

EFFECTIVENESS OF COLLABORATIVE LEARNING ON READING COMPREHENSION OF LEARNERS IN DMLT PROGRAMME

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ABSTRACT

Reading is a fundamental language skill that plays a crucial role in academic success, professional competence, and lifelong learning, particularly for learners of English as a Second Language (ESL). In the context of English for Specific Purposes (ESP), Diploma in Medical Laboratory Technology (DMLT) students require strong reading abilities to comprehend technical and discipline-specific texts. The present study investigates the effectiveness of Collaborative Learning using Collaborative Strategic Reading (CSR) in enhancing the reading comprehension of DMLT students.

The study concludes that Collaborative Strategic Reading is an effective instructional approach for enhancing reading comprehension among ESL learners in specialized domains. It also emphasizes the potential of collaborative learning environments in promoting academic achievement, critical thinking, and professional readiness. The findings have important implications for integrating strategy-based collaborative approaches in ESP classrooms.

Key Words

Collaborative Learning: A structured, systematic, instructional approach in which small groups work together towards a common goal.

Collaborative Strategic Reading: A structured strategy based on collaborative learning used for enhancing reading comprehension.

Reading Comprehension: The ability to understand and interpret meaning from written text.

ESL Learners (English as a Second Language) Learners: Individuals who learn English in addition to their native language.

DMLT: A diploma program that trains students in medical laboratory testing and diagnostic procedures.

ESP: A language teaching approach focused on developing skills for specific academic or professional contexts.

Introduction

Language is a systematic and structured means of communication that enables human beings to express thoughts, ideas, emotions, and experiences through sounds, symbols, gestures and written forms. It serves as a shared code within a community, allowing individuals to convey meaning and interact effectively. Unlike other forms of communication found in the natural world, human language is uniquely complex and creative, relying on the coordinated use of the vocal organs as well as symbolic representation in writing. It is not merely a tool for exchanging information, but a powerful medium for expressing attitudes, shaping relationships, and transmitting culture across generations. As Noam Chomsky aptly observes, “Language is a mirror of the mind,” reflecting both cognitive abilities and social identity. Thus, language stands at the core of human interaction and development, making its acquisition and mastery essential. This significance naturally leads to an understanding of the fundamental skills required to learn any language effectively.

Skills in Language Learning

The process of language learning is fundamentally built upon four essential skills, commonly referred to as LSRW—Listening, Speaking, Reading, and Writing. These skills are often categorized into receptive (passive) skills—Listening and Reading—and productive (active) skills—Speaking and Writing. The receptive skills involve the ability to receive, interpret, and comprehend language input, while the productive skills enable learners to express their thoughts, ideas, and emotions effectively. In the early years of life, a child acquires language naturally and informally through listening and speaking, which together form the primary foundation of communication.

However, for the holistic development of an individual, it is essential to systematically develop all four skills in an integrated manner. While listening and reading provide the necessary input and exposure to language, speaking and writing facilitate meaningful output and self-expression. Among these, reading holds a particularly significant place, as it not only supports academic learning but also contributes to intellectual and personal growth.

Significance and Advantages of Reading

The ability to read is widely regarded as the cornerstone of education and an essential skill for meaningful participation in society. It enables individuals to understand their roles as citizens, professionals, and members of a broader community, while also helping them address personal needs and challenges. Reading engages the whole personality, enriching thought processes and fostering deeper self-awareness as well as an understanding of others and the world. It allows individuals to expand their horizons, explore diverse perspectives, and develop informed opinions. In the modern world, reading carries strong social significance, as the effective functioning of a democracy depends upon a reasonably high level of reading competence among its citizens.

In today’s world, rapid technological growth and automation have changed lifestyles and increased leisure time. Instead of utilization of this free time productively, it often leads to passive use of digital media. Due to unmindful use of digital media, excessive screen exposure, multitasking, and fragmented modes of information consumption it is leading to declining attention span among students in

the present generation. A report by the National Endowment for the Arts (2007) highlights a decline in reading habits alongside reduced comprehension abilities among young learners. Studies indicate that sustained reading practices can significantly enhance concentration, cognitive engagement, and memory retention. In such a context, reading stands out as a meaningful and enriching activity that encourages reflective thinking and continuous learning and hence, there is need to cultivate reading as a disciplined habit. As *Mortimer J. Adler and Charles Van Doren* suggest, reading is an active process that promotes deeper understanding and analysis. The importance of reading is further reinforced in the National Education Policy 2020, which places strong emphasis on foundational literacy and numeracy as an urgent national priority. The policy clearly states that the ability to read and write is an “indispensable prerequisite for all future schooling and lifelong learning,” and that without achieving these foundational skills, the goals of education cannot be realized. This highlights that reading is not merely one of the language skills but the very basis upon which all higher learning depends.

Furthermore, with English emerging as a global language, reading proficiency becomes essential for accessing knowledge, engaging in global communication, and succeeding in academic and professional domains. For undergraduate students, in particular, being proficient in reading English has evolved into a crucial employability skill. It equips them with the ability to interpret information, think critically, and respond effectively in workplace contexts. In alignment with global workforce expectations, the *World Economic Forum Report* (2023) identifies critical thinking and continuous learning as key competencies—both of which are deeply rooted in strong reading habits.

Thus, reading today is not only a tool for academic success but also a vital life skill that supports cognitive development, enhances employability, and fosters active participation in a globalized and knowledge-driven society. Encouraging sustained reading habits among students can therefore address multiple contemporary challenges, including reduced attention span, limited critical engagement, and inadequate preparedness for professional life.

Significance of Reading for Diploma in Medical Laboratory Technology (DMLT) Students

Building upon the broader significance of reading, its role becomes even more crucial when viewed in the context of English for Specific Purposes (ESP), particularly for Diploma in Medical Laboratory Technology (DMLT) students who are learning English as a Second Language (ESL). For these learners, reading is not merely a general language skill but a functional and discipline-specific competence that directly supports their academic and professional requirements. DMLT students are required to engage with a wide range of technical materials such as laboratory manuals, diagnostic reports, medical journals, and standard operating procedures, most of which are predominantly available in English. Therefore, the ability to read with accuracy and comprehension becomes essential for understanding complex terminology, interpreting data, and following procedural instructions effectively.

Moreover, reading proficiency enhances their capacity to stay updated with advancements in medical science, thereby fostering lifelong learning—an indispensable requirement in the healthcare sector. It also contributes to the development of critical thinking and analytical skills, enabling them to interpret findings, draw conclusions, and make informed decisions in para medical settings. For ESL learners, reading further acts as a gateway to vocabulary enrichment and language acquisition within a specific professional domain, improving both their receptive and productive language abilities.

In addition, strong reading skills significantly enhance employability, as healthcare professionals are expected to comprehend written instructions, maintain accurate records, and communicate effectively within multidisciplinary teams. Thus, for DMLT students, reading serves as a bridge between language learning and professional competence, aligning with the goals of ESP by equipping learners with the linguistic tools required for real-world applications. This underscores the need to focus on developing targeted reading strategies tailored to their academic and occupational contexts.

Reading Strategies

Different strategies for enhancing reading comprehension in English have been advocated by many educators from time to time like Skimming, Scanning, Intensive and Extensive Reading, Cloze Reading etc. which have been useful for different types of readers. Certain strategies have specifically been advocated for use by the second language learners. The above mentioned types of reading are basically individualistic in approach. In the present times when ‘Constructivism’ is the buzz word, educationists are focussing more on collaborative learning so that not only the academic aspect but also the social as well as psychological development of students can take place.

In classrooms where collaborative learning is practiced, students pursue learning in groups of varying size, using a variety of learning activities to improve their understanding of a subject. Each member of a team is responsible not only for learning what is taught but also helping teammates to learn, thus creating an atmosphere of achievement.

There are number of strategies for collaborative learning viz. Complex Instruction, Cooperative Integrated Reading and Composition, Cooperative Learning Structures, Group Investigation, Student Teams Achievement Divisions, etc. Out of these strategies, some strategies can be specifically used for teaching English at different levels.

Collaborative Strategic Reading is one such strategy which can be used to enhance the reading comprehension of learners.

With this consideration, the present study was undertaken to ascertain the effectiveness of Collaborative Learning for reading comprehension using Collaborative Strategic Reading.

Collaborative Strategic Reading

Collaborative Strategic Reading (CSR) teaches students to use comprehension strategies while working cooperatively. Researchers *Janette K. Klingner, Sharon Vaughn and Jeanne Schumm* developed CSR. It is a grade-free and level-free strategy and compatible with a wide range of reading programmes. The goals of CSR are to improve reading comprehension and increase conceptual learning in ways that maximize students’ involvement.

It focuses on developing skills like-recognizing the script, deducing the meaning and use of unfamiliar lexical items, understanding the explicitly stated/not explicitly stated information, understanding conceptual meaning, understanding relations between parts of a text, identifying and extracting important points, locating specifically required information, transcoding information to diagrammatic display, etc.

Steps of Collaborative Strategic Reading

Collaborative Strategic Reading (CSR) has the following four steps/strategies

Preview

Preview is used before reading the entire text and students activate their prior knowledge about the topic. Looking at the headings, sub-headings, images or keywords, they predict about the text. The purpose of this is to set up a purpose of reading.

Click and Clunk

This step is used multiple times while reading the text. Students monitor their understanding while reading. It is a 'click' for something they understand and a 'clunk' for a word/phrase or statement/idea they do not understand. To resolve the clunks, different strategies like re-reading the sentence, looking for context clues, breaking the word into parts, asking peers or using a glossary are used. The purpose is to improve vocabulary and comprehension through active monitoring

Get the Gist

This step is also used multiple times while reading the text. Students identify the main idea of a paragraph or section. They summarize it in their own words (usually in one sentence). The purpose is to develop the ability to identify key information and avoid unnecessary details

Wrap Up

This step follows after reading the text. The students generate questions based on the text, review and summarize the key ideas and reflect on what they have learned. The purpose is to reinforce understanding and promote critical thinking

Thus, it is seen that Collaborative Strategic Reading is a systematic and structured strategy which can be selected for learners who are learning any language and so it has been chosen for the present study, to test the effectiveness of collaborative learning on the reading comprehension of learners studying in DMLT programme.

Objectives of the Study

The main objectives of the study were as follows:

- To prepare and implement reading skill module based on Collaborative Learning using Collaborative Strategic Reading
- To evaluate the effectiveness of Collaborative Learning on reading comprehension of students.
- To study the feedback of the students on the implementation of the module for reading comprehension based on Collaborative Learning.

Hypothesis

Based on the above objectives, the following hypothesis was formulated-

- 1.1 There will be no significant difference between mean achievement scores of the students in pre-test and post-test.

Delimitation of the Study

The present study was delimited to DMLT programme. The study has also been delimited to only one strategy of collaborative learning i.e. Collaborative Strategic Reading.

Design of the Study

The present study is experimental in nature and has been conducted utilizing 'Single Group Pre-Test, Post-Test Design.'

Sample

The sample of the study was chosen based on the convenient sampling technique. The sample of the present study comprised of 20 students pursuing Diploma in Medical Laboratory Technology (DMLT) from a private University in Vadodara in the experimental group. The number of girls in the group were 19 and only 1 boy was the part of the group.

Tool Used in the Study

Achievement Test (both pre-test and post-test) and feedback form were used as tools in the present study for the purpose of data collection.

Procedure of Data Collection

The intervention programme comprised of the reading skills module to be administered to the students. Reading Skills is a part of Elements of English and Communication Skills (EECS) Course taught to students pursuing the DMLT programme at the University. Taking into the consideration the weightage and learning hours allocated to the reading skills component and that the students learn English as a second language, the module was prepared.

Before beginning with the intervention programme, the reading comprehension of the students was tested through an achievement test (pre-test). The EECS course is taught in the first semester of the programme hence, it was considered as the entry level behaviour of the students. It was also taken into consideration that the students were not exposed to such collaborative learning conditions before. After preparing the module it was implemented and then its effectiveness was evaluated. The module consisted of news articles, passages, stories, etc to include expository, technical, narrative and data based materials which were aligned to achieve the Course

Outcome (CO) to Interpret and analyze a variety of texts, including articles, reports, and short stories, to identify main ideas and contextual meanings as well as to expand essential vocabulary to improve efficiency and precision in communication for improving reading skills.

A CSR learning log was also prepared to be given to the students.

A parallel form of achievement test was prepared and administered to the students as a posttest.

Lastly, the feedback form was administered to know the views of the students about the intervention programme.

The procedure for data collection thus, spread across three phases: Pre-Implementation Phase, Implementation Phase and Post-Implementation Phase.

Data Analysis

The data for the present study was analyzed quantitatively using ‘t-test’ to find out the effectiveness of Collaborative Learning using Collaborative Strategic Reading on the performance of the students.

The feedback of the students was analyzed qualitatively using percentage analysis.

Results and Interpretation

The main focus of this study was to study the impact of Collaborative Learning using Collaborative Strategic Reading on reading comprehension of students. The CSR strategy was considered as the independent variable and the performance of the experimental group students as the dependent variable. The results thus obtained for the assessment of the Collaborative Strategic Reading on the Reading Comprehension of the experimental group students are summarized and presented in the table given below.

Table-1: Significance of Difference Between Mean Achievement Scores of Pre-Test and Post-Test

Experimental Group	N	Mean	S.D.	df	‘t’
Pre-Test	20	18.25	6.29	19	8.23*
Post-Test	20	29.20	7.17		

*Significant at 0.01 level

From the above table it is evident that the mean for the pre-test scores is 18.25, mean for post-test scores is 29.20 and SD is 6.29 and 7.17 respectively. The calculated t-value was found to be 8.23 at 19 df which was found to be significant at 0.01 level. Hence, it can be concluded that the difference between pre-test and post-test scores is significant.

In light of this, the null hypothesis number 1.1 formed earlier that “there will be no significant difference in the mean achievement scores of students in pre-test and post-test” is rejected.

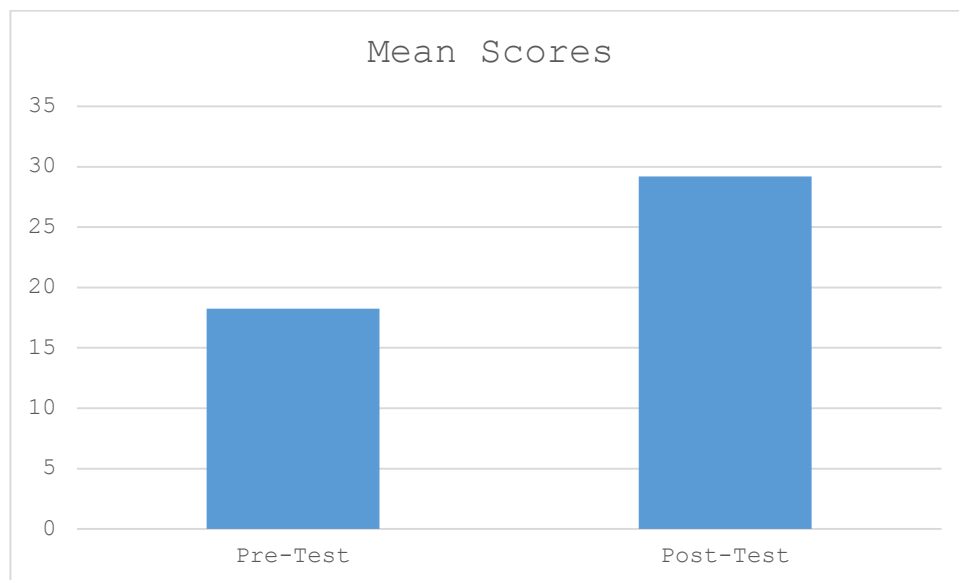


Figure-1 Graphical Representation of Significance of Difference between Mean Achievement Scores of Pre-Test and Post-Test

Analysis of the Feedback Form

In order to triangulate the data, the feedback of students was taken to gather information about their opinion on the teaching learning process and their perception about the tasks and activities carried out.

The feedback form was a questionnaire on a 5-point Likert type scale which consisted of eleven statements, and the students had to mark their opinion spread over the five points namely- Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

The feedback was administered to the students in the last phase of the intervention programme. The questionnaire aimed to collect students’ responses regarding improvement in reading comprehension, vocabulary, concentration, and overall learning experience. For Feedback Analysis, percentage scores were considered.

Few major findings, on analysis of the feedback are that it was found that 90.per cent students strongly agreed that the discussion before introducing the text helped them to understand the topic better. All the students (100 per cent) strongly agreed that summarizing the text in groups helped them to understand and remember the content well. 50 per cent of the students strongly agreed and 25 per

cent students agreed that after attending the sessions they have learned to read in a systematic way. 60 per cent students strongly agreed and 30 per cent agreed that the strategy adopted helped them to improve their reading skill. All the students (100 per cent) strongly agreed that they enjoyed working in teams and also 95 per cent students felt that the tasks given in the group made them more confident. When asked whether they would like to work in groups in future, 90 percent students strongly agreed and 5 per cent agreed for it.

Overall, from the above analysis of the results, it can be concluded that the intervention programme had a positive impact on the students. Their achievement scores improved significantly, and they also exhibited a positive inclination towards collaborative work in improving their reading comprehension.

Implications of the Study

In the current trend where more and more number of students are learning English as a second language, Collaborative Strategic Reading shows positive impact on their performance. The learning environment created through collaborative learning not only supports their academic performance but also benefits them socially as well as psychologically. All these factors put together enhances their professional preparedness.

CSR can be effectively used with a range of texts including expository, technical, narrative, and data-based materials. Also, it is particularly beneficial for ESP learners, as it facilitates the comprehension of discipline-specific texts through collaborative and strategy-based reading.

Overall, it was found that the Collaborative Reading proved to be beneficial for enhancing the reading comprehension of the students undergoing DMLT programme.

Limitations of the Study

While the present study provides valuable insights into the development of reading skills among DMLT students as ESL learners, certain limitations need to be acknowledged.

- The study was conducted on a small sample size, which may limit the generalizability of the findings to a larger population of learners.
- The sample exhibited a significant gender imbalance, with only one male participant compared to nineteen female participants. As a result, gender-based comparative analysis of performance was not feasible.
- The participants were drawn from a specific group of DMLT students, and therefore the results may not fully represent learners from other disciplines.

Suggestions For Further Study

As the Collaborative Strategic Reading was found to be highly effective to enhance the reading comprehension skills of the students pursuing DMLT programme, such kind of study can be extended to the following areas as well:

- Similar studies can be carried out in other ESP domains viz, Nursing, Pharmacy, Physiotherapy, Applied Sciences, Engineering as well as Commerce and Management, etc.
- Comparative studies between traditional as well as collaborative strategy based instruction
- Longitudinal studies to assess long-term impact of reading interventions.
- Studies to assess impact of Collaborative Learning strategies on skills of writing as well as speaking.

In conclusion, the present study, while limited in scope, offers valuable insights and a foundation for further research in enhancing reading skills among ESL learners in specialized domains. It also paves the way for future research aimed at strengthening language competence and professional readiness among learners. Overall, the study underscores the need for continued exploration and innovation in language teaching practices to meet the evolving academic and professional demands of learners.

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