International Journal of
Disabilities Sports and Health Sciences
e-ISSN: 2645-9094

RESEARCH ARTICLE

Cooperative Learning Vs Direct Teaching in Basketball: Effects on Junior High School Students Basic Techniques

Faiz FAOZI[*1,2], Firmansyah DLIS[1], Samsudi SAMSUDIN[1], Sumbara HAMBALI[3] and Dani Nur RIYADI[4]

[1]Universitas Negeri Jakarta, Program Study Doctoral of Physical Education, Jakarta / Indonesia
[2]STKIP Bina Mutiara, Department of Physical Education, Health and Recreation, Sukabumi / Indonesia
[3]STKIP Pasundan, Department of Physical Education, Health and Recreation, Cimahi / Indonesia
[4]Universitas Islam 45, Faculty of Teacher Training and Education, Departement of Physical Education, Health, and Recreation, Bekasi / Indonesia
*Corresponding author: faizfaozi@gmail.com

Abstract
This study aims to determine the impact of using one of the Student Team Achievement Division (STAD) type cooperative learning models on mastery of basic basketball techniques in grade VII junior high school students. This study used an experimental method using a randomize pretest posttest control group design. A total of 75 students were involved in this study, and were divided into two groups, namely 37 experimental groups and 38 people as a control group. The number is obtained from the entire class VII taken using cluster random sampling. The data collection technique uses a type of skill test of basic passing, shooting and dribbling techniques in basketball games that emphasize assessing their movements. The data analysis technique uses with an independent sample t-test analysis type at a confidence level of 0.05. Based on the results of the analysis, the passing, shooting, and dribbling technique had $p<0.05$. The researchers concluded that there is a significant average difference between the STAD type cooperative model and the direct teaching model, where the STAD model has a greater influence on basic basketball technical skills. It is expected that physical education teachers pay more attention to the characteristics of students, so that they are able to apply models that are in accordance with their characteristics.

Keywords
Basketball, Direct Teaching, Learning Model, STAD Type Cooperative

INTRODUCTION

Physical education provided in schools has a very complex purpose, namely to develop various skills of students, both in terms of physical, movement appearance, mental, and social (Kroote & Bucher, 2007), in addition to that in the process there is a content of social values such as discipline, cooperation, responsibility, and help (Goudas & Magotsiou, 2009), This is a life skill that can be used as capital in facing his future life (Goudas & Giannoudis, 2010). Physical education learning prioritizes the elaboration of strong relationships between the social-emotional, cognitive reflective, movement skills of students, and the psychological side of students (Ciotto & Gagnon, 2018; Lubis et al., 2022; Rasberry et al., 2011; Tessier et al., 2010).

Physical education learning should be able to contribute to the growth and development of children primarily through experiential learning of motion (Pangrazi &; Beighle, 2019), It is crucial to ensure that children are provided with ample opportunities to actively engage in sports and fully experience the advantages it offers throughout their lives (Gallahue & Donnelly, 2007). The aim

Received: 09 October 2023 ; Revised ;18 October 2023 ; **Accepted:** 12 December 2023; **Published:** 25 February 2024

How to cite this article: Faozi, F., Dlis, F., Samsudin, S., Hambali, S., and Riyaadi, D.N. (2024). Cooperative Learning Vs Direct Teaching in Basketball: Effects on Junior High School Students Basic Techniques. *Int J Disabil Sports Health Sci*;7(Special Issue 1):132-140. https://doi.org/10.33438/ijdshs.1371249

of establishing effective physical education programs is to cultivate physical abilities and skills, providing opportunities to students to comfortably participate in sports activities (Cairney et al., 2019), with the existence of these subjects learners will acquire development skill, knowledge of physical health, and different social state of mind (Hambali et al., 2021).

However, in its implementation, there is still an opinion that physical education is a lesson that only aims to develop physical aspects and movement skills (Bayu, 2018; Treasure, 2019). In fact, the practice of physical education learning in schools still revolves around what is referred to as physical education as sports techniques (Fitzpatrick, 2019), has not yet become physical education as a culture of motion (Muharram, 2019), especially in this age of globalization, issues of social skills are indispensable to overcome survival (Azzarito et al., 2017), meaning that physical education must indeed be packaged to develop various aspects that exist in students, namely physical, social and emotional aspects (Kim et al., 2017; Lesser & Nienhuis, 2020; Z. Wang & Wang, 2022).

This happens in the basketball learning process, where in every learning process starting from passing, dribbling and shooting techniques, especially still given a learning process that is still teacher-centered, students are told to be quiet, see and listen to the teacher who is practicing it, this will certainly make the student learning experience smaller, maybe for the cognitive aspect is slightly increased by the provision of information provided by the teacher in explaining the technique, However, students' creativity in both psychomotor and affective aspects tends not to develop. Therefore, here the role of the teacher is very important in achieving the goals of the ongoing teaching and learning process.

Teachers or educators are the main key to achieving educational goals (Andriani et al., 2018), therefore the quality of learning is greatly influenced by the quality of a teacher (Hanushek, 2020), teachers who teach monotonously tend to cause a sense of boredom, because students are not given the opportunity to learn actively (M. Wang, 2012), because usually the learning process centers more on the teacher (Adim et al., 2020), so that the impact of learning results in a poor understanding of physical education concepts (Cain, 2003), students are only oriented to the final score or final result obtained regardless of the learning process and students who have low skills become less motivated to participate in learning (Lasry et al., 2014).

As a real example of learning basketball at the junior high school level directly, namely when giving material Shooting, where the teacher provides material by demonstrating techniques Shooting and explain directly what things must be considered to perform the technique Shooting well and correctly. Such learning provides students with an understanding of techniques Shooting The truth is, then students know the results learned only make students skilled in sports and must achieve good scores or final results, regardless of the process in learning. Even though in this case junior high school students are able to think critically in the learning process (Syahbana, 2012), where the student has great curiosity, contends within the learning handle and applies social values in study such as participation, mutual help and friendship (Kurniawan et al., 2021). However, when direct learning is still used, students will not develop optimally.

Based on this, a teacher should be able to think creatively and innovatively to carry out the learning process in agreement with the characteristics of his students. The selection of learning models can be the right solution to change the monotonous learning atmosphere (Bodsworth, 2017). The use of the right learning model can foster children's interest in learning (Ulstad et al., 2016), so that when interest in learning increases, it tends to increase learning outcomes (Pan, 2013). Choosing the right learning model will enable the achievement of learning objectives (Casey & Goodyear, 2015). In the physical education learning process there are several models that can be used, such as direct ınsctruction and cooperative learning (Metzler, 2017).

Related to this study, the author tries to apply the cooperative learning model, because the learning model is considered to be able to improve or develop mastery of students' basic technical skills (Altınkök, 2017). In addition, cooperative learning is able to develop social values and students' understanding of physical education learning (Dyson & Grineski, 2001). Some studies say the cooperative learning model has several types, such as model STAD (Student Team Achievment Division), model TGT (Team Games Tournament) than model Jigsaw. The other two are

designed for use in specialized subjects at specific grade levels, namely CIRC (Cooperative Integrated and Composition) dan TAI (Team Accelerated Instruction) (Slavin, 2017).

Of the five student team learning methods in cooperative learning, researchers chose STAD as the student learning method to be used in the research process, because STAD is the simplest method. Many studies have examined this STAD model, such as in volleyball and football (Gunawan et al., 2021; Wibisono et al., 2018), however, very little is applied to basketball, especially to all three techniques at once, and the subject is mostly done by high school students, while in this study it was done at the junior high level. This is certainly the author's first reason for conducting this study. Besides the use of the STAD model is based on the reason that this model is student-centered learning, because there are positive changes obtained by students when teachers change their teaching to student-centered (Khan & Inamullah, 2011), In addition, this model is also believed to help students to improve collaboration and self-learning skills (Rai & Samsuddin, 2007). Then this model will also give rise to good interaction between students, improve positive attitudes and interpersonal skills (Wyk, 2012). STAD provides more experience to students in learning, because there are students who act as tutors, and this can result in high achievement (Rahayu et al., 2017). The objective of this model is to foster student motivation by encouraging mutual support and assistance in acquiring the skills taught by the teacher (Slavin, 2017).

In basketball learning that uses the STAD type cooperative learning model, students are faced with environmental situations that require them to find the best solution in completing basketball learning, students' performance in the learning shown is the result of understanding their thinking, not comes from what the teacher tells you.

MATERIALS AND METHODS

Participant

The research sample involved as many as two classes from a total of 10 classes, which were 75 people (Experiment; Male 18, Female 19) and (Control; Male 18, Female 20) with Mean (age 13, height 162, and weight 51), were randomly selected using cluster random sampling techniques. The subject is a grade VII student at SMPN 1 in Cisarua Kota Bandung Barat, Indonesia. This sample will be divided into two groups, where each group will be given different treatment according to the research design used.

This study followed ethical standards and received approval from the Sekolah Tinggi Keguruan dan Ilmu Pendidikan (STKIP) Bina Mutiara Sukabumi with reference number [026/LPPM-BMS/III/2022]. Participant provided informed consent, with the volunteer form covering research details, risks, benefits, confidentiality, and participant rights. The research strictly adhered to the ethical principles of the Declaration of Helsinki, prioritizing participant's rights and well-being in design, procedures, and confidentiality measures

Research Methods and Design

The research design employed in this study is an experimental approach utilizing a randomized pretest-posttest control group design. This plan is valuable for seeing the degree of comparison between the exploratory group and the control group (Jack R. Fraenkel et al., 2012). In this particular design, the treatment group received intervention through the implementation of a cooperative learning model known as STAD, whereas the control group received intervention through direct instruction.

Treatment group	R	O	X	O
Control Group	R	O	C	O

Figure 1. The Randomized Pretest-Posttest Control Group Design

Information:
R : Random (random assignment to class VII that is randomly selected)
O: Observation or Measurement
X: Experiment (Treatment with STAD type cooperative learning model)
C: Control (Treatment with Direct Teaching Model)

Research Procedure

The study was conducted as many as 9 meetings with a frequency of 2 times a week. Before the treatment in each group was given, an initial test was carried out first to see the extent of

mastery of basic technical skills that had been possessed by the subjects, both in the experimental group and in the control group. Then the treatment to each group was given 7 times with a duration of two hours per day, bringing the total to 14 hours.

Research Data Collection

The collection of research data used measuring instruments in the form of basketball skill tests, This test the author adopted from his book Nurhasan (2013) entitled Tests and Measurements in Physical Education, where this test including throwing and catching tests, dribbling tests and shooting tests. The scoring approach uses motion process assessment, where the sample performs test movements, then the assessment team assesses the movement process.

Statistical Analysis

Data analysis using quantitative analysis with a statistical approach. The results of data analysis with analysis testing using Paired Sample t-test and Independent Sample t-test Posttest.

RESULTS

Based on the results of the data collection that has been carried out, a description of the basketball skill test results for each group is obtained as follows:

Table 1. Description of Basketball Skill Test Results

Group			Mean	N	Standart Deviation
Experiment	Passing	Pretest	29.43	37	.929
		Posttest	34.62	37	1.187
	Shooting	Pretest	29.03	37	1.093
		Posttest	35.54	37	1.260
	Dribbling	Pretest	30.08	37	1.341
		Posttest	35.08	37	1.382
Control	Passing	Pretest	29.24	38	.883
		Posttest	30.66	38	.878
	Shooting	Pretest	29.51	38	.804
		Posttest	30.92	38	1.064
	Dribbling	Pretest	30.11	38	1.134
		Posttest	33.92	38	1.124

From on table 1, can known that the scores for mastery of basketball skills in the experimental group using the STAD pre-test passing type cooperative learning model had an average of 29.43, shooting had an average of 29.03, and dribbling had 30.08, while for post-test passing had an average of 34.62, shooting had an average of 35.54 , and Dribbling has an average of 34.08. In the control group using the direct teaching pre-test passing model had an average of 29.24, shooting had an average of 29.51, and dribbling had an average of 30.11, while post-test passing had an average of 30.66, shooting had an average of 30.92, and dribbling has an average of 33.92. Furthermore, to find out whether there was a significant average difference in the two groups, the results were analyzed using the independet sample t-test. However, to find out whether the two models have an impact or influence on basic basketball technical skills, a paired sample t-test was first carried out on each group, where before that stage first testing normality and homogeneity on each test in each group, and the result data are normally distributed and all groups have variances the same.

To assess the impact of treatment within each group, the data from the initial and final tests were analyzed using the Paired Sample t-test. The results of this analysis are presented below:

Table 2. t-test Results

Variable	Experimental Group			Control Group		
	Descriptive Stat	t	Sig (2-tailed)	Descriptive Stat	t	Sig (2 tailed)
Passing	5.189 ± 1.076	12.376	.000	1.421 ± .599	14.631	.000
Shooting	6.514 ± .901	16.964	.000	1.405 ± .725	11.792	.000
Dribbling	5.000 ± .913	26.653	.000	2.816 ± 1.111	15.617	.000

Test on the cooperative learning type STAD treatment show that the significance in the Sig. (2-tailed) column shows a significance of 0.000 < 0.05. It can be concluded that there's is an impact of the cooperative learning model type STAD on the mastery of basic basketball technique skills in junior high school students. From table 2, results of the paired samples t-test in the control group treatment showed that the significance in the Sig. (2-tailed) column showed a 0.000 < 0.05. That is, so it can be concluded that there is an impact of the direct teaching model on the mastery of basic basketball technique skills in junior high school students. Furthermore, to find out whether there is an average difference in each group, independent sample t-test is carried out and the following are the result:

Table 3. Result of Analysis in All Groups

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Passing	Equal variances assumed	4.421	.039	4.005	73	.000	3.964
	Equal variances not assumed			3.989	66.298	.000	3.964
Shooting	Equal variances assumed	2.358	.129	2.292	73	.025	4.622
	Equal variances not assumed			2.292	70.029	.025	4.622
Dribbling	Equal variances assumed	.525	.471	3.993	73	.000	1.160
	Equal variances not assumed			3.982	69.332	.000	1.160

Independent Sample t-test results in the treatment of the experimental group and the control group have a t-count value for the passing technique of 4.005 with a Sig. (2-tailed) is 0.000, for a shooting technique of 2.292 with a probability of Sig. (2-tailed) is 0.025, and for a dribbling technique of 3.982 with a probability of Sig. (2-tailed) is 0.000. Since of Sig. (2-tailed) in each technique < 0.05. This means that the cooperative learning model type STAD is more powerful than the direct teaching model on mastering basic basketball technique skills in junior high school students.

DISCUSSION

According to the findings, the cooperative learning approach known as STAD demonstrated a more favorable impact compared to the direct teaching learning model. In the STAD type cooperative model can help students improve students' positive attitudes in learning (Wyk, 2012). Individual students build confidence in their ability to solve learning problems (Rahmawati et al., 2018), thus making each student motivated to complete the motion task given by the teacher and in the end their skills can be better because in the process they work collaboratively or teach each other (Yang et al., 2021). Very inversely proportional to the learning process of the direct teaching model students are more apathetic and there is no interaction between students because students only focus on the motion tasks given by the teacher (Bilgin & Dalkıran, 2017; Jayantilal & O'Leary, 2017).

Physical education learning with basketball material presented through STAD type cooperative learning provides more opportunities for students to learn to master the motion tasks given by the teacher. STAD type cooperative learning model, in

each learning students must be directly involved in a learning process of motion tasks and social processes where students work together to achieve learning objectives (Rizki, 2022). In the cooperative learning process, not only teachers motivate their students to complete motion tasks well, but students are also emphasized to motivate each other and teach their group mates in an effort objective. This collaborative approach fosters the development of interpersonal skills that can prove invaluable in post-school life (Shoval & Shulruf, 2011).

Cooperative learning allows students to learn to analyze Various Skills, meaning that in cooperative learning there is a process of collaboration and discussion between group members (Felder & Brent, 2007), It's not just the teacher who gives positive feedback to students but also occurs in students in their respective groups (Slavin, 2017), and in the end after analysis and discussion with the group they can execute the skills well or in other words they can perform the correct movement skills (Dyson & Casey, 2016). Other studies also mention that cooperative learning treatment has a better influence on students' academic success and practice skills compared to other models (Bayraktar, 2011). Mastery of student skills in learning with the cooperative learning model type STAD can be improved, because the cooperative learning model type STAD gives responsibility to students who study in groups (Laal &; Ghodsi, 2012), the goal is to complete the teaching assignments given by the teacher together and all students must contribute to the learning outcomes (Nevin et al., 2009). So that students who have low abilities in the learning process will be motivated to complete the tasks given by the teacher to get better results (Day & Bryce, 2013) And without realizing it, the mastery of skills increases.

Then it was seen directly that direct teaching learning can also affect the results of basketball skills, but still this learning only emphasizes the final result (Hastie & Wallhead, 2016) without regard to understanding of the basic concepts of the movement process and tends to be more individualist (Eyuboğlu & Dalkıran, 2020), therefore this learning model is actually rarely applied in the current era, especially in Indonesia which in its character always upholds the value of mutual cooperation and mutual help (Arief & Yuwanto, 2023). Presentation of learning through to do the motion tasks given by the teacher (Yoda, 2017). STAD type cooperative learning refers to a set of instructional methods where students engage in collaborative efforts to accomplish a shared objective (D. Kim, 2018). Through the utilization of cooperative learning, students have the opportunity to assume dual roles as both learners and instructors, working together to attain a shared learning models direct-teaching less provides an atmosphere that builds student motivation when compared to the cooperative learning model type STAD. In the cooperative learning model type STAD which is believed to increase student learning motivation, this increased motivation is because in cooperative learning each student is emphasized to help each other fellow group mates, so that movement skills or motion tasks given by the teacher can be maximized by each student (Kalaja et al., 2010). The opinion is confirmed said the use of cooperative models in physical education learning can increase student achievement motivation better than traditional learning (Wang, 2012). Thus, The high motivation of students to learn will greatly affect their movement skills.

Conclusions

Based on the research findings and the subsequent discussion, this study concludes that there is a discernible disparity in the impact of enhancing basketball skill mastery in grade VII students of SMPN 1 Cisarua, West Bandung Regency, Indonesia, comparing the direct teaching model and the STAD type coopearative learning model, the STAD type cooperative model has a stronger impact on the group receiving therapy. These results provide suggestions to several related parties to pay more attention to things that can support the improvement of student skill mastery, because physical education thoroughly involves movement learning, where movement learning through the content of social values such as discipline, cooperation, motivation, responsibility, mutual help and friendship. It is expected that students will have skills and life skills as a provision to face the world of work and undergo their respective professions.

Furthermore, also for physical education teachers of sports and health, to pay more attention to the application of models that are in accordance with the learning objectives to be achieved, such as the application of the STAD type cooperative learning model to improve psychomotor aspects

cognitive aspects, and social aspects of students simultaneously in the learning process. Finally, for further researchers, it is expected to further develop research with a wider scope by adding additional variables.

Conflict of interest

The authors declare no conflict of interest. No financial support was received.

Ethics Statement

This study followed ethical standards and received approval from the Sekolah Tinggi Keguruan dan Ilmu Pendidikan (STKIP) Bina Mutiara Sukabumi with reference number [026/LPPM-BMS/III/2022].

Author Contributions

Study Design, FF and FD; Data Collection, FF, and S; Statistical Analysis, SH and DNR; Data Interpretation, DNR; Manuscript Preparation, FF and SH; Literature Search, S and FD. All authors have read and agreed to the published version of the manuscript.

REFERENCES

Adim, M., Herawati, E. S. B., & Nuraya, N. (2020). Pengaruh Model Pembelajaran Contextual Teaching And Learning (CTL) Menggunakan Media Kartu Terhadap Minat Belajar IPA Kelas IV SD. *Jurnal Pendidikan Fisika Dan Sains*, *3*(1), 6–12. [CrossRef]

Altınkök, M. (2017). The effect of movement education based on cooperative learning method on the development of basic motor skills of primary school 1st grade learners. *Journal of Baltic Science Education*, *16*(2), 241–249. [CrossRef]

Andriani, S., Kesumawati, N., & Kristiawan, M. (2018). The influence of the transformational leadership and work motivation on teachers performance. *International Journal of Scientific and Technology Research*, *7*(7), 19–29.

Arief, M. I., & Yuwanto, L. (2023). Gotong royong sebagaı budaya bangsa ındonesıa dıtınjau darı teorı nılaı (basıc human values theory. *Jurnal Cahaya Mandalika*, *4*(2), 490–497. [CrossRef]

Azzarito, L., Macdonald, D., Dagkas, S., & Fisette, J. (2017). Revitalizing the Physical Education Social-Justice Agenda in the Global Era: Where Do We Go From Here? *Quest*, *69*(2), 205–219. [CrossRef]

Bayraktar, G. (2011). The effect of cooperative learning on students' approach to general gymnastics course and academic achievements. *Educational Research and Reviews*, *6*(1), 62–71. [CrossRef]

Bayu, W. I. (2018). Paradigm changes in physical education in schools. *Peningkatan Kualitas Pendidikan Jasmani Dan Olahraga Melalui Literasi*, 1–6.

Bilgin, N., & Dalkıran, O. (2017). Examining Attitudes of Students Regarding the Sports Education Model and Direct Teaching Model. *Journal of Education and Training Studies*, *5*(12), 79. [CrossRef]

Bodsworth, H. (2017). Barriers and facilitators to using digital technologies in the Cooperative Learning model in physical education. *Physical Education and Sport Pedagogy*, *22*(6), 563–579. [CrossRef]

Cairney, J., Dudley, D., Kwan, M., Bulten, R., & Kriellaars, D. (2019). Physical Literacy, Physical Activity and Health: Toward an Evidence-Informed Conceptual Model. *Sports Medicine*, *49*(3), 371–383. [CrossRef]

Casey, A., & Goodyear, V. A. (2015). Can Cooperative Learning Achieve the Four Learning Outcomes of Physical Education? A Review of Literature. *Quest*, *67*(1), 56–72. [CrossRef]

Ciotto, C. M., & Gagnon, A. G. (2018). Promoting Social and Emotional Learning in Physical Education. *Journal of Physical Education, Recreation and Dance*, *89*(4), 27–33. [CrossRef]

Day, S. P., & Bryce, T. G. K. (2013). The Benefits of Cooperative Learning to Socio-scientific Discussion in Secondary School Science. *International Journal of Science Education*, *35*(9), 1533–1560. [CrossRef]

Dyson, B., & Casey, A. (2016). *Cooperative Learning in Physical Education and Physical Activity: A Practical Introduction*. Routledge.

Dyson, B., & Grineski, S. (2001). Using Cooperative Learning Structures in Physical Education. *Journal of Physical Education, Recreation & Dance*, *72*(2), 28–31. [CrossRef]

Eyuboğlu, E., & Dalkıran, O. (2020). Comparison of the Effects of Sports Education and Direct Teaching Models on the Attitude and Cognitive Domain Level of Undergraduate Students. *Journal of Education and Learning*, *9*(2), 191. [CrossRef]

Felder, R. M., & Brent, R. (2007). Cooperative learning. *Active Learning: Models from the Analytical Sciences*, *970*, 34–53.

Fitzpatrick, K. (2019). What happened to critical pedagogy in physical education? An analysis of key critical work in the field. *European Physical Education Review*, *25*(4), 1128–1145. [CrossRef]

Gallahue, D. L., & Donnelly, F. C. (2007). *Developmental physical education for all children*. Human Kinetics.

Goudas, M., & Giannoudis, G. (2010). A qualitative evaluation of a life skills program in a physical education context. *Hellenic Journal of Psychology*, *7*, 315–334.

Goudas, M., & Magotsiou, E. (2009). The effects of a cooperative physical education program on students' social skills. *Journal of Applied Sport Psychology*, *21*(3), 356–364. [CrossRef]

Gunawan, A., Dlis, F., & Lubis, J. (2021). *Learning Methods and Motivation Towards Learning Outcomes of Soccer Games*. *35*(Icssht 2019), 158–161. [CrossRef]

Hambali, S., Akbaruddin, A., Bustomi, D., Rifai, A., Iskandar, T., Ridlo, A. F., Meirizal, Y., Rusmana, R., & Tyas, R. A. (2021). The effectiveness learning of physical education on pandemic covid-19. *International Journal of Human Movement and Sports Sciences*, *9*(2). [CrossRef]

Hanushek, E. A. (2020). Education production functions. *The Economics of Education: A Comprehensive Overview*, 161–170. [CrossRef]

Harta, L. I. (2019). Implementation of character education in

Era 4.0 through physical education and sports in schools. *Prosiding SENFIKS*, *1*(1), 66–73.

Hastie, P. A., & Wallhead, T. (2016). Models-based practice in physical education: The case for sport education. *Journal of Teaching in Physical Education*, *35*(4), 390–399. [CrossRef]

Jack R. Fraenkel, Norman E. Wallen, & Hyun, H. H. (2012). *How to Desain and Evaluate Research in Education* (Eight Edit). McGraw-Hill, Inc.

Jayantilal, K., & O'Leary, N. (2017). (Reinforcing) factors influencing a physical education teacher's use of the direct instruction model teaching games. *European Physical Education Review*, *23*(4), 392–411. [CrossRef]

Kain, D. J. (2003). Teacher-centered versus student-centered: Balancing constraint and theory in the composition classroom. *Pedagogy*, *3*(1), 104–108.

Kalaja, S., Jaakkola, T., Liukkonen, J., & Watt, A. (2010). Fundamental movement skills and motivational factors influencing engagement in physical activity. *Perceptual and Motor Skills*, *111*(1), 115–128. [CrossRef]

Khan, G. N., & Inamullah, H. M. (2011). Effect of student's team achievement division (STAD) on academic achievement of students. *Asian Social Science*, *7*(12), 211–215. [CrossRef]

Kim, D. (2018). A study on the influence of Korean Middle School Students' relationship through science class applying stad cooperative learning. *Journal of Technology and Science Education*, *8*(4), 291–309. [CrossRef]

Kim, S., Lyons, G. L., Lequia, J., & Kulkarni, S. S. (2017). Preliminary Study of Social Skills Generalization with Pivotal Response Treatment. *International Journal of Special Education*, *32*(1), 55–87.

Kroote, M. L., & Bucher, C. A. (2007). *Management of Physical Education and Sport*. McGraw-Hill.

Kurniawan, N. A., Hidayah, N., & Rahman, D. H. (2021). Analisis Kemampuan Berpikir Kritis Siswa SMK. *Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan*, *6*(3), 334. [CrossRef]

Laal, M., & Ghodsi, S. M. (2012). Benefits of collaborative learning. *Procedia - Social and Behavioral Sciences*, *31*(2011), 486–490. [CrossRef]

Lasry, N., Charles, E., & Whittaker, C. (2014). When teacher-centered instructors are assigned to student-centered classrooms. *Physical Review Special Topics - Physics Education Research*, *10*(1), 1–9. [CrossRef]

Lesser, I. A., & Nienhuis, C. P. (2020). The impact of COVID-19 on physical activity behavior and well-being. *International Journal of Environmental Research and Public Health*, *17*(23), 1–12. [CrossRef]

Lubis, J., Haqiyah, A., Kusumawati, M., Irawan, A. A., Hanief, Y. N., & Riyadi, D. N. (2022). Do problem-based learning and flipped classroom models integrated with Android applications based on biomechanical analysis enhance the learning outcomes of Pencak Silat? *Journal of Physical Education and Sport*, *22*(12), 3016–3022. [CrossRef]

Metzler, M. W. (2017). *Instructional Models For Physical Education*. Routledge.

Muharram, N. A. (2019). Paradıgma pendıdıkan krıtıs dıtınjau darı perspektıf pendıdıkan jasmanı dımasa pandemı covıd 19. In A. Wijayanto (Ed.), *Disrupsi Strategi Pembelajaran Olahraga "Serta Tantangan dalam Menghadapi New Normal Selama Masa Pandemi Covid-19* (pp. 239–244). Akademia Pustaka.

Nevin, A. I., Thousand, J. S., & Villa, R. A. (2009). Collaborative teaching for teacher educators-What does the research say? *Teaching and Teacher Education*, *25*(4), 569–574. [CrossRef]

Nurhasan. (2013). *Tes dan Pengukuran dalam Pendidikan Jasmani*. Departemen Pendidikan Nasional.

Pan, Y. H. (2013). Relationships among teachers' self-efficacy and students' motivation, atmosphere, and satisfaction in physical education. *Journal of Teaching in Physical Education*, *33*(1), 68–92. [CrossRef]

Pangrazi, R. P., & Beighle, A. (2019). *Dynamic physical education for elementary school children*. Human Kinetics Publishers.

Rahayu, T., Syafril, S., Wati, W., & Yuberti, Y. (2017). The Application of STAD- Cooperative Learning in Developing Integrated Science on Students Worksheet. *Jurnal Ilmiah Pendidikan Fisika Al-Biruni*, *6*(2), 247–254. [CrossRef]

Rahmawati, Mintarsih, E., Setyawati, E., & Ritonga, R. (2018). Buıldıng self-confidence through cooperatıve learnıng STAD. *JP2D (Jurnal Penelitian Pendidikan Dasar) UNTAN*, *1*(3), 34–40. [CrossRef]

Rai, N., & Samsuddin, S. (2007). *STAD Vs Traditional teaching, Redesigning Pedagogy, crpp conference 2007*.

Rasberry, C. N., Lee, S. M., Robin, L., Laris, B. A., Russell, L. A., Coyle, K. K., & Nihiser, A. J. (2011). The association between school-based physical activity, including physical education, and academic performance: A systematic review of the literature. *Preventive Medicine*, *52*(SUPPL.), S10–S20. [CrossRef]

Rizki, B. S. (2022). STAD-Type Cooperative Learning To Improve Learning Outcomes Under Ring Shoot. *International Journal of Basketball Studies*, *1*(1), 25–31. [CrossRef]

Shoval, E., & Shulruf, B. (2011). Who benefits from cooperative learning with movement activity? *School Psychology International*, *32*(1), 58–72. [CrossRef]

Slavin, R. E. (2017). *Educational Psychology: Theory and Practice*. Pearson Education.

Syahbana, A. (2012). Pengembangan Perangkat Pembelajaran Berbasis Kontekstual untuk Mengukur Kemampuan Berpikir Kritis Matematis Siswa SMP. *Edumatica*, *2*(2), 17–26. [CrossRef]

Tessier, D., Sarrazin, P., & Ntoumanis, N. (2010). The effect of an intervention to improve newly qualified teachers' interpersonal style, students motivation and psychological need satisfaction in sport-based physical education. *Contemporary Educational Psychology*, *35*(4), 242–253. [CrossRef]

Ulstad, S. O., Halvari, H., Sørebø, Ø., & Deci, E. L. (2016). Motivation, Learning Strategies, and Performance in Physical Education at Secondary School. *Advances in Physical Education*, *6*(February), 27–41. [CrossRef]

Wang, M. (2012). Effects of cooperative learning on achievement motivation of female university students. *Asian Social Science*, *8*(15), 108–114. [CrossRef]

Wang, Z., & Wang, J. (2022). Analysis of Emotional Education Infiltration in College Physical Education Based on Emotional Feature Clustering. *Wireless Communications and Mobile Computing*, *2022*(Special Issue). [CrossRef]

Wibisono, R., Kartiko, D. C., & Hartoto, S. (2018). Improve the Motivation of Learning and Learning Outcomes Passing Down volleyball Through Cooperative Learning Model. *Journal of Physical Education Health and Sport*, *5*(2), 39–45. [CrossRef]

Wyk, M. M. van. (2012). The Effects of the STAD-Cooperative Learning Method on Student Achievement, Attitude and Motivation in Economics Education. *Journal of Social Sciences*, *33*(2), 261–270. [CrossRef]

Yang, C., Chen, R., Chen, X., & Lu, K. H. (2021). The Efficiency of Cooperative Learning in Physical Education on the Learning of Action Skills and Learning Motivation. *Frontiers in Psychology*, *12*(October), 1–17. [CrossRef]

Yoda, I. K. (2017). The Development of Cooperative Learning Model Based on Local Wisdom of Bali for Physical Education, Sport and Health Subject in Junior High School. *1st Annual Applied Science and Engineering Conference*, *180*(1), 1–9. [CrossRef]