

ACADEMIC ACHIEVEMENT IN SOCIAL SCIENCE: RELATIVE EFFECT OF COLLABORATIVE LEARNING AND DIALOGUE

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Collaborative learning and Dialogue are two important learning approaches which play a significant role in student's achievement. Over the years there have been numerous researches conducted on collaborative learning Web (1982), Salvin (1991), Astin (1993), Raja Maznah (2004) and dialogue approach Cohen (1962), Rhode (2001), Davies (2006), those depict that students learn better, when they are taught through these approaches. Keeping this in view a study was conducted to determine the relative effect of collaborative learning and dialogue approach on academic achievement of the secondary school students in social science. The study was conducted by using experimental method and the sample of the study comprised of sixty secondary school students. Purposive sampling technique was used for selection of sample. Two experimental groups were formulated based on intelligence test score (I.Q. level) of the students (30 students in each groups). Pre-test - post-test matched group design was used for group formation. One experimental group was taught through collaborative learning and other through dialogue approach. After completion of twenty days of teaching, pot-test (achievement test in social science) was administered on both the experimental groups. For analyzing the academic performance of both the group t-test was employed. Result indicates that both collaborative learning and dialogue approach induce better academic Performance in social science among students. However, in academic performance no significant difference among each of the experimental groups was found.

Key Words: Academic Achievement, Collaborative learning, Dialogue.

Education works best when it focuses on thinking and understanding, rather than on rote memorization. Students gain knowledge more and enjoy learning when they are energetically involved in the teaching learning practice. Research reports that, when students are taught in small groups they learn better. Beckman (1990), opines that students who work in collaborative groups emerge as more satisfied with their courses.

COLLABORATIVE LEARNING

Collaborative learning is used in literature as an umbrella term (Byrne, 2002). Several names are associated with collaborative learning. In the views of Davis (1993), Collaborative learning can also be called as: Cooperative Learning, Collective Learning, Team Learning, Peer group Learning and Project work groups. Whether one calls this cooperative or collaborative learning, it simply means that students are actively engaged with at least one other student to construct knowledge,

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create something, or arrive at a decision together based on their findings. This approach is based on the thought that learning is an obviously collective work based on collaborative participation. It is through the talk that learning occurs. This approach takes the focus of the instructor and puts the intake of knowledge into the hands of the students. It concentrates on learning how to think and understand, and it develops civil and conversation skill by making learning situation and give emphasis to collaboration and exchange of idea. In the views of Dillenbourg (1999) in collaborative learning two or more participants discover or effort to learn something together.

In collaborative learning, students are divided into small groups and work through assignments in the light of teacher's instructions. This process is the instructional use of small steps in which students work collectively to improve their personal and other team member's learning. It involves using of different types of educational activities for engaging common intellectual attempts by the students, or students and teachers together. In collaborative learning students commonly search for understanding, solutions or meanings. Collaborative learning approaches center on students' involvement, not only the teacher's presentation and explanation. Learners are called to share cognitive and experiential knowledge, assume a variety of roles, and practice and master a variety of emotional social skills. Thus, it is necessary for learners to master collaborative learning because in this process learners have the opportunity to get to know one another, build trust, develop and sustain a community of knowledgeable learners, create and be accountable for group norms and classroom processes, while working together to ensure fulfillment of the end result (Barkley, Cross, & Major, 2005; Bruffee, 1999; Kagan, 1999). It involves student's discussion on their thoughts and opinions on the learning problems throughout presentations and communications in groups. It provides the capability to understand a mixture of other opinions; therefore, they can do work effectively with participants from various conditions and accommodating diverse opinions. In Collaborative learning situation learners energetically get engaged in the teaching learning process and place more responsibility of conception on them; their character is transferred toward a new dynamic approach rather than being lectured and receiving information submissively (Scot, 2008).

Collaborative learning is one of the useful and more effective instructional strategies. It builds a safe environment, where students can express themselves and explore their thoughts without the fear of failure or criticism (Sandberg, 1995). Collaborative learning enables students to exchange more views and thoughts. This is because they feel less nervous and can complete task better (Dellucchi, 2006). This approach helps in developing critical thinking skills among learners (Palloff & Pratt, 2007). Goswami (2009) reported that students taught through collaborative learning approach improved their performance in mathematics.

Astin (1993), in a study reported that classroom instructional strategies those promote meaningful collaboration among students made a significant contribution to students achievement. Gokhale (1995), stated that students who participated in collaborative learning performance significantly did better on critical thinking than students who studied individually. Johnson (1996) in a study reported that collaborative learning method had a significant positive impact on student's achievement.

Boardman *et al.* (2001) found in their study that collaborative strategic reading is a practical and effective practice that can be eagerly integrated into reading and language arts instruction with positive impact. Colbeck *et al.* (2001) conducted a study on "collaborative learning methods vs lecture methods and discussion methods". Results of the study indicate that active or collaborative learning methods produce both statistically greater gains in students learning than those associated with more traditional instructional methods.

Pascarella *et al.* (2002) found in their study that minorities, regardless of their gender, were more predisposed towards collaborative learning than were whites. Maesin (2009) in a study concluded that all the undergraduates preferred to participate in collaborative learning activities during their English lessons.

Lal (2011) in a study reported that group of students who were exposed to "collaborative learning" had high academic achievement as compared to the group of students who were exposed to "lecture method". Torres (2013) reported that collaborative learning induces significantly high academic achievement of students.

DIALOGUE APPROACH

Dialogue is a written or spoken conversational exchange between people. It is a group discussion in which participants make efforts to reach a mutual understanding, experiencing everyone's point of view full, equally and no judgmentally. Dialogue searches into the movement of thoughts, and explores the procedure of thinking collectively. In dialogue process, a group of people can explore the individual and collective idea, beliefs and feelings. It offers a chance to take part into a process that shows communication successes and failures. It can expose the often-confusing patterns of incoherence that lead the group to avoid certain problems or, on the other hand, to maintain alongside all reasons, on eminence and protecting ideas regarding particular problems. Dialogue is an important teaching strategy in the classroom transaction (Baskas, 2010). It is really aimed at going into the complete thought procedure and shifting the way, the thought procedure occurs communally. It helps to develop critical thinking skills in students (Goodney and Long, 2007). In the views of Moberg (2008), dialogue in various types remains a valuable way of teaching in large applications. In the views of Freire (1970) "dialogue is a literary and theatrical form consisting of written or spoken conversational exchange between two or more people". In the present study dialogue approach is conceived as an

instructional strategy. The dialogue approach encourages a warm relationship between the students and the teachers. It attempts to promote cooperation between the teacher and the students. Besides it helps in understanding difficult topics in an easiest way.

In dialogue approach students are encouraged to construct their own meaning of the content what is taught. The dialogue approach puts emphasis on listening with increased understanding of the content. It employs learner's exploration ability along with a tendency to bear with others. When a teacher uses dialogue as an instructional strategy he makes students to develop their level of understanding and work together to achieve a common goal. Often it is argued that students learn best when they are made to encounter a variety of contexts and express in numerous ways. This exercise helps them to explore more learning opportunities.

Brewer (2004) in a study documented that college students in online business mode showed noticeable increases in achievement who were exposed dialogue approach. Azevedo (2005) writes that when students interact with multimedia in a dialogue mode they deeper learning.

Cheng & Chen (2006) in a study reported that students when taught through dialogue approach showed significantly better attitudes towards learning. Baskas (2010), reported in his study that dialogue is an essential part in the classroom and should be developed fast and professionally in order to provide the best instruction in the classroom.

SIGNIFICANCE

Collaborative learning and Dialogue are two important learning approaches which play a significant role in student's achievement. During the past few years there have been fervent researchers who have conducted studies on collaborative learning Web (1982), Salvin (1991), Astin (1993), Raja Maznah (2004) and dialogue approach Cohen (1962), Rhode (2001), Davies (2006). These studies depict that students learn better, when they are taught through collaborative learning or dialogue approach. A look at literature reflects that no study was conducted to determine the relative effect of collaborative learning and dialogue approach on academic achievement of secondary school students in Social Science. Keeping this in view the present study was undertaken to find out the relative effect of collaborative learning and dialogue as instructional strategies in social science at secondary school level. Findings of the study would show guidelines to the social science teachers in designing their teaching pedagogy for ensuring effective teaching. There is a felt need of using the effective teaching strategies in social science to maximize conceptual development. In this direction, findings of the study would be very helpful to future educational planners of Social Sciences.

Objectives: The following objectives were framed in the study:

1. To find out the effect of “collaborative learning” approach as instructional strategy on academic achievement in Social Science.
2. To find out the effect of “dialogue” approach as instructional strategy in Social Science.
3. To find out the relative effect of “collaborative learning” and “dialogue” approach as instructional strategies in Social Science.

Hypotheses: The following hypotheses were framed to achieve the objectives:

1. Collaborative learning contributes significantly to the academic achievement in Social Science.
2. Dialogue approach contributes significantly to the academic achievement in Social Science.
3. There exists no significant difference in the effect of collaborative learning and dialogue approach as instructional strategies on academic achievement in Social Science.

DESIGN OF THE STUDY

The study was conducted by using experimental method. The sample of the study comprised of sixty secondary school students studying in class IX. Purposive sampling technique was used. Two experimental groups were formed based on intelligence test score (I.Q. level) of the students (30 students in each groups). Pre-test - post-test matched group design was used for formulation of the groups. One experimental group was taught through collaborative learning and other through dialogue approach. After completion of twenty days of teaching, post-test (achievement test in social science) was administered on both the experimental groups. For analyzing the academic performance of both the groups t-test was calculated.

RESULT AND DISCUSSION

Result of the study is presented by following the below given sequence.

- Result relating to effect of Collaborative learning on Academic Achievement of Secondary school students in Social Science
 - Result relating to effect of Dialogue approach on Academic Achievement of Secondary school students in Social Science
 - Result relating to Relative Effect of Collaborative learning and Dialogue approach on Academic Achievement of Secondary school students in Social Science
- ❖ **Result relating to Effect of Collaborative learning on Academic Achievement in Social Science:** This section shows the result relating to Effect of Collaborative learning on Academic Achievement in Social Science. The result is presented below followed by discussion:

TABLE-1

<i>Group- Collaborative Learning</i>	<i>No of students</i>	<i>Mean score</i>	<i>S.D</i>	<i>Mean difference</i>	<i>SEd</i>	<i>t-value</i>	<i>Level of significance</i>	
Pre-test score	30	28.67	4.4	7.3	1.04	7.02	0.01 level	0.05 level
Post- test score	30	35.97	3.61				Significant	

(Academic Achievement score of the group taught through Collaborative Learning)

The above table shows the data relating to pre-test and post-test achievement test score in social science of the group of students taught through Collaborative Learning. A look at the table reflects that the mean score of pre-test & post-test are 28.67 & 35.97 respectively. The mean score difference between pre-test & post-test is found to be 7.3 and the calculated 't' value is 7.02. The obtained 't' value is found to be higher than the tabulated value and this is significant both at 0.05 & 0.01 level of significance. The significant difference in mean scores indicates that Collaborative Learning induces better academic achievement in Social Science. Based on the above finding it can be stated that the hypothesis no. 1 i.e. "Collaborative learning contributes significantly to the academic achievement in Social Science" is thus upheld.

- **Result relating to Effect of Dialogue approach on Academic Achievement in Social Science:** This section shows the result relating to effect of Dialogue approach as an instructional strategy on Academic Achievement of Secondary school students in Social Science. The result is presented below followed by discussion:

TABLE 2

<i>Group- Dialogue Approach</i>	<i>No of students</i>	<i>Mean score</i>	<i>S.D</i>	<i>Mean difference</i>	<i>SEd</i>	<i>t-value</i>	<i>Level of significance</i>	
Pre-test score	30	28.83	4.39	5.57	0.99	5.63	0.01 level	0.05 level
Post- test score	30	34.4	3.2				Significant	

(Academic Achievement score of the group taught through Dialogue Approach)

Table 2 shows the data of pre-test and post-test achievement score of the group of students taught through Dialogue Approach in social science. A look at the table reflects the mean score of pre-test & post-test are 28.83 & 34.4 respectively. The calculated 't' value is found to be 5.63 which is higher than the tabulated value. The calculated 't' value is found significant both at 0.01 & 0.05 level of significance. This indicates that the group of the students taught through dialogue approach

shows high academic achievement in social science. The above finding supports to accept hypothesis no2. i.e, “Dialogue approach contributes significantly to the academic achievement in Social Science”.

- Result relating to Relative Effect of Collaborative learning and Dialogue approach on Academic Achievement in Social Science

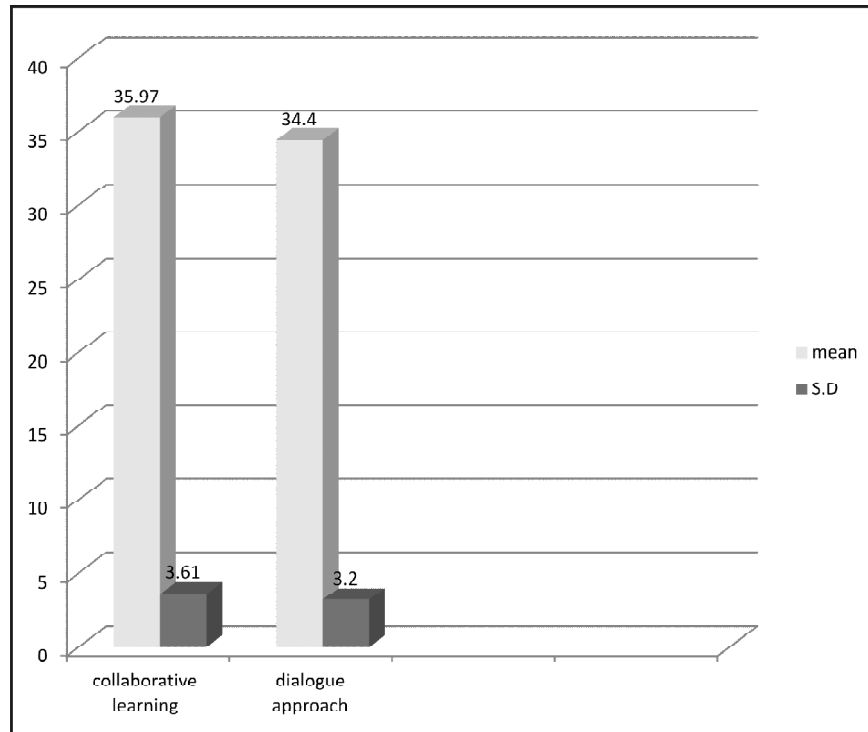
TABLE-3

<i>Group</i>	<i>No of students</i>	<i>Mean score</i>	<i>S.D</i>	<i>Mean difference</i>	<i>SEd</i>	<i>t-value</i>	<i>Level of significance</i>
Experimental group exposed to collaborative learning	30	35.97	3.61	1.57	0.88	1.78	0.05 level
Experimental group exposed to Dialogue approach	30	34.4	3.2				Not Significant

(Difference between the group of students taught through Collaborative Learning and Dialogue Approach)

Table 3 shows the data relating to academic achievement of students taught through collaborative learning and Dialogue approach. A look at the table reflects that the mean score of the group taught through collaborative learning is 35.97 and the mean score group exposed to dialogue approach is 34.4. The mean difference between the two groups is 1.57. The t-value is 1.78 which is not significant. This shows that there exists no significant difference between the two groups in their academic achievement in social science. This can be explained that none of the two groups differ to each other in their academic achievement in social science. Based on the above finding it can be stated that the hypothesis no.3 i.e, “There exists no significant difference in the effect of collaborative learning and dialogue approach as instructional strategies on academic achievement in Social Science” is thus accepted. This can further be explained both Collaborative learning and Dialogue approach as instructional strategies do not produce significant difference in academic achievement in Social Science of Secondary class students. However, both the approaches are effective in inducing higher academic performance in Social Science.

The result is shown graphically below:



CONCLUSIONS

The study concluded the following:

- Collaborative learning as an instructional strategy to teach Social Science at Secondary level is effective in inducing high academic performance.
- Dialogue approach as an instructional strategy to teach Social Science at Secondary level is effective in inducing high academic performance
- Both Collaborative learning and Dialogue approach do not induce significant difference among group of learners in terms of their academic achievement scores in Social Science at secondary level.
- Collaborative learning and Dialogue approach as instructional strategies are advantageous for Secondary

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