Sosioedukasi
JURNAL ILMIAH ILMU PENDIDIKAN DAN SOSIAL
ISSN: 2086-6135 E-ISSN: 2541-612x

Volume 14 No. 3. September 2025 https://ejournal.unibabwi.ac.id/index.php/sosioedukasi/index

IMPROVEMENT OF MATHEMATICS LEARNING PROCESS AND OUTCOMES USING THE MAKE A MATCH MODEL ASSISTED BY CONGKLAK MEDIA IN GRADE III SDN 174/II APUNG ILIR

Siti Nurhaliza[1a*], Nurlev Avana[2b], Aldino[3c]

[1,2,3] Universitas Muhammadiyah Muara Bungo, Jambi, Indonesia

[a] lizalestari981@gmail.com
[b] avananurlev10@gmail.com
[c] aldino947@gmail.com

(*) Corresponding Author
lizalestari981@gmail.com

ARTICLE HISTORY
Received : 15-08-2025
Revised : 10-08-2025
Accepted : 15-09-2025

KEYWORDS
Pujakesuma,
Pemilu 2024,
Calon Legislatif

ABSTRACT
This research aims to improve the quality of the mathematics learning process and outcomes of grade III students of SDN 174/II Apung Ilir through the application of the Make a Match learning model assisted by congklak media. The method used is Class Action Research (PTK) which is carried out in two cycles, with each cycle including the stages of planning, implementation, observation, and reflection. Data collection is carried out through learning outcome tests, student activity observation sheets, and documentation. The results showed a significant increase in both indicators measured. The average score of student learning outcomes increased from 75.00 in the first cycle to 83.18 in the second cycle, with a learning completeness rate of 90.91%. Student activities also showed development, from the category of "quite active" in cycle I to "very active" in cycle II. These findings are in line with the results of previous research showing that the application of an interactive learning model with the support of contextual media is able to increase motivation, engagement, and understanding of mathematical concepts. Therefore, the Make a Match model assisted by congklak media is recommended as an alternative to mathematics learning strategies in elementary schools to encourage active participation and improve students' academic achievement.

INTRODUCTIONS

Basic Education is a stage of education that teaches knowledge and skills and forms basic attitudes needed in society, as well as preparing students to continue to secondary education. The purpose of Basic Education is to provide an essential foundation for life in the Society, which follows the development of basic attitudes, knowledge, and skills. Basic education is also known as elementary school (SD), which is an educational institution that implements

Sosioedukasi
JURNAL ILMIAH ILMU PENDIDIKAN DAN SOSIAL
ISSN: 2086-6135 E-ISSN: 2541-612x
Volume 14 No. 3. September 2025 https://ejournal.unibabwi.ac.id/index.php/sosioedukasi/index

fundamental education programs to remind students, both those who will continue to higher education and those who will not. Currently, the curriculum implemented is a mardeka curriculum which provides a lot of freedom for educators to develop quality learning, according to the needs and learning environment of students. (Isrok'atun & Rosmala, 2019)

The curriculum includes subject matter, learning methods, assessments, and all learning experiences that occur in and out of the classroom, school, family, community, and through a variety of media, including Technology, Arts, Culture, Sports, and Recreation. Simple educational learning is the process of gaining knowledge, skills, and values that are designed and guided by educators to help learning in simple terms can be interpreted as an effort to influence a person's Emotional, Intellectual, and Spiritual to want to learn at their own will. Learning is different from teaching where there is a principle of teaching describing the activities of educators, while learning describes the activities of students. Learning shows what a person must do as a recipient of learning, while teaching shows what an educator who becomes a teacher must do. So teaching is a process of interaction between educators and students during the learning process. (Susanto, 2013)

However, the reality that exists today is that many in the tassels complain about the difficulty of learning in participating in Mathematics learning. This difficulty is often highlighted during the teaching and learning process, the low learning outcomes of students due to the lack of enthusiasm for learning of students who respond, absorb and even work on Mathematics practice questions given by educators. One of the reasons is the way of presenting learning and the learning atmosphere is less interesting and the learning process is less interesting. (Suyanto, 2009)

Mathematics is very important to be taught to students because it is always used in all aspects of life. Therefore, as a first step to lead to the expected goal, it is to encourage or encourage interest in learning Mathematics for the community, especially for children or students. The Mathematics process in question involves educators to encourage and increase students' learning mint in Mathematics lessons, because educators must strive to maintain and develop their students' mint and learning readiness. Mathematics instruction for elementary school students must be concrete and in accordance with the concept of the material being studied. Basically, participants start from the age of 7 years to 12 or 13 years, they are still in the concrete operational pass. Therefore, in learning Mathematics, it is very faithful if you use media or teaching aids to help explain things that are abstract to concrete. That Mathematics is explained by Dienes in Russependi reveals that the faithful concepts or principles in Mathematics presented in the form of a sketch will be able to be understood well by students. So this contains the meaning that objects or objects in concrete form will play a very important role if applied properly for learning Mathematics.

The learning models themselves are usually compiled based on various principles or triories of knowledge. Experts develop learning models based on various principles of knowledge theory. Experts develop learning models based on principles of learning, psychological, sociological, analytical, or other supporting theories. learning models based on learning theories which are grouped into four teaching models. The model is a general pattern of learning behavior to achieve the expected learning goals Joyce & Weil argues that the Learning model is a plan or pattern that can be used to shape the curriculum (long-term learning plan), design learning materials, and guide learning in the classroom or otherwise. The learning model can be used as a pattern of choice, meaning that teachers choose a suitable and specific learning model to achieve their educational goals. Samidi & Istarani (2016)

The preparation of learning objectives is very important in the series of learning design development. At this stage, it will determine the learning objectives that will be a reference to determine the type of learning material, learning strategies, learning methods, and learning media that will be used in the learning process. Without a clear goal, learning will become a directionless, unfocused, and ineffective activity. The learning model has a purpose for learning. This pingsi has an important role in learning. The learning model itself is a guideline for teachers and teachers to carry out learning. In this case, the selection of the model is greatly influenced by the nature of the material to be learned. (Dewi, 2023)

Sosioedukasi
JURNAL ILMIAH ILMU PENDIDIKAN DAN SOSIAL
ISSN: 2086-6135 E-ISSN: 2541-612x
Volume 14 No. 3. September 2025 https://ejournal.unibabwi.ac.id/index.php/sosioedukasi/index

In addition, the purpose of the competency that will be achieved in the learning and also the level of participation of the participants. The teaching model can also be categorized based on several types that suit the desired purpose. To choose the learning model, there are things that must be met. In addition, teachers must also understand the mathematics that will be given and also the characteristics of students. Teachers must use a paraehymic model.

Media is a communication or introductory tool that functions to apply messages or information from teachers to students. Another thing that says the meaning of media is any medium of delivery that can be used to convey information or messages in learning. The media is derived from the Latin word Medius which means middle, introduction, and intermediary. According to Gerlach & Ely, media is a human object or matter, or event, that can create an atmosphere in which students can acquire knowledge, attitudes or skills. Just like teachers, textbooks, and also the school environment are media. In more detail, the media and its relation to the teaching and learning process are to capture, process, and rearrange student or verbal information. (Jazariyah et al., 2021)

Media congklak is one of the traditional games that is loved and known by Indonesian children. With various kinds of names or names in each region in Indonesia, making it even more unique in its greeting is also usually in this game, the type of shell or coconut shell that is used as a container and Congklak seeds usually use small stones and if there is none, the cage is also used with grains from plants. This game is very popular with the name Congklak, and also the Malay area of this game is called conglak. And there are also other names such as in Lampung, this game is called pentuman lamban, while in Sulawesi it has several names, namely: Mokaotan, Manggelenceng, Anggalacang, Nogarata. Indirectly, this congklak game can foster an honest character in students. This game does not require judges or a team of judges, so it is easy to play and students can get used to and apply the attitude dimension, namely honesty because the judges are the co-stars themselves. If one of the players is found to be cheating then that player will be penalized or qualified. In addition to teaching honesty, this game of congklak also develops perseverance, appreciation, and hard work in counting. (Sakti et al., 2024) (Shafira & Sakerani, 2023)

With this congklak game, students will get more benefits. The traditional game of congklak is not only used as a medium for learning mathematics, but the traditional game of congklak also trains children's fine motor skills. When players or students move congklak seeds from one hole to another, they train their fine motors. Some of the benefits contained in the game are: (1) Practicing patience in playing congklak and precision. This game requires patience and precision in counting. Especially during the game, one of the players has to distribute the congklak seeds into the holes on the congklak board. If the player is impatient and thorough, then the game will not run well and smoothly. (2) Can train the spirit of sportsmanship, and in this game also requires the ability to accept defeat, The use of make A match learning where children are invited to learn while playing. By using this make A match learning, it can improve the learning outcomes of these students. The make A match learning method is easy to apply in delivering lessons. Therefore, the researcher tried to conduct a classroom action study entitled Increasing Student Learning Motivation in Mathematics Subjects with Traditional Congklak Game Media Using the Make A Match Co-operative Distribution Model Class III SDN 174/II Apung Ilir (3) Train students' ability to analyze or calculate. In order to be a winner, it is necessary to have the player's ability to analyze, especially when the opponent gets a turn to play. Players who have good analytical skills can become winners in the game even if they only leave one cone. Febrianty & Nugrahanta (2021)

Johnson & Majewska (2022) revealed that the initial numeracy game is part of mathematics learning that is indispensable in daily life, including the concept of numbers which is the basis for developing skills in mathematics lessons and in preparation for basic education. Piaget, with the example of the initial counting stages such as in early childhood which includes the concept stage, this stage starts from understanding the concept of real objects and the symbols of numbers.

\

Sosioedukasi
JURNAL ILMIAH ILMU PENDIDIKAN DAN SOSIAL
ISSN: 2086-6135 E-ISSN: 2541-612x
Volume 14 No. 3. September 2025 https://ejournal.unibabwi.ac.id/index.php/sosioedukasi/index

METHOD

Based on its implementation, this class action research uses the Arikunto (2016:6) model, because the Arikunto model is the main reference or basis for the existence of various other action research models, especially PTK. Arikunto described that action research in one cycle has four main steps, including *planning*, implementation, *observing*, and *reflecting*. (Arikunto, 2019)

When depicted in the form of a visualization, then the Arikunto model will be depicted in the chart as follows:

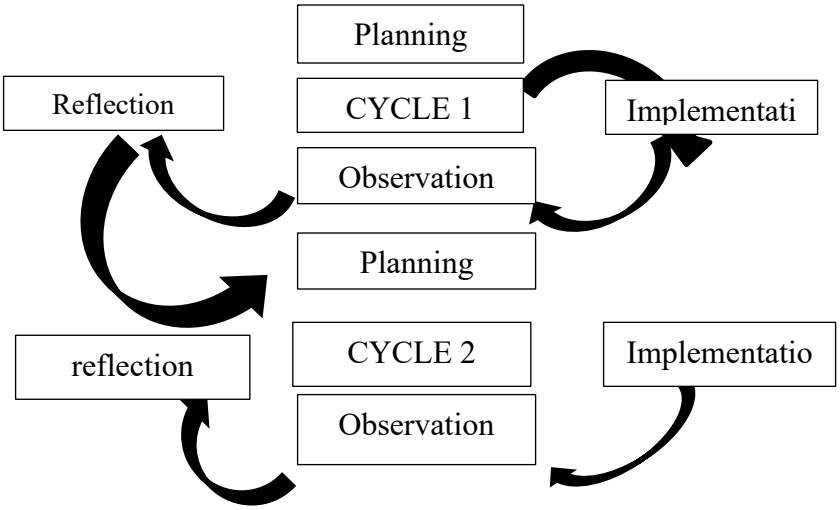


Chart 3.1 Assessment Cycle Procedure
(Arikunto 2012:6)

Each cycle is carried out in several learning activities. The first cycle underlies the determinants and development of the second cycle, where the second cycle is an improvement from the first cycle onwards to improve learning outcomes. The implementation of these actions follows the class action procedure, which is carried out by researchers in grade III SD 174/II Apung Ilir in mathematics subjects as well as the procedures in the implementation of class actions carried out in this study.

RESULT AND DISCUSSIONS

Brief Acquaintance of the Pujakesuma Association of Simalungun Regency

Based on the author's experience during 3 months of introduction to the school field (PLP) II at SDN 174/II Apung Ilir in the 2024/2025 school year. Mathematics learning has not been implemented properly. This is because mathematics learning contains abstract concepts. Mathematics learning has not been associated with real problems that students encounter in daily life. This is aimed at the learning process that tends to listen, take notes, and practice mathematics problems.

Mathematics learning in the classroom is still teacher-centered. Teachers as learning centers provide material concepts directly from package books. The tendency to teach by conveying materials and formulas to students, it indicates that teachers are used to using the lecture method. This shows that the use of learning methods and models has not varied. To find out the student's understanding, the teacher gives students the opportunity to give their opinions about the material being studied and ask questions about mathematical concepts that have not yet been understood.

Sosioedukasi
JURNAL ILMIAH ILMU PENDIDIKAN DAN SOSIAL
ISSN: 2086-6135 E-ISSN: 2541-612x
Volume 14 No. 3. September 2025 https://ejournal.unibabwi.ac.id/index.php/sosioedukasi/index

However, students lack confidence and courage in expressing their opinions and are still embarrassed to ask questions verbally if there is material that they do not understand. This causes that student learning outcomes in learning mathematics are still low as shown in the following table:

No	Student Name	Gender	CD	Value	Information
1.	Anita	P	70	65	Incomplete
2.	Ayu Putri	P	70	60	Incomplete
3.	Cintra Lestari	P	70	85	Conclusion
4.	Zahra Salsabila	P	70	75	Conclusion
5.	Nadia	P	70	75	Conclusion
6.	Zahra Alesya	P	70	80	Conclusion
7.	Alfahreza	L	70	55	Incomplete
8.	Priest Son	L	70	85	Conclusion
	Students complete		5 people		37,5%
	Students are not complete		3 people		62,5%

Data source: class III document SDN 174/II Apung Ilir Bathin III ULU District Bungo Regency

Research Findings

a. Learning Process: Students are more skilled in using congklak, quickly find card pairs, and actively discuss.

This research focuses on efforts to improve the process and learning outcomes of mathematics students in grade III of SDN 174/II Apung Ilir through the application of *the Make a Match* learning model with the support of congklak media. The method used is classroom action research (PTK), which is commonly applied in order to improve the quality of learning at the elementary school level.

The application of *the Make a Match model* is expected to be able to improve students' skills in utilizing congklak as a learning medium. The results of the study showed a significant increase in the two implementation cycles. In line with the findings, the use of the collaborative learning model was proven to increase student learning activity in a meaningful way, from 71.67% in the first cycle to 83.33% in the second cycle, and encourage an increase in learning outcomes from 60.71% to 78.57%. A similar phenomenon was reported by Sukmawati (2021) in the application Pihlainen et al. (2021) *of Problem Based Learning*, which showed a positive contribution to improving learning outcomes and active student involvement. Thus, *Make a Match* has great potential to optimize students' academic activity and achievement in mathematics learning.

In the context of the use of congklak media, it is stated that the use of relevant and contextual media can create an interactive learning atmosphere and help students understand mathematical concepts more effectively. Media that is close to students' lives, such as congklak, plays a role in increasing the enjoyment and motivation of learning, which is an important factor considering the low interest in learning mathematics in some students. Syakhrani & Aslan (2024)

Furthermore, this study also shows an improvement in the quality of discussions between students from one cycle to the next. Collaborative discussions not only deepen understanding of mathematical concepts, but also develop communication and cooperation skills. This is in line with findings that affirm that interactive teaching materials can significantly spur students' motivation and understanding. A collaborative learning environment with the support of the right learning media is a supporting factor for this success. Atun et al. (2023)

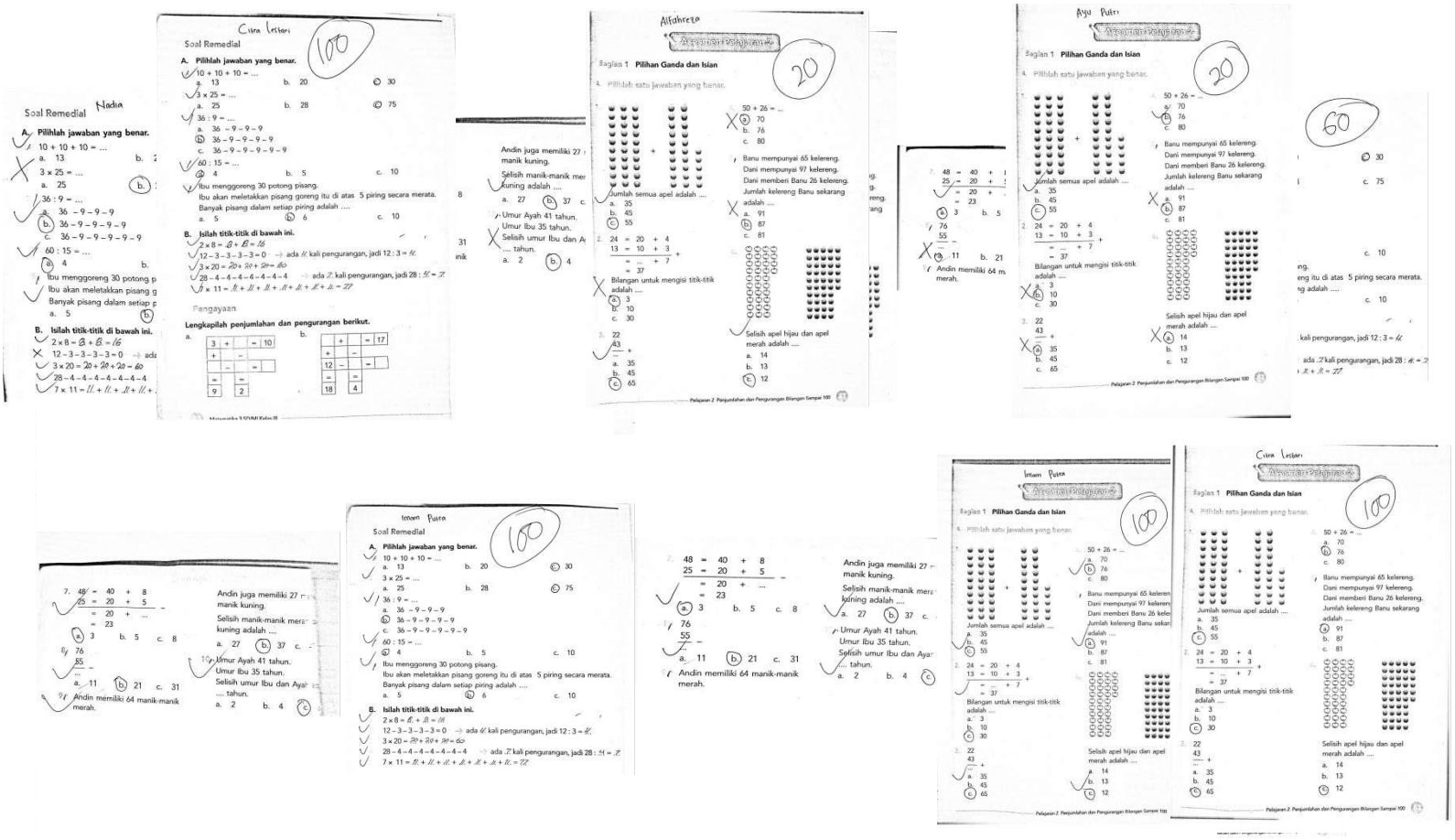
The results of this study confirm that the application of *the Make a Match model* assisted by congklak media is effective in improving learning outcomes, discussion skills, and the use of learning media in grade III of SDN 174/II

Sosioedukasi
JURNAL ILMIAH ILMU PENDIDIKAN DAN SOSIAL
ISSN: 2086-6135 E-ISSN: 2541-612x
Volume 14 No. 3. September 2025 https://ejournal.unibabwi.ac.id/index.php/sosioedukasi/index

Apung Ilir. These findings can be used as a reference for the implementation of similar learning strategies in other classes, taking into account the diversity of media that suits the characteristics and needs of students.

Learning Outcomes: The average score increased to 83.18, completeness 90.91%

The results of the study show that the application of the *Make a Match* learning model has a significant positive impact on student learning outcomes. The average score in the first cycle was recorded at 75.00, and after the intervention in the second cycle, the average increased to 83.18 with a learning completeness rate of 90.91%. This finding is in line with Suhartati's (2023) research which revealed that the application *of the Make a Match* model is able to improve student learning outcomes, especially in subjects that require active participation.



Change: Student activity increased from "moderately active" in cycle I to "very active" in cycle II

In terms of activeness, student learning activities in the first cycle were in the category of "quite active," but increased to "very active" in the second cycle. The high level of student involvement is reflected in interaction during learning, both through group work and active discussions. These results are in line with findings that activity-based learning models such as Purnamasari et al. (2023) *Make a Match* can encourage students to engage more actively in the learning process. This increase is also influenced by the motivation that arises from the creation of an interactive

Sosioedukasi
JURNAL ILMIAH ILMU PENDIDIKAN DAN SOSIAL
ISSN: 2086-6135 E-ISSN: 2541-612x
Volume 14 No. 3. September 2025 https://ejournal.unibabwi.ac.id/index.php/sosioedukasi/index

learning atmosphere. Although the study showed variation in outcomes in relation to spatial intelligence and learning achievement, the findings in this study did not show a direct relationship with these aspects. Suardiana (2021)

This study confirms that the application of *the Make a Match model* assisted by congklak media is effective in improving the process and learning outcomes of mathematics students in grade III of SDN 174/II Apung Ilir. The increase in the average score to 83.18 with a learning completion rate of 90.91%, as well as an increase in activity from the "moderately active" to "very active" category, proves the effectiveness of this method. Based on these results, *the Make a Match* model is recommended to be implemented more widely in various learning contexts to encourage active participation and improve students' academic achievement.

Discussion

This research aims to improve the process and learning outcomes of mathematics students in grade III of SDN 174/II Apung Ilir through the application of *the Make a Match learning model* with the help of congklak media. The findings of the study show that this strategy is effective in improving academic achievement, with the average student score in cycle II reaching 83.18 and the level of learning completeness of 90.91%. In addition, the change in the level of student activity from the "moderately active" category in the first cycle to "very active" in the second cycle indicates a positive impact on student participation and involvement in the learning process.

This significant improvement in learning outcomes is in line with previous findings that the use of interactive learning models is able to help students understand and absorb material more optimally. Nopiyani et al., as quoted in, emphasize the importance of a realistic approach to learning and provide space for students to communicate as well as interact with the material. In this context, Astuti et al. (2024) *Make a Match* encourages collaboration and discussion between groups, creating a more dynamic and participatory learning atmosphere.

In terms of activity, the increase to the "very active" category shows that fun and contextual learning methods, such as the use of congklak, are able to attract attention and increase student motivation. emphasizing that learning media that is relevant to students' experiences can strengthen interaction and improve understanding of concepts. Furthermore, it is identified that methods that facilitate interaction between students can improve activeness as well as learning outcomes. The collaborative learning environment presented in Harefa et al. (2020) Jauhari et al. (2023) *Make a Match* provides a space for students to exchange knowledge and strengthen their collective understanding of concepts.

This condition supports the view that learning mathematics does not only take place through reading or listening activities, but also demands active involvement in the process of exploration and problem-solving. noted that the problem-based learning model has been shown to be effective in increasing student participation in concept mastery. In addition, the success in cycle II confirms that learning that is carried out gradually and reflectively—by correcting weaknesses from the previous cycle—has a positive impact on student understanding. This kind of approach also contributes to the development of social and communication skills, which are essential needs in 21st century learning. Putra & Hasanah (2018) (Dahry et al., 2020; Scott, 2014)

Thus, this study concludes that the application of *the Make a Match* model assisted by congklak media is not only effective in improving learning outcomes and academic completeness, but also encourages active student involvement through meaningful interactions. This model is worthy of consideration as an alternative learning strategy in various educational contexts, in line with the demand to develop learning that is oriented towards academic achievement as well as students' life skills.

CONCLUSION

The application of the Make a Match learning model assisted by congklak media has been proven to be able to increase the level of student activity in mathematics learning. Student participation is seen to be more intensive,

Sosioedukasi
JURNAL ILMIAH ILMU PENDIDIKAN DAN SOSIAL
ISSN: 2086-6135 E-ISSN: 2541-612x
Volume 14 No. 3. September 2025 https://ejournal.unibabwi.ac.id/index.php/sosioedukasi/index

characterized by active involvement in discussions, peer-to-peer collaboration, and greater contribution during the learning process. This change is reflected in the increase in the category of student activities from "moderately active" in cycle I to "very active" in cycle II.

This model also showed significant effectiveness in improving the mathematics learning outcomes of grade III students at SDN 174/II Apung Ilir. The average student score in the second cycle reached 83.18, with a learning completeness rate of 90.91%. These findings indicate that the delivery of material through an interactive and fun method is able to facilitate a deeper understanding of mathematical concepts. | Indonesian Journal of Education (INJOE)

REFERENCE

Arikunto, S. (2019). *Prosedur Penelitian*. Rineka Cipta.

Astuti, M. W., Cahyadi, F., & Budiman, M. A. (2024). Media Video Animasi Pembelajaran untuk Meningkatkan Hasil Belajar Matematika Siswa Kelas 3 Sekolah Dasar. *Jurnal Papeda: Jurnal Publikasi Pendidikan Dasar*, *6*(2), 239–247. https://e-journal.unimudasorong.ac.id/index.php/jurnalpendidikandasar/article/view/1838

Atun, R. S., Dibia, I. K., & Wiarsini, W. (2023). Peningkatan Hasil Belajar Matematika Melalui Pembelajaran Matematika Realistik. *Journal of Innovation and Learning*, *2*(1), 1–8. https://doi.org/10.23887/jil.v2i1.39154

Dahry, S., Avana, N., Aprizan, A., & Jumiyatun, J. (2020). Peningkatan Proses dan Hasil Belajar Matematika Menggunakan Metode Course Review Horay (CRH) di Kelas IV SD N 65/II Sungai Bangsat Kecamatan Pelepat. *Jurnal Inovasi Pendidikan Dan Teknologi Informasi (JIPTI)*, *1*(2), 49–55. https://doi.org/10.52060/pti.v1i2.358

Dewi, K. P. (2023). Pengaruh Metode Bermain dengan Bahan Daur Ulang terhadap Kemampuan Berhitung Anak Kelompok B Usia 5-6 Tahun di TK Insan Prestasi. *Education For All*, *3*(2), 55–66. https://doi.org/10.35508/EFAPLS.V3I2.13051

Febrianty, C. A., & Nugrahanta, G. A. (2021). Traditional Games and Their Contribution to The Respectful Character in Children. *JPSD (Jurnal Pendidikan Sekolah Dasar)*, *7*(2), 157–171. https://doi.org/10.30870/JPSD.V7I2.12433

Harefa, D., Gee, E., Ndruru, M., Sarumaha, M., Dian, L., Ndraha, M., Ndruru, K., & Telaumbanua, T. (2020). Penerapan Model Pembelajaran Cooperative Script untuk Meningkatkan Hasil Belajar Matematika. *JKPM (Jurnal Kajian Pendidikan Matematika)*, *6*(1), 13–26. https://doi.org/10.30998/jkpm.v6i1.6602

Hayuningtyas, H. (2014). Pemanfaatan Sumber Belajar dengan Limbah Kardus untuk Mengembangkan Konsep Matematika Permulaan Anak Usia 5-6 Tahun (Studi Eksperimen di TK Taman Indria Semarang). *BELIA: Early Childhood Education Papers*, *3*(1), 1–11. https://doi.org/10.15294/BELIA.V3I1.3422

Isrok'atun, & Rosmala. (2019). *Model-Model Pembelajaran Matematika*. Bumi Aksara.

Jauhari, T., Rosyidi, A. H., & Sunarlijah, A. (2023). Pembelajaran dengan Pendekatan TaRL untuk Meningkatkan Minat dan Hasil Belajar Matematika Peserta Didik. *Jurnal PTK Dan Pendidikan*, *9*(1), 1–11. https://doi.org/10.18592/ptk.v9i1.9290

Jazariyah, J., Latifah, E., & Atifah, N. Z. (2021). Persepsi Orangtua terhadap Pemanfaatan Barang Bekas sebagai Alat Permainan Edukatif Anak Usia Dini. *Kiddo: Jurnal Pendidikan Islam Anak Usia Dini*, *2*(2), 180–190. https://doi.org/10.19105/kiddo.v2i2.5038

Johnson, M., & Majewska, D. (2022). Formal, Non-Formal, and Informal Learning: What Are They, and How Can We Research Them? Research Report. In *Cambridge University Press & Assessment*. Cambridge University Press & Assessment. Shaftesbury Road Cambridge CB2 8EA. Tel: 44-1223-553311; e-mail: directcs@cambridge.org; Web site: https://www.cambridgeassessment.org.uk/. https://www.cambridge.org/

Sosioedukasi
JURNAL ILMIAH ILMU PENDIDIKAN DAN SOSIAL
ISSN: 2086-6135 E-ISSN: 2541-612x
Volume 14 No. 3. September 2025 https://ejournal.unibabwi.ac.id/index.php/sosioedukasi/index

Pihlainen, K., Korjonen-Kuusipuro, K., & Kärnä, E. (2021). Perceived Benefits from Non-Formal Digital Training Sessions in Later Life: Views of Older Adult Learners, Peer Tutors, and Teachers. *International Journal of Lifelong Education*, *40*(2), 155–169. https://doi.org/10.1080/02601370.2021.1919768

Purnamasari, D., Ulhaq, T. D., Saputro, M. H. E., & Marini, A. (2023). Peran Guru dalam Mengatasi Kesulitan Belajar Peserta Didik Sekolah Dasar pada Muatan Pelajaran Matematika Materi Soal Cerita. *Jurnal Pendidikan Dasar Dan Sosial Humaniora* , *2*(6), 839–848. https://doi.org/10.53625/JPDSH.V2I6.5451

Putra, A., & Hasanah, V. R. (2018). Traditional Game to Develop Character Values in Nonformal Educational Institution. *IJAEDU-International E-Journal of Advances in Education*, *4*(2), 86–92. http://ijaedu.ocerintjournals.org

Sakti, S. A., Endraswara, S., & Rohman, A. (2024). Revitalizing Local Wisdom within Character Education Through Ethnopedagogy Apporach: A Case Study on a Preschool in Yogyakarta. *Heliyon*, *10*(10), e31370. https://doi.org/10.1016/j.heliyon.2024.e31370

Samidi, & Istarani. (2016). *Kompetensi & Profesionalisme Guru Ilmu Pengetahuan Alam (IPA) dan Matematika*. LARISPA.

Shafira, N. A., & Sakerani, S. (2023). Meningkatkan Aspek Perkembangan Kognitif Anak dan Kemampuan Berhitung Permulaan Menggunakan Model Cooperative Learning. *Jurnal Inovasi, Kreatifitas Anak Usia Dini (JIKAD)*, *3*(2), 1–11. https://doi.org/10.20527/jikad.v3i2.9130

Suardiana, I. M. (2021). Metode Drill untuk Meningkatkan Hasil Belajar Matematika pada Siswa Kelas IV SD. *Journal of Education Action Research*, *5*(4), 542. https://doi.org/10.23887/jear.v5i4.39476

Susanto, A. (2013). *Teori Belajar Pembelajaran di Sekolah Dasar*. Prenada Media Group.

Suyanto. (2009). *Model Cooperatif Tipe Make A Mach*. Swadaya.

Syakhrani, A. W., & Aslan, A. (2024). The Impact of Informal Family Education on Children's Social and Emotional Skills. *Indonesian Journal of Education*, *4*(2), 619–631. https://www.injoe.org/index.php/INJOE/article/view/153