

JOURNAL OF  
Educational &  
Psychological  
S C I E N C E S

**The Effect of Using Exchangeable and Cooperative  
Teaching Methods on Sixth Grade Students'  
Achievement in English and their Reflection  
on their Social and Psychological Skills**

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### Abstract

This study aimed at identifying the effect of using exchangeable and cooperative teaching techniques on the sixth grade students' achievement in English and its reflection on their social and psychological skills. The sample of the study consisted of (220) students (105) males and (115) females. The sample was divided into three groups; each of which is composed of two classes one for boys and the other for girls. The first experimental group -73 male and female students- was taught a unit using the exchangeable method. Meanwhile the second experimental group -76 male and female students -was taught the same unit by using the cooperative method whereas the control group -71 male and female students- was taught the same unit by using the traditional method. The results showed that there were statistical differences between the means of the students' pre and post achievements in favor of the teaching methods-the cooperative method - for the post achievement. Additionally, they showed that there were statistical differences between the means of the students' pre and post achievements in their social skills due to the cooperative method and psychological skills due to the exchangeable method.

**Key words:** cooperative learning, exchangeable learning, traditional learning, social skills, psychological skills, and academic achievement.

## أثر استخدام طرائق التدريس التبادلية والتعاونية في تحصيل طلبة الصف السادس في اللغة الإنجليزية وانعكاس ذلك على مهاراتهم الاجتماعية والنفسية

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### الملخص

هدفت هذه الدراسة التعرف إلى أثر استخدام أسلوبي التدريس التبادلي والتعاوني في تحصيل طلبة الصف السادس الأساسي في اللغة الإنجليزية وانعكاس ذلك على مهاراتهم الاجتماعية والنفسية.

تكونت عينة الدراسة من (٢٢٠) طالباً وطالبة، منهم (١٠٥) من الذكور، و(١١٥) من الإناث، تم توزيعهم على ثلاث مجموعات تتكون كل منها من شعبتين واحدة من الذكور وأخرى من الإناث. المجموعة التجريبية الأولى-٧٣ طالباً وطالبة- تم تدريسهم وحدة من مادة اللغة الإنجليزية بالطريقة التبادلية، ومجموعة تجريبية ثانية - ٧٦ طالباً وطالبة- تم تدريسهم الوحدة نفسها بالطريقة التعاونية، ومجموعة ثالثة ضابطة مكونة من (٧١) طالباً وطالبة تم تدريسهم المادة ذاتها بالطريقة التقليدية. ولدى تحليل البيانات أظهرت النتائج وجود فروق دالة إحصائية بين متوسطات درجات التحصيل القبلي والبعدي تبعاً لأساليب التدريس المستخدمة وذلك لصالح الإجراء البعدي، وبينت النتائج أيضاً وجود فروق دالة إحصائية بين متوسطات درجات التحصيل البعدي تبعاً لأساليب التدريس المستخدمة وذلك لصالح الأسلوب التعاوني. ومن جهة أخرى أظهرت هذه النتائج وجود فروق دالة إحصائية بين المتوسطات الحسابية لاستجابات الطلبة القبلي والبعدي في المهارات الاجتماعية والنفسية تبعاً لأساليب التدريس المستخدمة؛ إذ كان هذا التأثير أكبر في المهارات الاجتماعية في حال استخدام الأسلوب التعاوني. في حين كان هذا التأثير أكبر في المهارات النفسية في حال استخدام الطريقة التبادلية.

**الكلمات المفتاحية:** التعلم التعاوني، والتعلم التبادلي، والتعلم التقليدي، المهارات الاجتماعية، والمهارات النفسية، التحصيل الدراسي.

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## The Effect of Using Exchangeable and Cooperative Teaching Methods on Sixth Grade Students' Achievement in English and their Reflection on their Social and Psychological Skills

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### Introduction of the Study

The process of education is one of the most important educational processes that needs scientific planning to reach its goals, namely via the delivery of information to the learner through the best possible way. Methods of teaching are closely associated with the objectives and content of the curriculum to be taught; therefore, the chosen teaching method must be consistent with the educational objectives, and its content, whether practical, theoretical, empirical, scientific or literary (Myers & Lemon, 2007).

Each method of teaching affects learning in a different way, and so it does with the material to be learned. Therefore any teaching method described as good and effective must have some characteristics mainly those that would help students to interact and share in the school activities and tasks, and achieve the desired objectives (Takala, 2006).

To achieve an effective role of the learner, one must vary his/her methods of teaching and be away from the traditional method of teaching, which makes students merely passive recipients and ineffective, so educational systems need the transmission of the teacher-centered activities to learner-centered activities which support the modern educational philosophy that focuses on the learner and his/her active role and not on the teacher and his/her traditional role (Brown & Palincsar, 1985).

It is noted that the level of achieving the educational objectives are limited, and among the basic factors affecting the failure to achieve these goals is the use of the traditional methods in teaching. For the purpose of activating the role of the school class, the achievement of the desired objectives which

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are either related to performance or to the participation and interaction and the acquisition of appropriate social and psychological skills there is an urgent need of new effective methods of teaching such as the Exchangeable method and the Cooperative method (Barakat, 2005).

The exchangeable method has been given a lot of concern by many researchers, especially in recent years because of its positive and effective results in the educational process through giving the whole focus to the learner in the educational process. The importance of this method appears after its first application by Moost, this method works on the organization of class in pairs or couples where every learner is given a specific role; one plays the leading role, while the other is the observer. The student, who is leading the role has to complete the work and take all the decisions related to learning and teaching, meanwhile the observer gives feedback during or after the performance and enhances the leading student (Tradewell, 2003).

This method is based primarily on the information already provided by the teacher; either in the form of data on a wall or distributed to students in advance. This method also focuses on the exchange of students' roles giving the leading role to the observers and vice versa. From this continual exchange of the students' roles, this method takes its name, because it allows learners to exchange roles during the implementation of the lesson and this achieved the desired end of the learning process, which aims to gain knowledge, acquire the social and the psychological skills through creating appropriate social and psychological atmosphere which helps students to make decisions, take responsibility and participate in learning (Rubin, 2005).

This method is different from other teaching methods by changing the interactive relation during the lesson into a three-dimension relationship: the teacher, the leading student, and the observer. This relationship helps students to participate in the class management and share its burden with their teacher. As teaching is not just a product but it is also a process and because students may learn more from the process. The four-strategy process of teaching through the exchangeable method - the summary, generation of questions, seeking clarification and prediction- helps students gain from behind each of them something such as language skill, culture, value, trend,

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etc (Brown & Palincsar, 1985).

The cooperative method of teaching focuses on increasing the role and effectiveness of the learner, the purpose of decision-making and the access to solve problems collectively and collaboratively. This method is regarded as one of the teaching techniques that came with the contemporary educational movement: where students learn to work in small groups of 4-6 students with different levels of achievement, and collaborate with each other within the same group, where each of them feels that that he/she is responsible for learning and work with classmates in order to achieve common goals during the implementation of the classroom activities, through the active interaction with his classmates (Barakat, 2005).

This method of teaching is based on dialogue, debate and exchange of views and ideas between the members of one group with respect to the subject to be learned. Among the advantages of this method is that it increases student's motivation and enthusiasm towards the effective participation, and it also helps weak students to participate in the group to get reinforcement additionally, it creates an atmosphere of group competition away from shame and fear. It also improves the social skills among students such as the respect of opinion and other opinion (Slaven, 2003).

Educational studies confirm that the use of collaborative teaching method encourages students to acquire the skills and knowledge away from the boredom and frustration, and makes the educational material for learning exciting and motivating. It takes students away from the unwanted immoral and non-creative individual competition; It also reduces the sense of hostility and create positive cooperative attitudes of members of the group (Sparks, 2000; Tradewell, 2003; Lonning, 2004; Sherman, 2007).

Learning in small groups helps to alleviate the level of shame shown by some students, through encouraging them to have continual communication with others, which helps in the treatment of complications that can arise from severe and constant shame represented in mental disorders, known as social fear (Williams, 2002). Shame and social fear are regarded as psychological disorders that are found in various communities. The feelings of shame and guilt are the most emotional and behavioral prevalent aspects among children. This problem has raised the attention of educators, doctors

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and psychologists to discuss the reasons behind this issue and find remedies where necessary (Oczuks, 2003).

There are behaviors that should be developed for the students' success to work in groups, including: good communication among members of one group, respect for the views of others, work quietly without disturbing others, and listen to others and not turning away from hearing them; commitment with the group until the work is accomplished, criticizing ideas and not people, accepting others' criticism, offering help for the needy and asking for help when necessary without embarrassment, In addition to the above-mentioned behaviors, the following ones are recommended such as : Having a sense of responsibility at work, good sense of belonging to a class and school, and the flexibility to agree on common ideas while the agreement is not complete. Thus cooperative learning urges students to be committed to work, group and have the sense of responsibility towards the members of his group, while working on the exchange of experiences and resources with each other as efficiently as possible (Almasi, 2003).

The interaction that takes place in the social cooperation among groups gives better opportunities for learning that do not exist in traditional learning situations. These opportunities help children to express their thinking, interpret solutions, explain and justify their claims and explanations. The attempts to resolve the differences lead to the creation of opportunities for children to find alternative concepts of the issue, as well as expanding the construction of conceptual thinking. This, in turns, does not only help in finding alternative solutions to integrate and develop their ability to communicate and direct social interaction, but it also helps in alleviating the phenomenon of extreme shyness in some children, which is not available in the traditional classroom (Slavin, 1988).

A lot of research has been conducted on methods of teaching, and by reviewing the educational related literature, the researchers were able to come up with a number of studies; some of these studies (Foster & Penic, 1985; Okuebokda, 1986; Tingle & Good, 1990; Watson, 1990; Lazarowits, 1994; Jacobs & Kinney, 1997; Gillies & Ashman, 1998; Al-Semairi, 2003; Tradewell, 2003; Rodgers, 2005; Sherman, 2007; Myers & Lemon, 2007) have shown preference of cooperative learning, while some of the findings

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of other studies (Berge, 1990; Sparks, 2000; Lonning, 2004; Barakat, 2005; Durden & Dangle, 2008) to the competitive of education in small groups, while studies have shown (Burron; Jemes & Ambrosio, 1993; Todd & Tracey, 2006; Podlesnik & Chase, 2006; Takala, 2006; Sutherland & Snyder, 2007; Sporer; Brunstein & Kieschke, 2009) that exchangeable learning is the best, also some other studies (Burron; Jemes & Ambrosio, 1993; Jacobs & Kinney, 1997; Al-Semairi, 2003; Tradewell, 2003; Barakat, 2005; Myers & Lemon, 2007; Durden & Dangel, 2008) have emphasized the positive impact of collaborative and exchangeable learning in the development of social and psychological skills among students.

In sum, although traditional teaching and learning have positive aspects, there are clear limitations where students can not interact with each other, or develop skills such as group discussion skills, or personal exchange skills, as in the exchangeable and cooperative learning.

This study is an attempt to verify the effectiveness of these methods compared to the traditional ones in achieving the educational objectives in learning English and developing the learners' social and psychological skills.

### **Statement of Problem**

Educational and psychological studies have consistency on the existence of individual differences among students regardless age, social and cultural environment. In the face of this reality, teachers can not direct the same education to all students in the same way; it is basic that education should be diverse, dealing with the students as individuals and as groups, rather than dealing with them as one group. Modern educational theories overemphasize student centeredness, the teacher's role as an organizer, a facilitator and a community worker. His role functions well while working implicitly, but effectively with groups considering all the factors that lead to success, i.e., age, level and capacities (Barakat, 2008).

The whole educational process is now facing learning problems and difficulties, especially with regard to the students' low academic level represented in low achievement. Among the most important reasons behind such low achievement is the use of traditional methods of boredom and



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alienation (Joyce & Well, 2006).

Researches, at the present time, focus to explore the impact of modern methods on raising the students' achievement, and increase their desire and motivation. The development of sense of responsibility and increasing the students' confidence are also among the concerns of modern educational methodologies which focus on dialogue and debate, exchanging ideas, collaboration and mutual positive interaction. This is what the current study is seeking to achieve from the use of exchangeable and collaborative methods to determine the extent of their impact in helping students to learn and interact better in the acquisition of social and psychological skills necessary for student' balanced growth (Barakat, 2005).

### **Objective of the Study**

This study aimed at identifying the impact of using exchangeable and cooperative teaching techniques on the sixth grade students' achievement in English and its reflection on their social and psychological skills.

### **Significance of the Study**

It is possible to determine the significance of the study in the following aspects:

- 1- Trying to investigate the impact of using the cooperative and the exchangeable methods of teaching. On the sixth grade students' achievement in English. To the researchers' best knowledge, this study is one of the few studies in this area.
  - 2- It is useful in providing information about the impact of using these methods of teaching on the students' achievement in this stage, and thus it could assist the officials of all levels to take appropriate action by considering the results of this study.
  - 3- It encourages researchers to conduct further studies on this subject to cover aspects that have not addressed in the study.
  - 4- It contributes to the success and effectiveness of the educational system through raising the students' achievement level resulting from motivation and self-esteem, which can be achieved only through applying appropriate teaching methods.
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5- It contributes to the clarification of the vision of teachers and those responsible for the educational process about the development of the students' social and psychological skills through using both the cooperative and exchangeable methods of learning.

### **Hypotheses of the Study**

For the verification of the objectives of the study and answering its questions; it could be possible to examine the following null hypotheses:

1- There are no statistically significant differences at ( $\alpha=0.05$ ) in the sixth grade students' means of scores of pre and post achievement levels in English due to the used teaching method (exchangeable, cooperative and traditional)

2- There are statistically significant differences at ( $\alpha=0.05$ ) in the sixth grade students' means of scores of post achievement levels due to the used teaching method. in favor of the exchangeable and cooperative methods

3- There are statistically significant differences at ( $\alpha=0.05$ ) in the sixth grade students' means of scores of social skills due to the used teaching method exchangeable, cooperative and traditional in favor of the cooperative method.

4- There are statistically significant differences at ( $\alpha=0.05$ ) in the sixth grade students' means of scores of psychological skills due to the used teaching method in favor of the exchangeable method

### **Definition of Terms**

**Exchangeable Method:** It was first used as a method of teaching by "Mosten", It's a method of education which gives the learner a more active role and a key role in the educational process. It is implemented in the organization of the class into pairs (couples) where each learner is given a specific role: Once it is the performer and observer. And the role of the teacher in this style is to link between the pairs and students. Classroom management according to this method is dependent on the triangular relationship between the teacher and the student, the presenter and the student, the observed (Joyce & Well, 2006).

**The Co-operative Method:** This method focuses on the effectiveness of

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the learner in the classroom and through interaction with his colleagues in the decision-making and access to a solution to the problems of education. This is the way one of contemporary educational technology, where students divided into small groups ranging from (4-6) of varying levels of achievement, and cooperate with each other where each has its role in the responsibility for achieving the objectives of the lesson (Barakat, 2005). Jacobs & Kinney (1997) defined cooperative education as a teaching strategy that includes small group of students working together to develop the educational experience of each member to the possible maximum extent. While Lonning (2004) defined it as a strategy that focuses on encouraging students to work in heterogeneous groups to achieve the goal of learning. This method is based on dialogue, debate and exchange of views and ideas on the subject of the lesson and the method of increasing performance motivation of students towards active participation, and encourages weak students to work within these groups. Sparks (2000) defined it as the collaborative work of a small, non-homogeneous group to achieve the goal or goals defined in the context that brings more benefits to group learning than to individual learning. Williams (2002) and Sherman (2007) defined it a kind of learning and teaching that takes place in a special environment where the classroom is organized in small heterogeneous groups that can work together to complete a given task or to a achieve a common goal through mutual interaction under the supervision and guidance of the teacher where students bear a great responsibility to learn and teach each other.

**Traditional Method:** It is common and usual method of teaching in our schools, and is based on the use of the general way which depends on the teacher rather than the student without using the exchangeable or the cooperative method (Watson, 1990). This is overstressed by the Palestinian Teacher's book issued by the Palestinian Ministry of Education emphasizing interpretation and oral discussion as focal and using the book questions as homework assignments and for evaluation purposes.

**Academic achievement:** It is progress which is being made by the students in achieving the goals of the studied educational material (Gage, 2006), In this study, it is used to measure the students' achievement of specific

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objectives after learning a certain unit.

**Social Skills:** Those skills which are associated with the students' ability in the social interaction and communication within the classroom, and the students' ability to accept the social life away from individual isolation or convergence. These skills show the students' potential in working within groups and outside without showing shyness or fear (Duke & Pearson, 2002). These skills are measured in the current study by an instrument prepared for this purpose.

**Psychological skills:** The experiences exercised by the student in the classroom away from the violence and feelings of shame and fear and a sense of guilt and inadequacy and tension (Gillies & Ashman, 1998). These skills are measured in the current study by an instrument prepared for this purpose.

### **Limitations of the Study**

This study is limited to the students in the Sixth Grade in Tulkarm Government Basic boys' and girls' Schools during the second semester of the academic year 2008/2009.

### **Methods and Procedures**

#### **1. The Design of the Study:**

This will clearly be seen from the independent and dependent variables, namely:

- **Independent variable:** Teaching methods used: The Exchangeable, the Collaborative and the Traditional methods,

- The Dependent Variables:

1. The students' achievement level in English.
2. The students' responses in the social skills
3. The students' responses in the psychological skills

**2. Population and Sample:** The population of this study consisted of all students enrolled to study in government schools of the Directorate of Education and the Palestinian Governorate of Tulkarem, and numbered (3432) students, of whom (1662) males and (1770) females. But, the sample

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of the study consisted of (220) male and female students selected randomly from the whole population during the second semester of the academic year (2008/2009), representing a rate of (3.6%) of this community, who are distributors to six classes, including three for males and three for females according to the method of teaching as indicated in table (1):

**Table (1)**  
**Distribution of sample of the study according to the gender and the method of teaching variables**

Methods \ Gender	Males	Females	Total
Exchangeable	33	40	73
Co-operative	37	39	76
Traditional	35	36	71
Total	105	115	220

### 3. Instruments of the Study:

#### A. Academic Achievement Test

This test was developed to measure the sixth grade students' achievement in English with the help of the student teacher and the original teacher on the basis of the sixth grade English textbook assigned by the Palestinian Ministry of Education. The test was applied twice: once before the implementation of the experiment to measure the students' pre-achievement and once after the completion of the study and to measure the students' post-achievement. The students' total score ranged between (zero and twenty degrees). This test consisted of the four sections: Comprehension, vocabulary, grammar and writing.

#### Reliability and Validity:

The reliability of academic achievement test was checked through using test - retest method after an interval of three weeks, by applying the test on a different group other than the study sample amounted to (42) male and female students, and the reliability factor for the whole scale has reached (0.94). Respectively, regarding the validity of this test, content validity was used way via sending the items of the scale to nine specialists –PhD holders in the area of Education, Psychology and Teaching Methods- arbitrators

and experts in education psychology and teaching methods working in the Palestinian universities. The specialists' approval degree with the items of the scale ranged between (96%-100%). The researchers considered these stability and validity factors adequate and acceptable for the purposes of the present study

### **B. Social and Psychological Skills Scale for Children**

This scale which is the researchers' design was used to measure the children's social and psychological skills. The scale includes (40) items distributed equally into two areas: The first area was dedicated to measure the children's social skills associated with social communication and classroom interaction. The second area was dedicated to measure the children's psychological skills associated with fear, anxiety, feelings of inferiority, shame and frustration, that is, skills associated with the students' emotional life. The researchers, in the preparation of this scale, benefited from other scales used by (Lazarowitz, 1994; Tradewell, 2003; Al-Semairi, 2003).

The items of the scale was organized according to the Likart's of the five alternatives: strongly agree / agree / somewhat / Disagree / Strongly Disagree, where the student's response ranged between (5-1), respectively, and thus each student has two degrees on this scale: the first, ranging from (20 to 100) to measure the degree of social attitudes, where the high score indicates the student's ability to adapt to different social attitudes in the school, while the lower degree indicates the student's low ability to adapt to social attitudes. The second, ranging from (20 to 100) to measure the degree of the psychological skills; high degree indicates high degree to the manifestations of fear, shame and psychological tension and the sense of guilt and inadequacy in relation to academic positions, while the lower degree indicates the psychological and emotional health.

### **Reliability and Validity of the Scale:**

The reliability factor of this scale was approved via using test - retest method after an interval of three weeks. The reliability factor for the whole scale has reached (0.88) while the value was (0.85) and (0.86) on

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the social and psychological areas, respectively. Regarding the validity of this scale, content validity was used way via sending the items of the scale to nine specialists—PhD holders in the area of Education, Psychology and Teaching Methods—arbitrators and experts in education psychology and teaching methods working in the Palestinian universities. The specialists' approval degree with the items of the scale ranged between (91%-100%). The researchers considered these stability and validity factors adequate and acceptable for the purposes of the present study.

#### **4. Method of the Study:**

The researchers used experimental method for its relevance to the nature of this study. The method uses experiment to verify the hypotheses. The experiment of this study was applied to six groups: three for males and three for females. The first group (a class of the males and another of females) in the first experimental group where the exchangeable method was applied in the teaching of English language for students. The second experimental group (a class of males and another class of females) where the collaborative method was applied in the teaching of English language for students. While the third control group (a class of males and another of females) where the traditional method was applied in the teaching of English language for students. Through a series of procedures to control the influence of other factors other than the experimental factor, which is the method of teaching (these procedures will be discussed in details in the steps of the study).

#### **5. The Steps of the Study**

The following steps were implemented in the current study:

- 1- Preparing (8) classes throughout a couple of weeks included the topics, teaching aids used, accompanying activities, and evaluation, additionally; an achievement test was prepared for selected material of this study.
  - 2- Coordination with Al-Quds Open University and the Directorate of Education in Tulkarem, for approval of the application of this pilot study and to facilitate the task of training students in the Directorate schools.
  - 3- Two schools were selected: one for males and another for females as a representative sample of the whole city schools. The researchers and
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the two training teachers paid a preliminary visit to these schools at the beginning of the second semester of the academic year (2008/2009), to clarify the objectives of the study to school principals and collaborating teachers to implement this experiment, the researchers found willingness, readiness and close cooperation from principles and collaborating teachers to undertake the study. There was clear coordination with them on the stages of implementation of the study and the period required for its application.

4- Determine the experimental and control groups randomly in the selected schools for the application of the experiment: the two classes in each school, one class for using the exchangeable method of teaching and the other class for using the collaborative method of teaching, and a third class for using the traditional method of teaching in the presence of the principals and the teachers who were involved in it.

5- Make sure that there is equality among the students in the experimental and control groups in terms in the pre-achievement test. This was achieved by calculating the means, and the standard deviations of the students' degree in pre-achievement according to the used means of teaching, gender, and there was an adequate equality about groups by using the two-way analysis of variance in the pre achievement of all students in the different groups as shown in table (2):

**Table (2)**  
**The results of Two-Way Analysis of Variance (2×3) to determine the significant differences between the means of the students' grades of the pre achievement test**

Source of variance	Sum of Squares	df	Mean Squares	F	Sig.
Gender	2.521	1	2.521	0.401	0.527
Methods	3.327	2	1.663	0.265	0.768
Gender×Methods	11.447	2	5.723	0.911	0.404
Error	1344.868	214	6.284		
Total	1362.163	219			

The previous table shows that there is no statistical differences between the means of the students' grades of the pre achievement test both in the experimental and control groups due to gender and the used methods of



teaching variables or the interaction between them, and this underlines the equality of study groups in terms of the level of achievement before implementing the experimental treatment.

6- It was also confirmed that there is equality among students in the experimental and control group regarding the level of social and psychological skills which was calculated by arithmetic means and standard deviations for the students' pre achievement levels due to gender and the used method of teaching. To ensure equality between groups, the researchers used the two-way analysis of variance in the pre achievement test of all students in the different groups as shown in Tables (3 & 4):

**Table (3)**

**The results of Two-Way Analysis of Variance (2 × 3) to determine the significant differences between the means of the students' social skills of the pre achievement test**

Source of variance	Sum of Squares	df	Mean Squares	F	Sig.
Gender	1230.276	1	1230.276	7.048	.009
Methods	681.657	2	340.829	1.953	.144
Gender×Methods	246.148	2	123.074	.705	.495
Error	37355.051	214	174.556		
Total	39513.132	219			

**Table (4)**

**The results of Two-Way Analysis of Variance (2×3) to determine the significant differences between the means of the students' responses in the psychological skills before implementing the experiment**

Source of variance	Sum of Squares	df	Mean Squares	F	Sig.
Gender	142.632	1	142.632	0.709	0.401
Methods	962.122	2	481.061	2.391	0.094
Methods×Gender	30.882	2	15.441	0.077	0.926
Error	43054.362	214	201.189		
Total	44189.998	219			

The previous two tables show that there were no statistical differences between the means of the students' responses in the social and psychological skills before the implementation of the study experiment in the control and the experimental groups due to gender, methods of teaching and the

interaction between them. This underlines the equality of study groups in terms of the level of this skill before implementing the experimental treatment.

7- Unit (6) from the textbook was reconstructed and reorganized once according to the criteria of exchangeable method, and once again, in accordance with the cooperative learning method. The time plan for teaching was well prepared and eight teaching classes were designed for the purpose to fit the different teaching methods, It is worth mentioning in this respect that the same material was used in teaching all the groups but with different teaching methods where two training male and female students taking practical education course taught students in the different groups the selected unit with the supervision and guidance of the original collaborative school teachers.

8- The procedures of the study were applied in the third month of the second semester of the academic year (2008/2009), where teaching started on (14-3-2009) and was completed on (20-4-2009), the first researcher directly supervised the procedures for implementing the lessons.

9- The application of the achievement test was given to the sample of the study all the students in the control and experimental groups; after completing the teaching of the unit on (21-4-2009) to measure the students' post achievement.

10- The application of the children's scale for the social and psychological skills after completing the experiment on 22-4-2009 to measure the female students' skills in the different social and psychological positions associated with teaching and learning process.

11- After collecting the necessary data and categorizing them, the researchers used the computerized statistical packages in the social sciences (SPSS) for the analysis of these data to test the hypotheses of the study and treat them by the appropriate statistical procedures.

## **6. Statistical Treatment:**

To answer the questions of the study, the data were computerized using the Statistical Packages of Social Sciences (SPSS) for the analysis of data by using the following statistical analytical and descriptive procedures:

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- 1- Means and standard deviations.
- 2- T-test.
- 3- One-Way ANOVA of variance.
- 4- Two- Way Analysis of Variance (23×).
- 5- LSD Test for Post comparisons.

### Results of the Study

Results of Hypothesis 1: There were no statistical significant differences ( $\alpha=0.05$ ) between the means of the sixth grade students' pre and post achievement scores in English due to the used teaching methods (exchangeable, collaborative and traditional).

To test this hypothesis arithmetic means and standard deviations of the students' grades were calculated both in the pre and post achievements in English due to the methods of teaching used. Additionally, T-test was used to determine the significance of these differences whose results are shown in Table (5).

**Table (5)**  
**The results of T-test as an indication of the differences between the means of the students' degrees in the pre and post achievement in English due to the method of teaching used**

methods \ measure	N	Pre		Post		T	Sig.
		Mean	Std. Dev	Mean	Std. Dev		
Exchangeable	73	10.868	2.594	14.105	3.353	8.174	0.000*
Co-operative	76	13.164	3.582	14.739	3.296	4.323	0.000*
Traditional	71	7.761	5.431	13.155	3.438	7.748	0.000*

\* functioning at the level of significance ( $\alpha=0.01$ )

The results in the previous table revealed that there was a statistical difference between the means of sixth grade students' pre and post achievement due to the methods of teaching used which was the subject of experimentation in favor of the post procedure, that is, there were statistical differences in the students' achievement resulting from using the different teaching methods the collaborative, the exchangeable and the traditional.

Results of Hypothesis 2: There were no statistical significant differences ( $\alpha=0.05$ ) between the means of the sixth grade students' post achievement

scores in English due to the used teaching methods (exchangeable, collaborative and traditional).

To test this hypothesis means and standard deviations of the students' grades were calculated in the post achievements in English due to the methods of teaching used. Table (6) shows the results.

**Table (6)**  
**Means and standard deviations of the students' grades**  
**were calculated in the post achievements in English**  
**due to the methods of teaching used**

Methods	N	Mean	Std. Devi
Exchangeable	73	14.105	3.353
Co-operative	76	14.738	3.297
Traditional	71	13.155	3.438
Total	220	14.009	3.408

The results in the previous table revealed that there was a statistical difference between the means of sixth grade students' post achievement due to the methods of teaching used. one –way Analysis of Variance test was used to determine the significance of these differences whose results are shown in Table (7).

**Table (7)**  
**The results of one –way Analysis of Variance for the sixth grade**  
**students' post achievement due to the methods of teaching used**

Source of variance	Sum of Squares	df	Mean Squares	F	Sig.
Between Groups	91.473	2	45.737	4.047	* 0 .019
Within Groups	2452.508	217	11.302		
Total	2543.982	219			

\* functioning at the level of significance ( $\alpha=0.01$ )

The previous table showed that there was a statistical difference between the means of sixth grade students' post achievement due to the methods of teaching used. (LSD) test for post comparisons was used whose results are shown in Table (8).

**Table (8)**

**The results of (LSD) test for post comparisons to determine the significance of these differences for the sixth grade students' post achievement due to the methods of teaching used**

Methods	Exchangeable	Co-operative	Traditional
Exchangeable	-	.2510	.0880
Co-operative	-	-	.005*0
Traditional	-	-	-

\* functioning at the level of significance ( $\alpha = 0.01$ )

The previous table showed that there was a statistical difference between the means of sixth grade students' post achievement due to using the collaborative method and the traditional one in favor of the collaborative method. Additionally, there were no significant differences between the means when comparing the other means (exchangeable method and the traditional one). Which means that the collaborative method has the most positive impact on the students' achievement, followed by the exchangeable method while the traditional method has the least positive impact on the students' achievement.

Results of Hypothesis 3: There were no statistical significant differences ( $\alpha=0.05$ ) between the means of the sixth grade students' responses in their social skills due to the used teaching methods (exchangeable, collaborative and traditional).

To test this hypothesis, means and standard deviations of the students' responses in their social skills were calculated before and after the experiment due to the methods of teaching used. Table VI shows the results. Additionally, T-test was used to determine the significance of these differences whose results are shown in Table (9):

**Table (9)**

**The results of T-test as an indication of the differences between the means of the students' responses in social skills before and after the experiment due to the method of teaching used**

methods \ measure	N	Pre		Post		T	Sig.
		Mean	Std. Dev	Mean	Std. Dev		
Exchangeable	73	61.013	12.927	67.803	11.403	7.594	0.000*
Co-operative	76	63.767	14.508	72.452	11.749	9.556	0.000*
Traditional	71	59.099	12.624	59.394	12.259	1.157	.2510

\* functioning at the level of significance ( $\alpha=0.01$ )

The previous table showed that there was a statistical difference between the means of sixth grade students' responses in the social skills before and after the experiment due to using the collaborative method and the exchangeable one in favor of the post experiment. Additionally, the results showed no significant differences due to using the traditional method. This means that the collaborative method has the most positive impact on the students' responses in the social skills, followed by the exchangeable method while the traditional method has the least positive impact on responses in the social skills.

Results of Hypothesis 4: There were no statistical significant differences ( $\alpha=0.05$ ) between the means of the sixth grade students' responses in the psychological skills due to the used teaching methods (exchangeable, collaborative and traditional).

To test this hypothesis, means and standard deviations of the students' responses in the psychological skills were calculated before and after the experiment due to the methods of teaching used. Table VI shows the results. Additionally, T-test was used to determine the significance of these differences whose results are shown in Table (10):

**Table (10)**

**The results of T-test as an indication of the differences between the means of the students' responses in psychological skills before and after the experiment due to the method of teaching used**

methods \ measure	N	Pre		Post		T	Sig.
		Mean	Std. dev	Mean	Std. evi		
Exchangeable	73	66.000	14.739	73.978	10.638	6.110	0.000*
Co-operative	76	63.318	13.961	71.724	10.818	7.445	0.000*
Traditional	71	60.732	13.609	62.212	12.309	3.118	0.000*

\* functioning at the level of significance ( $\alpha = 0.01$ )

The previous table showed that there was a statistical difference between the means of sixth grade students' responses in the psychological skills before and after the experiment due to using the collaborative method, the exchangeable method and the traditional one in favor of the post experiment.

This means that the teaching method used has a positive impact on the students' responses in the psychological skills in the classroom. Additionally, the results showed that the exchangeable method has the most positive impact on the students' responses in the psychological skills followed by the collaborative method while the traditional method has the least positive impact on the students' responses in the psychological skills.

### **Discussing the Results of the Study**

The results of the study were discussed and interpreted accordingly to its two main objectives:

**1- Axis I:** Discussing the results associated with the methods of teaching used - exchangeable method, collaborative method and the traditional one—on the sixth grade students' achievement scores in English (the first two hypotheses).

The results showed that there were statistical differences between the means of the students' grades in the pre and post achievement in English due to the methods of teaching used in favor of the post experiment. This means that there were differences in the students' post achievement resulting from using the different teaching methods. The collaborative method showed the most positive effect, followed by the exchangeable method while the traditional one showed the least positive effect on the students' achievement.

Additionally, the results showed that there were statistical differences between the means of sixth grade students' post achievement in English due to using the collaborative method and the traditional one in favor of the collaborative method. Likewise, the results revealed no significant differences between the means when using the other methods if compared with each other and this means that that the collaborative method has the most positive impact on the students' achievement, followed by the exchangeable method while the traditional method has the least positive impact on the students' achievement. (For details see tables 5 and 8). This result which is the answer of the first two questions is in agreement with (Foster & Penic, 1985; Okuebokola, 1986; Berge, 1990; Waston, 1990; Lonning, 2004; Lazarowitz, 1994; Sparks, 2000; Rodgers, 2005; Barakat,

2005; Myer & Lemon, 2007; Durden & Dangel, 2008; Sporer; Brunsteain & Kieschke, 2009) because all showed that the collaborative method of teaching has the most positive impact on the students' achievements if compared with other methods of teaching.

These results disagreed with the results of few studies (Sporer, Brunsteain & Kieschke, 2009; Takala, 2006 and Podlesnik & Chase, 2006) which showed that the exchangeable means of teaching showed the most positive impact if compared with the other teaching methods (the collaborative method and the traditional one). These results also contrasted with (Tingle & Goode, 1990; Burrton, James & Ambrosio, 1993; Sherman, 2007 and Todd & Tracey, 2006) because the results of these studies did not show any impact on the students' achievement due to the methods of teaching used.

The reasons for this outcome is the use of cooperative method which contributes to raising the level of achievement in general on the grounds that this method facilitates access to information through the students' practices of the collaborative activities and skills; the fact that students within these groups are cooperating in the accomplishment of the educational tasks with more responsibility and more care, teaching each other which in turn leads to the mastery of these tasks effectively. In addition, the members of groups are keen on completing the tasks and objectives for material and moral benefits and enhancements. Studies in this area have shown that students who learn in this way are usually willing to share knowledge, experiences and ideas with each other within the group. In this respect, students do not feel the sense of competition within their group, but they are urged to work hard and effectively to compete with other groups, and this was reflected positively in raising the level of motivation and increase their achievement compared with other methods (Frances, 2001; Shroyer, 2004; Stephen, 2006 & Terrence, 2006).

The reason behind the positive impact of using the cooperative method on the students' achievement to psychological and social factors provided by this method in the classroom atmosphere, because student feel comfortable when they find themselves with others and that reduces the level of fear and anxiety resulting from authority represented in the teacher's personality and his control of all students, so students view participation and interaction



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with each other in the same group as a safe exit to get rid of this tension and psychological turmoil. (Fountas & Pined, 1996) This helps to increase students' attention and focus on learning motives and understanding them better, in addition, other students feel the sense of satisfaction and relaxation with the members of the group to bear some of the educational outcome and the educational tasks entrusted to them. And this reduces the burden on students and makes it more effective. Several studies confirm the importance of organizing the teaching and learning issues within the same group cooperatively, rather than competitively, as in traditional education or individually as in the individual education (Sargent, 2001; Bellefille, 2003 and David, 2006).

This result is also supported by the results of some studies that pointed to the superiority of collaborative learning in groups to the traditional mass learning with regard to solving problems and the acquisition of concepts and ways of thinking, remembering, motor performance and creative and innovative thinking (Foster & Penic, 1985; Tingle & Good, 1990.)

It is known that gathering these areas affect positively on the students' learning and achievement, in addition to the use of techniques and innovative teaching methods used in the cooperative method of teaching which leads to the effectiveness of this method, such as the method of free discussion, project method, simulation, inquiry method and other methods and techniques that have proved efficacy and effectiveness on influencing the students' academic achievement and on thinking and its types as well as on self-motivation (Jouce & Well, 2006).

Axis II: Discussing the findings associated with the impact of teaching methods used in providing students with the social and psychological skills during the teaching and learning process (the third and fourth hypotheses), where the results showed that the teaching method used played a positive impact on enhancing the students' social skills in the classroom, where this effect was greater in the case of using the cooperative method, and then followed by the exchangeable method and, finally, the traditional method (see Table 9).

This result is an answer to the third question because the results indicated that the teaching method used played a positive impact a positive impact on

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acquiring students with psychological skills in the classroom, where this effect was greater in the case of using the exchangeable method, and then followed by the cooperative method and, finally, the traditional method (see Table 10). This result gives a satisfactory answer to the fourth question of the study. When comparing these results with the results of previous studies, the researchers found that their study is in consistent with (Burron, James & Ambrosio, 1993; Lazarowitz, 1994; Gillies & Ashman, 1998; Al-Semairi, 2003; Tradewell, 2003; Podlesnik & Chase, 2006; Myer & Lemon, 2007; Durden & Dangel, 2008) which showed that the impact of collaborative method enhances the students' social and psychological skills. While these results contrasted with (Jacobs & Kinney, 1997; Sparks, 2000 and Barakat, 2005) as these studies did not show any positive effect of the methods of teaching used on enhancing the students social and psychological skills.

In short, most of the results of the previous studies showed compatibility on the importance of using the collaborative and exchangeable methods and their great benefits in building social relationships among students, and enhancing their skills to interact and communicate while learning. This result can be explained that the students' use of the different educational activities, whether in the form of small cooperative groups, or in the form of bilateral exchangeable pairs helps students to improve language skills and to accept the views of others in addition to declining their levels of intolerance and selfishness, fear and anxiety. It seems that the strategies of these methods of teaching and learning allow the exchange of ideas and discuss them freely among students, and provide an atmosphere of interaction to make it easier for students to reach consensus about solutions to problems associated with achieving the expected educational goals.

### **Recommendations**

Based on the results of this study, the following recommendations were suggested:

1. Taking care of improving and developing the students' social and psychological skills to achieve the proper adjustment with the self and society by using the collaborative and exchangeable methods of teaching.
2. Calling teachers to use the collaborative and exchangeable methods of

- teaching. As they achieve good teaching quality and lead to better results.
3. Doing further studies on the impact of using the cooperative and exchangeable methods of teaching on the students' achievement and their relationship with the students' social and emotional life, mainly in the lower elementary stage and with all the subjects taught at school, in order to ascertain the impact of these techniques on students of this stage in the various subjects in different stages and for both genders.
  4. Doing further studies on the impact of using the cooperative and exchangeable methods of teaching on the students' achievement compared to other means of teaching, such as: problem-solving, programmed learning, individual learning and argument-based teaching.
  5. The Palestinian Directorate of Training and Qualification should hold in-service training courses for teachers with respect to the cooperative and exchangeable methods of teaching how to use them in various educational positions.

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