

## COMPARISON OF INFLUENCE OF GROUP DISCUSSION METHOD WITH LECTURE METHOD IN RELATIONSHIP WITH PEERS

Narjes, Aghaebrahimyia\*, Ebrahim, Mirshahjafari,

*Department of Educational Sciences, Faculty of Educational Sciences and Psychology, Islamic Azad University Khorasgan, Branch, Isfahan, Iran*

**Abstract:** The purpose of this study was to compare the group discussion teaching method with lecturing teaching method on relationship with peers' growth rate of high school girls. Research method, semi-experimental, includes two types (experimental and control). In experimental group, the group discussion teaching method and in the control group, the lecturing teaching method was used. At the end of each teaching method, a test had been taken with a questionnaire about social skills rate. The evaluation instruments in this study were Matson et al.(1983) social skills rate measurement. According to the studies of Yousefi and Kheir (2002), the reliability of Matson social skills measurement with the use of Cronbach's alpha ratio and Classification method in the total scale was reported as 0.86. Two levels of descriptive level (frequency, average standard deviation) and Inferential (Levene's test and covariance analysis) was used for data analyzing. Results showed that there has been a great difference between social skills' grades in level of  $p < 0.01$ . The average of experimental group was more than control one. Therefore, group discussion teaching method increased the students' social skills.

**Key words:** Learning, lecture Method, Discussion Method, Peers

### INTRODUCTION

As a result of the information and communications' revolution, challenges are facing schools in the field of presenting effective education, achieving the philosophy of education, and finding the productive innovative student. As competent as the teacher is, this task can only be achieved through qualitative development of the rest of the elements of the learning and teaching process, the syllabus contents, and the resources used to implement it through some proceedings, such as:

1. The organization of the syllabus content and the methods of its implementation on new basis.
2. The development of new experiences for the syllabus developers and the teachers with respect to the new techniques and methods of course preparation.
3. Training the teachers for utilizing learning strategies according to the lesson goals and the nature of educational events.
4. Giving the opportunity to teachers to renovate and innovate while applying the syllabus, and varying the theoretical and applied activities, so the students at

different levels find what suits each of them with respect to individual differences (Mustafa, 2011).

### INSTRUCTIONAL METHODS AND LEARNING ACHIEVEMENT

There is empirical evidence that instructional methods adopted by teachers influence learning Achievement significantly. Whereas appropriate instructional methods would facilitate grasping of new concepts, inappropriate methods are likely to constrain knowledge retention and application (Dunn, 1983; Chang, 2010). Consequently, it is important for teachers to align their instructional methods with the needs and preferences of students to enhance effectiveness of the process in terms of learning achievement. Students whose learning preferences are mismatched with instructional methods are less likely to develop interest in the subject matter, prompting some to drop out altogether (Odundo, 2003; Zeeb, 2004). A study conducted by Dunn (1983) found that student leaning achievement was significantly related to the instructional methods used by teachers. In this regard, the methods used to deliver lessons had a greater impact than the content covered in a course of study. In another study, Chang (2010) investigated the effectiveness

of teacher-centered and learner-centered pedagogical methods on the performance of students. The study found that learner-centered methods were more effective in influencing the perception of students towards science subjects. Students placed more value on active participation in-group discussions than attendance of lectures. Learner-centered methods foster greater flexibility in teaching and stimulate intellectual engagement with teachers and among students (Chang, 2010).

Teaching as the key and inseparable element of growth and development is the most significant approaches of social programs success guarantee in all the social aspects. Developing the quality of teaching activities has always been one of the concerning of teaching experts. Learning includes all the skills and knowledge which human gain throughout his life (Safavi, Borzoui 2006).

Group discussion is an interactive method which enables exchange of thoughts. The best way of finding the answers of questions is discussing. In group discussion, the new thoughts are evaluated and examined and it results in creating new thoughts and concepts and it helps to meta-reflection about the view points and values. The participants should distinguish between reality and belief (personal idea) and practice listening and analyzing what has been heard. Group discussion results in reliability and correlation. Differences in ideas, races, genders and commonalities must be respected. Every group work develops communication skills between people. Group discussion helps people to learn and share the knowledge and think about others' thoughts before having a general agreement on a subject (Shabani, 2007).

The aim of this study was comparison of Influence of group discussion method with lecture method in relationship with peers.

## **MATERIALS AND METHODS**

This is a semi-experimental study with pre-test and post -test plan in which students' social skills examined and compared as follows:

1. Experimental group which learns chemistry via group discussion method.
2. Control group which learn the same lesson in the same period via lecturing method.

The research society included all girl students in the high schools of Isfahan city on 2013-2014. The sample included 62 first year of high schools. They

have chosen as the least suggested number of people for comparison groups in experimental groups including semi-experimental studies. The random choice method was clustering method which means that one section is chosen among all six sections of education in Isfahan and one school is chosen among all the schools of that section and then two random classes are chosen among all the first-year classes. According to the subject and research nature and the necessity of teaching in a real class and reducing the interaction, these two classes are almost equal in most aspects such as family social and cultural situation, equity in class level and having the same teacher.

The tool used in this research is social skill evaluation scale of Matson et al.(1983). Matson et al scale had been created for 4-18 years skills evaluation in 1983(Matson, 2009). This scale includes 21 expressions which explain children social skills and is graded from 1-5 according to five level index of Likert (never – rarely – sometimes – usually – always) and Yousefi and Kheir (2002) for reliability evaluation of social skill scale of Matson et al used Cronbach's alpha ratio and classification in total scale is reported as 0.86. This questionnaire measures 5 social skills subscales. Aggressive and impulsive behaviors parameter includes: rebelling, being defiant. And communication with peer group parameter includes: jealousy, isolating, relation with peers and loneliness.

The case study groups are almost the same in variables such as the job of parents, their degrees and number of brothers and sisters. For analyzing the data gathered from the questionnaires, two levels of descriptive and analytic statistics is used. In descriptive level, frequency table and chart and frequency percentage, average calculation and standard deviation with variance and in analytic level the covariance analysis is used. The software used for statistical analysis is *SPSS<sub>19</sub>* software.

## **FINDINGS**

For analyzing the data gained from research questionnaires we used descriptive and analytic statistics. In descriptive level, frequency table and chart and frequency percentage, average calculation and standard deviation with variance and in analytic level based on research ideas which is based on experimental and control groups, the covariance analysis is used.

Table 1: Comparison between average and standard deviation of social skills parameters

Variables indices	Experimental		control		
	average	standard deviation(S)	average	standard deviation(S)	
aggressive and impulsive behavior	Pre-test	45.00	6.95	45.64	6.8
	post- test	49.67	8.66	45.70	8.91
communication with peer group	Pre-test	39.64	7.19	38.19	5.5
	post- test	39.96	5.13	37.74	5.51

The results Table 1 showed that the average grade of proper social skills, aggressive and impulsive behavior, supremacy and exaggerated self-confidence, non-social behaviors and communication with peer group in the

experimental group is more than the control group in post exam stage. Using parametric tests for evaluating the equity of variance of the given grades of social skills and its components, Leven’s test has used and the results are shown in tables 2 and w.

Table 2: Levene’s test about variance equity of social skills and its components’ grades

Variable	F	df <sub>1</sub>	df <sub>2</sub>	Significance level
aggressive and impulsive behavior	0.047	1	60	0.829
communication with peer group	2.947	1	60	0.168

The results of Levin examination show equity of social skills and its components’ grades. The

results show that we have equity in variance for social skills and its components’ grades.

Table 3: Shapiro-Wilk Test for social skills and its components’ grades

Variables	group	statistic	df	Significance level
aggressive and impulsive behavior	Experimental	0.866	31	0.001
	Control	0.941	31	0.086
communication with peer group	Experimental	0.813	31	0.001
	Control	0.923	31	0.028

The results of this examination show the social skills and their components’ grades. It shows that there is no normal grade in control group except social behaviors and impulsive and aggressive behavior component.

According to the equity in both groups, using parametric exams is possible.

**The main hypothesis:** Group discussion teaching method has a positive effect on social skills in comparison with lecturing method.

Table 4: Covariance analysis of social skills’ grades in case study groups

Source	Sum of squares	df	Mean of square	F	Significance level	Eta values	statistical power
Pretest	55423.22	1	55423.22	336.06	0.001	0.85	1.00
Group	2514.82	1	55423.22	15.25	0.001	0.21	0.97

As the results showed in table 4, there is a meaningful difference between groups in social skills’ grades in  $p < 0.01$  level. It means that the difference between students’ social skills’ grades in experimental and control groups is meaningful. According to the fact that the average of

experimental group in social skills’ grades is more than control group, group discussion could have a positive effect on social skills.

**Hypothesis 1:** The group discussion teaching method is effective on decreasing aggressive and

impulsive behaviors of students in comparison with lecturing method.

**Table 5: Covariance analysis of impulsive and aggressive behaviors' grades**

source	Sum of squares	df	Mean of square	F	Significance level	Eta values	statistical power
Pretest	0.846	1	0.846	0.034	0.003	0.854	0.034
group	87.222	1	87.222	3.508	0.066	0.060	0.452

The results in table 5 showed, there is no a meaningful difference between groups in impulsive and aggressive behaviors' grades in  $p < 0.01$  level. It means that the difference between students' impulsive and aggressive behaviors' grades in experimental and control groups is not meaningful. Therefore, group discussion method

couldn't change the students' impulsive and aggressive behaviors.

**Hypothesis 2:** Group discussion teaching method is effective on increasing the communication with the peer group in comparison with lecturing method.

**Table 6: Covariance analysis of communication with the peer group's grades in case study groups**

source	Sum of squares	df	Mean of square	F	Significance level	Eta values	statistical power
Pretest	119.075	1	119.075	18.24	0.001	0.247	0.986
group	27.939	1	27.939	4.229	0.044	0.071	0.524

As the results in table 6 showed there is a meaningful difference between groups in communication with the peer group's grades in  $p < 0.01$  level. It means that the difference between students' communication with the peer group's grades in experimental and control groups is meaningful. According to the fact that the average of experimental group in communication with the peer group's grades is more than control group, group discussion could have a positive effect on communication with the peer group.

(2007), Mir Shahjafari et al (2004) and Gholtash (2004) and Soltani's (2005). Also many researches concerning active method of teaching are in line with this research and accept the interactive method. Researches such as Nosrat (2009) and Pour Sabahian (2008) which studied the effects of active method on physics learning and also the studies of Lindesi Nagle (2010) and Ajija (2013) and Kiou et al. (2014) showed that interactive methods increase the success among students.

**CONCLUSION**

Regarding that the aim of this study is evaluating the effect of group discussion method on increasing social skills, the main hypothesis according to the results of the chart was accepted. It said that there is a meaningful relation between group discussion and lecturing methods. It means that the average of social skills' grades in experimental group is more than the control one. Regarding that the case study groups are almost the same in variables such as the job of parents, their degrees and number of brothers and sisters, this effect results from group discussion method; the differences between these two groups show the great effect of group discussion teaching method on social skills of students. These results are inconsistent with the results of researches by Ghaffari and Kazem pour (2011) on 61 students. They are also in line with Keramati

**REFERENCES**

Ajaja,O,(2013). Which strategy best suits biology teaching? Lecturing, concept mapping, cooperative learning or learning cycle? Electronic Journal of Science Education Vol. 17, No. 1 (2013)

Chang, Y. (2010). *Students' perceptions of teaching styles and use of learning strategies*. Retrieved from [http://trace.tennessee.edu/utk\\_gradthes/782](http://trace.tennessee.edu/utk_gradthes/782) on 22/9/2012.

Ghaffari et al. 2012. The effect of interactive methods on students' social skills. Educational management and guidance journal of Azad university of Garmsar, sixth year, P 87-106.

Gheltash A. 2004. Evaluation of the effects of interactive teaching method on students in fifth year of primary school's social skills in

- 2003-2004. Unpublished MA dissertation, Tehran. Tarbiat Moallem University.
- Kus M , Erkan F,& Sertel A .(2014) Teacher and student thoughts on effectiveness of cooperative learning in geography teaching <http://www.academicjournals.org/err>.
- Matson, Johnny L. (2009). *Social Behaviours and Skills in Children*, Springer, New York. DOI:10.1007/978-144190234-4.
- Matson,J., Rotatori, A., Helsel,W.(1983). Development of a rating scale to measure social skills In children, The Matson Evaluation of Social Skills with Youngsters(MESSY). *Behaviour Research and Therapy*, 21335-340.
- ustafa, M. N. (2011). *Teaching Thinking Strategies*. Amman: Dar Al Bedaya, Publishers & Distributors.
- Nagle,L, The role of self-efficacy instudents' reading enjoyment through Reciprocal Teaching. Unpublished Master's Thesis. Published by ProQuest LLC (2013). Copyright in the Dissertation held by the Author.
- Nosrat F. 1388. The effect of technological active physics teaching on guidance school students' educational success. MA dissertation, educational science collage in Khorasgan Azad University.
- Odundo, P.A. (2003). *Impact of instructional methods on learners' achievement in business studies in Kenya's secondary schools*. Unpublished PhD Thesis submitted to the University of Nairobi, November 2003.
- Pour Sabahian M. 2008. Evaluation of physics learning, view and skill in research teaching method and its comparison with the usual method in electricity laboratory course. Shahid Rajai Trabiab Dabir University (1386-1387). MA dissertation of science collage. Safavi M, Borzooei T. *Osoole amuzesh be bimar*, first edition,1385,Tehran:Salemi
- Shabani H. *Skills education*. Tehran: Samt Company; 2006:10-11. [Persian. Shabani H. 2007. *Teaching skills*, second volume. Tehran, Samt.
- Tanner, K. (2009). *Approaches to Life Sciences Teaching and Learning*. Retrieved from <http://www.lifescied.org/cgi/content/full/8/2/89> on 20/9/2012.
- Soltani. M 2005. Evaluation of interactive teaching method on social skill development on high school boys studied in second year of high school in Hashtroud (2003-2004). Unpublished MA dissertation, Allame University, Tehran.
- Tella, J., Indoshi, F. C. & Othuon, L. A. (2010). "Relationship between students' perspectives on the secondary school English curriculum and their academic achievement in Kenya". *Journal of Educational Research*, Vol. 1, No. 9, pp. 382-389.
- Yousefi F. Kheir M. 1381. Evaluation of validity and reliability of Matson's social skills measurement scale and comparison of girls' and boys' functions in this scale. Shiraz University Human and Social science Journal, No. 2, P 147-158.
- Zeeb, M. S. (2004). *Improving student success through matching learning and teaching styles*. Retrieved from <http://www.creativelearningcentre.com/downloads/lsia/Zeeb%20LSA%20research%20pilot%20edited%20US.pdf> on 20/9/2012.