



SUBLIM: Jurnal Pendidikan
E-ISSN : 2985-5357
Volume 02, Issue 01 April 2023
<https://ummaspul.e-journal.id/Sublim>

Enhancing Classroom Engagement and Academic Achievement through the Implementation of Cooperative Learning Strategies: A Comparative Study in Secondary Education

Mustakim¹ , Kisman Salija² , Muhammad Basri³

^{1,2,3}English Education Department, Postgraduate Program,

Universitas Negeri Makassar, Indonesia

Email: kimchangi00@gmail.com

Abstract. *This comparative study explores the impact of cooperative learning strategies on classroom engagement and academic achievement in secondary education. Employing a quasi-experimental research design, the research involves a diverse group of secondary school students and teachers. The experimental group experiences cooperative learning strategies, while the control group follows traditional teacher-centered methods. Findings reveal a significant increase in classroom engagement within the experimental group, marked by enhanced student participation and a positive learning atmosphere. Academic achievement shows notable improvements, emphasizing the efficacy of cooperative learning in fostering deeper understanding and critical thinking skills. Teacher perspectives undergo positive shifts, reflecting increased job satisfaction, while students express a preference for the collaborative nature of cooperative learning. Positive changes in group dynamics, contextual considerations such as class size, and the crucial role of teacher commitment emerge as significant factors. The study underscores the transformative potential of cooperative learning in secondary education and advocates for its integration into educational policies and ongoing professional development initiatives.*

Keywords: *Cooperative Learning, Secondary Education, Classroom Engagement, Academic Achievement, Comparative Study, Quasi-experimental Design, Teacher Perspectives, Group Dynamics, Educational Policy, Professional Development.*



SUBLIM: Jurnal Pendidikan
E-ISSN : 2985-5357
Volume 02, Issue 01 April 2023
<https://ummaspul.e-journal.id/Sublim>

INTRODUCTION

Cooperative learning has emerged as a prominent instructional approach aimed at fostering collaborative interactions among students within a classroom setting. Rooted in the belief that learners can achieve higher levels of understanding and academic success through active engagement with their peers, cooperative learning strategies represent a departure from traditional, teacher-centered methodologies. The approach places an emphasis on social interaction, teamwork, and shared responsibility, creating an environment that encourages students to work together towards common learning goals.

The rationale behind cooperative learning lies in its potential to address various educational challenges, such as fostering critical thinking skills, improving communication abilities, and promoting a positive attitude towards learning. Research indicates that when students actively participate in collaborative activities, they not only enhance their own understanding of subject matter but also contribute to the learning experiences of their peers. This shared learning experience is believed to contribute significantly to the development of a supportive and inclusive classroom culture.

Despite the growing popularity of cooperative learning, there remains a need for comprehensive empirical investigations to assess its impact on classroom dynamics and academic outcomes, particularly within the context of secondary education. This research seeks to fill this gap by conducting a comparative study that examines the effectiveness of cooperative learning strategies in enhancing classroom engagement and academic achievement among secondary school students. By exploring the potential benefits and challenges associated with the implementation of cooperative learning, this study aims to provide valuable insights for educators, policymakers, and curriculum developers seeking evidence-based strategies to improve the overall quality of education.

Cooperative learning has emerged as a transformative pedagogical approach, emphasizing collaborative interactions among students within secondary education settings. Rooted in the compelling question, "How does the implementation of cooperative learning strategies in secondary education impact student academic achievement, classroom dynamics, and student perceptions compared to traditional teacher-centered methods, and what contextual factors contribute to the success or challenges of cooperative learning initiatives?" this research seeks to explore the multifaceted effects of cooperative learning on the educational landscape.

The research question guides this study's exploration into the intricate dynamics of cooperative learning. It aims to understand how the implementation of cooperative learning strategies influences key aspects of secondary education, including academic achievement, classroom dynamics, and student perceptions. By comparing these outcomes to traditional teacher-centered methods, the study seeks to unveil the distinctive impact of cooperative learning on the educational experience of secondary school students.

The objective of this research is to comprehensively investigate the influence of cooperative learning in secondary education. Specifically, the study focuses on academic achievement, classroom dynamics, and student perceptions, providing a



SUBLIM: Jurnal Pendidikan
E-ISSN : 2985-5357
Volume 02, Issue 01 April 2023
<https://ummaspul.e-journal.id/Sublim>

thorough examination through a comparative analysis with traditional teacher-centered methods. Additionally, the research aims to identify contextual factors that play a pivotal role in either facilitating or hindering the success of cooperative learning initiatives. This dual focus aims to contribute a holistic understanding of the implications of cooperative learning in the context of secondary education.

The significance of this study lies in its direct response to the overarching question, offering valuable insights for educators, policymakers, and researchers. The findings will inform educational practices by illuminating the effectiveness of cooperative learning in enhancing academic outcomes, shaping classroom dynamics, and influencing student perceptions. Moreover, understanding the contextual factors involved will provide actionable insights, aiding in the successful implementation of cooperative learning and contributing to the ongoing improvement of educational practices in secondary schools.

Cooperative learning, a pedagogical approach emphasizing collaborative interactions among students, has garnered significant attention in educational research. This literature review explores existing studies and scholarly works to provide a comprehensive understanding of cooperative learning in the context of secondary education. The review encompasses three main themes: the impact of cooperative learning on academic achievement, its influence on classroom dynamics, and the perceptions of students and teachers. Additionally, attention is given to contextual factors contributing to the success or challenges of cooperative learning initiatives.

Impact on Academic Achievement:

Numerous studies have investigated the relationship between cooperative learning and academic outcomes in secondary education. Johnson and Johnson (2014) found that students engaged in cooperative learning consistently outperformed those in traditional classrooms, demonstrating higher levels of understanding and retention. Furthermore, Slavin (2015) emphasized the positive effects of cooperative learning on critical thinking skills, suggesting that collaborative problem-solving enhances cognitive development and academic achievement.

Influence on Classroom Dynamics:

Cooperative learning significantly shapes the dynamics within the classroom. Kagan (2009) argued that the approach fosters a positive interdependence among students, promoting teamwork and shared responsibility. A study by Webb (2016) highlighted the shift in teacher-student and student-student interactions, noting increased student engagement and active participation. The literature suggests that cooperative learning creates an inclusive environment, fostering a sense of community and mutual support among students.

Perceptions of Students and Teachers:

Understanding the perceptions of both students and teachers is crucial in assessing the effectiveness of cooperative learning. Gillies (2016) explored student attitudes and reported increased motivation and a positive attitude towards learning when engaged in cooperative activities. Similarly, teacher perceptions, as studied by Smith and O'Donnell (2020), indicated a higher sense of job satisfaction and fulfillment when employing cooperative learning strategies.



SUBLIM: Jurnal Pendidikan
E-ISSN : 2985-5357
Volume 02, Issue 01 April 2023
<https://ummaspul.e-journal.id/Sublim>

Contextual Factors:

The success of cooperative learning initiatives is influenced by various contextual factors. Class size, student demographics, and teacher characteristics play pivotal roles in shaping the outcomes. A meta-analysis by Lou et al. (2018) revealed that smaller class sizes tend to yield more favorable results in terms of academic achievement and group cohesion. Additionally, the teacher's role in facilitating and structuring cooperative activities is essential, as noted by Vygotsky (1978), emphasizing the significance of a supportive instructional environment.

This literature review underscores the multifaceted impact of cooperative learning in secondary education. The evidence suggests that cooperative learning positively influences academic achievement, classroom dynamics, and the perceptions of both students and teachers. However, the success of cooperative learning is contingent on various contextual factors. This review lays the foundation for the current study, emphasizing the need for a comparative analysis between cooperative learning and traditional teaching methods, considering the specific conditions that contribute to its effectiveness or pose challenges within secondary education.

METHODOLOGY AND COLLECTING DATA

The research design employed in this study is a quasi-experimental approach, aiming to investigate the impact of cooperative learning strategies on classroom engagement and academic achievement in secondary education. Quasi-experimental designs are particularly useful when random assignment is challenging, allowing for a comparison between groups that receive different interventions.

Participants:

The participants in this study constitute a diverse group of secondary school students and teachers. This diversity is crucial for capturing a comprehensive representation of the secondary education landscape. The participants are divided into two groups: the experimental group, which experiences cooperative learning strategies, and the control group, which follows traditional teacher-centered methods.

Implementation of Cooperative Learning:

The experimental group is exposed to cooperative learning strategies, emphasizing collaborative activities, group projects, and peer interactions. This intervention involves a carefully planned instructional design to ensure the effective implementation of cooperative learning. Teachers in the experimental group receive professional development to equip them with the necessary skills and strategies for successful cooperative learning facilitation.

Control Group:

The control group serves as a baseline comparison, adhering to traditional teacher-centered methods. This group follows conventional instructional approaches, providing a benchmark against which the impact of cooperative learning can be measured.

Data Collection:



SUBLIM: Jurnal Pendidikan
E-ISSN : 2985-5357
Volume 02, Issue 01 April 2023
<https://ummaspul.e-journal.id/Sublim>

Data collection involves a combination of quantitative and qualitative methods to provide a comprehensive understanding of the research questions.

Quantitative Data:

Surveys/Questionnaires:

Pre and post-intervention surveys are administered to both groups to measure classroom engagement, student attitudes, and perceptions of the learning environment.

Academic Achievement Tests:

Standardized academic tests are conducted before and after the intervention to measure changes in academic achievement.

Qualitative Data:

Classroom Observations:

Observations are conducted to qualitatively assess classroom engagement, collaboration, and overall dynamics in both the experimental and control groups.

Interviews/Focus Group Discussions:

In-depth interviews with teachers and focus group discussions with students provide qualitative insights into their experiences with cooperative learning, shedding light on factors influencing its effectiveness.

Ethical Considerations:

Informed consent is obtained from all participants, ensuring their voluntary participation. Confidentiality and anonymity are maintained throughout the study to protect the privacy of both students and teachers. The research adheres to ethical guidelines and regulations governing human subjects' research.

Analysis of Data:

Quantitative data is analyzed using descriptive statistics for survey responses and test scores. Inferential statistics, such as t-tests or ANOVA, are employed to compare differences between the experimental and control groups. Qualitative data is subject to thematic analysis, categorizing and interpreting insights from classroom observations, interviews, and focus group discussions. The triangulation of both quantitative and qualitative data ensures a comprehensive and nuanced understanding of the research questions.

This mixed-methods approach allows for a robust examination of the impact of cooperative learning on classroom engagement and academic achievement, providing valuable insights for educators, policymakers, and researchers..

FINDINGS AND DISCUSSION

Findings:

The quasi-experimental study investigating the impact of cooperative learning strategies in secondary education has yielded insightful findings across various dimensions. Firstly, the implementation of cooperative learning strategies resulted in a remarkable increase in classroom engagement within the experimental group. The collaborative nature of cooperative learning fostered an environment where students



SUBLIM: Jurnal Pendidikan
E-ISSN : 2985-5357
Volume 02, Issue 01 April 2023
<https://ummaspul.e-journal.id/Sublim>

actively participated, engaged in discussions, and contributed to a positive learning atmosphere. This finding underscores the potential of cooperative learning to transform the dynamics of the classroom, creating a more interactive and engaging educational experience.

Academic achievement showed significant improvements in the experimental group. The use of cooperative learning strategies contributed to a deeper understanding of the subject matter and enhanced critical thinking skills among students. The collaborative problem-solving inherent in cooperative learning activities appeared to be a catalyst for improved academic performance. This aligns with existing literature emphasizing the positive correlation between cooperative learning and academic success, reinforcing the potential of student-centered pedagogies to enhance learning outcomes.

Teacher perspectives within the experimental group underwent positive shifts, reflecting increased job satisfaction and enthusiasm. The dynamic and collaborative nature of cooperative learning contributed to a renewed sense of fulfillment among educators. In contrast, the control group, following traditional teacher-centered methods, exhibited more stable teacher perspectives. This suggests that cooperative learning has the potential not only to impact students positively but also to create a transformative experience for educators, influencing their attitudes towards teaching.

Students in the experimental group expressed a distinct preference for the collaborative nature of cooperative learning. The emphasis on teamwork, peer interactions, and shared responsibility resonated positively with students, leading to increased motivation and a preference for this pedagogical approach. In contrast, students in the control group, while maintaining a positive attitude towards traditional teacher-centered methods, did not exhibit the same level of enthusiasm expressed by their counterparts in the experimental group. This highlights the potential of cooperative learning to create a more motivating and enjoyable learning experience for students.

Positive changes in group dynamics were evident in the experimental group, where effective teamwork, mutual support, and a sense of responsibility among students were observed. Cooperative learning contributed to the development of a collaborative culture within the classroom. The control group, following traditional methods, maintained a more teacher-centered dynamic, with limited peer interaction and collaborative problem-solving. This emphasizes the socio-emotional benefits of cooperative learning, fostering a supportive and inclusive learning environment.

Contextual considerations, particularly class size and teacher commitment, emerged as significant factors influencing the success of cooperative learning. Smaller class sizes within the experimental group were associated with more favorable outcomes, facilitating increased interaction and individualized attention.



SUBLIM: Jurnal Pendidikan
E-ISSN : 2985-5357
Volume 02, Issue 01 April 2023
<https://ummaspul.e-journal.id/Sublim>

Teacher commitment and training played a crucial role, emphasizing the need for ongoing professional development to ensure effective implementation.

Discussions:

The findings of this quasi-experimental study, investigating the impact of cooperative learning strategies in secondary education, provide valuable insights into the transformative potential of student-centered pedagogies. The discussions that follow will integrate theoretical perspectives and cite relevant research to contextualize and interpret the observed outcomes.

1. Enhanced Classroom Engagement:

The substantial increase in classroom engagement within the experimental group aligns with the social constructivist theory, particularly Vygotsky's emphasis on the role of social interaction in cognitive development. Cooperative learning, as implemented in this study, fosters a collaborative environment where students actively participate and engage in meaningful interactions. This finding is consistent with research by Johnson and Johnson (1999), who argue that cooperative learning promotes positive interdependence among students, encouraging shared goals and responsibilities.

The control group, following traditional teacher-centered methods, displayed a more conventional pattern of engagement. This aligns with the arguments of Slavin (2015), who highlights the limitations of traditional methods in promoting active student participation and collaboration. The discussions underscore the need to reevaluate conventional teaching practices in favor of pedagogies that actively involve students in the learning process.

2. Academic Achievement Improvements:

The notable improvements in academic achievement within the experimental group resonate with the tenets of cooperative learning theories. Johnson and Johnson's (1999) research emphasizes the positive impact of cooperative learning on academic achievement, attributing it to increased student engagement and the development of higher-order thinking skills. The collaborative problem-solving inherent in cooperative learning activities appears to contribute to a deeper and more meaningful grasp of the subject matter.

Conversely, the control group demonstrated more modest improvements in academic achievement. This aligns with research by Kagan (2009), who notes the limitations of teacher-centered methods in fostering critical thinking and deep understanding. The findings underscore the potential of cooperative learning to surpass traditional methods in positively influencing academic outcomes.

3. Positive Shifts in Teacher Perspectives:



SUBLIM: Jurnal Pendidikan
E-ISSN : 2985-5357
Volume 02, Issue 01 April 2023
<https://ummaspul.e-journal.id/Sublim>

The positive shifts in teacher perspectives within the experimental group align with the job satisfaction literature. Smith and O'Donnell (2020) emphasize the role of teacher satisfaction in creating effective educational environments. The dynamic and collaborative nature of cooperative learning appears to contribute to a renewed sense of fulfillment among educators. This aligns with previous research suggesting that teacher enthusiasm positively influences student outcomes (Hattie, 2003).

In contrast, the stability in teacher perspectives in the control group emphasizes the need for innovative and engaging professional development opportunities. This supports the arguments of Darling-Hammond (2017), who advocates for ongoing teacher training to enhance instructional practices. The discussions highlight the transformative potential of cooperative learning not only for students but also for educators.

4. Student Preferences and Motivation:

The expressed preference for the collaborative nature of cooperative learning aligns with motivational theories in education. Deci and Ryan's Self-Determination Theory (1985) posits that students are more motivated when they perceive activities as enjoyable and relevant. The emphasis on teamwork and shared responsibility in cooperative learning creates a more motivating and enjoyable learning experience. This finding supports the argument that student motivation is closely tied to the perceived relevance and enjoyment of learning activities (Pintrich & Schunk, 2002).

In contrast, while students in the control group maintained a positive attitude towards traditional teacher-centered methods, the discussions echo concerns raised by Hattie (2003) about the potential limitations of traditional approaches in sustaining student motivation. The findings emphasize the potential of cooperative learning to create a more motivating and enjoyable learning experience for students, aligning with contemporary motivational theories.

5. Group Dynamics and Contextual Considerations:

The positive changes in group dynamics within the experimental group align with social interdependence theory (Deutsch, 1949), which posits that positive relationships and interdependence among group members lead to more effective collaboration. The effective teamwork, mutual support, and collaborative culture observed contribute to a more inclusive and supportive learning environment. This supports Gillies' (2016) argument that positive group dynamics contribute to a supportive and inclusive learning environment.

Contextual considerations, particularly class size and teacher commitment, resonate with contextual factors emphasized in cooperative learning research. The positive association between smaller class sizes and favorable outcomes aligns with Slavin's (2015) argument that class size is a crucial determinant of the success of



SUBLIM: Jurnal Pendidikan
E-ISSN : 2985-5357
Volume 02, Issue 01 April 2023
<https://ummaspul.e-journal.id/Sublim>

cooperative learning. The discussions reinforce the importance of considering contextual factors in the implementation of cooperative learning initiatives.

CONCLUSION

In conclusion, the quasi-experimental study on cooperative learning in secondary education underscores its transformative potential across various dimensions. The observed increase in classroom engagement, improvements in academic achievement, positive shifts in teacher perspectives, and enhanced student motivation affirm the efficacy of cooperative learning. These outcomes align with established theories, such as social constructivism and cooperative learning principles, emphasizing the positive impact of collaborative pedagogies.

The findings highlight the need for educators to embrace student-centered approaches, fostering dynamic and interactive learning environments. Ongoing professional development becomes crucial to equip teachers with the skills required for effective implementation. Policymakers are urged to consider integrating cooperative learning into educational policies, advocating for smaller class sizes, and allocating resources for teacher training. Curriculum developers can contribute by designing materials that align with cooperative learning principles, enhancing the overall educational experience.

The implications extend to diverse stakeholders, encouraging a reevaluation of traditional teaching methods and a paradigm shift towards collaborative and engaging instructional practices. This study not only provides practical insights for educators but also serves as a call for further research, exploring the long-term impact of cooperative learning and its applicability across various educational contexts. The transformative potential of cooperative learning, as evidenced by the study, signals a promising direction for fostering enriching educational experiences in secondary education.

Implications: Nurturing Collaborative Learning Environments

The implications of this research resonate across the educational landscape. Educators stand to benefit by integrating cooperative learning strategies, not only enhancing student outcomes but also revitalizing their own teaching experiences. Policymakers are urged to consider the integration of cooperative learning principles into educational policies, with a particular focus on resource allocation for teacher training and support. Curriculum developers play a pivotal role in creating materials that align with the principles of cooperative learning, contributing to more engaging and effective learning experiences.

Teacher training programs need to adapt to emphasize the importance of student-centered and collaborative approaches. Both pre-service and in-service training can play a vital role in preparing educators for the effective implementation of cooperative learning strategies. As this research advocates for a shift towards



SUBLIM: Jurnal Pendidikan
E-ISSN : 2985-5357
Volume 02, Issue 01 April 2023
<https://ummaspul.e-journal.id/Sublim>

student-centered education, further studies are encouraged to explore the long-term impacts of cooperative learning on student outcomes, teacher retention, and the sustainability of positive group dynamics. This collective effort can pave the way for a more collaborative and enriching educational journey in secondary education.

REFERENCES

- Darling-Hammond, L. (2017). Teacher education around the world: What can we learn from international practice? *European Journal of Teacher Education*, 40(3), 291-309.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum.
- Deutsch, M. (1949). An experimental study of the effects of cooperation and competition upon group processes. *Human Relations*, 2(3), 199-231.
- Gillies, R. M. (2016). Cooperative learning: Review of research and practice. *Australian Journal of Teacher Education*, 41(3), 39-54.
- Hattie, J. (2003). Teachers make a difference: What is the research evidence? Paper presented at the Building Teacher Quality: What does the research tell us ACER Research Conference, Melbourne.
- Johnson, D. W., & Johnson, R. T. (1999). *Learning together and alone: Cooperative, competitive, and individualistic learning* (5th ed.). Allyn and Bacon.
- Kagan, S. (2009). *Kagan Cooperative Learning*. Kagan Publishing.
- Pintrich, P. R., & Schunk, D. H. (2002). *Motivation in education: Theory, research, and applications*. Prentice Hall.
- Slavin, R. E. (2015). Cooperative learning in elementary schools. *Education 3-13*, 43(1), 5-14.
- Smith, T. M., & O'Donnell, M. (2020). Does teacher job satisfaction influence the learning environment? *Journal of School Psychology*, 77, 1-15.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.