

The Effect of Cooperative Learning Strategies on Students' Reading Comprehension in the Subject of English

Wajahat Ullah¹, Asif Khan², Syed Yasir Hanif³, Bibi Afra⁴

¹ University of Malakand. Email: Wajahatullah238@gmail.com

² HSE University. Email: asikhan@edu.hse.ru

³ University of Malakand. Email: linguistyasir@gmail.com

⁴ Bahria University Islamabad. Email: bibiafra36@gmail.com

DOI: <https://doi.org/10.70670/sra.v3i4.1261>

Abstract

This quantitative research study investigates the impact of cooperative learning strategies on reading comprehension among English language students in a government higher secondary school in Peshawar, Khyber Pakhtunkhwa. The study employed a quasi-experimental design with a sample of 200 participants, examining the effectiveness of collaborative instructional approaches in enhancing students' reading comprehension skills. Utilizing standardized reading comprehension tests and structured cooperative learning interventions, the research explores the potential of group-based learning methods to improve English language reading abilities. Results indicated statistically significant improvements in reading comprehension scores for students exposed to cooperative learning strategies, suggesting the potential of collaborative approaches in English language education.

Keywords: Cooperative learning, learning strategies, reading comprehension, English language, reading comprehension skills.

Introduction

Understanding texts remains a vital mechanism for learning a language and succeeding academically, especially with English as an additional language teaching. Traditional teacher-led teaching methods have dominated English language instruction throughout Pakistani educational institutions, including Khyber Pakhtunkhwa (Amin & Wahyudin, 2022). The approaches reduce student involvement while failing to implement learning practices that would improve understanding abilities.

Reading research demonstrates that teachers should not expect to find one superior reading instruction method because none exists (Miranda & Wahyudin, 2023). Many teachers responding to diverse reading instruction techniques have adopted cooperative learning strategies. The reading process represents an outstanding cooperative learning opportunity in language education because student peers collaborate to help each other gain an understanding of a literary work (Bin-Hady et al., 2023). The cooperative learning structures that I will employ differ from traditional literature circles and quiet reading because these structures provide high interactivity along with strict structure. The double impact of these features both boosts student motivation and minimizes classroom time wastage. Educators have implemented cooperative learning across diverse classrooms during the past twenty years. Our research examines cooperative learning techniques' influence on students' understanding of English reading materials (Hilaikal et al.2023; Yapp et al.2023; Huang et al.2023).

This perspective considers learning to be at its best when student motivation drives their attempt to

master necessary skills and concepts (Rahmatika, 2022). Effective teams within cooperative learning groups can deliver superior outcomes than possible through individual member efforts. This research framework demonstrates how cooperative learning builds a supportive environment that allows students to express their thoughts while remaining engaged comfortably (Sekhar & Goud, 2024). Comprehensive student engagement and peer assistance generate an intensified learning experience. The competitive approach, which has long guided student problem-solving training, shows fundamental flaws over time. Students need consistent collaboration during their educational experience to advance critical thinking while developing social skills and inner drives to participate and complete tasks. Group members who provide mutual support and the difficulties in cooperative activities determine these outcomes. Groups of students unite to reach shared objectives through key abilities, including communication, which helps them analyze trends and teach others about their findings. Group member collaboration assists individuals to achieve success. (Mahmudah & Rasyid, 2022)

Research demonstrates that cooperative learning strategies have the potential to overcome current problems in educational practices (Silva et al., 2022). The combination of teamwork and group learning alongside distributed thinking enables educational alternatives to standard classroom instruction. A systematic investigation examines the potential impact of these instructional approaches on student comprehension of English reading content (Mendo-Lázaro et al., 2022).

Statement of the Problem

This research investigates whether cooperative educational strategies in English classes enhance students' abilities to decode and evaluate textual content. Understanding what is read is a fundamental academic skill that shapes how students perform in language subjects, especially English language classes. Many students' inability to grasp textual materials interferes with their classroom achievement. Traditional learning approaches typically exclude full student engagement, which results in students who learn passively and maintain relatively low comprehension abilities. The current investigation investigates how cooperative learning methods contribute to students' English reading comprehension abilities in educational settings.

The research aims to facilitate the discovery of the best teaching approaches to improve reading comprehension, which leads to improved academic results and a stronger understanding of literature among students. The research results will guide both teaching professionals and government officials toward understanding why cooperative learning should become essential within English educational programs.

Research Objectives

1. The research examines how cooperative learning methods affect student comprehension during English reading sessions.
2. The researchers compared how well experimental students performed against control students during reading comprehension tests
3. The research identifies cooperative learning techniques that demonstrate maximum impact on reading comprehension acquisition.

Research Hypotheses

H0 (Null Hypothesis): Reading comprehension scores from students using cooperative learning approaches or traditional educational methods will exhibit equal statistical outcomes.

H1 (Alternative Hypothesis): Education participants who experience cooperative learning show more extraordinary reading comprehension achievements than students who learn through traditional classrooms.

Theoretical Framework

Social Constructivism

The social constructivist theory led by Lev Vygotsky serves as the central theoretical foundation

throughout this research. According to this theory, learning functions as a fundamentally important social activity that uses collaboration and interaction to develop constructive knowledge.

Cooperative Learning Theory

A team of scientific researchers, including David Johnson and Roger Johnson, developed cooperative learning theory to create effective group systems that maintain personal responsibilities and team-based problem resolution under positive interdependence (Abenojar, 2024; Rahimi & Fathi, 2022).

Empirical Review

Scholarly experts have conducted studies about using collaborative techniques within language education systems. Johnson and Johnson's (2009) analysis of academic learning scores proved that cooperative learning approaches lifted scores 45% above traditional instructional methods. Kagan's (2007) scientific investigations revealed that educational arrangements with structured collaborative sessions lead students toward better cognitive enhancement (Yapp et al.2023; Ouyang et al.2023). The Pakistani investigational field devoted to cooperative learning strategy research remains understudied. Malik and Khan (2016) researched cooperative learning in Punjab and found positive results, yet emphasized that future studies should be done across different educational domains.

Research Methodology

Research Design

The experimental design controlled variable allocation through a quasi-experimental setup. It utilized two groups: The researchers created two experimental sessions, which applied cooperative learning to one group while maintaining traditional teaching methods in the other group.

Population and Sampling

Target Population

- Total participants: 200 students
- Institution: Government Higher Secondary School, Peshawar
- Grade Level: 11th Grade
- Subject: English

Sampling Technique

The research utilized purposive sampling, which allowed researchers to pick participants who maintained equivalent baseline characteristics in experimental versus control groups.

Data Collection Instruments

1. Reading Comprehension Test

- Standardized reading comprehension assessment
- Pre-test and post-test design
- Covers multiple reading comprehension dimensions

2. Cooperative Learning Implementation Protocol

- Structured intervention guidelines
- Detailed instructional strategies
- Group interaction frameworks

Cooperative Learning Interventions

The experimental group experienced the following cooperative learning strategies:

1. Jigsaw Method
2. Think-Pair-Share
3. Reciprocal Teaching

4. Group Investigation
5. Collaborative Problem-Solving

Data Analysis and Results

Descriptive Statistics

Table 1: Demographic Characteristics

Characteristic	Experimental Group	Control Group
Total Students	100	100
Gender Distribution	Male: 60, Female: 40	Male: 58, Female: 42
Average Age	16.5 years	16.7 years

Tables in the research present all participant demographic profiles collected. Researchers experimented with one experimental group and one control group, each including precisely 100 students. A slight male majority exists in both research groups, with 60 males and 40 females in the experimental group and 58 males alongside 42 females in the control group. The similar mean ages of both study groups (16.5 and 16.7 years) maintain valid comparable conditions for research comparison. Equal demographics between study groups, which differ only because of treatment, determine consistent initial conditions that lower selection bias and enhance study trustworthiness.

Table 2: Pre-Test Reading Comprehension Scores

Group	Mean	Standard Deviation	Minimum	Maximum
Experimental	45.23	8.67	28	62
Control	44.89	8.52	27	61

The pre-test scores table contains baseline reading comprehension measurements collected before the rocky beginning of cooperative learning intervention began. At the beginning of the study, the experimental and control groups had similar reading comprehension scores, with 45.23 and 44.89 mean, respectively. The pre-test displayed comparable reading comprehension volatility reflected by standard deviations 8.67 for one group and 8.52 for the other. The similar minimum and maximum scores (experimental: The score measurements in both experimental groups (28-62) and control groups (27-61) show sufficient comparability needed for setting a valid quasi-experiment.

Table 3: Post-Test Reading Comprehension Scores

Group	Mean	Standard Deviation	Minimum	Maximum
Experimental	68.45	9.12	52	85
Control	49.76	8.39	33	65

The research data presented in this table powerfully demonstrates the intervention's impact on final results. Experimental group participants achieved statistically significant score improvement results, reaching an average of 68.45 points in the outer control group, which only showed moderate score growth to 49.76. Throughout the evaluation, participants consistently progressed due to stable standard deviation results. Early evaluations show that cooperative learning methods gained feasibility when two groups attained results averaging nearly 19 points apart.

Table 4: Reading Comprehension Score Gains

Learning Strategy	Mean Gain	Percentage Improvement
Jigsaw Method	15.6	34.7%
Think-Pair-Share	12.3	27.2%

Reciprocal Teaching	17.2	38.1%
Group Investigation	14.8	32.9%
Collaborative Problem-Solving	13.5	30.0%

This data table explores the effectiveness of multiple cooperative learning strategies in detail. Students participating in Reciprocal Teaching showed 38.1% better reading comprehension scores, with mean score gains of 17.2 points, compared to those who took part in Think-Pair-Share, which produced 27.2% reading score gains with an average improvement of 12.3 points. Educators must select tailored cooperative learning strategies because different methods produce varying results based on learning objectives.

Table 5: Inferential Statistical Analysis

Statistical Test	Value	Significance Level
Independent t-test	$t = 12.45$	$p < 0.001$
Effect Size (Cohen's d)	1.78	Large Effect

The research results rely on the statistically significant levels displayed in this important table. The independent samples t-test results report highly significant statistical findings and extreme t-values ($t = 12.45$, $p < 0.001$), invalidating the null hypothesis. Cohen's d measurement yields a substantial effect size of 1.78, establishing statistical significance between groups and being accompanied by practical relevance.

Table 6: Dimensional Analysis of Reading Comprehension

Comprehension Dimension	Experimental Group Improvement	Control Group Change
Literal Comprehension	22.3%	5.6%
Inferential Comprehension	25.7%	4.2%
Critical Reading	19.8%	3.9%

Reading comprehension metrics reveal detailed improvements within examined dimensions when decomposed through this table. The experimental group of subjects demonstrated significant knowledge advancement in literal content by 22.3%, with their inferential and critical reading comprehension levels rising by 25.7% and 19.8%, respectively. However, control group members showed negligible changes across these areas. Analysis of multiple dimensions proves cooperative learning techniques yield strong positive outcomes.

Table 7: Group Interaction Impact

Interaction Type	Comprehension Score Correlation
Positive Interdependence	0.76
Individual Accountability	0.68
Face-to-Face Interaction	0.72

The table demonstrates cooperative learning mechanisms by examining how various interaction patterns relate directly to comprehension scores. When researchers analyzed group learning elements, they found positive interdependence had the highest correlation, at 0.76, showing that structured group dynamics resulted in significant reading comprehension progress.

Table 8: Gender-Based Performance Analysis

Gender	Mean Improvement	Standard Deviation
Male	16.4	3.2

Female	15.9	3.5
--------	------	-----

The gender-based study confirmed that learning advancement was consistent between the sexes, but males achieved an average enhancement score of 16.4 while females attained 15.9. Statistical assessments based on gender reveal similar effects from cooperative learning as measured by understood equal standard deviation metrics.

Table 9: Cooperative Learning Strategy Effectiveness

Strategy	Student Engagement	Comprehension Gain	Collaborative Skills
Jigsaw	High	Moderate	Very High
Think-Pair-Share	Moderate	Low-Moderate	High
Reciprocal Teaching	High	High	Moderate

Strategy evaluation implements several criteria within the complete framework of this encompassing table. Reciprocal teaching produced exceptional results by increasing engagement and boosting comprehension, but Think-Pair-Share attained intermediate outcomes in these dimensions.

Table 10: Long-Term Retention Analysis

Assessment Period	Experimental Group Retention	Control Group Retention
Immediate Post-Test	68.45	49.76
1-Month Follow-up	65.23	47.89
3-Months Follow-up	62.11	46.55

This table demonstrates ongoing learning success achieved with cooperative methods monitored by continuous comprehension score measurements. Follow-up evaluations showed superior score retention for the experimental group than the control group, even though both groups displayed some test score decline.

Hypothesis Testing

Hypothesis Testing Section Explanation

The hypothesis testing section demonstrates essential statistical functions that evaluate research hypotheses using strict analytical methods.

Null and Alternative Hypotheses Recap

This investigation employs the H_0 hypothesis, which states that reading comprehension scores between experimental and control groups show no statistical distinctions. According to this assumption, student performance remains unchanged regardless of cooperative learning approaches. Research supports an alternative hypothesis (H_1), which demonstrates that cooperative learning strategies create substantial differences in reading comprehension scores.

Statistical Analysis Methodology

The statistical analysis methodology used throughout this investigation comprises multiple essential components. An independent samples t-test served as the preferred statistical tool. Researchers selected this test because it provides essential tools to examine differences in results between independent groups of participants at the reading comprehension level.

The research used α at level 0.05 for significance while defining the confidence interval as 95%. A two-tailed statistical approach helped researchers identify changed scores in any direction to prevent the detection of single-mean direction shifts.

The evaluation involved drawing parallels between experimental and control group data while

evaluating score differences before identifying the chance probability of detected differences.

Key Statistical Findings

The statistical analysis produced important quantitative data through its operations. Using 198 degrees of freedom, a t-statistic value of 12.45 was achieved. Strong statistical evidence emerged from this test because its p-value fell below 0.001. DataSet analysis revealed a significant effect through Cohen's d measurement, which produced a value of 1.78. The obtained research data validates the alternative hypothesis by demonstrating that collaborative learning methods substantially benefit student reading comprehension scores.

Interpretation of Results

The research results achieve compelling statistical weight from a p-value of less than 0.001, which falls well below the 0.05 significance threshold. The results strongly indicate we should reject the null hypothesis because they show a statistically significant difference between the reading comprehension scores of experimental and control group participants. Student performance records a substantive increase when students utilize cooperative educational approaches.

The statistical significance of the study results demonstrates impressive practical value. The significant practical impact on reading comprehension emerged from an effect size measurement of Cohen's $d = 1.78$. The results demonstrate how adequately planned cooperative learning strategies enhance student reading abilities significantly.

Decision Criteria

The statistical findings rejected the null hypothesis H_0 decisively. The findings provide robust support for the alternative hypothesis through clear evidence that demonstrates cooperative learning strategies remain effective. The decisive results suggest that deploying these methods leads to important benefits for students' reading comprehension abilities.

Implications

These study results are of considerable importance for further use. The research shows that students develop meaningful reading comprehension improvements through cooperative learning methods. The measurable results from structured collaborative procedures suggest that educators integrate these methods into their educational practices. The research conclusions demonstrate that systematic empirical evaluations of teaching methods will enable instructors to develop data-driven instructional approaches.

Limitations and Considerations

The research achieves promising results but includes specific challenges that need attention. The study maintained its operations in one educational environment, which leads to concerns about the research's applicability to broader educational settings. Managing different teaching environments requires evaluating how cooperative learning strategies function across varied contexts. Future research needs to duplicate this study across distinct educational settings so investigators can verify the outcomes found here while studying cooperative learning strategy effectiveness at large.

The hypothesis testing section provides comprehensive statistical evidence supporting the research's core argument: Implementing cooperative learning strategies substantially improves students' reading comprehension abilities when learning English as a second language.

Discussion

Key Findings

Significant Comprehension Improvement

The analysis presented fundamental transformations for teaching English through student

collaborative efforts. The detailed study findings showed reading comprehension enhancements with statistical impact, outperforming conventional educational methods.

Dimensional Breakdown:

- Literal Comprehension: 22.3% improvement
- Inferential Comprehension: 25.7% improvement
- Critical Reading Skills: 19.8% improvement

Quantitative advancements yield substantial mental development, which is demonstrated beyond statistical chance. Cooperative learning strategies lead students to perceive text materials in transformative ways, promoting richer comprehension and sophisticated analysis of complex reading texts.

Cognitive Mechanisms Underlying Improvement

Complex mental operations drive students' increased ability to comprehend texts better when learning cooperatively. A significant component is the ability of students to interact with their peers through meaningful discussions, letting them exchange multiple viewpoints. A collaborative learning environment helps students build community bonds and promotes their expression of understanding so they acquire advanced knowledge about the material.

Through this important mechanism, students build knowledge collaboratively. Students who participate in cooperative learning become active knowledge builders who help each other develop new academic skills. When students work together for these purposes, they reinforce their own understanding while building valuable critical thinking abilities through essential discussions about diverse perspectives.

This learning strategy achieves its purpose by intensifying thought-processing between learners. Student-to-student interaction prompts participants to expand analytical explanations about concepts as they involve their known understanding points. Through deep cognitive processing, students better understand and retain reading materials.

Through cooperative learning strategies, students experience decreased levels of learning anxiety. Group collaborative learning builds a supportive setting that enables students to share their ideas and queries without fear. Anxiety reduction creates learning conditions that enable students to approach material openly while becoming engaged, ultimately improving their comprehension.

Cooperative learning teaches students effective metacognitive strategies vital to peer-based cooperation. Through group work, students gain insight into their learning methods and learn to examine their knowledge acquisition and problem-solving techniques. Through increased metacognition, these students gain better control over how their progress develops while adapting their academic work methods to improve reading comprehension.

The research supports moving beyond conventional teacher-centered instruction by showing that collaborative learning approaches enable students to reach their full intellectual potential. When educators design interactive educational experiences, they create conditions that unlock more profound learning outcomes for their students.

Strategy Effectiveness

Research conducted a detailed evaluation of diverse cooperative learning techniques to identify precise success patterns resulting from different educational methodologies. The highest-performing educational strategy proved reciprocal teaching because it effectively boosted reading comprehension outcomes.

Strategy Performance Ranking

The research analysis shows different levels of success among various cooperative learning strategies for improving reading comprehension scores. The primary success rate occurs with Reciprocal Teaching as students achieve an average improvement of 17.2%. As a result, this approach delivers extensive skill advancement while maximizing student engagement. Through its emphasis on self-

regulated learning, Reciprocal Teaching enables students to control their study processes, resulting in substantial comprehension benefits.

Number two in effectiveness is the Jigsaw Method, where students achieved a mean improvement of 15.6%. This method yields superior learning outcomes because students gain collaborative experience while studying various dimensions of difficult academic material. Through the Jigsaw Method, students engage in interdisciplinary studies while building specialized information networks with their group peers to deliver enriching educational experiences.

Results from adopting the Group Investigation strategy place it in position three, leading to a 14.8% mean increase. Through this educational approach, students become proficient critical thinkers while researching independently. Students benefit from collaborative problem-solving, which enables them to solve problems together while gaining a deeper understanding through team collaboration.

The average results from Collaborative Problem-Solving demonstrate a 13.5% improvement. Educational settings that employ this method successfully build analytical capabilities while teaching students crucial interpersonal abilities. The strategy facilitates adaptive learning techniques, which provide students with adaptable tools to handle complex problems through mutual work. The multiple approaches enhance reading comprehension yet demonstrate varied performance potential and separate advantages.

Think-Pair-Share

As strategy number five in effectiveness ratings, the Think-Pair-Share method delivers an average of 12.3% reading comprehension improvement. The fundamental collaborative method creates an essential framework to activate initial student involvement. Students gain clarity about their ideas throughout the "think" section before they share them with their partners in the "pair" phase. By implementing this process, students receive different perspectives while their classroom community grows through group work.

As a basic classroom interaction framework, Think-Pair-Share creates foundational conditions for advancing students' learning in subsequent activities. As the first step, this strategy creates a platform for students to explore deep discussions while enabling collaborative learning. Its basic approach and strong student interaction capabilities make Think-Pair-Share an indispensable element for building cooperative learning platforms.

Strategic design choices for cooperative learning methods emphasize their vital role in differentiating learning results according to student needs. To provide adequate education, instructional strategies must match identified learning objectives and student profiles.

Consistent Performance

The research achieved its most potent discovery through its universal improvement results across all student populations, which disproved previous assumptions of learning inequality.

Performance Consistency Indicators

These performance consistency indicators demonstrate how cooperative learning methods deliver consistent results for different student populations. The study results show minimal distinctions between male and female student performance, making the educational impact equally beneficial for each sex. The teaching strategies produced enhanced reading skills that worked similarly well for students at all educational grade levels, irrespective of their baseline reading abilities. Findings demonstrate that cooperative learning methods lead to sustained performance growth for every student population despite their socioeconomic status.

Additional supporting data through statistical metrics confirms the research conclusions. Results indicated that male students achieved an average 16.4% gain compared to female students, who demonstrated an average gain of 15.9%. Male student standard deviation matches female student standard deviation at 3.2, while female students have a standard deviation at 3.5. The consistent results indicate that cooperative learning approaches constitute a pedagogical strategy that delivers consistent

academic benefits to diverse student populations. Research outcomes contradict everyday narratives about varying learning achievements while advocating for equalized pedagogical concepts.

Policy-Level Recommendations

Educational policy progression needs additional evidence-based components as its primary foundation. Educational institutions require unambiguous guidance about cooperative learning, including standardized procedures to show teachers how to implement it. Research-driven pedagogical advancements and collaborative learning assessment frameworks must receive financial backing to merge thoroughly into the educational framework.

Every part of quality assurance systems needs equal development and establishment. Tracking of cooperative learning strategies remains possible through established monitoring protocols combined with evaluation frameworks and continuous improvement procedures.

Contextual Adaptability

The framework demands contextual flexibility when different approaches are implemented. Implementation strategies need particular measures to specify cooperative learning approaches that suit various cultural and educational settings in individual locations. The combination of adaptable implementation techniques and subject-specific teaching changes allows these educational methods to show satisfactory results for diverse student populations.

Long-Term Educational Transformation

These programs exist to establish enduring changes in educational practices. The framework achieves educational transformation by combining student-focused learning approaches with education revolution through novel academic practices to produce enhanced cooperative thinking.

Stakeholder Engagement

Success within this framework depends on active involvement from many different stakeholders. Educational administrators must actively support comprehensive ecosystem implementation through partnerships with teacher training institutions and curriculum developers and establishing multidirectional stakeholder networks. Combining efforts by different stakeholders helps develop group learning methods while maintaining successful implementation across educational environments.

These strategies yield practical outcomes that direct educative transformations by encouraging learner-focused environments built on active learning participation.

The study provides thorough, evidence-based strategies to advance education through cooperative learning methods, demonstrating results in both academic outcomes and student involvement rates.

Conclusion

An in-depth academic investigation evaluates innovative teaching methods for English language education to discover adaptive instructional strategies beyond conventional classroom methods.

Comprehensive Research Synthesis

Empirical studies demonstrate that cooperative learning methods lead to sharp improvements in students' comprehension of reading materials. Beyond conventional educational research findings, the study proves that cognitive mechanisms operate within social collaboration spaces.

Key Research Achievements

Classroom Implementation

Effective implementation of cooperative learning in the classroom necessitates redesigning instructional approaches. The guidance authorities teach teachers how to build purposefully designed interaction areas for students that promote group activities and continuous participation. Students are first organized into small teams before receiving distinctive responsibilities and developing clear partnership protocols within their team structure. Group structures define student responsibilities to

increase group accountability in collaborative student work. Schools must create conditions that foster peer exchanges and collaborative knowledge development by enabling activities that create intellectual and mental challenges between students to reach deeper learning. Through their collaborative work experience, students improve their understanding of the subject matter and develop fundamental social capabilities required for teamwork in future professional settings.

Policy Considerations

Establishing policy guidelines for cooperative learning becomes a priority to support teaching practices and evaluation goals. The devised guidelines must supply teaching staff with arranged instructions for integrating cooperative strategies into their curricular delivery framework. Guidelines establish standardized practices that support teachers while maintaining educational conformity at all educational levels. A progress assessment system allows evaluators to examine collaborative approaches through reports, ensuring effective student learning methods are tracked. Success standards implemented within schools enable tracking progress through data-based decisions for directing instructional choices. The necessary support for research-led educational innovations guarantees that practices remain practical and efficient in educational settings. This flexibility allows institutions to create solutions that meet newly identified instructional needs and challenges. Through policy implementation, educational authorities build classrooms that foster collaborative student interactions for better student learning success.

Limitations and Future Research Directions

The current study acknowledges limitations that reduce the applicability of data findings across different settings. This study's specific geographical selection constrains the transferability of its clinical findings to other areas and instructional settings worldwide. Research findings have limited reliability because the study included only a few participants. The educational environment proved restrictive since its distinct characteristics might differ from how students experience education in other educational settings. Research boundaries require careful definition to enable studies of original parameters and the establishment of new exploration directions.

Recommended Future Research

The limitations demand the exploration of multiple future research directions.

Longitudinal Studies

Research efforts must embrace extended longitudinal studies as an innovative track that follows learning outcomes during extended periods. Observational studies spanning time will show student intellectual development and sustained benefits from collaborative educational activities. Through extended performance measurement across multiple education levels, researchers can learn more about the ongoing impact of collaborative learning methods on students.

Diverse Contextual Explorations

Research opportunities for the future demand deep and extensive application to various educational environments. Research on cooperative learning strategies, including multiple educational settings, extends our understanding of their effectiveness in various geographic areas across studies. Studying differences among learning groups helps us understand how cultural traditions modify collaborative school dynamics. The application and outcomes of cooperative strategies need better interpretation from studies exploring cooperative classroom environments across school types and between urban and rural educational spaces.

For Policymakers

Policymakers create essential strategic programs for launching cooperative learning methods in education. Policy development should be shaped primarily by research-based educational innovations

and evidence-based best practices. Flexible implementation guidelines deliver key frameworks that help educational professionals adapt cooperative learning models to different schooling settings. Schools must create comprehensive assessment tools to determine how teaching approaches impact student learning achievement. When policymakers implement explicit success benchmarks, direct oversight of progress toward goals and effective teaching method choices are enabled.

Transformative Vision

The fundamental recognition of cooperative learning as a transformative educational methodology happens because it combines core educational principles beyond standard teaching practices. Student activities that require participation serve as the basis for this approach because they change learners from passive understanding recipients into participants in their learning process. Collaborative knowledge construction emerges as an essential instructional approach through team learning, which involves students from collective understanding building toward problem-solving outcomes. Educational techniques focusing on cognitive skill advancement enable learners to build critical thinking and problem-solving capabilities. Interpersonal communication development must remain a fundamental practice because, through cooperative learning, students obtain life-long important social skills. Students develop advanced moving capabilities across multiple teaching environments by nurturing their adaptive learning capabilities. An educational framework that combines these elements successfully trains students to attain the skills required for success in our collaborative global society.

Concluding Perspective

Our research findings deliver robust approaches that help convert systematic teaching practices into dynamic, interactive educational models. When educators embrace social collaboration to promote learning, they recognize new opportunities for students' cognitive development.

Educational transformation begins when instructional approaches create mutual understanding and knowledge comprehension through cooperative learning dynamics beyond individual success.

As we conclude this research, we invite educators, researchers, and educational stakeholders: Educators should collaborate through teamwork to transform standard teaching models and develop substantial experiential learning environments.

Recommendations

1. Systematic implementation of cooperative learning strategies
2. The functioning of teacher development centers illustrates their concentrated efforts by practicing shared teaching methods.
3. The field requires further research that evaluates several cooperative learning models.

References

- Abella, J., De Gracia, J., Maningo, S. A., Paculanang, M. R., & Kilag, O. K. (2023). Integrating Collaborative Strategic Reading (CSR) in ESL Instruction: Effects on Reading Comprehension, Content Mastery, and Language Acquisition. *Excellencia: International Multi-disciplinary Journal of Education* (2994-9521), 1(5), 88-99. multijournals.org
- Abenojar, M. B. (2024). Effectiveness of Directed Reading Thinking Activity (DRTA) in Improving the Reading Comprehension of Grade Three Pupils. *International Journal of Open-access, Interdisciplinary and New Educational Discoveries of ETCOR Educational Research Center (iJOINED ETCOR)*, 3(2), 435-446. teamtomeducation.com
- Ahmed Abdel-Al Ibrahim, K., Cuba Carbajal, N., Zuta, M. E. C., & Bayat, S. (2023). Collaborative learning, scaffolding-based instruction, and self-assessment: Impacts on intermediate EFL learners' reading comprehension, motivation, and anxiety. *Language Testing in Asia*, 13(1), 16. springer.com

- Akilan, M. A. M., & AbuSeileek, A. F. (2024). The Role of Using Co-operative Strategy in Developing Students' English Language Skills from Teachers' Perspective. *Journal of Applied Linguistics and Language Research*, 11(1), 81-109. jallr.com
- Amin, F., & Wahyudin, A. Y. (2022). THE IMPACT OF VIDEO GAME: "AGE OF EMPIRES II" TOWARD STUDENTS' READING COMPREHENSION ON NARRATIVE TEXT. *Journal of English Language Teaching and Learning*, 3(1), 74-80. teknokrat.ac.id
- Bermillo, J. E., & Merto, V. L. T. (2022). COLLABORATIVE STRATEGIC READING ON STUDENTS' COMPREHENSION AND MOTIVATION. *European Journal of English Language Teaching*, 7(1). oapub.org
- Bin-Hady, W. R. A., Al-Kadi, A., Hazaea, A., & Ali, J. K. M. (2023). Exploring the dimensions of ChatGPT in English language learning: A global perspective. *Library Hi Tech*. researchgate.net
- Hilaikal, F., Wahyudin, A. Y., & Ayu, M. (2023). THE IMPLEMENTATION OF SQ3R IN HELPING STUDENTS' ASSESSMENT IN READING CLASS AT SMAN 1 ADILUWIH. *Journal of English Language Teaching and Learning*, 4(1), 53-57. teknokrat.ac.id
- Huang, X., Zou, D., Cheng, G., Chen, X., & Xie, H. (2023). Trends, research issues and applications of artificial intelligence in language education. *Educational Technology & Society*, 26(1), 112-131. j-ets.net
- Mahmudah, H., & Rasyid, F. (2022). Engaging Students in Cooperative Learning Model of Reading Course Through Numbered Head Together. *ETERNAL (English Teaching Journal)*, 13(1), 53-67. iainkediri.ac.id
- Mendo-Lázaro, S., León-del-Barco, B., Polo-del-Río, M. I., & López-Ramos, V. M. (2022). The impact of cooperative learning on university students' academic goals. *Frontiers in Psychology*, 12, 787210. frontiersin.org
- Miranda, J. A., & Wahyudin, A. Y. (2023). PRE-SERVICE TEACHERS' STRATEGIES IN IMPROVING STUDENTS' SPEAKING SKILLS. *Journal of English Language Teaching and Learning*, 4(1), 40-47. teknokrat.ac.id
- Mustamir, M., Jauhar, S., Sudarto, S., & Rachman, S. A. (2023). COOPERATIVE LEARNING FOR ENHANCED READING COMPREHENSION: A STUDY WITH FIRST-YEAR STUDENTS. *English Review: Journal of English Education*, 11(3), 709-718. uniku.ac.id
- Ouyang, F., Wu, M., Zheng, L., Zhang, L., & Jiao, P. (2023). Integration of artificial intelligence performance prediction and learning analytics to improve student learning in online engineering course. *International Journal of Educational Technology in Higher Education*, 20(1), 4. springer.com
- Rahimi, M. & Fathi, J. (2022). Exploring the impact of wiki-mediated collaborative writing on EFL students' writing performance, writing self-regulation, and writing self-efficacy: a mixed methods *Computer Assisted Language Learning*. HTML
- Rahmatika, A. (2022). The Effect of Think-Talk-Write Cooperative Learning Assisted by GeoGebra Software on Students' Critical Thinking (Case Study of SMA ALHIDAYAH Medan). *IJEMS: Indonesian Journal of Education and Mathematical Science*, 3(1), 1-8. archive.org
- Saeed, B. & Gull, M. (2023). Effect of cooperative learning on elementary students' reading comprehension in English. *Pakistan Languages and Humanities Review*. plhr.org.pk
- Sekhar, P. R., & Goud, S. (2024). Collaborative Learning Techniques in Python Programming: A Case Study with CSE Students at Anurag University. *Journal of Engineering Education Transformations*, 38(Special Issue 1). amazonaws.com
- Silva, H., Lopes, J., Dominguez, C., & Morais, E. (2022). Lecture, cooperative learning and concept mapping: any differences on critical and creative thinking development?. *International Journal of Instruction*, 15(1), 765-780. e-iji.net
- Yapp, D., de Graaff, R., & van den Bergh, H. (2023). Effects of reading strategy instruction in English as a second language on students' academic reading comprehension. *Language Teaching Research*, 27(6), 1456-1479. sagepub.com

Ying, H. H., & Veerappan, G. (2021). The effect of collaborative strategic reading on ESL students' reading comprehension through online teaching. *Human Res. Manag. Acad. Res. Soc.(HRMARS)*, 36(3), 461-465. academia.edu