READING COMPREHENSION OF SEVENTH GRADERSIN ENGLISH: EFFECT OF RECIPROCAL TEACHING

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Abstract

The present study was conducted toinvestigate the effectiveness of reciprocal teaching on English reading comprehension of seventh graders who are low achievers in English. A total of (N=100) low achievers in English were identified and the sample was divided into two groups; experimental group (N=50) was taught through reciprocal teaching and control group (N=50) was taught through conventional method.Pre-test – post-test with one control group design was employed and the data collected was subjected to one -way analysis of variance.The result indicated the effectiveness of reciprocal teaching in improving reading comprehension of the students who are low achievers in English

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Key words: low achievers, conventional method, reciprocal teaching, English reading comprehension

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Introduction

The method of teaching English reading comprehension in most of thenorth Indian classrooms are based on translation from English into Hindi instead of based on a reading process which would help the readers construct meaning from a text. This traditional instruction has failed to develop Indian students' abilities to comprehend English texts or to interpret them meaningfully because reading is more than just a receptive skill through which the readers learn new words and translate sentences or a whole text word by word into their native language. It is thus essential to clarify the reading process and its nature, what reading is, and how proficient readers engage in the reading process and comprehend a text so that a full understanding of these concepts help Indian EFL (English Foreign Language) readers develop a higher level of reading comprehension. One widely used set of meta-cognitive strategies are the reciprocal teaching strategies, a set of four cognitive strategies, used to improve students' reading comprehension. From the cognitive constructivism perspective, we believe that struggling readers can improve their performance through the use of interactive (through dialogue) strategies and the reconstruction of ideas. Research has shown that meaningful learning occurs when learners actively construct knowledge representation of information in working memory(Novac, 1990). The conditions of meaningful learning require an instructional model that must elicit cognitive processes of comprehension (McGriff, 1996). According to Alverman and Phelps (1998) the reciprocal teaching model, which was developed in the mid-1980s, involves a high degree of social interaction and collaboration. The study reported here examined the effectiveness of reciprocal teaching strategies on a group of students who are low achievers in English.Whenever teachers are faced with the problem of students who have good decoding skills but inadequate comprehension skills, they need to be able to train those students to use meta cognitive strategies; otherwise, these students will continue to read texts emphasizing only words and not meaning (Dermody & Speaker, 1999). One line of research on cognition has focused on the reciprocal method to use in order to construct meaning.

Theoretical perspective

One of the most notable strategy-instruction packages developed in the 1980s (Pearson & Dole, 1987; Pressley, Snyder, &Cariglia-Bull, 1987) was reciprocal teaching (Palincsar& Brown, 1984), a method of reading instruction designed to improve comprehension in children who can

decode but who experience difficulty understanding text. The intervention involves training four strategies associated with both skilled comprehension and comprehension monitoring while reading (Meyer, Brandt, & Bluth, 1980; August, Flavell, & Clift, 1984; Bereiter & Bird, 1985). It is also recognized as an example of an inclusive practice (Palincsar& Brown, 1984; Rosenshine& Meister, 1994; Westera, 2002; Alton-Lee, Westera&Pulegatoa-Diggins, 2012). Reciprocal teaching encourages student self-directed prediction of what information might occur in text, clarification of information not completely understood as text is read, generation of questions about text content and summarization of material covered. Over time, reciprocal teaching has been shown to be effective for diverse groups of learners: pre-readers, students with limited comprehension and decoding skills, English language learners, and students with specific learning difficulties and low achievers.

Using the early reciprocal teaching research, Kelly et al. (1994) sought to determine the effectiveness of reciprocal teaching by replicating the work of Palincsar and Brown (1984). In the study by Kelly et al. (1994), the students who used reciprocal teaching showed significant improvement in reading comprehension and maintained the level in the 8-week follow-up assessment. Reciprocal teaching makes explicit use of four structured reading strategies, namely, summarizing, questioning, clarifying and predicting in the context of direct but guided facilitation of active interactions between teacher-learner, learner-learner and learner-texts (Ahmadi & Ismail, 2012).Reciprocal teaching is a reading instructional method that involves teachers and learners engaging in dialogues vis-à-vis a text (Ahmadi & Ismail, 2012; Arif, 2014). The reciprocal teaching strategy has been employed to structurally bridge the "discrepancy between decoding skills and comprehension skills" demonstrated by the students (Reichenberg & Lofgren, 2014).

Reciprocal teaching is an instructional activity that utilizes four comprehension strategies (predicting, questioning, clarifying and summarizing) in the form of a dialogue between teachers and students regarding segments of a text.The process begins with the instructor modeling the steps of Reciprocal Teaching(Pilonieta& Medina, 2009) as:

Predicting: requires the readers to hypotheses about what the author might discuss in the text. This is an opportunity for the students to link the new knowledge they will encounter in the text with the knowledge they already process. It enables the students to understand the structure of the text.

Questioning: helps the students identify the kind of information significant enough to form the basis for a question. It is also a form of self-test. Generating questions about text, likewise, depends on the gist and the function needed for summarizing, but with one additional demand: that the reader monitors the gist to pick out the important points. To generate questions, the reader is required to re-process the information read into question format.

Clarifying: enables the students to identify the difficulties in comprehending the text and the reasons for the same. They also conclude whether to re-read a segment of the text, or to go ahead or to ask for help. There may problem with pronunciation, word meanings and paragraph. In short, clarifying directs the reader to look for parts of the passage that are confusing and unclear. *Summarizing*: provides the students with opportunity to identify paraphrase and integrate important information in the text. It requires the reader to recall and state that gist he/she has constructed.

This is in line with Vygotsky's (1978) socio cultural theory, in which learning takes place in an interactive environment. When students interact with the texts, they use their prior knowledge, acquire information from the context, and combine disparate elements into a new whole before they arrive at their own idea of the meaning (McNeil, 1992). In the process of interacting with 142 others, the learning takes place in a socio-cultural environment (students to student or student to teacher) through dialogue (Anderson & Pearson, 1984; Wilson, 1999). In higher education, Rosenshine and Meister (1994) conducted a meta-analysis of 16 quantitative studies focusing on reciprocal teaching that revealed that reciprocal teaching is most effective for older students as well as those with poor comprehension skills.

In a review by Rosenshine and Meister (1994), 16 studies were analyzed. The authors found an overall positive effect on reading comprehension, with a median Cohen's effect size value (d =

.32) for standardized tests and a large effect size value (d = .88) for researcher-developed tests. Reciprocal teaching is based on active socialization, wherein the knowledge constructed from the text is negotiated within discourse communities through both teacher student and student-student interactions (Gergen, 1999a, 1999b). In facilitating learning using reciprocal teaching activities, students are taught cognitive strategies (Rosenshine& Meister, 1994) through appropriate support and feedback (Oczkus, 2003).

Boulware-Gooden, Carreker, Thornhill, and Joshi (2007) proved that intervention group improved significantly over the comparison group in reading comprehension, $F (1,117) = 4.28$, $p < .041$, with an effect size of .041. In recent synthesis concerning reading interventions targeted at struggling readers between Grades 6 and 9 (Edmonds et al., 2009), seven studies focusing on reading comprehension were included. Most of these studies included some kind of instruction in reading strategies, with two of them using reciprocal teaching. The overall Cohen's effect size (d =1.23) on reading comprehension was very large. Wu and Chen (2018) find that the experimental group performed more satisfactorily than did the control group, indicating that the integration of the e-book resulted in this measurable improvement by enhancing learners' reading comprehension. Reciprocal teaching has positive effect on comprehending expository text (Pilten2016). Izadi and Nowrouzi (2016) investigated the effect of Reciprocal Teaching and Emotional Intelligence and found that reciprocal instruction significantly improved learner's reading comprehension. Students who used reciprocal teaching significantly increased reading comprehension (Ramos, 2012; Ayun &Yunus, 2017). Channa, Nordin and Abassi (2018) through their study found that discussion and recommendations are presented for developing effective reading strategies to design syllabus for the engineering students to improve their reading proficiency.Gunderson et. al (2018) found in his study that reciprocal teaching effects the improvement of both math performance and math attitude. Roop (2018) looked at the effects of a specific comprehension strategy—Reciprocal Teaching on the performance of intermediate elementary students in the intermediate elementary grades on a standardized literacy assessment and found positive effect of strategy.Okkinga, Steensel, Gelderen and Sleegers (2018) show that reciprocal teaching contributed to adolescent low achiever's reading comprehension only when experimental teachers provided high quality strategy instruction and reciprocal teaching can improve low-achieving adolescents reading comprehension in whole-classroom settings.

Rationale of the study

Throughout the world, English is taught as one of the subjects in schools, colleges and universities. Though English is a foreign language, it is introduced as a compulsory subject in the kindergarten even in the most of government schools of India. Still majority of the students feel that English is a difficult subject which leads to high failure rate.Students of V grade in Chandigarh scored lower than the overall national average on all the areas of Reading Comprehension (locating information, Grasp ideas/interpret and Infer/evaluate). Students responded correctly by Less than 50% in Reading Comprehension (National Achievement Survey 2010). Majority of the English teachers follow the traditional method of instructions in schools. National average of VIII grade students at "reading comprehension assigned homework every day scale" is 63 whereas Chandigarh scored 60 at this scale which is below average (National Achievement Survey 2017). At later stages, all learning happens through language. Higher-order linguistic skills generalize across languages; reading, (for example) is a transferable skill. Improving it in one language improves it in others, while reading failure in one's own languages adversely affects second-language reading (National Curriculum Framework-2005).

For effective instructions and learning, there is need to create learning setting in the classroom, that will enable learners to actively participate in the process of instruction, rather than be listeners. Reciprocal teaching is one strategy that can enable all the learners in the classroom to learn or work together. Reciprocal teaching (Palincsar& Brown, 1984) is a widely used method of instructing and guiding learners in reading comprehension. It consists of a set of three related instructional principles: (a) teaching comprehension-fostering reading strategies, including predicting, question-generating, summarizing and clarifying; (b) expert modelling, scaffolding and fading; and (c) students practicing and discussing reading strategies with other students, guided and coached by the teacher. Reciprocal teaching assumes a gradual shift of responsibility for the learning process from teacher to student, which includes the teacher explicitly modelling the use of reading strategies (Rosenshine& Meister, 1994) as well as scaffolding the application of reading strategies within the groups of students working together. It is assumed that by gradually fading teacher's support, students become increasingly more capable of regulating their own reading process.

This can contribute to intellectual, social and psychological development of learners unlike other methods of instructions. Although a number of empirical studies have been conducted on reciprocal teaching abroad, few have been conducted in classroom settings of government schools of India. There is a need to investigate how to help these struggling readers to enhance their reading comprehension. So, the author proposed to study the effect of reciprocal teaching on reading comprehension of low achievers in English.

Research Question

Does reciprocal teaching result in greater reading comprehension of low achievers in English than in conventional settings?

Delimitations of the study:

1)   The study was delimited/ conducted in three Government Senior Secondary Schools of U.T Chandigarh.

2)   The study was conducted on VII Grade students in English only.

3)   The experiment was restricted to 45 working days of the academic session.

Methodology

Sample

In the present study, random sampling technique was used. The sample was selected from around 300 VII grade students of English from three government schools of Chandigarh. The Students were subjected to the English competency test (developed by researcher) to check their achievement in English. The students who score below $M - 1\sigma$ (mean – 1 SD) were selected for the final sample. Students were randomly assigned to experimental and control group for investigating their reading comprehension in English.

Groups	Sample
Experimental Group	50
Control Group	50
Total	100

Design of the Study

The study was experimental in nature and pre-test-post-test control group design with one experimental and one control group was employed. **Control group** was taught by traditional method i.e. chalk and talk. **The experimental group** was taught by reciprocal teaching. Students were randomly assigned to each group. Two groups were assessed before and after the treatment on reading comprehension. The treatment was given to the experimental group for approximately 45 working days. In the present study, the investigator studied the effect of reciprocal teaching strategy (independent variable) on reading comprehension of low achievers in English.

Tools and Material

The following tools and material were used:

1.   Instructional material/lesson plans based on the reciprocal teaching were developed by the investigator. The lessons were based on the syllabus of class VII English text book prescribed by NCERT, New Delhi. The chapters included were: Three Questions, A Gift of Chappals, Gopal and the Hilsa Fish, The Ashes that Made Tree Bloom, Quality, Expert Detective, The Invention of Vita-Wonk, Fire: Friend and Foe, A Bicycle in Good Repair&The Story of Cricket. Content validity of the lesson plans was established.

2.   Worksheets based on the above lessons. (Validated by experts).

3.   English Competency Test in English comprised of 57 items (synonyms, antonyms, modals, one-word substitution, cloze test, adverbs, homophones, preposition, and tenses). Reliability of the test was calculated by KR-20 formula and was found to be was 0.92.

4.   Reading Comprehension Test in English comprised of 56 items. Reliability of the test was calculated by KR-20 formula and was found to be was 0.83.

Experimental Procedure

Phase I: Selecting the Experimental Sample

In the first phase of the study, English competency test was administered to around 300 students of VII grade students from three government schools of Chandigarh**.** Those who scored below $M - 1\sigma$ were selected for the final sample. At last, the 100 students were randomly assigned to experimental and control group for investigating their reading comprehension.

Phase II: Pre-testing Stage

This stage involved the administration of Reading Comprehension test to the students in the experimental group and the control group.

Phase III: Instructional Session

The experimental group was taught through reciprocal teaching. Students were put into a group of four. One student was designated as leader. The investigator then divides the material into smaller chunks (Pilonieta& Medina, 2009). Then investigator read the first chunk to all the small groups, modeling the following steps of reciprocal teaching as:

Prediction: ask students to predict what they think the reading may be about.

Questioning: remind students to generate three levels of question: Right-There questions, between the lines questions, critical thought questions.

Clarify: remind students to ask themselves what words, phrases and pronunciation are unclear to them.

Summarize: students summarize verbally, within pairs, and then share with their assigned small group or record their summary and read it aloud to their small group.

The investigator modeled the steps of reciprocal teaching for 3-4 days. After that students applied the reciprocal teaching by using the same steps. The Investigator distributed material to each member of the group identifying each person's unique role as predictor, questioner, clarifier and summarizer (Pilonieta& Medina, 2009). The control group was taught in traditional instruction settings. The two groups were taught the same topics of English for about 45 working days.

Phase IV: Post-testing Stage

After completion of the instructional session, the Reading Comprehension test was again administered to the experimental group and control group.

Analysis and interpretation of the data

After scoring the difference between post-test and pre-test scores on reading comprehension were computed. Quantitative data was analyzed on SPSS 16.0 packaged software. The obtained mean difference was subjected to one-way ANOVA. The means and SD's of different teaching strategies were computed and have been presented in table I and the summary of one-way analysis of variance, mean of sum of squares, degree of freedom, and the F-ratio have been presented in table 2

Table 1:Means and S.D. of different teaching strategies

	Pre-test			Post-test		
	N	Mean	SD	N	Mean	SD
Traditional	50	17.28	8.38	50	17.66	8.863
Experimental	50	22.62	8.15	50	30.32	9.98

Source: field study 2018

Table-1 shows that the mean score of reciprocal teaching strategy (M=22.62) is higher than the mean scores of traditional teaching strategy (M=17.28) for pre-test and mean score of reciprocal teaching strategy (M=30.32) is also higher than the mean scores of traditional teaching strategy (M=17.66) for post- test. After scoring the difference between post-test and pre-test scores of both the groups, the researcher found thatthere is a growth of 2.20% in the mean score of traditional teaching strategy and 30.04% for reciprocal teaching strategy. Table-1 shows that SD of reciprocal teaching strategy (SD= 8.15, SD= 9.98) for pre-test and post-test. Further table shows that SD of Traditional teaching strategy is 8.38 for pre-test and (SD= 8.86) for post-test.There is growth of 5.76% inSD of Traditional teaching strategy and 22.45% in SD of reciprocal teaching strategy.

Further evidences of the result are supported by the study ofBoulware-Gooden, Carreker, Thornhill, and Joshi (2007). It implies that students when exposed to reciprocal teaching yield better mean gain scores on reading comprehension than the conventional group.

Analysis of Variance on Reading Comprehension

The mean of sum of squares, degree of freedom, and the F-ratio have been presented in Table 2.

Table 2: summary of one-way analysis of variance

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1310.440	1	1310.440	55.51**	.000
Within Groups	2313.560	98	23.608		
Total	3624.000	99			

**Significant at 0.01 level of significance*

(Analysis by SPSS 16.0)

F-ratio was found to be 55.51 which was significant at 0.01 level of significance. The examination of means of indicate that students when exposed to reciprocal teaching yield better mean gain scores on reading comprehension than in the traditional settings.

Discussion

The aim of the researcher was to examine compare mean gain scoreson reading comprehension of low achievers in English taught by two instructional treatments. Our study revealed significant differences were found between students in the treatment classes and the control classes on the reading comprehension post-test. Studies of Carrel et. al, (1989) and Al-Fassi (1989) have claimed positive effects of reciprocal teaching in first language settings. Lysynchuk, Pressley and Vye (1990) find greater increase from before to after training on a standardized test of reading comprehension in the reciprocally trained than in the control condition. This effect is important since standardized comprehension tests measure important reading skills and is used extensively in making curriculum and instruction decision.

Many studies have confirmed the positive effects of reciprocal teaching (Rosenshine& Meister, 1994; Kelly, Moore, & Tuck, 2001; Boulware-Gooden, Carreker, Thornhill, & Joshi, 2007; Spörer, Brunstein, &Kieschke, 2009). Serag (2000) obtained significant differences between the mean scores of the study groups in favor of the experimental group, which was taught by the indirect strategies-based program. Jad (2003) as cited in Al-Qatawneh (2007) showed

statistically significant differences between the experimental and control groups on the grand posttest and each domain of the post-test in favor of the experimental group. Awadh and Sa'eed (2003) as cited in Al-Qatawneh (2007) detected significant differences on the comprehension test, question production, and reading awareness attributed to the strategy of teaching in favor of the meta-cognitive strategies. When a teacher actively uses reciprocal teaching in most readings required of students, reading levels increase one to two grade levels in three to six months (Oczkus, 2005). According to Choo, Eng and Ahmad (2011) Reading Comprehension is one of the four components tested by the MUET (Malaysian University English Test) for Sixth-Form students in Malaysia, and school teachers were charged with the task of helping these students improve. The result of this study shows how 'reciprocal teaching strategies' could help low-proficiency Sixth-Form students improve their reading comprehension. Ching-Ting (2015) reveals that implementing explicit teaching before reciprocal teaching significantly improved low student's reading comprehension and strategies compared with direct instructions.Reciprocal teaching has positive effect on comprehending expository text (Pilten, 2016). Izadi and Nowrouzi (2016) investigated the effect of Reciprocal Teaching and Emotional Intelligence and found that reciprocal instruction significantly improved learner's reading comprehension.Students who used reciprocal teaching significantly increased reading comprehension (Ramos, 2012; Ayun &Yunus, 2017). Okkinga, Steensel, Gelderen and Sleegers (2018) show that reciprocal teaching contributed to adolescent low achiever's reading comprehension only when experimental teachers provided high quality strategy instruction and reciprocal teaching can improve low-achieving adolescents reading comprehension in whole-classroom settings. Wu and Chen (2018) find that the experimental group performed more satisfactorily than did the control group, indicating that the integration of the e-book resulted in this measurable improvement by enhancing learners' reading comprehension

Implications

As revealed in the study, reciprocal teaching strategy has a positive effect on the reading comprehension of students. In contextof the Indian school environment, students are facing problem in reading comprehension with conventional methods of learning. In this scenario, reciprocal teaching method can prove to be a help.Extensive training and coaching are needed

for teachers to become experts in reciprocal teaching. Implementation quality has to be taken into account when doing effectiveness research and when adopting new, theory-based didactic approaches.

- Grouping of students with different capabilities, may significantly improve the performance of low achievers

- Teachers should prepare worksheets based on the length of the chapter and formative evaluation to monitor the progress of students should be employed after completion of chapter.

- While involved in group processing, the teacher should make sure that the students are discussing the concept in right direction or guidance should be provided wherever need arises.

- Emphasis should be given to create classroom situations that compel the students to involve in discussions, involving eye-contact, accepting others ideas, showing patience with group members and reaching conclusions collectively.

- Motivation must be given through certain subject based activities to pupils to arrive at solutions with the help of classmates.

- Rewards in the form of prizes, display of names on notice board for improvement in performance should be used to arouse interest in the subject of English.

- As much group activities should be planned in classroom to enhance reading skills of students.

Reciprocal teaching takes time to get used to as additional time commitment is involved to include reciprocal teaching activities. The pleasure of watching students actively engage in discussing the questions is so exciting that it makes whatever additional time is required for preparation seems like time well spent. Reciprocal teaching strategy can be used occasionally if there is too much content to teach or combined with different instructional strategies to bear fruitful results.

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