

## The Effect of Cooperative Learning on Reducing Anxiety and Improving Reading Comprehension of EFL Learners

**Hossein Siahpoosh**

Department of English Language, Ardabil Branch, Islamic Azad University, Ardabil, Iran

**Zahra Ghobadi Asl\***

Department of English Language, Ardabil Branch, Islamic Azad University, Ardabil, Iran

**Javad Khodadoust**

Department of English Language, Ardabil Branch, Islamic Azad University, Ardabil, Iran

### Abstract

This study investigated the effect of cooperative learning on reducing anxiety and improving reading comprehension ability of the Iranian intermediate male and female EFL learners. Also, this study checked possible interaction between grouping (cooperative learning vs. individualistic learning) and gender on anxiety and reading comprehension. The research data were collected with the use of quantitative methods, including two instruments: The Foreign Language Classroom Anxiety Scale [FLCAS] and the reading comprehension pre-test and post-test. A total of 80 intermediate level students participated in this study. The findings revealed that cooperative learning had no effect on reducing foreign language learning anxiety, but improved reading comprehension ability of the learners. The effect of gender, as moderator variable, was also examined, and the interaction between grouping and gender on anxiety and reading comprehension was studied too, but no statistically significant effect was found.

**Keywords:** Anxiety, Foreign Language Classroom Anxiety Scale (FLCAS), Cooperative Learning (CL), Reading Comprehension, EFL Learners

### INTRODUCTION

Reading is the basic tool of learning and the foundation of all knowledge in everyday life. Important things in reading are comprehension and interpretation of meaning. Reading comprehension means decoding and understanding a text that a reader reads (Abd al & Al Odwan, 2012). Different factors can influence reading comprehension and anxiety is one of the important aspects of affective variables. According to Horwitz (2001) anxiety affects second language learning and language learners with high anxiety perform poorly in language learning classes. Many researchers and educators investigated techniques that improve and facilitate reading comprehension (Alhaidari, 2006; Chen, 2005; Faramarzi, 2003). There may be different ways or strategies for improving reading

comprehension ability of foreign language learners and cooperative learning (CL) may be one of them. Cooperative learning gives learners more chances to produce language in a functional manner (Zhang, 2010).

This study was an attempt to investigate the effectiveness of Think-Pair-share method of cooperative learning on reducing anxiety and improving reading comprehension between male and female EFL learners in Iran and answer the following questions.

**RQ1.** Does type of grouping (cooperative learning vs. individualistic) have any effect on reducing language learning anxiety?

**RQ2.** Does gender have any effect on reducing language learning anxiety?

**RQ3.** Does the interaction between type of grouping (cooperative learning vs. individualistic) and gender have any effect on reducing language learning anxiety?

**RQ4.** Does type of grouping (cooperative learning vs. individualistic) have any effect on increasing reading comprehension ability of the learners?

**RQ5.** Does gender have any effect on increasing reading comprehension ability of the learners?

**RQ6.** Does the interaction between type of grouping (cooperative learning vs. individualistic) and gender have any effect on increasing reading comprehension ability of the learners?

## **REVIEW OF LITERATURE**

### **Reading**

According to Chastain (1988), reading is the activation of relevant knowledge and related language skill for accomplishing exchange of information from one person to another. Reading comprehension is a complex cognitive ability (Meneghetti, Carretti & De Beni, 2006). Kazemi (2012) says reading occurs in a context rather than in isolation. Reading is considered as a complex act of communication in which is based on word recognition, vocabulary, sentence patterns and text structure awareness (Shaaban, 2006). Foreign language anxiety inhibits students' efforts, reduces motivation, and slows acquisition progress (Nagahashi, 2007).

### **Anxiety**

Anxiety is feeling of tension and worry that stops students' learning. Language learning anxiety is considered as specific situation anxiety because it is limited to the language learning situation (Horwitz, Horwitz & Cope, 1986; MacIntyre & Gardner, 1994). The anxiety experienced in a classroom setting is called Foreign Language Classroom Anxiety (FLCA). Elkhaiffi (2005) stated that there is a negative correlation between foreign language anxiety and achievement. There may be different ways or strategies for reducing anxiety of foreign language learners and cooperative learning (CL) may be one of them.

## Cooperative Learning

According to Slavin (1987) cooperative learning refers to a set of instructional methods in which students work together on academic tasks. In Cooperative learning methods students sit together and help one another with classroom tasks. According to (Johnson & Johnson, 2010) cooperative learning involves small teams of students from different levels of achievement that use different activities in order to improve and promote their achievements.

There are comprehensive bodies of research about cooperative learning techniques and anxiety. For example, Atef-Vahid and FardKashani (2011) found a significant moderate negative correlation between foreign language anxiety and the achievement. Students with higher levels of foreign language anxiety received lower grades than their less anxious counterparts. Nagahashi (2007), Suwantarathip and Wichadee (2010), Oludipe and Awokoy's (2010), Mehdizadeh, Nojabae and Asgari (2013), Saati Masomi(2015) concluded that cooperative learning provides a nonthreatening, supportive environment and reduces students' language anxiety, math anxiety and develops their thought, language proficiency and language skills.

Talebi and Sobhani (2012), Marzbana and Alinejad (2014), Zarei and Keshavarz (2012), Er, Altunay and Yurdabakan (2012), Abd-Al and Al-Odwan (2012), Takallou and Veisi (2013), Marashi and Sanatipoor(2015), Marashi and Tabatabayi (2019) , Marashi and Baygzadeh (2019), findings showed that cooperative learning can improve students' speaking proficiency, reading comprehension ,vocabulary learning and listening.

## METHODS

### Participants

Eighty intermediate students served as the participants of the study. The students' ages ranged from 13 to 18 and their first language was Azeri-Turkish. The participants (n=80) were divided into four equal groups, two experimental and two control. From two experimental groups, one of them was male students and the other one was female. The two control groups had the same composition. The experimental groups were assigned to receive Think-Pair Share technique of cooperative learning method as their treatment and the control groups experienced individualistic learning during the study.

### Materials

#### *Foreign Language Classroom Anxiety Scale (FLCAS)*

Foreign Language Classroom Anxiety Scale (FLCAS), (Horwitz et al., 1986) was a standardized 33-item questionnaire. Scores for nine statements - items 2, 5, 8, 11, 14, 18, 22, 28, and 32 - which were negatively keyed for anxiety, were calculated using a 5-point scale with 1 being "strongly agree" and 5 being "strongly disagree" Scores for the remaining 24 statements, which were positively keyed for anxiety, were calculated using a 5-point scale with 1 being "strongly disagree" and 5 being "strongly agree" The total scale scores range from 33 to 165, with high scores indicating high levels of foreign language anxiety. In order to make sure no misunderstanding of the items will occur, the

questionnaire was translated twice, first from English to Persian and second from Persian to English. Before the administration of Persian version of FLCAS to the respondents, the comprehensibility of the translated version was checked out. The reliability of the scale was computed through the application of Cronbach's alpha and turned out to be 0.96.

### **Reading Comprehension Tests**

Reading comprehension test in pre-test and post-test stages consisted of three reading passages. The first passage was followed by ten multiple-choice items and the second and third passages each was followed by five true-false items. Each correct answer received 1 point earning 20 points as a whole. In order to ensure appropriate texts were selected, two steps were taken. First two lessons of each course book that were taught to students were randomly selected and their readability was calculated separately using Flesch-Kincaid Ease formula which ranged from 65.5 to 74.3. Second the researcher set out to find texts in the readability ranges mentioned. The average readability of the selected texts was 68. Reliability of pre-test was 0.78 and the reliability of post test was 0.80 through the Cronbach' alpha.

### **Data Collection Procedures**

The data for this study were collected in 14 sessions. First of all, eighty students (40 males and 40 females) from intermediate level were considered as the participants of this study. All of them were 13 to 18. They were divided into four groups of 20, two treatment groups (20 males and 20 females), and two control groups (20 males and 20 females). Second the participants were given the FLCAS (10 minutes) was followed by reading comprehension test (40 minutes). Then cooperative learning method was introduced to the experimental groups and they were taught through cooperative learning for 12 sessions. As mentioned above, the cooperative method employed in this research was called Think-Pair Share. During the first step individuals were asked to think silently about a question posed by the teacher. During the second step individuals paired up and exchanged thoughts. In the third step, the pairs shared their responses with other pairs, other teams, or the entire group. The teachers presented a lesson, and then students worked within their team to make sure that all team members had mastered the lesson. After that, all students were asked questions individually without helping one another to show how much they had learned. The control groups were taught traditionally (individualistic learning) for 12 sessions too. All the participants in four groups studied the same material (*interchange 1, active skills for reading 1, practice and progress, Irāniāns flash card, and short story*). In the last session of the study FLCAS was administered to the learners followed by a reading comprehension test, as post-test.

### **Results**

To examine the research hypotheses a two-way ANOVA was run. After calculating descriptive Statistic for checking the differences between groups' anxiety scores and reading comprehension scores t-test were done, their results are presented in tables 1 and 2.

**Table 1.** Independent Samples Test for Scores on FLCAS (Pretest)

	t-test for Equality of Means			
	t	df	Sig. (2-tailed)	Mean Difference
anxiety Equal variances assumed	.276	78	.783	1.67500
Equal variances not assumed	.276	75.737	.783	1.67500

In table 1 the result indicated that there was not significant difference between students' anxiety scores (Sig. = 0.783 > .05).

**Table 2.** Independent Samples Test for Scores on Reading Comprehension (Pretest)

	t-test for Equality of Means			
	t	df	Sig. (2-tailed)	Mean Difference
reading Equal variances assumed	.042	78	.967	.02500
Equal variances not assumed	.042	77.704	.967	.02500

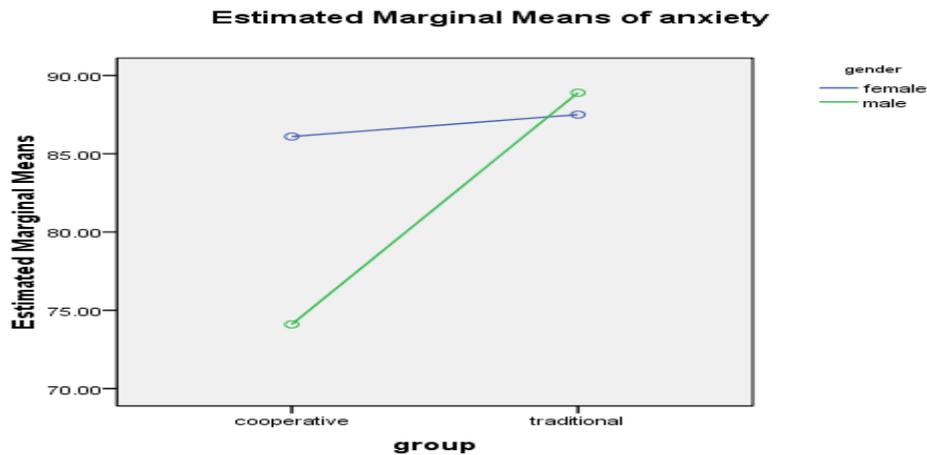
Also, table 2 showed that there was not significant difference between students' reading comprehension scores at 0.05 probability level.

After getting descriptive statistic for posttest scores on anxiety, the researcher used Kolmogorov-Smirnov test to determine the normality of the scores on language learning anxiety as an assumption for the use of two-way ANOVA. The result indicated that the scores on this test were normally distributed (Sig. = 0.2 > .05). To examine the first three null hypotheses a two-way ANOVA was run for anxiety. As table 3 shows, the sig. value for independent variable, grouping, was 0.167 that is,  $p > .05$ . This means that there was not a significant main effect for independent variable, cooperative learning. Regarding the second null hypothesis, the result of two-way ANOVA (table 3) revealed no statistically significant effect for gender on anxiety ( $p = 0.364$ ). This means that males and females did not differ significantly in terms of their anxiety.

**Table 3.** Two-way ANOVA for Scores on Anxiety

Source	Sum of Squares	DF	Mean Square	F	Sig.	Partial Eta Square
Groups	1312.200	1	1312.200	1.947	.167	.025
Gender	561.800	1	561.800	.834	.364	.011
Groups*Gender	897.800	1	897.800	1.332	.252	.017
Error	51224.400	76	674.005			
Total	620494.000	80				

As mentioned earlier, the third question in the current study investigated the interaction of grouping and gender on anxiety. As presented in table 3, the alpha value corresponding to the interaction effect (Grouping \* Gender) indicates that the interaction between these two variables is not significant (Sig. = 0.252,  $p > .05$ ). Figure 1 indicates the line graph of anxiety scores for cooperative learning group and traditional learning group across genders. This revealed that grouping type does not influence male and female learners' anxiety differently.



**Figure 1.** Line graph of mean performance on anxiety across the groups

The line graph indicated that there was a negative relationship between cooperative learning and anxiety. This means that students who had cooperative learning had lower anxiety compared to the students in traditional group.

To examine the second three questions and null hypotheses a two-way ANOVA was run for reading comprehension. In Descriptive Statistics of dependent variable, reading comprehension, the total mean value of reading comprehension for cooperative learning group students was 16.92 and for traditional learning group students was 15.45.

In addition, the researcher used Kolmogorov-Smirnov test to determine the normality of the scores on reading comprehension test as an assumption for the use of two-way ANOVA (Table 4)

**Table 4.** Normality Check for Score on Reading Comprehension

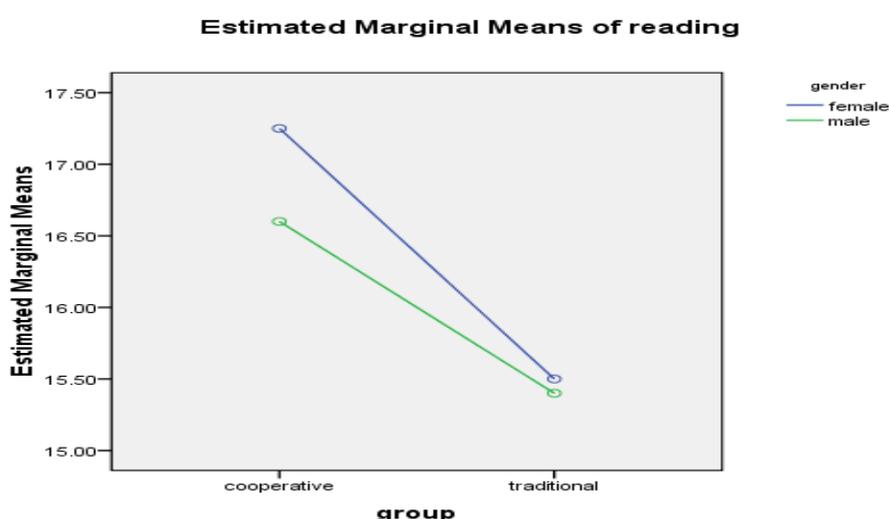
	Kolmogorov-Smirnov		
	Statistic	df	Sig.
Reading	.083	80	.200

The result indicated that the scores on this test were normally distributed (Sig. = 0.2 > 0.05). Then to examine the fourth, fifth and sixth null hypotheses, a two-way ANOVA was run. As you can infer from table 5, the sig. value for independent variable, grouping, was 0.002 that is,  $p < .05$ . This means that there was a significant main effect for independent variable, cooperative learning. The effect size for grouping was 0.119, which can be considered large compared to Cohen's criterion. Regarding the second null hypothesis, the result of two-way ANOVA (table 5) revealed no statistically significant effect for gender on reading comprehension. The sig. value for effect of gender was 0.418, which is much larger than 0.05 probability level. This means that males and females did not significantly differ in terms of their reading comprehension.

**Table 5.** Two-Way ANOVA for Scores on Reading Comprehension Test

Source	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Square
Groups	43.513	1	43.513	10.259	.002	.119
Gender	2.813	1	2.813	.663	.418	.009
Groups*Gender	1.513	1	1.513	.357	.552	.005
Error	322.350	76	4.241			
Total	21333.000	80				

As mentioned earlier, the sixth question in the current study investigated the interaction of grouping and gender on reading comprehension. As presented in table 5, the alpha value corresponding to the interaction effect (Grouping \* Gender) indicates that the interaction between these two variables is not significant (Sig. = 0.552,  $p > .05$ ). Figure 2 indicates a line graph on reading comprehension scores for cooperative learning group and traditional learning group for males and females.



**Figure 2.** Line graph for mean performance on reading comprehension across the groups

As it is obvious from the line graph, there is a difference in male and female's scores for reading comprehension in cooperative learning group. This means that students who had cooperative learning had high reading comprehension scores compared to the students in traditional group.

## DISCUSSION

Regarding the results obtained from the two-way ANOVA for anxiety, cooperative learning did not have a statistically significant effect on reducing language learning anxiety. Also, results didn't show statistically significant effect for gender in this regard. Based on these analyses, we can claim that the first null hypothesis was not rejected and the second null hypothesis stating that gender had no effect on reducing anxiety was confirmed. The third question set out to examine the interaction of grouping (cooperative learning vs. traditional learning) with gender in influencing anxiety. The interaction effect

was not significant; hence the third null hypothesis was not rejected either. The results of the analyses supported the findings of previous study Duxbury and Tsai's (2010) findings which showed there wasn't any significant correlation between foreign language anxiety and cooperative learning. In contrast to this study Nagahashi (2007) said cooperative learning may help reduce students' anxiety in the FL classroom. The result of the present study was also in contrast with the findings of Oludipe and Awokoy's (2010) research; they studied the influence of cooperative learning methods of teaching on students' anxiety for learning chemistry. The cooperative learning groups' anxiety decreased significantly and showed most interest to have group work.

Regarding the results obtained from the two-way ANOVA for reading comprehension, as you can see in table 5 cooperative learning had statistically significant effect on increasing reading comprehension ability of the Iranian EFL learners. However, results didn't show statistically significant effect for gender on reading comprehension ability. Based on these analyses, we can claim that the first null hypothesis was rejected whereas the second null hypothesis was not rejected. The third question explored in the current study investigated the interaction of grouping (cooperative learning vs. traditional learning) with gender in influencing reading comprehension. The interaction effect was not significant; hence the third null hypothesis was not rejected. The results of the analyses supported the findings of previous studies Zarei and Keshavarz (2012) Students Team-Achievement Division (STAD) and Cooperative Integrated Reading Composition (CIRC) had statistically significant effects on reading comprehension and vocabulary learning of students. Similar to this research Takallou and Veisi (2013) had positive attitude toward cooperative learning on increasing students' reading comprehension ability.

## CONCLUSION

The findings of the study indicated that cooperative learning did not reduced language learning anxiety. The second result of this study showed that cooperative learning can enhance reading comprehension ability of Iranian EFL learners. Third the study did not show statistically significant effect of gender on anxiety or reading comprehension. Fourth interaction between grouping (cooperative learning vs. traditional learning) and gender did not reveal significant effect on language learning anxiety or reading comprehension ability of the learners.

## REFERENCES

- Abd-Al, T., & Al-Odwan, H. (2012). The effect of the directed reading thinking activity through cooperative learning on English secondary stage students' reading comprehension in Jordan. *Humanities and Social Science International Journal*, 2(16), 138-151
- Alhaidari, M. S. (2006). *The effectiveness of using cooperative learning to promote reading comprehension, vocabulary, and fluency achievement scores of male fourth, and fifth-grade students in a Saudi Arabian school*. Unpublished Doctoral Dissertation. Pennsylvania State University

- Atef-Vahid, S., & Fard Kashani, A. (2011). The effect of English learning anxiety on Iranian high-school student's English language achievement: Brain Broad Research in Artificial Intelligence and Neuroscience. *Teaching Language Skills Journal*, 2(3), 29-44. Retrieved from <http://brain.edusoft.ro>
- Chastain, K. (1988). *Developing second language skills: Theory and Practice*, (3<sup>rd</sup> ed.). San-Diago, CA: Harcourt Brace Jovanovich.
- Chen, S.F. (2005). *Cooperative learning, multiple intelligences and proficiency: Application and learning*. Unpublished Doctoral Dissertation. Australian Catholic University.
- Duxbury, J.G., & Tsai, L.L. (2010). The effect of cooperative learning on foreign language anxiety: A comparative study of Taiwanese and American universities. *International Instruction Journal*, 3 (1), 3-18. Retrieved from [www.e-iji.net](http://www.e-iji.net)
- Elkhafifi, H. (2005). Listening comprehension and anxiety in the Arabic language classroom. *Modern Language Journal*, 89(2), 206-220.
- Er, M., Altuny, U., & Yurdbakan, I. (2012). The effect of active learning on foreign language self-concept and reading comprehension achievement. *New Trends in Education and Their Implication International Journal*, 3(4), 43-58.
- Faramarzi, H. (2003). *The role of collaborative strategies reading in the improvement of reading comprehension ability of Iranian ESL learners*. Unpublished M.A. Dissertation. Tarbiyat Modarres University, Tehran, Iran
- Horwitz, E.K., Horwitz, M.B., & Cope, J. (1986). Foreign language classroom anxiety. *Modern Language Journal*, 70(2), 1-5. 0026-7902/86/0002/125
- Horwitz, E.K. (2001). Language anxiety and achievement: *Applied Linguistics Annual Review*, 21 (1), 112-126. Retrieved from <http://dx.doi.org>
- Johnson, D.W., & Johnson, R.T. (2010). *Restorative Conflict in school: Necessary roles of cooperative learning and constructive conflict*. ESRC Seminar, (pp. 1-40). Restorative conflict in schools.
- Kazemi, M. (2012). The effect of jigsaw technique on the learners' Reading achievement. The case study of English as second language. *MJAL*, 4(3).
- MacIntyer, P.D., & Gardner, R.C. (1994). The subtle effect of language anxiety on cognitive processing in the second language. *Language Learning*, 44(2), 283-306
- Marashi, H. & Baygzadeh, L. (2019). Using cooperative learning to enhance EFL learners' overall achievement. *Downloaded from [ijal.khu.ac.ir](http://ijal.khu.ac.ir)*
- Marashi, H. & Sanatipoor, S. (2015). Comparing competitive and cooperative content-based instruction in reading and writing classes. *Journal of Studies in Learning and Teaching English*, 4, (2), 001-020
- Marashi, H. & Tabatabayi, Z. (2019). Student teams achievement divisions and think-pair-share: which works better for listening? *International Journal of Foreign Language Teaching & Research*, 7(26)
- Marzban, A. & Alinejad, F. (2014). The effect of cooperative learning on reading Comprehension of Iranian EFL learners. *Procedia - Social and Behavioral Sciences*, 116, 3744 - 3748
- Mehdizadeh, S. & Nojabae, S.S. & Asgari, M.H. (2013). The effect of cooperative learning on math anxiety, help seeking behavior. *Journal of Basic and Applied Scientific Research*, ISSN 2090-4304

- Meneghetti, C., Carretti, B., & De Beni, R. (2006). Components of reading comprehension and scholastic achievement. *Science Directed* 16, 291-301. Retrieved from [www.ccsenet.org/ies](http://www.ccsenet.org/ies) *International Education Study*, 5(2).
- Nagahashi, T.L. (2007). Techniques for reducing foreign language anxiety: Results of a successful intervention study. Retrieved from: <http://air.lib.akitau.ac.jp/dspace/bitstream/10295/547/3/kk9-6.pdf>.
- Oludipe, D., & Awokay, J. O. (2010). Effect of cooperative learning teaching strategy on the reduction of students' anxiety for learning chemistry. *Turkish Science Education Journal*, 7(1), 30-36. Retrieved from <http://www.tused.org>
- Saati Masomi, F. (2015). Effects of cooperative learning and group study on reducing test anxiety. *International Science Congress Association*, 4(10), 64-71
- Shaaban, K. (2006). An initial study of the effects of cooperative learning on reading comprehension, vocabulary acquisition, and motivation to read. *Reading Psychology*, 27(5), 377-403
- Slavin, R.E. (1987). Cooperative learning: where behavior and humanities approaches to classroom motivation meet. *The Elementary School Journal*, 88(1), 29-37. Retrieved from <http://www.jstor.org/stable/1002001>
- Suwantarathip, O., & Wichadee, S. (2010). The impacts of cooperative learning on anxiety and proficiency in an EFL class. *College Teaching and Learning Journal*, 7(11), 51-57.
- Talebi, F., & Sobhani, A. (2012). The impact of cooperative learning on oral proficiency. *Social Sciences Mediterranean Journal*, 3(3), 75 2039-2117
- Takallou, F., & Veisi, S. (2013). Implementing cooperative learning in a reading class. *Report and Opinion*, 5(1), 16-23. Retrieved from <http://www.sciencepub.net/report>
- Zarei, A. A., & Keshavarz, J. (2012). On the effects of two models of cooperative learning on EFL reading vocabulary learning. *Teaching Method Modern Language Journal*
- Zhang, Y. (2010). Cooperative language learning and foreign language learning and teaching. *Language Teaching and Research Journal*, 1(1), 81-83. Retrieved from doi:10.4304/jltr.1.1.