



Journal of Physical Education for Secondary Schools

Journal homepage: <https://ejournal.upi.edu/index.php/JPESS>



Literature Study Analysis of The Application of Cooperative Learning Model in Futsal Game Learning on Problem Solving Abilities

Aida Roha Abdul Rasid^{1*}, Hasmiza Abdul Majeed¹

¹Faculty of Sports and Recreation Science, Universiti Teknologi Mara, Malaysia

*Correspondence: E-mail: Aidaroha@uitm.edu.my

ABSTRACT

The ability to solve problems (Problem Solving) in students is crucial in learning. To enhance this ability, teachers must use appropriate learning models and media. The cooperative learning model, which emphasizes student-centered learning, encourages students to work together and think critically. In physical education, particularly in futsal game learning, this model is effective for developing Problem Solving skills. By applying the cooperative learning model in futsal, teachers can create systematic problem situations to assess students' Problem Solving abilities. The study analyzes relevant literature from national and international journals to evaluate the effectiveness of this approach.

© 2021 Kantor Jurnal dan Publikasi UPI

ARTICLE INFO

Article History:

Submitted/Received 07 Dec 2020

First Revised 28 Dec 2020

Accepted 06 Jan 2021

First Available online 11 Jan 2021

Publication Date 01 Apr 2021

Keyword:

Cooperative Learning, Futsal Game Learning, Problem Solving, Physical education

1. INTRODUCTION

In physical education there are various learning models that can support the learning process, this is also related to the ability of students to solve problems through cooperative learning models (Dyson & Grineski, 2001). Cooperative learning in physical education is an instructional model in which students work together in small groups to learn in the psychomotor, cognitive, and affective domains (Dyson & Grineski, 2001). In the learning process, every student must be strived to be actively involved in order to achieve learning objectives. This requires assistance from the teacher to motivate and encourage students in the learning process to be involved in totality. Teachers must master the material and strategies in learning. So far, the cooperative learning process involves the process of making decisions and solving problems as well as the process of sharing relevant information and expertise with others (Dyson & Grineski, 2001).

The cooperative learning model in its implementation focuses on students to work together in solving problems (Huang et al., 2017). Cooperative learning is the practice of applying social skills from face-to-face interactions in peer relationships with physical activities to improve problem solving (Huang et al., 2017). In addition to the learning model, material in physical education is no less important in placing students in situations that require exerting problem-solving abilities. Mu'Qodin (2002) says that problem solving is a skill that includes the ability to seek information, analyze situations, identify problems with the aim of producing alternative actions, then consider these alternatives in relation to the results achieved and ultimately carry out the plan by doing a the right action.

Apart from all that, the Futsal game learning material is one of the extracurricular activities in physical education learning. Futsal game learning material is a material that is very common in physical education, learning futsal games is learning with the big ball category. Futsal is a ball sport played by two teams, each of which consists of 5 players. the goal of futsal is to get the ball into the opponent's goal. By using the feet, head and all parts of the body except the hands, unlike soccer, futsal is played in a closed space and on a level place. With a smaller field size and fewer players than soccer. The Futsal field is bounded by lines not by the net or by a board.

Thus it can be concluded that futsal intracurricular activities are activities carried out in school hours which are large ball learning activities that are already in the curriculum. Learning futsal games is an intracurricular activity taught by physical education teachers in schools, in this learning environment through learning futsal games and also by applying the cooperative learning model, students will be exposed to a learning environment that forces them to show their problemsolving skills or problemsolving skills. during learning. Such a learning environment allows students to make decisions in practice and process information about motor skills actively and

collectively so that they can become skilled movers. As for the factors that influence students in critical thinking (Huang et al., 2017, p. 3).

From expert opinions, it can be concluded that in principle the cooperative learning model is a learning model that will emphasize or bring students into an independent learning environment. To create a more complex problem situation, the futsal learning that has been stated is very familiar in intracurricular activities, it will add a variety that will make the learning environment active and students will think more critically in solving problems or problem solving. Therefore, researchers are interested in further examining the application of the Cooperative Learning model in learning Futsal Games to problem solving abilities.

2. METHODS

This research is using literature study method or literature review. Literature review is a comprehensive overview of research that has been done on a specific topic to show readers what is already known about the topic and what is not known, to find rationale for research that has been done or for ideas for further research (denney & tewksbury, 2013) literature studies can be obtained from various sources including journals, books, documentation, internet and libraries. The literature study method is a series of activities related to the method of collecting library data, reading and taking notes, and managing writing materials (Nursalam, 2016). The type of writing used is a literature review study that focuses on writing results related to the topic or variable of writing.

Literature review begins with the written material which is considered sequentially from the most relevant, relevant, and sufficiently relevant. Then proceed with an abstract, each article first to provide an assessment of whether the problem discussed is in accordance with what is being solved. Noting the important points and their relevance to the research problem. To keep from getting caught up in the plagiarism element, the author should also note the sources of information and include a bibliography. If indeed the information comes from other people's ideas or writing. Make notes, quotes, or information that are arranged systematically so that writing can easily be searched back if any time needed (Nursalam, 2016).

Each article that has been selected based on the criteria, a conclusion is made that describes an explanation of the application of the cooperative learning model in learning futsal games in problem solving abilities. Before the author makes conclusions from several literature results, the author will identify in a brief summary form that contains the author's name, year of writing, study design, samples, and research results. After the results of writing from several literatures have been collected, the author will analyze the application of the cooperative learning model in learning futsal games on problem solving abilities.

In this study, articles from international and national journals were used with the following criteria:

1. Inclusion Criteria:

- a. International and national articles that discuss issues that are relevant or related to the topic of applying the cooperative learning model in learning futsal games on problem solving abilities
- b. Articles in English and Indonesian
- c. Article in full text (can be accessed in full)

2. Exclusion Criteria:

- a. The article does not discuss things that are relevant to the topic of applying the cooperative learning model in learning futsal games to problem solving abilities
 - b. Languages other than English and Indonesian
 - c. The article cannot be accessed in full
- Research articles that match the inclusion criteria are then collected and a summary of the articles is made including the name of the researcher, the year the article was published, the research objectives, and a summary of the results or findings. To further clarify the abstract and full text analysis, the articles are read and examined. The summary of the article is then analyzed for the content contained in the research objectives and the results / research findings. The analysis used was using 20 analysis of the contents of the article, then coding the content of the article that was reviewed using a literature review matrix, the data that had been collected was then searched for the relationship between the problems studied and the important results for the author and then discussed to draw conclusions.

3. RESULTS

After collecting articles using accredited journal sites such as Sciencedirect, Tandfonline, Garuda ristekbrin, Google Scholar, 41 articles were identified and eligibility criteria were carried out. Then after that, 34 articles were filtered, then excluded studies were carried out and 22 articles were carried out, after that excluded studies were again based on inclusion criteria so that the total number of articles that met the requirements for review was 20 articles.

Articles that have met the inclusion requirements for further review will be made a table in the form of a matrix containing the author's name for the year the article was published, research variables, results & conclusions, and important results for the author. Then from the matrix will be used to analyze the contents of the article regarding the relationship between the discussion of problems related to the author's research in table 1.

Operationally, the indicator or problem solving stage consists of five stages (Mourtos (2004), as follows:

- a. Defines the problem
- b. Check for problems
- c. Plan a solution
- d. Carry out the plans that have been made
- e. Evaluate

Of the five stages, a correlation can be found between the indicators and the problems under study:

a. Defining the Problem

There are several sub indicators that are determinants in defining the problem, including determining facts related to the problem, determining the concept or category determining information related to the problem given, and determining the details of the problem (Mourtos et al., 2004).

As is well known, the cooperative learning model using futsal game learning media has been effective in physical education. The cooperative learning model also makes students the main axis in the implementation of learning. Learning futsal games is also the right media to use because it can motivate students to take part in learning. The teacher's role here is only to clarify practical objectives, ensure assignments are understood, demonstrate appropriate behavior, supply directions, set deadlines, clearly state goals, facilitate learning by monitoring group progress, and provide effective group instruction and guidance (Hannon & Ratliffe, 2004).

The structure in the cooperative learning model regulates students to interact actively in learning. In this case the learning model can make students discuss actively in knowing what problems are faced in learning (Dyson & Grineski, 2001).

In its application, learning futsal games can be used as the right media because futsal games can run smoothly, regularly and attractively if players master the elements in futsal games. (Hamzah and Hadiana, 2018). Students are required to indirectly identify problems related to basic techniques and other skills so that the learning of futsal games can take place.

b. Checking for Problems

There are several sub indicators that are used as a reference in examining the problem, including identifying the root of the problem, examining the reciprocal relationship (cause- effect) of a given problem and checking the severity of the problem (Mourtos et al., 2004).

Most cooperative learning studies are attempted in the context of levels of physical activity or skill performance and problem solving, and therefore most research on cooperative learning focuses on increasing levels of physical activity. (Huang et al., 2017). Therefore, physical activity that is applied through futsal learning media can be a medium of delivery for teachers in providing systematic problems so that students can cooperatively be effective in fulfilling the sub indicators in examining problems.

In this stage, the role of learning media is something that must be considered, because the material will be a source of problems in the application of the cooperative learning model, the material provided must provide attractiveness first so that students are motivated in examining the problems given. Therefore, it is possible to choose suitable material such as learning futsal games, because in the research that is written. It was stated that according to the reflection, the expectations of the researchers were 80% of students were active, and enthusiastic in participating in learning futsal games.

Learning futsal games based on the assessments of most respondents also has a positive impact on the development of the motoric, affective and cognitive aspects of students, and can train students' emotional and social development (Irawan, 2015), of this the cognitive aspect is the main thing that can be used in examining or diagnosing problems.

C. Plan for a Solution

There are several sub indicators that are used as references in planning solutions, including developing a problem-solving plan, and choosing an approach or way of solving related problems (Mourtos et al., 2004). The problem-solving description emphasizes that it is a decision-making process that occurs when a solver is presented with a task for which they do not have a specific set of actions they can use to reach a solution (Docktor, 2009). The task given in the cooperative learning model must be in the form of a complex problem so that it makes students work together in making problem-solving plans.

During learning with the cooperative learning model using futsal learning media, students are required to think critically in planning solutions related to problems, therefore the cooperative learning model is a suitable model to use. Cooperative learning helps students to develop their thinking skills, critical analysis skills, problem solving skills, improve their communication and teamwork skills (Munir (2018). Problem-solving skills such as organizing and analyzing problems, planning and adjusting work progress, remaining judgmental in solving problems, and being sensitive in making observations are positively related to critical thinking performance (Huang et al., 2017). Therefore, cognitive and metacognitive abilities are very important for critical thinking skills from the statement, the use of appropriate learning media is the key for students to think cooperatively critically to plan solutions to related problems.

In implementing cooperative learning points 1 and 2 according to (Dyson & Grineski, 2001) :

1. The teacher presents students with challenging movement tasks
2. Individually students think of possible solutions to problems

From these two points, the cooperative learning model has brought students to an independent learning situation to think of solutions to assignments in the form of problems given.

a. Implementation the Plans That Have Been Made

There are several sub indicators that are used as references in implementing the plans that have been made, including making a list of problems to be resolved, and sequencing the work steps related to the solutions that have been made. (Mourtos et al., 2004). The results of the analysis conducted by (Huang et al., 2017) shown that most students achieve positive improvements through peer support strategies and peer interaction and that mixed team discussions facilitate solving their problems with regard to the performance of skills in learning. has brought students into the stages to carry out the plans that have been made. In this case, the ability to think critically to solve student problems will be tested in cooperative learning. The task given through learning the futsal game will hone cognitive skills in students, and students will be more interested and more enthusiastic in implementing solutions that have been made previously related to the problems given.

In the implementation of cooperative learning points 3,4 and 5 according to (Dyson & Grineski, 2001) :

1. Students are divided into groups and asked to share each of their responses with other group members
2. Students carry out the activities suggested by each group member and share their responses to the activity, or decide how to combine suggestions for completing assignments or solving problems.
3. Each group makes a compromise related to the implementation of the bound movement for the whole class.

Based on these points, it can be found that the cooperative learning model can make students play an active role in implementing plans from solutions that have been made previously related to problem solving.

e. Evaluation

There are several sub indicators that are used as references in implementing the plans that have been made, including checking the feasibility of the solutions that have been made and making assumptions regarding the solutions that have been made (Mourtos et al., 2004).

After the implementation of the problem solution process that has been made, through the cooperative learning model in futsal learning, students have gone through stages to carry out evaluations related to the solutions that have been implemented. This stage aims to determine the extent to which the ability to solve the problem of the motion tasks given during the learning takes place.

Group implementation process evaluation occurs when group members discuss how well they are achieving their goals and maintaining effective collaboration. The group

needs to describe what actions help and unhelpful members of the group and make decisions about what behavior to continue or change. Continuous improvement of the learning process results from careful analysis of how members work together.

4. DISCUSSION

The application of the cooperative learning model in learning futsal games can have an influence on problem solving abilities because it has fulfilled the five indicators of problem-solving skills adapted from (Mourtos et al., 2004). From the explanation put forward through the analysis of literature studies, it has been explained that the application of the cooperative learning model in learning futsal games in the form of theory, quotations and research results from the results of journals that have been read and reviewed.

5. CONCLUSION

Based on the results of the literature study that has been carried out, the conclusions that can be obtained are as follows:

1. The use of cooperative learning models in learning futsal games can support physical education learning to be more effective
2. The application of the cooperative learning model in learning futsal games can affect the students' problem-solving abilities because the cooperative learning model using futsal learning as a medium has fulfilled the five indicators of problem-solving skills

6. REFERENCES

- Corrêa, U. C., de Pinho, S. T., da Silva, S. L., Clavijo, F. A. R., Souza, T. de O., & Tani, G. (2016). Revealing the decision-making of dribbling in the sport of futsal. *Journal of Sports Sciences*, 34(24), 2321–2328. <https://doi.org/10.1080/02640414.2016.1232488>
- Denney, A. S. and Tewksbury, R. (2013) 'How to write a literature review', *Journal of Criminal Justice Education*, 24(2), pp. 218–234. doi: 10.1080/10511253.2012.730617.
- Docktor, J. L. & K. H. (2009). This context refers to the agreement of scores from multiple. *Proceedings of the NArST 2009*.
- Dyson, B., & Grineski, S. (2001). Using cooperative learning structures in physical education. *Journal of Physical Education, Recreation & Dance*, 72(2), 28–31. <https://doi.org/10.1080/07303084.2001.10605831>
- Güven, M. (2010). An analysis of the vocational education undergraduate students' levels of assertiveness and problem-solving skills. *Procedia - Social and Behavioral Sciences*, 2(2), 2064–2070. <https://doi.org/10.1016/j.sbspro.2010.03.282>

- Hamzah, B. and Hadiana, O. (2018) 'Pengaruh penggunaan model problem based learning terhadap keterampilan passing dalam permainan futsal', *JUARA : Jurnal Olahraga*, 3(1), p. 1. doi: 10.33222/juara.v3i1.210.
- Hannon, J. C., & Ratliffe, T. (2004). Cooperative learning in physical education. *Strategies*, 17(5), 29–32. <https://doi.org/10.1080/08924562.2004.11000362>
- Huang, M. Y., Tu, H. Y., Wang, W. Y., Chen, J. F., Yu, Y. T., & Chou, C. C. (2017). Effects of cooperative learning and concept mapping intervention on critical thinking and basketball skills in elementary school. *Thinking Skills and Creativity*, 23, 207–216. <https://doi.org/10.1016/j.tsc.2017.01.002>
- Johnson, D. W. and Johnson, R. T. (2017) Cooperative learning ";Conference paper, p. 11.
- Kolayis, H., Turan, H., & Ulusoy, Y. O. (2012). Comparison of problem-solving disposition of students in physical education teacher and psychological counseling and guidance. *Procedia - Social and Behavioral Sciences*, 46, 1939–1942. <https://doi.org/10.1016/j.sbspro.2012.05.407>
- Lasri, H. and Riadi, R. M. (no date) 'Effect of problem solving method on student learning results in cooperative concept and class x management in sman 11 pekanbaru city koperasi dan pengelolaan koperasi kelas x di sman 11 kota pekanbaru', pp. 1–9.
- Mahpur, M. (2017) 'Memantapkan analisis data melalui tahapan koding', Repository Universitas Islam Negeri Malang, pp. 1–17. Available at: <http://repository.uin-malang.ac.id/800/2/koding.pdf>.
- Mahpur, M. (2017) 'Memantapkan analisis data melalui tahapan koding', Repository Universitas Islam Negeri Malang, pp. 1–17. Available at: <http://repository.uin-malang.ac.id/800/2/koding.pdf>.
- Martinez, M. E. (1998). What Is problem solving? Illustration by Mario. *Phi Delta Kappa International*, 79(8), 605–609. <http://www.jstor.org/stable/20439287>
- Mourtos, N., Okamoto, N., & Rhee, J. (2004). Defining, teaching, and assessing problem solving skills. 7th UICEE Annual Conference, February 2004, 9–13. <http://ae.sjsu.edu/files/public/nikos/backup/pdf/UICEE04Mumbai.pdf>
- Munir, M. T., Baroutian, S., Young, B. R., & Carter, S. (2018). Flipped classroom with cooperative learning as a cornerstone. *Education for Chemical Engineers*, 23, 25–33. <https://doi.org/10.1016/j.ece.2018.05.001>
- Novitasari, N., Ramli, M., & Maridi. (2015). Mengukur problem solving skills siswa SMA pada mata pelajaran biologi. *Jurnal Biologi Edukasi Edisi* 14, 7(1), 1–6.
- Oxford, R. L. (1997). Cooperative Learning, collaborative learning, and Interaction: three communicative strands in the language classroom. *The Modern Language Journal*, 81(4), 443. <https://doi.org/10.2307/328888>

- Pérez Gallardo, A. and Santoja, J. (1980) 'Anesthetic problems in the surgery of tracheal stenosis.', *Revista espanola de anestesiologia y reanimacion*, 27(3), pp. 220– 30. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/7465931>.
- Ristiani, H. (2014) 'Matematis siswa antara siswa yang mendapatkan model pembelajaran two stay – two stray (ts-ts) dengan konvensional (Studi Penelitian Eksperimen di SMAN 8 Garut) Herni Ristiani Mosharafa ISSN 2086-4280', *Mosharafa: Jurnal Pendidikan Matematika*, 3, pp. 109–120.
- Romi Satria Wahono (2015) 'A systematic literature review of software defect prediction: research trends, datasets, methods and frameworks', *Journal of Software Engineering*, 1. Available at: <https://romisatriawahono.net/publications/2016/wahono-slr-may2016.pdf>.