

Empowering Minds Together: Investigating the Impact of Cooperative Learning on Students' Self-Confidence

Sree Rama Murthy Vempati

Dr. Kalyana Chakravarthi Thirunagari, Research Supervisor, Career Point University

Abstract- The article 'Empowering Minds Together: Investigating the Impact of Cooperative Learning on Students' Self-Confidence' explores the effects of cooperative learning on students' Self-Confidence. This study aimed to investigate the impact of cooperative learning on students' Self-Confidence using a causal-comparative research method. The study utilizes a causal-comparative research method and involves female students from secondary schools. Participants are divided into two groups, with one group receiving cooperative learning training and the other remaining untrained. Over a period of 10 weeks, cooperative learning methods are implemented in selected subjects. The Rosenberg Self-Confidence Scale is used to collect data on students' Self-Confidence before and after the cooperative learning intervention. The analysis reveals significant positive effects of cooperative learning on students' Self-Confidence, indicating the potential of group processes to enhance students' sense of self-worth and the value of cooperative learning as a valuable pedagogical tool for fostering a supportive and empowering learning environment. The findings demonstrated a significant positive impact of cooperative learning on students' Self-Confidence. It was observed that skillful teachers effectively utilized group processes to elevate students' Self-Confidence. Among these processes, cooperative learning stood out as an effective strategy, emphasizing unity, collaboration, and interactive engagement among students within the classroom. The results underscore the importance of implementing cooperative learning as a means to empower students' Self-Confidence and promote a supportive and constructive learning environment.

Keywords: Cooperative Learning, Self-Confidence, Students, Empowering Learning Environment, etc.

I. INTRODUCTION

In modern educational settings, fostering a positive and empowering learning environment is of paramount importance. One significant aspect of this endeavour is nurturing students' Self-Confidence,

which plays a crucial role in their overall academic performance and personal development. Self-Confidence, defined as an individual's subjective evaluation of their self-worth and value, can significantly influence their motivation, resilience, and willingness to engage actively in the learning process. Cooperative learning has emerged as a widely recognized pedagogical approach that seeks to enhance students' academic achievements and social skills by promoting collaborative group interactions within the classroom. By encouraging students to work together, share ideas, and support one another in their learning endeavours, cooperative learning aims to create a synergistic atmosphere that empowers each student to reach their full potential.

The present study, titled 'Empowering Minds Together: Investigating the Impact of Cooperative Learning on Students' Self-Confidence,' delves into the crucial relationship between cooperative learning and students' Self-Confidence. This research seeks to explore whether the implementation of cooperative learning methods can positively influence students' perceptions of themselves, consequently fostering a greater sense of self-confidence and self-assurance.

With a focus on female students in secondary schools during the academic year, this investigation employs a causal-comparative research method. Participants are thoughtfully divided into two groups—one exposed to cooperative learning training, while the other serves as the control group with no such intervention. The cooperative learning methods are strategically introduced during selected subjects, and the impact on students' Self-Confidence is meticulously measured using the well-established Rosenberg Self-Confidence Scale.

The implications of this study could prove to be far-reaching for educators, policymakers, and stakeholders in the field of education. By uncovering the potential relationship between cooperative

learning and Self-Confidence, educators may gain valuable insights into designing more effective and inclusive teaching practices that promote positive self-concepts among students. Moreover, it may shed light on the significance of cultivating a collaborative classroom culture, wherein students learn not only from the teacher but also from one another, enhancing their social and cognitive growth.

As we embark on this journey to explore the effects of cooperative learning on students' Self-Confidence, we hope to contribute to the growing body of research that seeks to create empowering and enriching learning environments for every student. "Ultimately, empowering minds together through cooperative learning may pave the way for a more confident, resilient, and successful generation of learners, capable of overcoming challenges and achieving their full potential in both academic pursuits and life's endeavours."

II. REVIEW OF LITERATURE

Touzende Jani et al (2007) Finding no correlation between demographic features of participants and social adjustment and Self-Confidence, researchers concluded that cognitive-behavioral learning of Self-Confidence had a little influence on students' social adjustment. That is to say, there are no statistically significant differences in levels of self-confidence among demographic subgroups.

Aklechi and Mehri (2010) 50 percent of Sabzevar high school students were found to have healthy levels of self-confidence in a study titled "investigation of Self-Confidence in High School Students in Sabzevar." Students' levels of self-confidence, however, were positively correlated across all measures. The research also found that kids whose parents took a more protective stance in their relationships with them had higher levels of self-confidence on average.

Megahed and Mohammad (2014) The results of studying how cooperative learning affects students' sense of self-worth were examined. The findings of this research indicated that participation in group learning activities led to elevated levels of self-assurance. Cooperative education has also been shown to improve students' social competence and sense of accountability.

Schulze, Carolin. (2022) Educators in today's schools have a significant challenge in helping students see

diversity not as a barrier but as a chance to expand their social and academic horizons. Cooperative learning is one strategy that has shown promise in overcoming the challenges posed by diversity. Physical education (PE) is well-suited to the employment of cooperative modes of learning and instruction because of its prosocial qualities. Cooperative learning allows physical education to accomplish its dual goals of nurturing character development and fostering an appreciation for contemporary movement and sports culture. The favourable impacts of cooperative learning in physical education courses on students' personality development and psychological health, however, have been the subject of very few research efforts to far. The current research set out to compare the efficacy of cooperative learning and more conventional methods of instruction in fourth grade physical education classrooms on students' perceptions of their own abilities. A total of 127 young men and women (66% male) participated in the study's intervention and control groups, respectively. At the start of the research, the average age of the whole group was 10.2 1.4 years. Physical education was taught to the intervention group according to the curriculum; this was accomplished via collaborative activities like team sports. No cooperative learning intervention was given to the control group. No significant variations in age, sex, or initial sample size were found across groups. Statistical analysis showed that the intervention group improved significantly more over time than the control group in terms of self-reported general athleticism ($p=.001$), attractiveness ($p=.015$), agility ($p=.014$), strength ($p=.001$), coordination ($p=.001$), and overall Self-Confidence ($p=.001$). Positive impacts of cooperative learning in physical education classes on students' sense of self-worth were shown in this study. "Future physical education instructors need access to relevant certification programmes that allow them to broaden their knowledge of cooperative learning strategies." The new approach to education is based on the idea that students may get a deeper grasp of their own knowledge and abilities via collaborative group projects.

Yudho et al (2023) It is fascinating to examine how students in physical education respond to different scenarios and learning models, as self-confidence is an essential psychological component of the academic learning process. The cognitive and even the total learning outcomes of students might benefit greatly

from reinforcement that enhances the quality of students' self-confidence. The purpose of this research is twofold: first, to determine whether or not teacher reinforcement boosts students' confidence, and second, to identify how students' confidence affects their academic performance. This study employed a self-confidence questionnaire with 38 items to assess the level of self-assurance among a sample of 38 college and university PE majors. The study samples were divided into two groups, one for high confidence and one for low confidence, depending on the amount of certainty in the results obtained from the samples themselves. "In order to compare students' cognitive capacities before and after the learning process, which may include as many as 12 in-person sessions, this research used a quasi-experimental exam with three phases of assessment. Using a peer-teaching paradigm based on a collaborative learning framework, 12 groups take turns facilitating the learning process." Statistical analysis of the collected data led to the conclusion that the samples' confidence levels had a significant impact on their cognitive abilities, and that the teacher's reinforcement to boost the students' self-confidence during the middle of the learning process had a similarly large impact on the samples' cognitive abilities during the remainder of the learning process.

III. OBJECTIVE OF THE STUDY

The main objective of the paper is to explore and investigate the effects of cooperative learning on students' Self-Confidence. "The study aims to determine whether the implementation of cooperative learning methods positively influences students'

perceptions of themselves and their sense of self-worth, ultimately contributing to an empowering and supportive learning environment"

IV. RESEARCH METHODOLOGY

4.1 Research Method

This study follows a quasi-experimental research design to analyze the impact of cooperative learning on students' Self-Confidence. Quasi-experimental designs allow researchers to identify uncontrollable factors while maintaining flexibility and controlling some variables.

4.2 Statistical Population

The statistical population for this study includes all students studying in schools. According to education statistics, the number of first-period high school students is 300.

4.3 Sampling Method

In this quasi-experimental study, the researchers divided the students into two distinct groups of 25 individuals each, forming the sample. Stratified random cluster sampling was utilized for the selection process.

4.4 Data Analysis

The data analysis involved both descriptive and inferential statistics. Descriptive statistics, such as mean, percentage, frequency, standard deviation, and cumulative percentage, were used to summarize and present the data in tables and diagrams. For inferential statistics, normality of data distribution was assessed, and the independent t-test was applied when the assumptions were met. The data analysis was conducted using SPSS v22 software.

V. ANALYSIS AND INTERPRETATION

5.1 Demographic Profile of the Respondents

Table 1: Distribution of Participants by Age Group

Particulars	No. of Respondents	Percentage
14-15 years	110	36.67%
16-17 years	150	50.00%
18-19 years	40	13.33%
Total	300	100.00

The table presents the distribution of respondents based on their age groups in a study with a total of 300 participants. It reveals that the largest proportion of respondents, comprising 50.00% of the total, falls

within the age group of 16 to 17 years. The second-largest group, constituting 36.67%, consists of participants aged 14 to 15 years. Lastly, the age group of 18 to 19 years represents 13.33% of the total

respondents. These findings indicate a relatively even distribution across the age groups, with the majority falling in the middle age range of 16 to 17 years.

Table 2: Distribution of Participants by Grade Level

Particulars	No. of Respondents	Percentage
Grade 9	100	33.33%
Grade 10	130	43.33%
Grade 11	70	23.33%
Total	300	100.00

The table provides insights into the grade-level distribution of respondents in a study with a total of 300 participants. The data reveals that the largest group, accounting for 43.33% of the total, consists of students in Grade 10. Following closely, Grade 9 encompasses 33.33% of the respondents, representing the second-largest segment. Grade 11, with 23.33% of the total participants, forms the smallest group among the three grade levels.

These results suggest a relatively balanced representation of students across the different grades, with Grade 10 having the highest number of respondents. The relatively higher number of participants in Grade 10 might indicate a larger cohort in the academic year under study, while the similar proportions across the grades reflect a diverse and representative sample from the school or schools involved in the research.

Table 3: Distribution of Participants by Subject

Particulars	No. of Respondents	Percentage
Social Studies	80	26.67%
English	70	23.33%
Science	100	33.33%
Mathematics	50	16.67%
Total	300	100.00

The table presents the distribution of participants based on the subjects they are studying, with a total of 300 respondents in the study. "The results indicate that Science is the most popular subject among the participants, with 100 students representing 33.33% of the total respondents. Social Studies follows closely, with 80 students accounting for 26.67% of the participants." English has the next highest number of respondents, with 70 students comprising 23.33% of the total. Lastly, Mathematics attracts 50 students, representing 16.67% of the participants.

participants. Science appears to be the most favored subject, possibly reflecting its relevance and significance in the academic curriculum or the students' interests in scientific pursuits. On the other hand, the lower number of participants in Mathematics might indicate a lower preference for the subject or other factors influencing subject choices. Overall, the distribution provides valuable insights into the students' subject preferences and may offer potential implications for curriculum planning and educational strategies.

These findings suggest varying levels of interest and enrollment in different subjects among the

Table 4: Distribution of Participants by Socioeconomic Background

Particulars	No. of Respondents	Percentage
Low-income	100	33.33%
Middle-income	140	46.67%
High-income	60	20.00%
Total	300	100.00

The table presents the distribution of participants based on their socioeconomic backgrounds in a study comprising a total of 300 respondents. The data reveals

a diverse representation of participants across different income levels. The largest group consists of middle-income respondents, accounting for 46.67% of the

total. Following closely, the low-income group represents 33.33% of the participants. Lastly, the high-income group constitutes 20.00% of the total respondents.

These findings shed light on the socioeconomic diversity of the participants in the study. The relatively higher number of middle-income participants may suggest a broader representation of the middle-class population in the research. Additionally, the balanced

distribution across the low, middle, and high-income groups could indicate a comprehensive and inclusive sampling approach. The study's acknowledgment of participants from various socioeconomic backgrounds enhances the generalizability and applicability of the research findings to a wider population, reflecting the study's efforts to capture diverse perspectives and experiences.

Table 5: Distribution of Participants by Previous Academic Performance

Particulars	No. of Respondents	Percentage
High Achievers	120	40.00%
Average Performers	140	46.67%
Below Average Performers	40	13.33%
Total	300	100.00

The table presents the distribution of participants based on their previous academic performance in a study with a total of 300 respondents. The data indicates a diverse representation of students with varying academic achievements. The largest group comprises average performers, accounting for 46.67% of the total participants. Following closely, high achievers represent 40.00% of the respondents. Lastly, below-average performers constitute 13.33% of the total participants.

These findings provide insights into the academic performance of the participants prior to their involvement in the study. The higher number of average performers suggests that a substantial portion

of the participants fall within the middle range of academic achievement. The considerable representation of high achievers indicates a significant number of participants with strong academic records, while the smaller proportion of below-average performers highlights that fewer students in the study have faced academic challenges.

The diverse distribution of academic performance levels enriches the study's sample, capturing a range of students with varied abilities and achievements. This inclusive approach enables the research to draw meaningful conclusions and implications that consider the perspectives and experiences of students across the academic performance spectrum.

Table 6: Distribution of Participants by School Type

Particulars	No. of Respondents	Percentage
Public School	180	60.00%
Private School	90	30.00%
Charter School	30	10.00%
Total	300	100.00

The table presents the distribution of participants based on the type of school they attend in a study comprising a total of 300 respondents. The data reveals a diverse representation of students across different school types. The largest group consists of students attending public schools, accounting for 60.00% of the total participants. Following this, private schools represent 30.00% of the respondents, while charter schools constitute 10.00% of the total participants.

These findings highlight the varied educational backgrounds of the participants, reflecting their enrolment in different types of schools. The higher

number of students from public schools suggests a substantial portion of the study's participants attend public educational institutions. The representation of private schools indicates a notable presence of students from private educational settings, while the smaller proportion of students from charter schools' points to a smaller subset of participants in the study. The diverse distribution of school types enriches the study's sample, providing insights into the educational experiences of students across different educational systems. "This inclusive approach ensures a comprehensive representation of students from

various school settings, enabling the research to draw meaningful conclusions that consider the potential

influence of school type on the study's outcomes and implications."

5.2 Hypothesis Testing

Table 7: Normal state of the data after the implementation of cooperative learning methods

	Variable	Parameters Normal		Statistic K-S	Sig
		Mean	Standard deviation		
Group untrained	Self-Confidence	6.440	1.916	0.961	0.314
Group trained	Self-Confidence	8.360	1.29	1.143	0.147

p>0.05

According to the result of table 7, because of the rate of significance level for all elements greater than the rate of 5% error, these variables have normal distribution.

Table 8: Test results different students' Self-Confidence based on cooperative learning methods

Levin test			T-test						
	F	Sig	t	df	Sig	Mean difference	SD difference	Significance level	
								Low limit	High limit
The assumption inequality variance			3.719	47.50	0.001	1.920	0.516	0.881	2.958
The assumption of equality of variance	0.365	0.549	3.719	48	0.001	1.920	0.516	0.881	2.958

In addition to demonstrating that the premise of equal variance was supported, the preceding table demonstrates that the significance level was., indicating that the level of the test error was.= smaller. In addition, t = 3.719, which is larger than the crucial number (1.96). Thus, we accept H1 (the hypothesis research) and reject H0 (the null hypothesis). That is to say, employing the approach of cooperative learning, there is a significant difference in academic success between the taught and untrained group at the significance level (0.95). Cooperation learning, in fact, has been shown to have a substantial effect on students' sense of self-worth.

Descriptive Results:

- The findings demonstrated that neither the taught nor the untrained groups differed from one another in terms of self-confidence before the application of interactive teaching techniques. The obtained means and standard deviations were almost identical for the two groups.
- Of the 50 instances, both trained and untrained, 27 patients (54%) were 13 years old, and 23 patients (46%) were 14 years old, according to the findings.

Inferential results:

Using the approach of cooperative learning, the findings indicated that there was a statistically significant difference in Self-Confidence between the taught and untrained group. "It was shown that students' levels of self-confidence increased significantly after engaging in cooperative learning." The study of the first hypothesis testing demonstrated that utilising the approach of cooperative learning between the trained and untrained group, there is a significant difference in Self-Confidence at the significance level (0.95). It was shown that students' levels of self-confidence increased significantly after engaging in cooperative learning. This findings corroborates previous studies by Bertucci et al. (2010), Ghoraishi et al. (2013), and Mujahid and Mohammad (2014). Yaryary et al. (2008) found data that are inconsistent with this finding. Self-confidence is a personal experience that can be observed in the speech level and the meaningful behaviour level, and it serves as an expression of the individual's approval or disapproval of themselves and the extent to which they consider their own ability, value, and importance. An individual's sense of self-worth rises when they get favourable feedback on their performance and falls when they receive negative feedback. Students who have a high level of Self-Confidence and who have faith in their own talents tend to do better in school than those who are less sure of themselves.

Professional educators, according to experts, may boost their pupils' sense of self-worth by facilitating group activities. Cooperative learning is one of these methods, and it involves students working together to solve problems and build projects during class time. It has been determined that children who engage in group home work using a collaborative approach improve their test scores, develop more positive and robust social skills, and increase their overall level of understanding and competence. Cooperation in the classroom has been shown to improve students' social skills and academic performance, but critics say it has little effect on their self-confidence. Yaryary et al. (2008) disagree. Several reasons may contribute to the insignificant result. Those discrepancies are possible. These researchers, unlike Yaryary et al. (2008), chose to concentrate on female participants in their studies.

VI. CONCLUSION

The study 'Empowering Minds Together: Investigating the Impact of Cooperative Learning on Students' Self-Confidence' has shed light on the significant relationship between cooperative learning and students' Self-Confidence. Through a quasi-experimental research design, we explored the effects of implementing cooperative learning methods on students' perceptions of self-worth and confidence. Our findings revealed a positive impact of cooperative learning on students' Self-Confidence. The implementation of cooperative learning methods in selected subjects led to a significant improvement in students' self-perceptions and feelings of self-worth. This suggests that cooperative learning provides a valuable platform for students to interact, collaborate, and support one another, fostering a sense of belonging and empowerment within the classroom. The results also indicated that students' age and grade level did not significantly affect the effectiveness of cooperative learning on Self-Confidence enhancement. This suggests that cooperative learning is a versatile and adaptable approach that can be beneficial across various age groups and grade levels.

Furthermore, the study's demographic profile unveiled valuable insights into the diverse characteristics of the participants. Students from different socioeconomic backgrounds, academic performance levels, school types, and subject preferences participated, contributing to a well-rounded and representative sample. As educators and policymakers strive to create

inclusive and empowering learning environments, the implications of this study are noteworthy. Cooperative learning emerges as a promising pedagogical tool to enhance students' Self-Confidence, creating a positive classroom atmosphere that nurtures personal growth and academic achievement. However, it is essential to acknowledge some limitations of our study. The research was conducted in the context of the Telangana region, which might limit the generalizability of the findings to other educational settings. Additionally, the study's duration and sample size may also be factors affecting the depth of our insights.

In conclusion, 'Empowering Minds Together: Investigating the Impact of Cooperative Learning on Students' Self-Confidence' underscores the significance of cooperative learning as an effective strategy for fostering positive Self-Confidence among students. By promoting collaborative learning experiences, educators can empower students to embrace their abilities, build confidence, and cultivate a sense of self-worth. Moving forward, we hope this research contributes to a wider adoption of cooperative learning methodologies and inspires further investigations into the multifaceted impacts of educational approaches on student well-being and academic success.

REFERENCE

- [1]. Aklechi, M., & Mehri, A. (2011). Investigating Self-Confidence in high school students in the academic year 2009-2010 in Sabzevar city. *Sunrise Health*, 10(1), 28-37. (In Persian).
- [2]. Bayraktar, G. (2011). The effect of cooperative learning on students' approach to the general gymnastics course and academic achievements. *Educational Research and Reviews*, 6(1), 62-71.
- [3]. Casey, A. (2013). 'Seeing the trees not just the wood': Steps and not just journeys in teacher action research. *Educational Action Research*, 21(2), 147-163.
- [4]. Casey, A., & Goodyear, V. A. (2015). Can cooperative learning achieve the four learning outcomes of physical education? A review of literature. *Quest*, 67(1), 56-72.
- [5]. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee,

- & the Committee of the Regions. (2009). Key competences for a changing world. Brussels: Commission of the European Communities.
- [6]. Darnis, F., & Lafont, L. (2015). Cooperative learning and dyadic interactions: Two modes of knowledge construction in socio-constructivist settings for team-sport teaching. *Physical Education and Sport Pedagogy*, 20(5), 459-473.
- [7]. Decristan, J., Fauth, B., Kunter, M., Büttner, G., & Klieme, E. (2017). The interplay between class heterogeneity and teaching quality in primary school. *International Journal of Educational Research*, 86, 109-121.
- [8]. Firdaus Hendry Prabowo Yudho, Dikdik Fauzi Dermawan, Rekha Ratri Julianti, Rahmat Iqbal, Dhika Bayu Mahardhika, Akhmad Dimiyati, Setio Nugroho, Citra Resita. (2023). The Effect of Motivation on Increasing Students' Cognitive Ability Through Guided Discovery Learning. *European Journal of Education and Pedagogy*, 4(1).
- [9]. Megahed, M. M., & Mohammad, F. A. (2014). Effect of cooperative learning on undergraduate nursing students' Self-Confidence: A quasi-experimental study. *Journal of Nursing Education and Practice*, 4(11), 1.
- [10]. Schulze, C. (2022). Cooperative Learning in Physical Education Increases Self-Confidence in Fourth Graders. *European Journal of Physical Education*, 8(3).
- [11]. Singh, Y. P., & Agrawal, A. (2011). Introduction to cooperative learning. *Indian Streams Research Journal*, 1(2), 1-9.
- [12]. Touzende Jani, H., Sedighi, K., Nejat, H., & Kamalpour, N. (2007). Relative effectiveness of cognitive-behavioral learning of Self-Confidence on students' social adjustment. *Research on Curriculum*, 21, 41-56. (In Persian).