

Exploring the Synergy: An In-depth Review of Social Skills, Academic Achievement, and Peer Relationships within Cooperative Learning Environments

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ABSTRACT

Introduction: Cooperative Learning, in which students work in teams, is a well-liked strategy for promoting healthy interdependence and the development of social skills. Positive interactions, common understanding, and individual agency are the cornerstones of cooperative learning, an approach to education and psychology. **Method:** A PRISMA-based systematic literature review of academic articles published between 2010 and 2023 from platforms including Google Scholar, ISI, Scopus, Science Direct, PubMed, ResearchGate, and many more investigates the impact of cooperative learning on social skills, academic achievements and peer relationships. The selection of scholarly publications was based on predetermined inclusion and exclusion criteria. Relevance to the study's objectives and the availability of a solid theoretical framework were inclusion criteria. **Discussion:** According to studies, cooperative learning groups are superior to traditional methods for enhancing social skills and acquiring knowledge. Additionally, cooperative learning can facilitate positive interactions between students with disabilities and their typically developing peers. Cooperative learning can also reduce racial disparities, improve peer relations, and increase empathy, which makes it a valuable intervention for reducing prejudice across multiple domains. Cooperative learning and social skill instruction can help children become less selective and more effective learners. **Conclusion:** Academic success and relationships with peers are profoundly influenced by one's capacity for socialization, teamwork, and conflict resolution. The holistic well-being of students is promoted in cooperative learning settings because of the favorable effects on their social skills, academic performance, and interactions with their peers.

Keywords: Cooperative learning, social skills, Academic achievement, Peer relationship

Cooperative Learning is a popular education approach that involves small teams of students to develop social skills and foster positive interdependence. Supported by theories like Social Learning Theory^[1], Sociocultural Theory^[2], Social Interdependence Theory^[3], Communication Accommodation Theory^[4], Zone of Proximal Development^[5], and Social Cognitive Theory^[6], it provides a supportive environment for students to navigate social situations.

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Theoretical underpinnings of Cooperative learning, social skills, Academic achievements And Peer Relationship

Cooperative learning and academic achievement:

Cooperative learning, rooted in educational and psychological theories, promotes academic achievement through positive interactions, shared understanding, and autonomy. It fosters a collaborative environment, enhancing student engagement and motivation, ultimately contributing to their academic growth and success.

Cooperative learning and social skills:

Cooperative learning and social skills are influenced by psychological and educational theories. Social learning promotes observation, modeling, and imitating others' behaviors, while sociocultural theory shapes cognitive development through social interactions. Social Cognitive Theory influences social skills development through role modeling and feedback. The cooperative methodology affords college students the opportunity to develop interpersonal, social, and collaboration skills that can be crucial to their professional and social success.

Cooperative learning and peer relationship:

The framework linking peer interaction and cooperative learning is based on social learning, social interdependence, and social constructivism. These theories emphasize the importance of social interactions and collaborative processes in cooperative learning environments, promoting social skills, academic achievement, and positive peer relationships. Albert Bandura's social learning theory and Johnson and Johnson's social constructivism emphasize positive interdependence and effective peer interaction.

Interplay between Social Skills, Academic Achievement and Peer Relationship:

The relationship between social skills and academic achievement is complex and dynamic. Positive peer interactions, facilitated by well-developed social skills, contribute to a supportive learning environment and improved academic achievement. Students with strong social skills have higher academic achievement, confidence, and motivation. Cooperative learning settings offer opportunities for social skills development and academic engagement, while academic achievement influences peer acceptance and social status. Educators can leverage this interplay by creating cooperative learning environments that emphasize positive peer relationship, support social skills development, and foster academic achievement, ultimately enhancing students' overall well-being and success.

Social skills, such as communication, collaboration, and conflict resolution, play a vital role in peer relationships during cooperative learning activities. Positive peer interactions can create a supportive and inclusive learning environment, which, in turn, enhances students' academic achievement. When students feel comfortable and supported by their peers, they are more likely to engage actively in learning, share knowledge, and seek help when needed, leading to improved academic performance.

METHODOLOGY

This systematic review examined previous research on how cooperative learning could affect Social Skills, Academic Achievement, and Peer Interaction. Research articles found in Google Scholar, ISI, Scopus, Science Direct, PubMed, ResearchGate, and among others. Researcher looked at English-language papers by evaluating the entire texts available. Specifically, we utilized the following keyword or keyword combinations: Cooperative learning, social skills,

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Academic achievement, Peer relationship, cooperative learning and social skills, Cooperative learning and Academic achievement, OR cooperative learning and peer interaction. Scholarly publications were selectively chosen using predetermined inclusion and exclusion criteria. Inclusion criteria included relevance to the study's goals, the availability of a solid theoretical framework. Manuscripts were not considered if they lacked an abstract or full-text. After being pulled from the appropriate databases.

The study concludes with an in-depth analysis of the content of 26 periodicals from the 12 countries. The articles were judged based on the PRISMA checklist, which included criteria like whether or not the article's structure matched the research type, research purpose, research community, sample selection process, data collection tools, data analysis using statistical tests related to the objectives, existence of specified entry and exit criteria, adherence to research ethics, presentation of findings by research objectives, and discussion. The purpose of this analysis was to compile and assess the existing empirical research on cooperative learning and its effects on students' interpersonal and academic development, as well as their relationships with their peers. The ensuing diagram can be seen in (Figure 1)

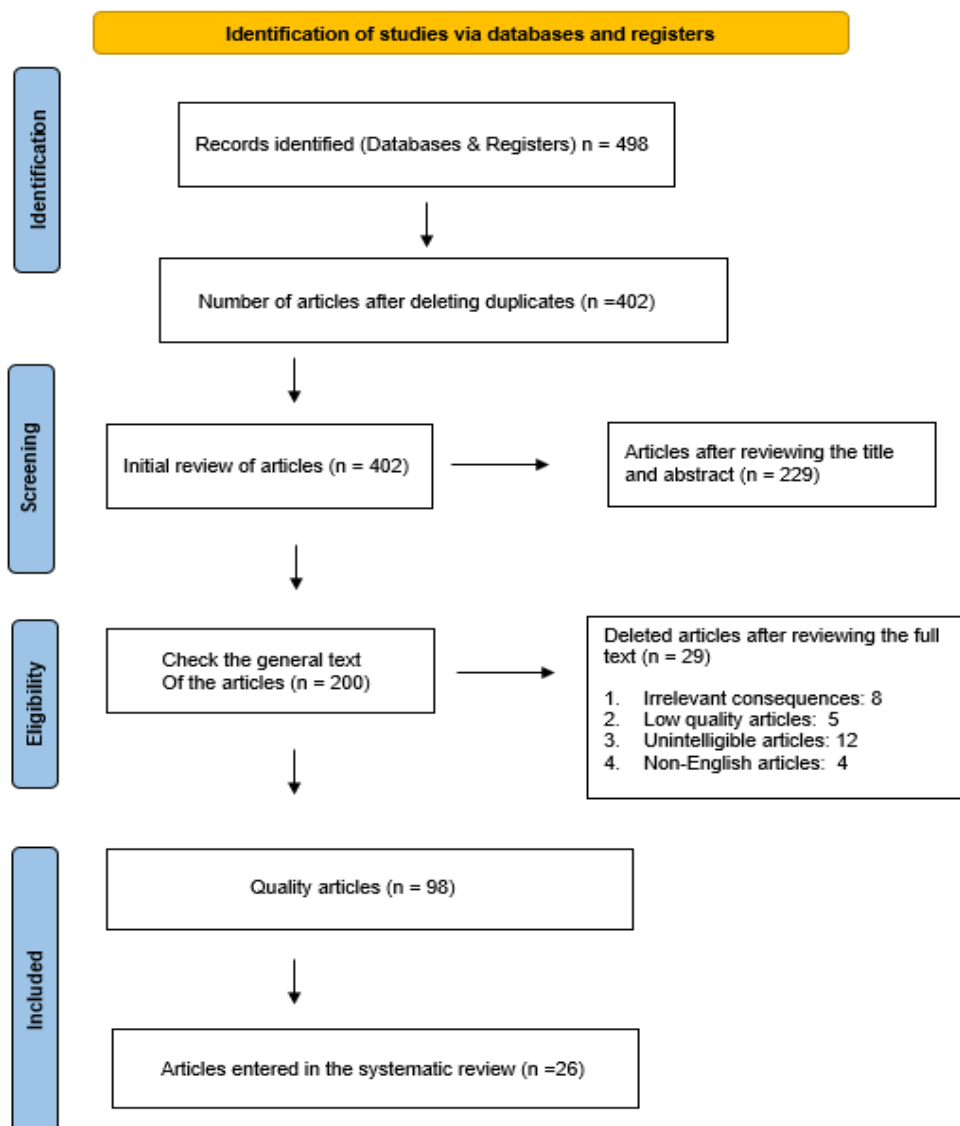


Figure 1. PRISMA flow chart outlining research results.

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Table 1:

Study	Title	Author(s)	Year	Sample	Region	Findings
1	The Effectiveness of Cooperative Learning Model Jigsaw and Team Games Tournament (TGT) towards Social Skills	Saifullah Kamaruddin et.al. ^[7]	2019	60	Malaysia	Cooperative learning model is very effective in improving social skills of year three pupils in Islamic Education subjects.
2	The effect of cooperative learning on students' social skills in the experimental science course	Yassin Tavakoli et. al. ^[8]	2014	418	Iran	Cooperative learning group had significantly more social skills compared to the traditional group.
3	Cooperative Team Learning and the Development of Social Skills in Higher Education: The Variables Involved	Mendo-Lázaro et.al. ^[9]	2018	346	Spain	Cooperative methodology has proven to be effective, showing significant improvements and relevance.
4	The effect of cooperative learning on the social skills of first grade elementary school girls	Lavasan et.al. ^[10]	2011	74	Tehran	Experimental group showed significant growth in enhancing appropriate social skills and lowering inappropriate ones.
5	Cooperative Learning Improves Social Skills and Knowledge of Science Topics in Pre-adolescent Children in Iran	Ahmadpanah et.al. ^[11]	2014	120	Iran	Cooperative learning improves social skills and knowledge acquisition compared to traditional teaching approaches.
6	The Effects of Cooperative Learning on Peer Relations, Academic Support, and Engagement in Learning Among Students of Color	Mark J. Van Ryzin ¹ , Cary J. Roseth et.al. ^[12]	2020	1890	US	Cooperative learning can lead to positive relationships with peers and reduce deviant peer affiliation.
7	Effects of Cooperative Learning on Students' Academic Achievement	Gull & Shehzad et.al. ^[13]	2013	65	Pakistan	Cooperative learning as an instructional strategy has a positive effect on students' academic achievement.
8	The Effect of Cooperative Learning on	S. Kaymak et al. ^[14]	2021	86	Kazakhstan	Cooperative learning increases mathematics

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	Students Academic Achievement					achievement significantly, allowing students to correct mistakes together.
9	The Effect of Cooperative Learning on Grade 12	Kibirige & Lehong et.al. ^[15]	2016	49	South Africa	Cooperative learning improves learners' performance in projectile motions, regardless of gender.
10	Effects of cooperative learning on academic performance of college students in Saudi Arabia	Alshammari et.al. ^[16]	2015	40	U.S.	Cooperative learning has an overall positive effect on improving students' academic achievement.
11	Effects of cooperative learning on students' achievement and attitudes in secondary mathematics	Hossain & Tarmizi et.al. ^[17]	2012	80	Malaysia	Cooperative learning significantly improves students' performance in mathematics and attitudes towards it.
12	The Impact of Cooperative Learning on Student Achievements in Higher Educational Settings	Khansa & Khaled et.al. ^[18]	2016	35	Lebanon	Jigsaw cooperative learning has a main effect on first-year students, particularly in large classes.
13	The Impact of Cooperative Learning on University Students' Academic Goals	Mendo-Lázaro et al. ^[19]	2021	509	Spain	Cooperative learning techniques shape learning goals, emphasizing their importance in the classroom.
14	The Effects of Cooperative Learning on the Academic Achievement and Knowledge Retention	Tran et al. ^[20]	2014	110	Vietnam	Cooperative learning stimulates cognitive activities, promoting higher achievement and knowledge retention.
15	Examining the Impact of Cooperative Learning Groups on Social Interactions in Inclusive Classrooms	Strickler K. ^[21]	2018	23	U.S.	Cooperative learning groups foster positive social interactions among students with disabilities and their peers.
16	The Effect of Cooperative Learning on	Altun et.al. ^[22]	2014	20	Istanbul	Cooperative learning had a favorable effect on students' learning, supporting permanent

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	Students' achievements					learning through repetition and discussion.
17	The impact of cooperative learning on peer relationships, intrinsic motivation and future intentions to do sport	Estrada et.al. [23]	2019	272	Spain	Co-operative learning fosters acceptance, support, and increased affective links among group members for wellbeing and security.
18	Effects of cooperative learning in youth athletics' motivational climate, peer relationships and self- concept	Železnik Mežan et al [24]	2023	157	Slovenia	The results confirmed that CL promotes better peer relationships

DISCUSSION

The 18 studies with 4354 participants (Table No 1) comprised three main areas of research (1) Effect of cooperative learnings on social skills (2) Impact of Cooperative learning on Academic achievement. (3) Relationship between Cooperative learning and peer relationship.

Effect of cooperative learning on Social Skills

According to Saifullah Kamaruddin et.al^[7], cooperative learning is highly effective for developing the social skills of Islamic Education students in the third grade. This is because cooperative learning teaches students to be disciplined, environmentally conscious, respectful of groups, to encourage interaction, to stimulate leadership, to demonstrate a responsible attitude, and to strive to accomplish group goals. According to a study by Yassin Tavakoli et. al.^[25], the skills of the cooperative learning group surpass those of the traditional group. It is possible to conclude that there was a statistically significant difference between the experimental and cooperative groups, and that the skills of the cooperative group were superior to those of the control group trained using the conventional and standard method. In a study conducted by Masoud Gholamali et.al.^[10], two groups (experimental and control) were compared, and the t-test revealed that the experimental group exhibited significant growth in enhancing appropriate social skills and decreasing inappropriate social skills. Cooperatively taught students exhibit more appropriate social behaviour and less impulsive behaviour when compared to traditionally taught students.

According to a 2014 study by Mohammad Ahmadpanah et.al. ^[11], cooperative learning improves social skills and the acquisition of knowledge in comparison to conventional teaching methods. Kendra Strickler^[21] found that cooperative learning groups can foster positive social interactions between students with disabilities and their general education peers.

Impact of Cooperative learning on Academic achievement

Allison Hardin Duckworth ^[26] discovered that cooperative learning is a form of active learning that, when effectively implemented, affords students the opportunity to improve their dispositions and performance in the traditional classroom.

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According to the findings of a 2013 study by Fariha Gull and Shumaila Shehzad^[13], cooperative learning activities had a positive effect on the academic performance of students enrolled in the subject Education. According to a study by Santiago Mendo-Lázaro^[19], the use of cooperative learning techniques in university classrooms facilitates the development of learning-focused goals among students. Experimental research conducted by Alshammari, Norah Mashouj^[16], the results indicated that students taught using the jigsaw strategy had a deeper understanding of the material than those taught using the lecture method. Therefore, the conclusion of this study is that cooperative learning improved Saudi Arabian students' academic performance. Anowar Hossain^[17] identifies the effects of cooperative learning on the mathematical achievement and attitudes of students in designated secondary institutions in Bangladesh. Using a quasi-experimental design, 80 ninth-grade students (40 from Boys' school and 40 from Girls' school) participated in this study. A test of independent samples was used to analyse the data.

According to the findings, cooperative learning had significant effects on mathematics achievement and attitudes towards mathematics. It was discovered that exposure to cooperative learning affected mathematics performance and attitudes among students. This study demonstrates a significant improvement in mathematical achievement and attitudes towards mathematics. Therefore, cooperative learning can be effectively utilised to enhance mathematics performance in secondary institutions in Bangladesh. The Impact of Cooperative Learning on Student Achievements in Higher Educational Settings study revealed that Jigsaw-taught students made greater gains on success measures than the control group. In addition, the survey revealed a positive attitude towards the use of jigsaw, with respondents believing that it fostered positive attitudes and inter-personal skills.^[18]

The findings of the research conducted by Santiago Mendo-Lázaro in 2022^[19], contribute new knowledge to the cooperative learning conceptual framework. During eight weeks of psychology instruction, Van Dat Tran's^[20] experimental study investigated the effects of cooperative learning on the achievement and retention of knowledge of 110 first-year primary education students at An Giang University. Two groups of 55 college students were instructed by the same professor. The experimental group used cooperative learning, whereas the control group relied on lecture-based instruction. After approximately eight weeks, students who were instructed through cooperative learning attained significantly higher scores on the achievement and knowledge retention post-tests than students who were instructed through lecture-based instruction. The study demonstrates the effectiveness of cooperative learning in Vietnamese higher education. The Effect of Cooperative Learning on Students' Achievement and Perceptions of the Science and Technology Course, a study conducted by Sertel ALTUN^[22], revealed that an achievement scale and focus group interviews were employed to collect quantitative and qualitative data, respectively. The t-test was used to analyse the quantitative data, whereas content analysis was used to analyse the qualitative data. The investigation revealed that the Cooperative learning method positively affected learning. The cooperation-based learning-teaching environment offered cooperation, supported permanent learning, provided opportunities for success, contributed to the development of social and personal skills, but also caused concern because it requires students to achieve success in all aspects.

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Relationship between Cooperative learning and Peer Relationship:

According to a study by Mark J. Van Ryzin^[12], cooperative learning decreases racial disparities, enhances peer relations, and boosts empathy. It can be used for interventions to reduce prejudice in law enforcement, healthcare, and the workplace. Interactive, collaborative training methods founded on the theory of contact can effectively reduce prejudice in a variety of domains. Another study by José Antonio Cecchini Estrada et al.^[23] revealed an increase in students' perceptions of cooperative learning, as well as enhanced teaching methods and teacher actions that promote it. This indicates that cooperative learning activates acceptance, support, and affective bonds among group members, confirming the program's validity and increasing the psychological need for relatedness.

Cooperative learning had a greater positive impact on children's affective (self-concept and motivation) and social learning (peer relationships), according to a study by Lea eleznik Mean et.al.^[24]. Only in the Experimental group did peer relationships and mastery motivational climate improve, with significant distinctions between the two groups. Implementing cooperative learning and teaching pre-adolescent children social skills can help them become less selective.

CONCLUSION

The relationship between social skills, academic achievement, and peer interaction is complex and dynamic, affecting students' overall development and success in educational settings. Social skills, such as communication, collaboration, and conflict resolution, significantly impact peer interaction and academic achievement. Robust social skills predict higher academic achievement, as students excel in collaboration and adaptability. Positive peer interactions heighten self-esteem and foster a sense of belonging, amplifying academic engagement and accomplishments. Cooperative learning environments, such as cooperative learning, act as catalysts for honing social skills, shielding against academic challenges and stress. Academic achievements can influence peer acceptance and social status, potentially increasing positive peer interactions and opportunities for social engagement. By fostering cooperative learning environments that accentuate positive peer interactions, provide platforms for social skill cultivation, and reinforce academic accomplishments, educators empower students to excel academically and develop vital social competencies essential for their holistic well-being and success.

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Conflict of Interest

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