Effectiveness of Peer-tutoring on Reading Comprehension of School Students in Hindi Language

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Abstract

The present investigation was intented to study the effectiveness of peer-tutoring strategy as against conventional method of teaching Hindi language in terms of students' reading comprehension. The quasi-experimental research design, i.e. pre-test-Post-test control group design was used and the study was conducted on a representative sample of 168 Class VIII students drawn from two schools of Agra district of Uttar Pradesh. It is evident from the analysis that peer-tutoring strategy has a significant role in enhancing the level of reading comprehension of eighth grade students in Hindi language. Further, experimental group students have made significantly higher gains in reading comprehension in comparison to their counter parts, i.e. conventional group students.

Introduction

Education is a goal-oriented process which continues throughout human life. It is a potent force for the harmonious development of the personality of an individual. Various attributes of human personality like truth, goodness and beauty may be attained through education. In this connection, Gandhiji rightly said, "Education is the preparation for complete living, adjustment to environment, perfection of one's nature, character building and harmonious development of personality."

It has an implication that education has the responsibility to develop the qualities of hand, heart and head as well as training in 3R's, i.e. reading, writing and arithmetic. Reading and writing are basic skills which are equally important for all the subjects taught to students. That is why there should be more emphasis on reading comprehension, vocabulary development and writing skills of the students from the vary beginning of schooling. This will not only strengthen the linguistic ability of the students but also enhance the academic achievement in all the subjects like mathematics,

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science, history, geography, etc. including languages taught to them. Therefore, due emphasis is being given on language development of the children from the primary stage of schooling. Teachers are doing their best to develop linguistic potential among the children by adopting various methods of teaching but they are not satisfied with the achievement of the students. Perhaps, our teachers stick to the textbook and stereotyped teaching methods till date. These teaching methods are not only ineffective but also fail to activate the minds of the pupils. The National Policy on Education (1986) criticised the teaching methods adopted in Indian schools by pointing out that by and large, "the methods of teaching are quite outmoded. Quite often, these encourage memorising the contents of books and replication of the expected answers." This is unfortunate particularly when there is a knowledge explosion all round. Hence, participatory learning and teaching, emotion and experience need to have a definite and value place in the classroom (NCF-2005).

UNESCO Report (1972) pointed out that "No doubt, the teacher has to import knowledge, but the more important function is to encourage thinking on the part of the students. He has to devote more time and energy to productive and creative activities; interaction; discussion; stimulation; understanding and encouragement". Hence, there is a need to identify and try out such a method through which language potential like reading comprehension, verbal ability, etc. could be enhanced. There may be various methods, viz. textbook method, lecture, project,

narration, story telling, individualised instruction, peer tutoring, etc. Out of these, a method is needed through which individual needs of the learner may be fulfilled at his own level or potential. A method known as peer tutoring fulfill this criteria where students get full opportunity to satisfy their individual need without hesitation because teaching is done by his or her own classmate. It helps the students not only to expose with their mates and meet out the individual demand but also strengthen their confidence. This, free and fair atmosphere, helps the individual to learn more with their classmate. Hence, there is a need to explain peer relations and learning as well as the method so as to know what it is, and how it applied in the classroom situation.

Peer Relations and Learning

Children's communication with their peers has qualities that differ from the qualities of adult-child communication. For example, peer dialogues are usually more equal than conversations between adult and child; children usually listen more respectfully to adults than to peers for information and guidance. Such differences have serious implications for learning. Educators have become aware of these differences and have begun to design classroom strategies that best exploit the learning opportunities provided by both peer and adult-child relations. This entry discusses contemporary methods for applying the special features of children's peer relations to their academic learning.

Piaget (1932) in his work on moral judgement, introduced the notion that children live within "two social worlds,"

one of unilateral adult-child commands, the other of mutual peer cooperation. Developmental psychologists have elaborated this distinction further (Youniss, 1980; Hartup, 1985). Whereas, adult-child interactions reflect a fundamental asymmetry of power and knowledge, peers interact on an equal footing. This means that adults usually direct and structure the agenda in their conversations with children, whereas children negotiate and "co-construct" the agendas of their peer encounters.

Hence, peer tutoring occupies an instructional ground somewhere between adult-child and true peer communication. Like adult-child instruction, peer-tutoring is based upon a transmission of knowledge model. This mode assumes that one party knows the answers and must communicate them to the other party. Knowledge is "passed down" from person to person in a linear fashion rather than co-constructed by persons who are both seeking answers. Unlike adult-child instruction, however, in peer-tutoring the expert party is not very far removed from the novice party in authority or knowledge: nor has the expert any special claim to teaching competence. Such differences affect the nature of discourse between tutor and tutee because they place the tutee in less of a passive role than does the adult-child instructional relations. Being closer in knowledge and status, the tutee in a peer relation feels free to express opinions, ask questions, and risk untested solutions. The interaction between instructor and pupil is more balanced and more lively when the tutor is a peer (Damon and Phelps, 1989).

Further, peer-tutoring not only helps in making teaching effective but also good the students to trap their talent or abilities and bring out their leaving potentiality into full play. However, there is a dearth of empirical evidences concerning with the effectiveness of peer-tutoring in Hindi Language in Indian classrooms setting. The present study answers the following basic questions:

(1) Does peer-tutoring in Hindi Language raises the level of reading comprehension of the pupils?

(2) Is peer-tutoring more effective than traditional method of teaching?

So far peer-tutoring is widely used as a teaching method for learners of all ages and all levels, viz. elementary, secondary, higher education, adult education and vocational education. It is most often imparted during or after the regular school hours by someone other than the teacher.

Peer-tutoring Strategy: An Overview

Paolitto (1976) traced the historical roots of peer-tutoring back to the first century A.D. when Quintilian noted the practice of having younger children taught by older children in his Institution Qratoria. The method was subsequently employed on a limited basis in Germany and Spain in the sixteenth century. Establishment of peer-tutoring on a formalised and widespread basis is generally credited to Andrew Bell, a Scotsman, who in the late eighteenth century established a school in Madras, India for orphans of British soldiers and Indian mothers. Bell modified the ancient Hindu tutoring system and in a 1797 report described the successful application of individual

and group peer tutoring as a method of instruction and discipline. Bell's methods were enthusiastically adopted by an English educator, Joseph Lancaster, who strongly advocated "tutorial" or "monitorial" method of instruction. In what came to be called the Bell-Lancaster system, professional teachers instructed older students who in turn instructed younger ones, with the younger students teaching still younger ones. Although variations of the Bell-Lancaster system were adopted by other European countries in the early 1800s, popularity of the system was short-lived, since increasingly, teaching was being viewed as a profession requiring training and talent and more money were being devoted to public education. Nevertheless, peer-tutoring was an accepted practice in the "one-room school-houses" of the early colonial period in American history.

Renewed interest in peer-tutoring as a teaching method in the United States began to be taken in the early 1960s due to concern over shortages of teaching personnel and the belief that some children might learn more effectively from another child than from an adult. One of the first and the most extensive of the tutoring programmes was the high school home work helpers programme started in 1962-63 in New York City. In this programme approximately one thousand 16-18 year-old students served as paid tutors to approximately six thousand ninth and tenth graders (age 11-15) from disadvantaged backgrounds and with reading problems.

Later on, various researchers studied the impact of peer tutoring on reading comprehension of children and found that participating children gained in reading ability or achievement or performance or attitude towards reading. (Nahem : 1978; Stern : 1978; Rogers : 1979; Jones : 1981; Limbrick, and Glynn : 1986; Brown : 1987; Tooping : 1988; Cinbula : 1991; Perry : 1991; Baland-Williams : 1992; Leach : 1993; Taliver : 1994; Fuchs and Others : 1995; Bulter : 1999; and Noell George, et.al. : 2000). However, researchers like Agris (1979), Bohac (1981), Nevi (1982), Reynolds (1987), and Vaughn, Klinger and Bryant (2001) could not observe significant gain in children reading scores or word recognition or improvement in their attitude towards reading.

Objectives of the study

1. To organise and undertake the teaching of Hindi language through peer- tutoring at the elementary stage.
2. To study the level of reading comprehension of students of experimental and control groups.
3. To compare the gains accrued in reading comprehension of experimental and control groups after the experimentation.

Hypotheses

1. Students who are taught through peer-tutoring method do not differ significantly in their reading comprehension from those taught through traditional method.
2. Gains (accrued) which flow to the peer-tutored students in their reading comprehension do not differ significantly from those tutored through traditional method.

Research Design

In this study, one of the quasi-experimental designs, namely pre-test-post-test-control group design was used. In this design, two parallel, equated groups are selected. To have two equated groups, randomized group technique is used in which both the groups are selected from a large population using random selection of subjects so that groups formed were equal in their composition. One of the groups was known as Experimental Group (E) and the other was Control Group (C). Both the groups were given pre-test comprising general intelligence, socio-economic status scale (SES) and reading comprehension test in Hindi Language. During the treatment phase, experimental group was taught through Peer tutoring while control group was taught through traditional method. After the experimental treatment, post-test was given on the same set of variable. A schematic brief is presented in Table 1.

Variables

Independent variables	: Peer Tutoring Approach
	: Traditional Method.
Dependent variables	: Reading Comprehension in Hindi language
Controlled variables	: General Intelligence
	: SES
	: Age
	: Status and type of school (Public schools)

Sample

The study aimed at finding out the efficacy of the two methods, viz. peer-tutoring approach and traditional method. Hence, two sections of class VIII from each of the two schools were taken for the experimentation. The experimental and the control groups were decided by the draw of lots. The detail about two groups which were taken as the experimental and the control groups are given in Table 2.

TABLE 1
Schematic representation of the experimental design

S. No.	Stage	Experimental Group N=84	Control Group N=84
1	Pre-test comprising of the following tests: 1. Raven's Progressive Matrics 2. Kulshreshta's SES Scale 3. Reading Comprehension Test		
2	Treatment	Peer-tutoring	Traditional method of teaching
3	Post-test-Reading Comprehension Test		

TABLE 2
Number of students in the experimental and control groups

S. No.	Institution	Experimental	Control Group Group	Total
1	S.R.K. Inter College, Agra	40	40	80
2	R.B.S. Inter College, Agra	44	44	88
	Total	84	84	168

Tools Used

The tools employed in this study are listed below:
1. Raven's Progressive Matrices
2. Kulshreshtha's SES Scale
3. Reading Comprehension Test

Experimentation

The experiment was conducted under three phases. In the first phase, the students of both the treatment groups were administered reading comprehension test. After the administration of this test, the students were provided orientation and instruction about the treatment to be given to them.

In second phase, regular treatment was given to both the groups accordingly. Each of the treatment group was taught with a particular method of teaching. The experimental group was taught by adopting the lecture-cum-peer tutoring method while the control group was taught by using the traditional method, the method which is usually applied by their teachers in the class, i.e. lecture-cum-book method.

Third phase was the evaluation phase, where the evaluation of reading comprehension ability was done. For this, the students of both the treatment groups were again tested on reading comprehension test. In this way, the students were tested on two occasions, that is, before the treatment and after the treatment on same test. This was done to see how much the students had gained as a result of teaching through peer tutoring and the traditional method.

Data Collection

The data for reading comprehension was collected on two occasions; one was pre-test occasion (before the treatment) called occasion I and the other was post-test occasion (after the treatment) called occasion II.

Statistical Techniques Used

Following statistical techniques were employed to analyze the data:

1. In order to know the nature of the data, the measure of central tendency and dispersion like mean and standard deviation (S.D.) were employed.
2. Two-tailed test was used to test the null hypotheses of no difference between means of two large and independent groups.
3. In order to find out the significant difference between two means,'t' ratio was calculated.
4. For deeper understanding, bar diagrams were plotted wherever necessary.

Results and Discussion

In order to study the effect of peer-tutoring and traditional method of teaching on reading comprehension, the relevant data were analysed in term of mean scores, S.D. and 't' value. The detailed analytical description is given in Table 3. The bar diagram for mean value of reading comprehension before and after the treatment is plotted in Figure 1.

It is evident from Table 3 that before the treatment, experimental and control groups were obtaining nearly equal mean scores for reading comprehension. The calculated 't' value is 1.30, which is insignificant at acceptable level of confidence. It means, both groups were more or less same in their performance for level of reading comprehension. But after the treatment, it was observed that students of peer-tutoring group were achieving higher mean scores (M=12.24) than the students of control group (M=9.76). The calculated 't' value is 10.33, which is significant at .01 level of confidence. Hence, the hypothesis (Ho_1) that "students who are taught through traditional method do not differ significantly in their reading comprehension from those taught through traditional method" is rejected.

It means that students of peer-tutoring group were attaining significantly higher level of reading comprehension in comparison to traditional group students. In other words, experimental group performed better on reading comprehension test after treatment than their counterparts, i.e. control group. Probably, it is due to the classroom climate during peer tutoring where they interacted in free and fair environment which motivated the students to translate, interpret and extrapolate the learning material as per their potential. Moreover, students try to put his/her viewpoint with logic to convince others when they have healthy interaction and competition with their classmates. This situation helps them to improve their comprehension in Hindi Language. Similar findings have been reported by Tooping (1988), Cinbula (1991), Leach (1993), Fuchs and Others (1996), and Noell et al. (2000) in language other than Hindi. Howover, Agris (1979), Nevi (1982), Reynolds (1987) and Vaughn, Klinger and Bryant (2001) could not find the significant effect of peer-tutoring on the reading improvement in their studies.

TABLE 3
Mean scores, S.D. and 't' value for reading comprehension of students before and after the treatment

S. No.	Tests	Groups	N	Mean Scores	S.D.	't' value	Significance
1	Pre-test	Experimental	84	9.07	2.24	1.30	Not significant
2	Pre-test	Control	84	8.64	1.99		
3	Post-test	Experimental	84	12.24	1.46	10.33	.01 level of confidence
4	Post-test	Control	84	9.76	1.70		

Comparison of Gains Achieved by the Experimental and Control Groups in Reading Comprehension

It is clear from the foregoing discussion that peer-tutoring strategy has a significant effect so far as improvement the reading comprehension of the students in Hindi language is concerned. But a careful observation of the results presented in the Table 3 indicates that both the experimental and control group students are progressing on the variable under study. Here, the question arises that whether the progress shown by both the groups is due to the maturation of the subjects under study or it is because of the two teaching strategies. To get the above mentioned doubt resolved, the gains made by the subjects of experimental and control groups were compared variable-wise for both the schools as well as for total scores altogether and discussed as under.

The gain scores made by the individuals of two groups in the pre-test and post-test on reading comprehension were compared. The results are presented in Table 4. The bar diagram for mean gain scores of reading comprehension of different groups i.e., experimental and control, has been plotted in Figure 2.

Table 4 reveals that both the experimental groups (experimental group of R.B.S. Inter College and S.R.K. Inter College as well as the total sample of experiment) made significantly higher gains in reading comprehension in comparison to the respective control groups, as the 't' values in Table 4 are found statistically significant. Hence, the hypothesis (Ho$_2$) that "gains (accrued) which flow to the peer-tutored students in their reading comprehension do not differ significantly from those tutored through the traditional method" is rejected. It connotes that students of peer-tutoring groups performed significantly better than conventional group students. Thus, after elimination of the individual maturation effects on the reading comprehension scores, it can be safe to conclude that peer-tutoring is an effective strategy in raising the level of reading comprehension of the students.

TABLE 4
Mean scores, S.D. and 't' value of gain scores for reading comprehension

Schools	Experimental Group			Control Group			't' value	Significance
	N	Mean	S.D.	N	Mean	S.D.		
R.B.S. Inter College, Agra	44	3.05	1.45	44	1.02	0.79	8.12	.01 level
S.R.K. Inter College, Agra	40	3.30	1.38	40	1.33	0.76	7.88	.01 level
Total Sample	84	3.17	1.41	84	1.17	0.79	11.11	.01 level

Conclusion

The findings of the study lead to the conclusion that peer-tutoring strategy has a significant role in enhancing the level of reading comprehension of the children in Hindi language. Further, it may be generalised that the experimental groups have made significantly higher gains in reading comprehension in Hindi language in comparison to the control groups.

Educational Implications

The major educational implications of the study are as under:

1. Peer-tutoring is a desirable approach for forestalling student unrest and burgeoning indiscipline in the changed social milieu of the country, for giving a discipline-oriented direction to the students' behaviour patterns and for raising the level of education, for tackling the emerging social, political, educational and economic problems. Peer-tutoring can be considered as a highly desirable method for triggering the all-round development of the students' personality. It is due to the inbuilt structure and freedom to work in groups where the students get so many opportunities to carry out various types of activities as tutors and tutees. It helps them to develop their potentials because students in various situations identify the problems and issues involved in and take decisions at different occasions. Such exercises broaden the mental horizon of students and develop confidence in them.

2. The peer-tutoring method is eminently suitable for inspiring students, giving them personalised direction, for keeping them fruitfully occupied and creatively active, for inculcating in them the ethos of self-discipline, for installing a measure of self-confidence, for channelising their activities into creative paths, for giving fillip to the regime of introspection, development of arguing and debating skills and for arriving at solutions on their own to the emerging problems in the teaching and learning situations.

3. It gives students a better understanding of their teachers' problems leading to the improvement of their own classroom behaviour as listed below:

   • The tutors are enabled to view the teaching-learning situation from the teachers' position and thus are led to make the classroom climate more psychological, congenial and less suppressive and authoritarian.

   • It permits student to put some of their own ideas into practice.

   • It increases their own knowledge by requiring them to master what they are teaching and to fill in gaps in their information.

   • As tutors, they enjoy an enhanced sense of competence and personal worth.

   • It increases the cognitive abilities and raises the level of reading comprehension in Hindi language.

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