Application of the Talking Chips Co-operative Learning Model to Improve the Learning Outcomes of Students in Economics

Nurul Laili Hidayati[a]*, **Yorman[b]**, **Lale Yaqutunnafis[c]**

*Corresponding author email: hhidayati101@gmail.com

Abstract

The focus of this thesis from the Economic Education Study Programme at the Faculty of Teacher Training and Education, Nahdlatul Wathan University Mataram, is to apply the Talking Chips Cooperative Model to enhance the learning outcomes of Class X students at *Nahdlatul Wathan Islamic High School* (MA NW) Pepao in Lekor Village, Janapria District, for the 2023/2024 academic year. Economics is a crucial subject in education that supports the development of science and technology. Therefore, a teacher's ability to manage the class effectively is vital. Educators must use engaging media and methods to create a pleasant atmosphere, encouraging students to participate individually and in groups. This study aims to assess the application of the Talking Chips cooperative learning model in improving the learning outcomes of Class X economics students at Nahdlatul Wathan Islamic High School (MA NW) Pepao. Primary data from the research demonstrate that this collaborative learning model has increased students' economic subject performance. Observations of student activity revealed that the results in Cycle I were rated as "good," while in Cycle II, they improved to "very good." These findings indicate that implementing the Talking Chips cooperative learning model has effectively enhanced the economic learning outcomes for Class X students MA NW Pepao.

Contents

[a] Departement Teaching and Education Science, University Nahdlatul Wathan, Mataram, Indonesia
[b] Departement Teaching and Education Science, University Nahdlatul Wathan, Mataram, Indonesia
[c] Departement Teaching and Education Science, University Nahdlatul Wathan, Mataram, Indonesia

Introduction

Education plays a pivotal role in shaping the future of students by enabling them to realize their potential within an educational framework that aligns with specific goals (Abdullah, 2022). It is through education that students acquire the tools they need to navigate life, develop critical thinking, and contribute meaningfully to society. Education's fundamental purpose is to equip students with the knowledge, skills, and competencies required to function effectively in their communities and the wider world (Yorman, 2022). This process of learning extends beyond mere content mastery, as it aims to cultivate well-rounded individuals capable of contributing to various aspects of life, from the professional world to social and civic responsibilities (Hidayat et al., 2016).

The success of an educational system is often measured by the extent to which students achieve the established learning objectives, which are closely linked to their ability to understand and apply knowledge in real-world contexts. The desired outcomes of education are not just academic proficiency but also the development of critical thinking skills, creativity, and the ability to work collaboratively. When students reach these goals, they are considered to have mastered the learning content. This holistic approach to education ensures that students are well-prepared to face challenges, think analytically, and make informed decisions in their everyday lives. However, achieving these outcomes requires that educators adopt teaching methods that actively engage students and foster deeper learning.

Despite the growing awareness of the importance of innovative teaching strategies, many educators still rely on traditional methods, especially in subjects such as economics. The conventional approach often places the teacher at the center of the learning process, with students expected to receive information passively. This teacher-centered method limits student interaction and engagement, reducing opportunities for them to explore the material creatively and critically (Yorman et al., 2023). In this setting, students are more likely to focus on memorizing facts rather than developing a deep understanding of the subject matter. Such an approach can result in students losing interest in the topic and finding it difficult to connect the theoretical content to real-life applications.

Consequently, the passive nature of traditional teaching can lead to a significant gap in student learning outcomes. Students who are not actively involved in the learning process may struggle to absorb and retain the material, resulting in poor academic performance. This lack of engagement also stifles students' creativity, as they are not encouraged to think beyond the basic concepts presented in the classroom. The absence of interactive or student-centered learning strategies often means that students do not have the opportunity to explore the subject in depth, ask questions, or collaborate with their peers. This can have long-term effects on their academic success and future career opportunities.

To improve student outcomes, educators need to move away from traditional, lecture-based methods and embrace more dynamic, student-centered approaches. Active learning strategies, such as cooperative learning, problem-based learning, and the use of technology, can help engage students more effectively and enhance their understanding of complex subjects like economics. Shifting the focus from the teacher to the students fosters a more interactive and participatory classroom environment, where students take responsibility for their learning and are encouraged to think critically and creatively. This approach not only improves academic performance but also prepares students for the challenges they will face in the future, making education a truly transformative experience.

Teachers play a crucial role in facilitating a smooth learning process. They are expected to select models, methods, and learning strategies appropriate for their classroom's specific situation and conditions (Fadillah, 2014). Due to a lack of diversity in the learning models, some students become unresponsive and passive during discussions or when responding to the teacher. Consequently, certain students do not actively participate in teaching and learning activities. This disengagement leads to boredom during learning, resulting in students failing to achieve the minimum competency standards (KKM). In group discussion activities, not all students actively participate or engage in the conversation. Some members may only listen while others contribute, concluding that student engagement in group discussions is still low and unsatisfactory.

The selection of learning methods to be used in the learning process must be oriented towards the learning objectives. In addition, it must be adjusted to the type of material and the characteristics of the students. One effective learning model that promotes student engagement and enhances learning outcomes is the cooperative

learning model, known as the talking chips method. This technique ensures that every group member has an equal opportunity to share their ideas while also listening to the perspectives of others (Dewi, 2019). Cooperative learning brings together diverse learners to collaborate on understanding the material (Ahmad & Mahmood, 2010).

The Talking Chips model is a cooperative learning strategy that promotes equal participation and ensures that all students can share their thoughts and ideas during group activities. One of the primary strengths of this approach is its ability to address the common challenge of unequal participation in group discussions, which can sometimes lead to dominant voices overshadowing quieter or more reserved students. The model's structure encourages even the shyest individuals to contribute, ensuring a more inclusive and collaborative learning environment. This approach can be especially beneficial in diverse classrooms where some students may struggle to engage without such structured opportunities.

In the Talking Chips model, the teacher prepares a small box filled with tokens, such as buttons or chips, each student receives at the beginning of the activity. This tangible element serves as a visual and physical reminder of each student's speaking chance. The distribution of 2-3 chips to each member of the group helps ensure that all students are actively involved. It also limits the possibility of any one student monopolizing the conversation, as they are required to surrender a chip after speaking. This simple yet effective rule fosters a sense of fairness and accountability within the group.

When students share their ideas or opinions, they are required to place one of their chips in the center of the table after speaking. This action signifies their contribution and helps the group track who has participated. Once a student has used up all their chips, they must remain silent until all their peers have also run out of chips. This step is crucial in preventing more talkative students from dominating the discussion and ensures that every group member has an opportunity to speak. By limiting speaking turns and focusing on the quality of contributions rather than the quantity, the model enhances the quality of group interactions.

The Talking Chips model encourages students to listen actively to their peers, as they must wait for their turn to speak. This waiting period can promote more thoughtful responses and help students engage in deeper reflection before contributing to the conversation. Additionally, when the chips are exhausted but the task remains unfinished, the group can make the decision to redistribute the chips, allowing the discussion to continue. This adaptability fosters a sense of cooperation and flexibility among group members, teaching them the importance of compromise and collective problem-solving.

Overall, the Talking Chips cooperative learning model offers a structured and equitable way to manage group discussions, ensuring that every student has a voice. By limiting the number of opportunities to speak, the model encourages focused, intentional contributions from each group member. This method helps improve communication skills, promotes active listening, and enhances collaborative problem-solving. Its clear rules and simple mechanics make it an effective tool for teachers to implement in a variety of classroom settings, creating a more inclusive and engaging learning experience for all students.

Materials and Methods

The type of research used in this study is (PTK) class action research where in this study an action will be taken to improve the quality of learning in the classroom. In general, in PTK there are four stages, namely: Planning, action, observing, and reflecting (Arikunto, 2006). The subjects in this study were MA NW Pepao grade X students. The total number of students in class X MA NW Pepao is 19 students consisting of 6 male students and 13 female students. The subject that is the target of research is the subject of Economics on the material Types of resource scarcity needs. The data collection methods employed in this research include observation, testing, and documentation. The data source is the subject from which the data is obtained (Arikunto, 2010).

The data source for this research is the primary data source. Primary data sources are people who can provide information about research data. The informants in this study were MA NW Pepao class X students consisting of 13 girls and six boys. This is a consideration to determine the extent of student success in the learning provided by the application of the *Talking Chips* cooperative learning model. The data analysis technique is to analyze the results of observations using the following calculation formula:

Success rate=$\frac{the\ number\ of\ activities\ obtained}{sum\ of\ maximal\ scores}\ x\ 100\%$

Excellent = 80-100
Good =66-79
Fair = 56-65
Less =40-55
Fail = 30-39

Then, to analyse student learning outcomes using the following calculation formula:

$$Average\ value = \frac{\sum X}{\sum N}$$

Then, calculate the learning completeness with the following calculation formula:

$$classical\ completeness = \frac{Number\ of\ students\ who\ completed}{Total\ number\ of\ students\ enrolled}\ x100\%$$

$$individual\ completeness = \frac{number\ of\ scores\ obtained}{maximum\ possible\ score}\ x100\%$$

This study aims to assess the effectiveness of the teaching methods employed in economics education for class X students, with the ultimate goal of achieving specific learning outcomes. Success in this study is defined by whether at least 80% of the students meet or exceed the minimum learning completeness indicator, ensuring that the majority of students attain the desired level of understanding and competency in the subject. This threshold of 80% is crucial in determining whether the learning strategies and approaches used in the classroom have been successful in fostering student comprehension and engagement. The minimum learning completeness indicator serves as a benchmark for the study, ensuring that a significant portion of the class has mastered the essential concepts of the economics curriculum.

To further evaluate the success of the study, the school has set a Minimum Completion Criteria *(Kriteria Ketuntasan Minimal*, KKM) score of 75, which represents the minimum score a student must achieve to demonstrate proficiency in the subject. This KKM score is a critical aspect of the assessment, as it reflects the foundational knowledge and skills required for students to progress academically. Achieving this score is indicative of the students' ability to understand key economic concepts and apply them effectively in various contexts. Therefore, the success of the study hinges not only on meeting the 80% completion rate but also on ensuring that students attain or surpass the KKM score of 75, marking their readiness for more advanced topics in economics.

Results and Discussions

Teacher Professional Competence Data was obtained from the results of a questionnaire distributed to 47 students in this study. With a total of 30 questionnaire items that have been tested for validity. According to Darmadi (2017), Talking chips in cooperative learning is a learning model carried out in the form of small groups consisting of 4-5 people per group, and each member of the group has several cards that can be used to mark if they have expressed their opinions or suggestions and then place the cards on the table. According to Kagan (Darmadi, 2017: 103), in the implementation of taking chips, the steps are as follows:
1) The teacher divides students into small groups, about 4-6 people per group.
2) The teacher asks each group to discuss the subject matter.
3) Each member of the group is given a card or chips (cards for speaking/ markers for speaking) usually two to three cards.
4) Each time a group member speaks up in the discussion, he/she must place one of his/her cards in the center of the group or in the middle of the table.

5) Each group member is allowed to add his opinion until his card runs out. If his/her card is exhausted, he/she may not speak again until all members of his/her group have exhausted their cards.

6) If all the cards have been used up and the task has not been completed, the group may take the opportunity to divide the cards again and the discussion may resume.

The advantage is that it can overcome the obstacle of equal opportunity that often colors group work. Because usually in groups there are those who are always dominant talk a lot and there are also those who are passive and only rely on those who are active. Meanwhile, the disadvantage is that the teacher is required to be able to supervise every student in the class.

This research starts from the planning, action, observation, and reflection stages of learning in each cycle. In each cycle, researchers held pretest-posttest activities. As an action to determine the ability of students before entering the learning material to be delivered and after the material is delivered with the application of the cooperative learning model type of talking chips.

1) Planing

At this stage, researchers made the following preparations: First, the researcher prepared a lesson plan in accordance with the steps of the cooperative learning model of talking chips type. Second, researchers prepared learning media in the form of talking chips. Third, researchers compiled the format of student activity observation sheets during the learning process. Fourth, researchers compiled test instruments, including question grids and test questions for pretests and posttests.

2) Actuating

At this stage of implementation, namely implementing learning by using the cooperative learning model of talking chips type in economic subjects on the types of needs and scarcity of resources, which are in accordance with the lesson plans that have been prepared.

3) Observing

This observation was carried out during learning. This stage was carried out to find out the extent of the activities of students who learned by using the cooperative learning model of talking chips type.

4) Reflection

This stage is carried out to follow up on deficiencies in the learning process in each cycle.s

Learning outcomes are real abilities that are the result of the interaction between various factors that influence both from within and outside the individual learning (Nasution. 2006; Yorman et al., 2023). Learning outcomes are often used as a measure to determine how far a person has mastered the material that has been taught. Benyamin Bloom broadly divides learning outcomes into three domains, namely the cognitive domain, the affective domain, and the psychomotor domain (Sudjana, 2001). Learning outcomes are the occurrences of behavioral changes in a person that can be observed and measured in the form of knowledge, attitudes, and skills (Hamalik, 2011) Learning outcomes are the result of a teaching and learning interaction and are usually indicated by test scores given by the teacher (Nasution, 2006).

After taking action by using a cooperative learning model of talking chips type in economic subjects on the material of the types of needs and scarcity of resources, students' activities and learning outcomes have increased seen from each cycle. Students' activities have increased from each cycle they have done. In cycle I, student activity in following the learning process only reached good criteria, which was only 82.29%. In cycle II, it was 93.79%, with very good criteria.

Student learning outcomes in each cycle also increased, in cycle I the pretest results had an average value of 68% with only 12 students who were complete out of 19 students with a percentage of classical learning completeness of 63%. As for the posttest results, the average value was 75.78%, with 18 out of 19 students completed with a percentage of classical learning completeness of 94%.

Student Learning Outcomes
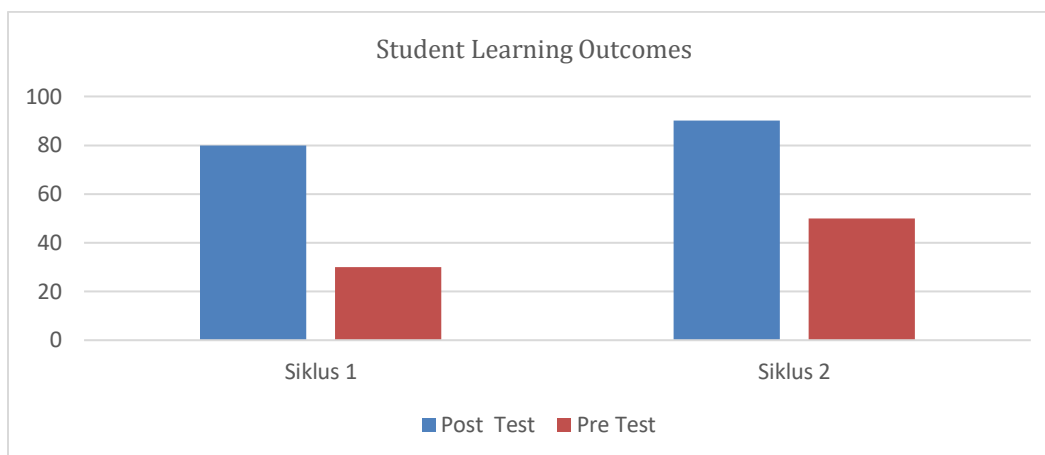
Based on the graph above, it is illustrated that there is an increase in student learning outcomes at each meeting in the cycle. In the first meeting of the cycle I, students' classical learning completeness reached 30.00%. Then, at the second meeting of cycle I, students' classical learning completeness increased to 82.29%. Then in the first meeting of cycle II, students' classical learning completeness increased again to 50.00%. Then in the second meeting of cycle II, students' classical learning completeness reached 90%. The graph above shows an increase in student learning outcomes in each cycle. This is due to the use of the cooperative learning model of talking chips type.

Conclusion

Based on the findings from the Classroom Action Research conducted in class X MA NW Pepao, it was observed that there was a significant improvement in student learning outcomes with the implementation of the cooperative learning model, specifically the Talking Chips type. In each cycle, students demonstrated better performance in their assessments, suggesting that the cooperative learning model effectively enhanced their understanding and retention of the material. Prior to this, the class predominantly relied on conventional teaching methods, such as lectures and question-and-answer sessions, which did not actively engage all students. The shift to the Talking Chips model provided a more structured and interactive approach, fostering greater student participation and involvement in the learning process.

Furthermore, the study highlighted a noticeable increase in student activities and engagement throughout each cycle. The Talking Chips model encouraged students to contribute more regularly by requiring them to give up a chip after speaking, thus promoting equal participation. While the overall activity level increased, it was noted that some students still appeared passive or hesitant to speak, remaining silent for much of the time. However, even with these challenges, the model's structured turn-taking system provided a framework that pushed students to participate, ensuring that each student had an opportunity to contribute. This shows that, while not all students were fully engaged, the model created a more inclusive and balanced environment that fostered active learning.

In conclusion, the application of the Talking Chips cooperative learning model proved beneficial in improving student learning outcomes and enhancing the overall learning process. By shifting from traditional lecture-based methods to a more interactive, student-centered approach, the study showed that the model can lead to greater academic success and more dynamic classroom interactions. Although some students required additional encouragement to become fully engaged, the positive results observed in the majority of students suggest that this model is an effective tool for improving both student performance and participation. The findings emphasize the importance of incorporating cooperative learning strategies to create a more engaging and effective learning environment for all students.
.

References

Abdullah, M. (2022). Lembaga pendidikan sebagai suatu sistem sosial (Studi Tentang Peran Lembaga Pendidikan di indonesia Dalam Perspektif Undang-Undang Nomor 20 Tahun 2003 Tentang Sistem Pendidikan Nasional). *Mamba'ul Ulum*, 18(1), 38-48. https://doi.org/10.54090/mu.56

Ahmad, Z., & Mahmood, N. (2010). Effects of cooperative learning vs. traditional instruction on prospective teachers' learning experience and achievement. *Ankara University Journal of Faculty of Educational Sciences (JFES)*, *43*(1), 151-164. https://doi.org/10.1501/Egifak_0000001194

Dewi, Y. W. (2019). Penerapan Model Pembelajaran Kooperatif Tipe Talking Chips Untuk Meningkatkan Aktivitas Belajar Dan Hasil Belajar Siswa Pada Mata Pelajaran Ekonomi Siswa Kelas X Di SMA Saraswati Singaraja Tahun Pelajaran 2017/2018. Jurnal Pendidikan Ekonomi Undiksha, 10(1), 46. https://doi.org/10.23887/jjpe.v10i1.20050

Fadillah. (2014). Implementasi Kurikulum 2013. *Ar-Ruzz*

Hamalik. (2011). Kurikulum dan Pembelajaran. *Jakarta: Bumi Aksara.*

Hidayat. (2019). Buku Ilmu Pendidikan Rahmat Hidayat & Abdillah. *Jakarta: Rineka Cipta*.

Kasman, Y., & Sumaryoto, S. (2023). Pengaruh Kondisi Sosial Ekonomi Dan Motivasi Belajar Terhadap Prestasi Belajar Ekonomi: Studi Pada SMA Negeri di Kabupaten Bima. *Herodotus: Jurnal Pendidikan IPS*, *5*(3), 228-240. http://dx.doi.org/10.30998/herodotus.v5i3.11252

Nasution. (2006). *Berbagai Pendekatan Dalam Proses Belajar Mengajar*. Jakarta: Bumi Aksara

Sardiman. (2008). *Interaksi dan Motivasi Belajar Mengajar*. Jakarta: Raja Grafindo Persada

Dinova, S. G., & Syamwil, S. (2023). Perbandingan Pembelajaran Kooperatif Talking Chips Dengan Konvensional dan Keaktifan Siswa Terhadap Hasil Belajar Ekonomi. *Jurnal Ecogen*, *6*(2), 244-254. http://dx.doi.org/10.24036/jmpe.v6i2.14698

Sudjana Nana. (2001). Metode Dan Teknik Pembelajaran Partisipatif. *Bandung: Falah Production*

Widyaningrum, R., & Prihastari, E. B. (2018). Implementasi model pembelajaran talking chips disertai media fotonovela untuk meningkatkan sikap peduli lingkungan dan kemampuan menyampaikan pendapat mahasiswa. Premiere Educandum : Jurnal Pendidikan Dasar Dan Pembelajaran, 8(1), 22. https://doi.org/10.25273/pe.v8i1.2033

Yorman, K. (2022). Implikasi Prestasi Belajar Ekonomi Di Pengaruhi Kondisi Sosial Orang Tua Dan Motivasi Belajar. *Jupeko (Jurnal Pendidikan Ekonomi)*, *7*(1), 54-61. https://doi.org/10.29100/jupeko.v7i1.2715

Yorman, Y. (2023). Implementasi Model Pembelajaran Kooperatif Tipe Team Game Tournaments Berbasis Direct Instruction Bermuatan Budaya Lokal Maja Labo Dahu Untuk Meningkatkan Motivasi Belajar Dan Sikap Sosial Dalam Mata Pelajaran IPS. (Doctoral dissertation, Universitas Pendidikan Ganesha). https://repo.undiksha.ac.id/17814/