

# Impact of Cooperative Learning on the Achievement of EFL Tertiary Level Learners: A Case-Study of a Mainstream University in a Middle Eastern Country

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Received: October 25, 2017 Accepted: November 18, 2017 Online Published: December 23, 2017

doi:10.5539/ijel.v8n2p168 URL: <http://doi.org/10.5539/ijel.v8n2p168>

## Abstract

Academic achievement of most of the Saudi EFL learners is generally poor. A lot of research has been done to probe problems of EFL learners but very little attention has been paid to overcome these problems via better classroom environment and teaching strategies. This quasi-experimental study aimed at investigating the impact of cooperative learning on academic achievement of EFL tertiary learners at a mainstream public sector university in a Middle Eastern country. The sample of the study included 50 EFL non-English major male students enrolled at the preparatory year program in the first semester of 1434-35 corresponding to 2014 A.D. Pretest posttest experimental group research design was used for the study. Scores of the pretest and posttest for the two course-based assessments were analyzed using MS Excel 2013 and SPSS Version 20. The results of the study revealed that the experimental group showed better performance in the posttest compared to that of control group, showing that cooperative learning has positive impact on academic achievement of Saudi EFL tertiary level learners. The low achievers and the medium achievers in the EG showed statistically significant improvement after the CL treatment whereas high achievers performed equally well in both CL and traditional setting. Low achievement of Saudi EFL tertiary level learners should be given a serious consideration and proper remedial measures should be implemented. CL can be instrumental in this regard.

**Keywords:** cooperative learning, Saudi EFL learners, academic achievement

## 1. Introduction

### 1.1 The Problem

There is no denying the fact that English has assumed the status of a global language and it has made its way even to those regions in the world where teaching and learning English was considered tantamount to committing a sin or an act of high treason. “English is the dominant language of commerce; it is a worldwide, international, linguistic phenomenon” (Graddol, 2006). Now English is taught and learnt in all parts of the world including the Middle East where until recently English was viewed as a language of the infidels. Saudi Arabia, being the largest country in the region, is also no exception in this regard.

In the past forty years, significant political, social and economic developments have taken place in the Kingdom of Saudi Arabia. The Education sector, besides many others, has witnessed tremendous development with considerable changes in the national curriculum especially English. English, which used to be taught as a foreign language from grade 6th, is now being introduced at grade four in all public schools in the Kingdom (Al-Watan Arabic language daily quoting the Minister of Education, Prince Khalid Al-Faisal in its issue published on Wednesday, May 28, 2014). The government has approved a five-year plan worth more than SR. 80 billion (\$21.33 billion) to develop the education sector with a special focus on teachers’ training. “The Ministry of Education as well as the Ministry of Higher Education are highly concerned with the pursuit of excellence in effective EFL teaching-learning in the arena of education” Liton (2012, p. 130).

English as a Foreign Language (EFL) was chosen and began to be taught in Saudi schools, colleges and universities because of English being most widely used in international trade, diplomacy, economy and contracts,

international aviation, higher studies, research, affairs of international cooperation across the globe as well as a shared language of peoples throughout the world. "Saudi Arabia has a vast population of expatriates in relation to citizens' population." (Alresheed, 2012, p. 11). Moreover, it is a lingua franca between the Muslim pilgrims visiting the holy cities of Makkah and Madinah from all over the world.

Despite all out support from the government of Saudi Arabia, Saudi students are lagging behind in English language learning as put by Alshumaimeri (2003) "Teachers have pointed out that students leave the secondary stage without the ability to carry out a short conversation". There are many reasons for the poor performance of Saudi EFL learners. Some of the reasons are listed below:

- A) Due to the inherent differences of the two languages in terms of structures, script patterns, syntactical orders, semantic associations, supra segmental features and socio-cultural background.
- B) Lack of both intrinsic and extrinsic motivation on the part of learners
- C) Scarcity of modern language-teaching methodologies and techniques in classrooms
- D) Scarcity of exposure to L2/FL communication in day to day life.
- E) English phobia among the learners

### *1.2 Statement of the Study*

"Although tremendous efforts have been exerted to improve the teaching-learning process of English, EFL programs in Saudi Arabia still fail to deliver as expected" Fareh (2010, p. 3600). *Despite the fact that there has been some* good language planning, better curriculum, improved textbooks, cutting-edge infrastructural facilities, efficient and qualified teachers, the performance of the EFL students in Saudi Arabia is not satisfactory. Therefore, it is imperative to seek alternative ways of coping with the problem and to suggest new strategies for the purpose.

### *1.3 Question of the Study*

To what extent does cooperative learning have an impact on the academic achievement of Non-English major Saudi EFL tertiary level learners?

### *1.4 Significance of the Study*

The significance of this study appears in its attempt to:

- 1). Contribute to the studies of seeking alternative methods of teaching EFL in order to improve students' academic performance.
- 2). Help EFL teachers and educators to compare and contrast the impact of various instructional strategies.
- 3). Help EFL teachers to recognize the importance of group work and cooperation in the classroom.
- 4). Offer suggestions and recommendations to EFL teachers as how to make the classroom environment friendlier, more participatory and more conducive to learning.
- 5). Ensure that every learner gets the chance of learning and practicing the target language in the classroom.

### *1.5 Review of Literature*

"Cooperative learning is the most extensively researched educational innovation of all time. And the results are clear" (Kagan, 2009, 3.1). The results of majority research are positive. Tons of studies show that cooperative learning boosts achievement more than traditional methods. Kagan (2009, 3.2) hold that cooperative learning outperforms competitive and individualistic learning structures across all age levels, subject areas, and almost all tasks. He further mentions that in identifying research-based instructional strategies for boosting achievement, Robert Marzano summarized the results of various meta-analyses of cooperative learning. A meta-analysis combines many research studies to determine an average effect. Across hundreds of research studies, compared with strategies in which students compete with each other or work individually, cooperative learning has an effect size of .78. That is an average of a 28 percentile gain for students in the cooperative learning classrooms. To state it in classroom terms, if a student scoring 50 in a traditional classroom were placed in a cooperative classroom, on average the student would be scoring 78! The number of studies along with the size and consistency of the findings make cooperative learning one of the best approaches to boosting achievement.

As mentioned above, cooperative learning has been researched for its impact on students' academic achievements in various subjects on various levels of their schooling in different regions of the world. Majority of the results show positive trends.

Similarly, Nguyen (2010) in her study “Cooperative Learning and ESL Students’ Participation” tried to determine the impact cooperative learning had on ESL students’ participation in a second grade classroom, and to examine ESL students’ attitudes toward cooperative learning. The results of the study indicated that ESL students participated more frequently during cooperative group learning than in the whole group; and students also increased their use of academic language during cooperative learning instruction.

In her attempt to build small learning communities in the classroom in order to see their effect on students achievement, Caryn Asherson of California State University conducted an action research on “Cooperative Learning: We Instead of Me”. She believed that many students enter school without caring support system. She presumed that if classmate’s success was tied together, group members would feel an obligation to do their best for the sake of the team. The research did reveal that cooperative learning can lead to improvements in motivation and interpersonal relationships among students.

Cooperative learning is comparatively new to the middle-eastern region especially Saudi Arabia. However researchers are showing great interest in this area. In the studies conducted so far, the effects of CL on Saudi students have been found to be positive in different areas in various subjects. Both teachers and learners have shown positive attitudes towards CL strategy.

Basamah (2002), in her study investigated the attitudes of principals and teachers towards implementing cooperative learning methods at girls’ private middle schools in Jeddah, Saudi Arabia. Additionally, factors affecting the implementation of cooperative learning at the schools were assessed. Her subjects consisted of principals and teachers of 30 girls’ private middle schools. The results of this study indicated that the overall attitudes of principals and teachers towards implementing cooperative learning methods were positive. The majority of the principals evaluated cooperative methods as a beneficial, 87% were willing to implement cooperative methods, 83% believed that their teachers could implement such methods, and most of them would support the implementation of cooperative learning methods.

There is a need to disseminate the results and positive aspects that CL has been showing, throughout the world, among Saudi teachers and learners. Proper training and assistance in implementation of CL in the classrooms would pave the way to acceptance of the new learning strategy in Saudi Arabia. Algarfi (2010) in his study titled “Teachers’ and pupils’ perceptions of and responses to cooperative learning methods within the Islamic Culture courses in one secondary school in Saudi Arabia” has investigated the development and implementation of cooperative learning in two Saudi classrooms seeking the perspectives of teachers and pupils to gather their opinion regarding changes to their classroom practice.

The study revealed a need for wider consideration and development of cooperative learning in both pre-service and in-service programs in Saudi Arabia and the implications for number of stakeholders to realize the aims presented.

In his meta-analysis, Saber (1999) [in Basamah 2002] reviewed research on cooperative learning in Arab countries. Saber found that the cooperative learning groups’ achievement mean score was higher than the traditional groups’ achievement mean score for students in high schools and middle schools in different subjects such as math, science, language, and social studies.

Mansour & Alhodithy (2007) conducted their study by focusing on ways of improving the teaching and learning process in response to the current changes in the Saudi education system. They had planned to discuss the possibility of introducing new methodologies into the SA education system, based on research into CL, which has had a widespread effect in other countries.

The findings of the study showed that the current classrooms and the school environment in Saudi Arabia do not accommodate the CL principles and practices. Moreover, where cooperative grouping was found, it lacked the features recommended in the literature for effective CL. Also, the study identified some of the constraints which affected the implementation of CL in Saudi secondary schools. However, the results have paramount implications for the school system, classroom teaching and students’ learning in Saudi Arabia.

Cooperative Learning has shown positive results in almost all areas of the EFL teaching and learning processes in all regions of the world. Saudi Arabia is also not an exception. Alharbi (2008) in her study investigated the effects of the use of cooperative learning method in English as a second language reading comprehension performance and how it improves the students’ second language, their attitudes toward cooperative learning, and their motivation toward reading. There were significant differences between the two groups in the reading comprehension performance and in students’ attitudes toward cooperative learning, which favored the experimental group. Finally, the researcher discussed educational implications for each variable and suggested

several recommendations for implementation and further research.

Results of this analysis indicated no significant difference between experimental and comparison groups for all measures. However, the analysis indicated significance differences between experimental and comparison groups on post-measures of vocabulary and fluency, and students' attitudes toward cooperative learning. Conversely, the result showed no significant difference between experimental and comparison groups on post-measures of reading comprehension and students' motivation toward reading.

When grouped cooperatively, Saudi students have shown positive results in the EFL context. Mahmoud (2014) used Cooperative language learning (CLL) approach to encourage second-year university students at the college of languages and translation, at Al-Imam University to learn from their peers so that they could develop their writing skills. The findings revealed that the students' scores in writing were higher for the post-test than the pre-test at the significance level of .001 after being subject to this kind of treatment. However, it must be stated that the degree of improvement was not extremely high as students still made some mistakes with regard to the grammar and syntax. As for the attitude scale, the results obtained proved that the students developed positive attitudes towards using the cooperative learning approach to develop language skills in general and to develop their writing skills in particular.

In the Saudi context, Balal (2013) examined the effects of cooperative learning on EFL learners' performance in Saudi Arabia. The sample consisted of 32 students who were selected randomly from two classes of the second year secondary school students in Riyadh in Saudi Arabia. The experimental class was taught through cooperative learning for one semester with the methods of Student Teams-Achievement Divisions (STAD). The control class was taught in the traditional method of Grammar Translation with some of the Audio-Lingual approach. Data were collected via observation and tests (pre-test and post-test). The researcher found that students taught through cooperative learning achieved better academic performance inside the classroom and in the final year exam; the researcher found that the use of cooperative learning method has positive effects on EFL learners' performance and cooperative learning approach is more effective than the other non-cooperative learning approaches.

The results are discussed in the light of theory and research on cooperative learning, task-based language teaching and the roles of learners, teachers and course books. The study is descriptive in nature. The researcher has noted that many group activities in the course books were merely presented without proper description of their implementation. Similarly, very few group activities were found to be cooperative in nature.

### *1.6 Gap in Research*

In the preceding section, it is clear that cooperative learning has the potential of becoming a fruitful instructional strategy for EFL teaching and learning. Researchers have investigated the effect of CL on students' academic achievement in various subjects and at different levels in Saudi Arabia. Similarly, EFL achievement of Saudi students with regard to CL in different skills areas have also been researched up to secondary level. The researcher has not found any study investigating impact of CL on Saudi students' academic achievement at tertiary level. Thus an effort is being made to find out if there is any impact of CL on academic achievement of Saudi EFL tertiary level learners

## **2. Methods and Procedures**

### *2.1 Design of the Study*

In line with the research question, a quasi-experimental pretest posttest research design was chosen for the study to investigate the impact of cooperative learning on students' achievement. It aimed at collecting descriptive and analytical data concerning impact of cooperative learning on academic achievement of Saudi EFL learners at Tertiary level. For the purpose of study fifty students and two teachers were selected. The students were selected from two groups of male students enrolled in the first semester of the preparatory year program (PYP) in the year 1435 A.H corresponding to 2014 AD at Umm Al-Qura University in Makkah. Participants were fifty (n=50) Saudi male students. They were sixteen to twenty five years old. The mean of their age was twenty one years. The teachers were faculty members of the English Language Center (ELC) at the College of Social Sciences in Umm Al-Qura University.

### *2.2 CL Intervention*

Immediately after the midterm examination, the CL treatment was introduced at the experimental group (EG) in the eleventh week. This helped for the obvious reason that learners had got used to the university environment and had got some experience of studying English in the first half of the semester. Up to this point, they had developed some impression of their teacher, the teaching methodology and English language as a whole.

Pre-Intermediate New Headway Plus, Special Edition by John and Liz Soars of the Oxford University Press was the course book.

Sufficient practice was given to students in order to reinforce those targeted language items through many activities designed by the teacher which were mostly communicative in nature. Then the teacher would start with the real lesson with “Starters” given at the beginning of every unit which served as a base for evaluating students’ basic knowledge of the targeted language item. Then the whole unit in each chapter was taught using CL structures e.g., STAD, Jigsaw II, Numbered Heads together and Inside-Outside Circles. All the aforementioned CL structures were implemented throughout the chapters in all the four skills especially Reading, Speaking and Listening along with Vocabulary and Grammar, wherever applicable. Majority of the students showed great interest and participated with enthusiasm in a relatively new teaching learning environment provided by CL.

### 2.3 Students’ Teaming

The students were assigned heterogeneously to 5 teams of five students each on the basis of their Midterm examination scores. Each group had at least one high achiever and two medium achievers and two low achievers. A high achiever among team members was selected as the Team Leader. Another bright student was selected as his deputy.

These groups were named after famous Saudi football league teams namely Al-Fateh, Al-Nasr, Al-Hilal, Al-Ahli and Al-Ettihad in order to spur learners’ interest. Small scorecards were designed carrying the names of the teams as well as their members. The teacher used these cards for assigning group marks based on successful completion of group activities.

#### 2.3.1 Description of Teams

Students in the experimental group were named according to their roll number in the class, with English Alphabets where the first on the roll gets the name A, the second as B and so on. The last student in the group was named “Y” corresponding to roll number 25. Experimental Group (EG) was divided into 5 teams, consisting of 5 students each. These teams were made heterogeneously according to the students result in the Midterm examination. Every effort was made to ensure inclusion of at least one high achiever and one medium achiever in all groups. Based on heterogeneous groupings, the aforementioned teams consisted of the following members as shown in table 1 below.

Table 1. CL teams mean scores in MT

Team	Team Members	MT Mean %
Al-Fateh	A, H, Q, W, Y	48 %
Al-Nasr	D, M, O, P, X	46 %
Al-Hilal	G, J, N, R, U	48 %
Al-Ahli	B, F, I, L, S	44.6 %
Al-Ettihad	C, E, K, T, V	46.6 %

10 % extra marks were promised to groups that improve on their mean scores during the period of the study. These marks were to be dispensed from the 20% marks allocated for attendance, class participation and homework.

### 2.4 Instrument of the Study and Its Administration

To study the impact of cooperative learning on students’ academic achievement, the researchers mainly relied on course-based assessments (Midterm and Final term examinations) of the two groups for data collection.

#### 2.4.1 Course-Based Assessments (Mid Term and Final Term Examinations)

The instrument in this study included the scores from the two major course-based assessments i.e., Midterm and Final Term examinations, held at the Preparatory Year, gathered in the middle and the end of the semester. The major reason for including the scores of these examinations was to examine if cooperative learning had any impact on the students’ academic achievement. The results of the Midterm and Final term examinations also served as pretest and posttest scores respectively for the three levels of achievers among students under study.

The first course-based assessment (Midterm examination) tested the students on the materials from chapter 1 to chapter 14 of the Elementary New Headway Plus, Special Edition by John and Liz Soars of the Oxford University Press. The second course-based assessment (Final Term examination) covered from chapter 1 to chapter 14 of the course-book “Pre-Intermediate New Headway Plus, Special Edition by John and Liz Soars of

the Oxford University Press". The final term examination was a longer version of the midterm examination in terms of assessment style and question items. The test designers of these examinations were English teachers teaching at the English Language Center of the College of Social Sciences in Umm Al-Qura University.

The test items in the course-based examinations consisted of listening comprehension (20%), vocabulary (30%), grammar (30%) and reading comprehension through multiple choice questions (20%). Three language skills, i.e., listening, reading, and writing, were tested in these examinations whereas assessment of speaking skills was not included in these two assessments.

The centralized exam system of the ELC is proved to be reliable. The system selects MCQ's items from the questions bank fed by the Exam Committee at the ELC. Such MCQ's cover almost all the intended learning outcomes set forth for the students in that particular stage.

The Final term examination carrying 50 marks consisted mainly of three sections. The first section contained two parts (A and B). Two recordings were presented for listening with 10 MCQ's to choose from; 5 questions for each listening items. The second section (Part C) Reading comprehension consisted of two reading passages, contained 10 MCQ's; 5 MCQ's per passage. The third section (Part D) consisted of Vocabulary and Grammar which contained 30 items multiple choice questions (MCQ's). There were a total of four different versions of Final (End) term examination, marked as A, B, C and D. All exam versions carried the same number of items and sections and the style of questions were the same.

### 2.5 Procedures Followed in Analyzing the Data

The data collected for analysis to examine the impact of cooperative learning in this study included (1) the scores of the two course-based assessments. The Independent Samples t-test and Paired Samples t-test were utilized to check if there was any significant difference in their scores of the two course-based examinations between the two groups in the pretest and posttest. The scores of the high, medium and low-achievers in EG were computed using SPSS version 20.0 to compare the inter-group differences.

### 2.6 Scoring the Two Course-Based Assessments

The first course-based assessment (Midterm Exam) carried 30 Marks. Almost all the test items (MCQ's) carried half (1/2) a mark per item. The Exam Committee at the ELC was responsible for checking and marking of these tests. The tests were auto-checked through special Scantron machines which marked the tests and compiled results automatically. Similarly, the second course-based assessment (Final Term Exam) carried 50 marks and each test item was assigned half (1/2) a mark per item. The exam papers were auto-checked through Scantron machines.

## 3. Results

### 3.1 Results of the Course-Based Assessments

#### 3.1.1 First Course-Based Assessment (Midterm Examination)

The first course-based assessment was taken by both CG and EG out of 30 marks. Table 2 below shows the scores of Midterm examination for both groups.

Table 2. Students' MT mean scores for CG and EG

Groups	MT mean	MT %	SD
Control Group (CG)	13.84	46.10	13.18
Experimental Group (EG)	14	46.63	16.36

As indicated in table 2 above, the mean percentage scores of the EG and CG were 46.63 and 46.09 respectively. It shows almost no difference between the mean scores of the two groups. However further statistical analysis was conducted to show whether the difference was significant or otherwise.

Table 3. MT Group statistics for CG and EG

Group Statistics					
	Group type	N	Mean	Std. Deviation	Std. Error Mean
Mid Term Percentage %	Experimental Group	25	46.6320	16.35771	3.27154
	Control Group	25	46.0960	13.17812	2.63562

Table 4. MT t-test results for CG and EG

Independent Samples Test		t-test for Equality of Means				
		t	df	Sig. (2-tailed)	95% Confidence Interval of the Difference	
					Lower	Upper
Mid Term %	Equal variances assumed	.128	48	.899	-7.91094	8.98294
	Equal variances not assumed	.128	45.92	.899	-7.92084	8.99284

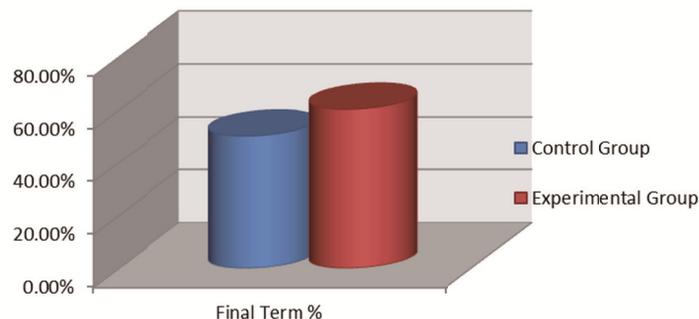
As shown in the tables 3 and 4 above, the statistical analysis of the midterm examination results data of the Independent Samples t-test show no significant difference ( $p=0.899>0.05$ ) between the two groups. This means that both the groups (CG and EG) had almost similar results before the treatment and this provided the researcher a sound platform to carry out his experiment on similar groups.

### 3.1.2 Second Course-Based Assessment (Final Term Examination)

The second course-based assessment (Final Term examination) was taken by both CG and EG out of 50 marks. Table 5 below show the mean scores of Final term examination for both groups.

Table 5. Students' mean FT scores

Groups	FT mean	FT %	SD
Control Group	25.04	50.08	19.20
Experimental Group	30.08	60.16	15.17



Graph 1. FT mean scores of EG and CG

The second course-based assessment took place at the end of the first semester (end of the treatment period for EG). As shown in the table 5 and graph 1 above, the mean percentage score of CG and EG was 50.08 % and 60.16% respectively. There was obvious difference in the means for the two groups. However, further statistical analysis will be done to see whether this difference was significant or otherwise.

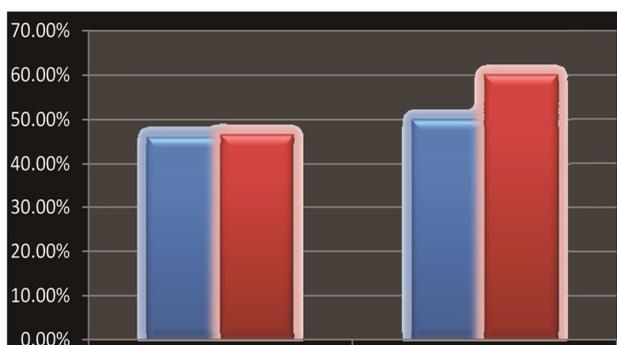
Table 6. FT group statistics for EG and CG

Group Statistics					
	Group type	N	Mean	Std. Deviation	Std. Error Mean
Final Term	Experimental Group	25	60.1600	15.69416	3.13883
Percentage %	Control Group	25	50.0800	19.19618	3.83924

Table 7. Independent samples t-test for EG and CG

Independent Samples Test		t-test for Equality of Means			95% Confidence Interval of the Difference	
		t	df	Sig. (2-tailed)	Lower	Upper
Final Term	Equal variances assumed	2.033	48	.048	.10920	20.05080
Percentage %	Equal variances not assumed	2.033	46.176	.048	.09901	20.06099

As shown in the tables 6 and 7 above, the result of statistical analysis for the FT scores shows significant difference between the CG and the EG ( $p=0.048 < 0.05$ ). This means that EG exceeded CG in terms of academic achievement after the CL treatment. The experimental group which was taught using cooperative learning techniques bears positive impact whereas the control group taught through traditional methods had comparatively less improved results. Graph 2 below shows the difference between EG and CG for the both MT and FT examinations.



Graph 2. MT and FT mean scores for CG and EG

The statistical analysis for intra-group comparison of MT and FT scores for experimental group as shown in the table below indicated a mean percentage improvement of 13.52%. Further statistical analysis would confirm whether this improvement was significant or not.

Table 8. Paired sample statistics of MT and FT for EG

Paired Samples Statistics				
	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 MT	46.6320	25	16.35771	3.27154
FT	60.1600	25	15.69416	3.13883

Table 9. Paired samples t-test results for MT and FT for

Paired Samples Test								
Paired Differences				95% Confidence Interval of the Difference		T	df	Sig. (2-tailed)
Pair 1	Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
MT - FT	-13.5280	13.66841	2.73368	-19.17004	-7.88596	-4.949	24	.000

As shown in the tables above, the experimental group showed tremendous improvement in the CL setting in the posttest results as compared to the results of pretest in the traditional setting. The Paired Samples t-test analysis indicates ( $p=0.000 < 0.05$ )  $t = -4.949$  at the degree of freedom level of 24. Such an improvement is highly significant. This means that the experimental group performed significantly well when cooperative treatment was introduced.

Similarly the statistical analysis for intra-group comparison for control group as shown in the tables below

indicated a mean percentage improvement of 3.98 %. Further statistical analysis would confirm whether this improvement was significant or not.

Table 10. Paired samples statistics of MT and FT for CG

Paired Samples Statistics				
	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 MT FT	46.0960	25	13.17812	2.63562
	50.0800	25	19.19618	3.83924

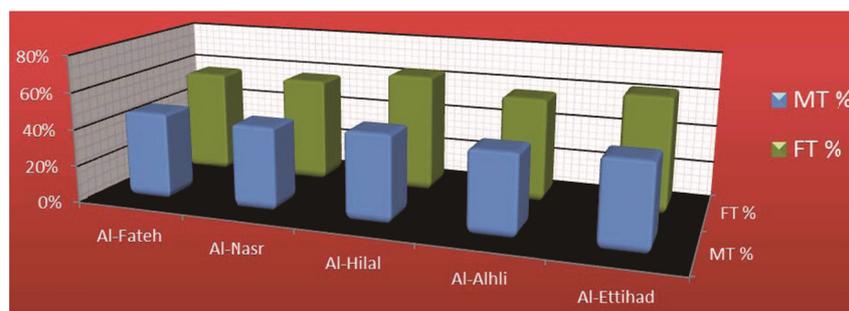
Table 11. Showing paired samples t-test results for MT and FT for CG

Paired Samples Test								
	Paired Differences			95% Confidence Interval of the Difference		T	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1 MT - FT	-3.98400	11.68427	2.33685	-8.80703	.83903	-1.705	24	.101

As shown in the tables above, the control group showed comparatively lesser improvement in the traditional setting in the posttest results as compared to the results of pretest. The paired samples t-test analysis results indicate ( $p=0.101 > 0.05$ )  $t = -1.705$  at the degree of freedom level of 24. Such an improvement is considered insignificant. This means that the control group did not perform well in both pretest and posttest in the same traditional teaching set up.

### 3.2 Cooperative Intra-class Teams Progress

The experimental group was heterogeneously assigned into five teams, based on their midterm examination marks. These teams were named after famous Saudi league football teams. The progress of all teams were kept and recorded by the teacher. Graph 3 and table 12 below show inter-teams results of the experimental group.



Graph 3. Intra-teams Performance in MT and FT

Table 12. Intra-teams performance in MT and FT

Teams	Midterm mean%	Final Term mean%	Progress %
Al-Fateh	48%	57.6 %	9.6%
Al-Nasr	46 %	58 %	12%
Al-Hilal	48%	64.8 %	16.8%
Al-Ahli	44.6 %	57.2 %	12.6%
Al-Ettihad	46.6 %	63.2 %	16.6%

As shown in graph 3 and table 12 above, Al-Hilal team showed the most improvement (16.8%) and got first position. Al-Ettihad team stood second with (16.66%) improvement and Al-Ahli team took third position showing (12.6%) improvement. As promised, all the teams were compensated with the 20% marks allotted to homework and class participation, based on their performance.

#### 4. Discussion

This part presents a discussion of the hypothesis and question of the study in light of data analysis and interpretations of the results. To test the hypothesis of the study, the average and mean scores of the two course-based assessments were calculated and compared, using SPSS version 20.0 and Microsoft Excel version 2010.

##### 4.1 The Hypothesis

There is no statistically significant impact of cooperative learning on academic achievement of Saudi EFL tertiary learners.

For the first main hypothesis of this study, the means of overall results in both course-based assessments for both experimental and control groups were calculated and compared. Table 13 below shows the results.

Table 13. MT and FT scores for CG and EG

	CG	EG	p value	Significance
MT %	46.10	46.63	0.899	Not Significant
FT %	50.08	60.16	0.048	Significant
Percentage Improvement	3.98	13.53		

The students level in the pretest in both CG and EG was almost the same ( $p=0.899>0.05$ ). However, students in the CG showed lesser improvement of 3.98 % on the mean scores of their FT in the traditional setting whereas those in the EG showed improvement of 13.53 %. The difference between CG and EG on the posttest score is significant ( $p=0.048<0.05$ ). This level of improvement indicated significantly positive impact. This is the answer to our question: To what extent does cooperative learning have an impact on academic achievement of Non-English major Saudi EFL learners? This means that students' performance in the control group remained the same whereas that of the experimental group improved. When cooperative learning was introduced, the students' performance improved significantly. Thus the main null hypothesis was rejected.

The above mentioned results of the present study revealed that cooperative learning had a positive impact on academic achievement of EFL tertiary level learners. This means with CL treatment, student's academic achievement increased as compared to traditional methods. This result is consistent with studies reported by Ajaja (2010), Gubbad (2010), Hsiung (2012) and Balal (2013) who found that CL plays a significant role in improving students' academic achievement. Similarly, CL was found to be feasible for the Low and Medium Achievers who showed tremendous improvements in their academic achievements. However, the performance of High Achievers was not affected by CL and they performed equally well in both CL and traditional settings. This result is consistent with studies reported by Stockdale (2004) and Liang (2002) who found that CL is best suited for Low and Medium Achievers.

##### 4.2 Conclusion

The present study was conducted to explore the possible bearings of "Cooperative learning" on the academic achievements of Saudi EFL learners at tertiary level. Thus, the research claims a distinguished place in the galaxy of already established research works due to the acknowledged fact that it was unprecedented work in the field and in this region. The nature, purpose, motive and rationale behind this humble endeavor were purely pedagogical. The strong academic background of the researchers, in addition to their firsthand experience of teaching both at national and international institutions of repute, made the present attempt easy and commendable. The net outcomes of the research are not only important because they will facilitate the teaching learning process but will also open new vistas for the upcoming researchers and academicians. The present study is part of a larger study by the principal researcher and is limited to male students of the preparatory year residing in the Makkah Province. It may be replicated to investigate the impact of CL on female students of the same area or male students of another area and at different levels.

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