activity through cooperative learning tend to get higher scores on reading comprehension**.**

Analysis of Covariance (ANCOVA) was conducted to determine the significance of the differences at (α= 0.05) in reading comprehension among English secondary stage students due to the instructional strategy (Directed reading thinking activity through cooperative learning compared with the conventional strategy).

Table 3: Analysis of Covariance for reading comprehension scores

Source of variance	SS	df	MS	F	Sig.
Reading pre	76.197	1	76.197	36.880	.000
Group	10.701	1	10.701	5.179	.028
Error	80.576	39	2.066		
Corrected Total	157.833	41			

Table 4: **Adjusted means of post-test reading comprehension scores across groups**

Group	Adjusted Mean	Std. Error
	Lower Bound	Upper Bound
Experimental	14.381	.327
Control	13.230	.345

The Analysis of Covariance results in Table 3 shows that the reading comprehension scores across the experimental and control groups were significantly different from each other, $F(1, 41) = 5.179$, $p = 0.028$. The adjusted means of post-test scores shown in table 4 reveals that students taught by using directed reading thinking activity through cooperative learning tend to get higher scores on reading comprehension.

Discussion, Conclusions, and Recommendations

This chapter consists of three sections, beginning with a discussion of the results according to research questions, followed by conclusions derived from the study findings; while the final section introduces recommendations related to the pedagogical implications for the use of the directed reading thinking activity through cooperative learning in regular classrooms.

Discussion of First Question Results

The findings concluded that there was a statistically significant difference at (α= 0.05) in reading comprehension among English secondary stage students due to the instructional strategy (Directed reading thinking activity through cooperative learning) compared with the conventional strategy. The results presented in Table 3 reveal that the reading comprehension scores across the experimental and the control groups were significantly different from each other, $F(1, 41) = 5.179$, $p = 0.028$

The adjusted means shown in Table 4 reveal that students taught through the directed reading thinking activity through cooperative learning tend to get higher scores in reading comprehension test with average scores (14.381), compared with the conventional strategy of teaching with average scores (13.230).The mean scores of students in the experimental group were significantly higher than those of the control group after treatment.

This improvement in students' reading comprehension may be attributed to students' skills developing ability to read the materials using the directed reading thinking activity. Because in this activity, students set purposes, make predictions, read silently, and verify predictions, re-read the selection of purposes specified by the teacher, and respond to evaluations and enrichment activities. This may be attributed to the effectiveness of the educational activity, practiced by the experimental group, which has enhanced the learning processes among students through a series of training activities such as brain storming, activating prior knowledge, predicting, checking, and developing hypotheses that have affected the process of learning among students.

The positive effects of cooperative learning strategies on students' reading comprehension may also be due to the characteristics of these strategies where all members who work in a heterogeneous group were completely cooperative. Also, these strategies encouraged and reinforced all members of each group to work as a team so as to accomplish the skills and activities they had to do and inquire about. On the other hand, low level learners can get benefit from their colleagues within each group in guiding and consulting them in learning. Moreover, the role of the teacher has changed, his role was to guide his students to learn, and to encourage, facilitate and reinforce them to accomplish the activities they had to do in a certain time.

Concerning the three levels of comprehension, namely: literal, inferential and critical, the significant differences in the adjusted mean scores of both groups on the post-test, showed that students were highly affected by the directed reading thinking activity through cooperative learning. The experimental group post-test adjusted mean scores on the three levels of reading comprehension were higher than the adjusted mean scores of the control group on the same test. This indicates that there was a considerable effect of directed reading thinking activity through cooperative learning on the three levels of reading comprehension.

In view of the theoretical framework and empirical studies stated in chapter two, Tancock (1994) cited that there was significant improvement in the students' reading skills; and the students began viewing the reading process as a meaningful experience rather than just rapidly going process through reading material to get specific answers to evaluations. Moreover, Almanza (1997) claimed that the majority of students scored higher in the cooperative reading groups than their counterparts from the directed reading thinking activity groups. The study suggested the use of cooperative learning as an instructional strategy.

The findings and previous literature supported the use of directed reading thinking activity through using cooperative learning as a successful instructional strategy to improve reading comprehension.

Conclusions

The following conclusion can be drawn from the study findings:

1. The current study, similar to previous research supported the use of directed reading thinking activity through cooperative learning, as a successful instructional strategy that could improve students' reading comprehension .
2. Using directed reading thinking activity through cooperative learning appeared to enable students to interact with the real language and content more than using the conventional strategy. Students felt that they were learning a target language as if it was used outside the classroom.
3. Using directed reading thinking activity through cooperative learning improved students' reading comprehension because these activities were rich with more communicative tasks and consequently provided students with new concepts, ideas, suggestions, styles of thinking as well as opinions.
4. This study helps in the effort of forming a better understanding of the association between directed reading thinking activity and cooperative learning as a strategy of teaching and reading comprehension on one side. Such understanding improves the level of EFL learners' reading comprehension skills and overcomes some difficulties.
5. Using directed reading thinking activity through cooperative learning enables Jordanian teachers to use effective means for teaching reading comprehension.

Recommendations

Based on the findings of this study, the study recommends that:

1. The curriculum designers incorporate directed reading thinking activity through cooperative strategies in their models of TEFL.
2. The teachers of EFL at the secondary level use the practical guidelines on how to teach reading comprehension tasks, and taking into consideration the fact that reading comprehension requires the acquisition of several skills.
3. Researchers carry out further investigation on the effect of using directed reading thinking activity through cooperative learning at different levels of EFL classes and different language skills in the Arab World.

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