



Analysis of low student learning motivation: implications for physical education learning in fourth grade

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Abstract

Low learning motivation in physical education limits active participation, perseverance, and the achievement of learning objectives. This study examines whether the small-sided games (SSG) approach can improve these conditions through a quantitative pretest–posttest control group experimental design. The population consisted of all fourth-grade students at Petemon State Elementary School in Surabaya (N=109), with a sample of 54 students selected through cluster random sampling (27 experimental; 27 control). Motivation was measured using a 5-point Likert scale questionnaire containing 25 statements that were proven to be valid ($r=0.619$) and reliable ($r=0.801$), so that changes in scores could be more reliably interpreted as changes in motivation rather than measurement error. The SSG treatment was given in 4 sessions, then the data were analyzed descriptively and inferentially (Shapiro–Wilk; paired sample t-test; $\alpha=0.05$). The results showed that the experimental group increased from 78.59 to 85.29 and was significant (0.000), while the control group increased less from 76.62 to 79.44. This pattern reinforces that SSG is effective in increasing motivation, possibly because the activities are more interesting, enjoyable, and encourage active involvement, making it relevant as an adaptive and student-centered PJOK strategy.

Keywords: learning motivation; small-sided games; PJOK; elementary school students

INTRODUCTION

Motivation Study is a fundamental factor that determines level involvement, persistence and success student in process learning, including in the subject Education Physical, Sports, and Health (PJOK) (Yogi Fernando et al., 2024). In context education physical, motivation play a role important in push participation active students, improve motor skills, as well as form attitude positive to activity physical. Globally, the low motivation Study in education physical become issues that get attention Serious Because impact on decline participation students, low achievements results learning, and lack of level fitness physique (Song & Choi, 2025). Students with motivation low tend passive, less enthusiastic follow learning, as well as No finish practical tasks optimally (Pitria Ningsih, 2024; Salim et al., 2022).

In Indonesia, the problem low motivation Study in PJOK learning is still often found. The causal factors between other limitations facilities and infrastructure, methods learning yag not enough varied, and lack of innovation of learning strategies that are oriented on need development students (Cahyani & Kurniawan, 2025; Kelwarani et al., 2023; Kufuwan & Abdullah Efendi, 2025). Research previously show that motivation own connection significant with effectiveness PJOK learning (Irawan et al., 2021; Siddik et al., 2024). However, thus, some

big study the Still nature *correlational* and not yet in a way *explicit* test intervention focused learning on improvement motivation *intrinsic* student elementary school .

One of potential approaches increase motivation Study is a learning strategy based games , especially *small- sided games* (SSG). This approach emphasizes game in group small so that increase frequency touch of the ball, participation active , and opportunity success students . Some studies show that SSG is effective in increase motor skills and participation student (Alrizki Amirudin et al., 2025; MF Clemente et al., 2021; Lugaya et al., 2019) . In addition , the approach game small proven capable increase interest and involvement student (Yuliana et al., 2024) . However Thus , research the more Lots emphasize on its influence to dimensions motivation intrinsic student elementary school . With thus Still there is gap study related effectiveness *small- sided games* (SSG) in increase motivation learn PJOK in particular on fourth grade elementary school students .

In a way theoretical , motivational Study can explained through Expectancy-Value Theory that states that motivation influenced by hope individual to success and value given to something tasks (Cook & Jr, 2016; Jenal et al., 2025) . In context fourth grade physical education learning , students is at on stage motor and social development that requires learning experiences that are enjoyable , meaningful , and provide a sense of competence (Rahman & Fuad, 2024) . By therefore , the approach enhancing learning opportunity success and positive experiences student believed can strengthen motivation they .

Based on description mentioned , there are need urge For do study experimental testing effectiveness small- sided games approach to motivation learn PJOK at student elementary school . This research is important Because motivation Study on stage elementary schools have implications term long to interest activity physical and pattern gaps empirical studies , but Also give contribution practical in development model more PJOK learning participatory , contextual and orientation on need development student .

METHOD

Methods used in this research is *experiment* with use design *pretest -posttest control group design* approach study nature quantitative , because the data used in This study is of a descriptive nature number or numeric , and used For know difference results assigned tasks . Method study *experiment* is study with control *independent variables* For see How they influence the dependent variable , to test connection cause and effect (Almeida, 2016) .

Population in this research is all over fourth grade students of public elementary schools Petemon Surabaya, which consists of 109 students . Research sample as many as 54 students obtained through *cluster random sampling* technique . In selected *cluster random sampling* No

individual but group or area (Maksum, 2018) . Class IV A is assigned as as group control and class IV D as group *experiments* , each consisting of 27 students .

This research was conducted for 4 weeks . On meeting first , all student given *pretest* in the form of questionnaire motivation learn PJOK for know condition beginning motivation students . Next, the group *experiment* get treatment in the form of learning use approach *small-sided games* (SSG) for 4 meetings . Each meeting ongoing for 3 x 35 minutes . On end meeting to four , second group return given *posttest* use the same questionnaire For know change motivation Study after treatment given .

Treatment given to group *experiment* is physical education learning material football use *small- sided games* . This approach emphasizes game in group small , with 3 vs 3 and 4 vs 4 formats, with size reduced field in accordance with condition field 10 meter x 20 meter school and modified rules . Modifications done so that all student involved active in game . Field made more small so that frequency ball touch increases and students own more Lots chance participate . In addition , it is carried out rotation player in a way periodically so that every student get chance play the same . Teachers also give bait back and push during game ongoing For guard enthusiasm and involvement students . Characteristics of *small- sided games* that improve intensity participation and interaction social has explained in various study previously (FM Clemente et al., 2021; Lugaya et al., 2019) . This approach also assessed capable increase motivation *intrinsic* Because student more often experience success and involvement direct in game (Beltrán et al., 2018; Paton et al., 2017) . Every meeting consists of over three stages main , namely warm-up , activities core in the form of game group small , and cooling . With this pattern, learning No only focus on basic movements , but Also for more gaming experience *contextual* and fun .

Group control follow PJOK learning with method conventional learning more emphasize on basic movements and instructions direct from the teacher without using game format group small . Activity done in a way structured with a pattern of demonstration and repetition movement . For ensure treatment walk in accordance with design research , researchers compile Plan Implementation Learning (RPP) used in a way consistent on every meeting group *experiment* . The teacher teaches on second group is the teacher who the same , so that difference results No influenced by difference style teaching . During implementation , researcher do observation direct to the way learning For ensure that the assessment format group small , modification field , as well as rotation players are really implemented in accordance scenario . This step is carried out For guard validity internal research for change motivation learning that occurs is truly caused by treatment given (Almeida, 2016) .

Instruments used in this research is questionnaire motivation learning PJOK which consists of 25 statements with *Likert scale* five choice , namely Very Agree , Agree , Undecided,

No Agree and Strongly No Agree . This questionnaire is used For measure aspect interest , participation , perseverance , and responsibility answer student in follow Physical Education learning . Results test *validity* show mark of 0.619 and the test *reliability* of 0.801, so that instrument stated worthy used For measure motivation Study student .

RESULTS AND DISCUSSION

Result

This study aims For know how approach Small-Sided Guys give significant impact to motivation Study students of Petemon Elementary School , Surabaya, in grade IV. This study was conducted in four meeting . Meeting First is pretest with given questionnaire . After the initial test student given 25 lists statement motivation learning . Treatment continued in the week to two to Sunday to four . After given treatment in the week to four Then given *posttest* in the form of questionnaire motivation Study with 25 statements . Data sheet questionnaire study in content by students in class IV A and IV D as a suitable class used in study . Results descriptive statistical analysis of the experimental and control motivation Study can seen on table 1:

Table 1. Analysis Statistics Descriptive

Statistics	<i>Pretest</i>	<i>Posttest</i>	<i>Pretest</i>	<i>Posttest</i>
	Experiment	Experiment	Control	Control
<i>Mean</i>	78.59	85.29	76.62	79.44
<i>Std. Deviation</i>	4.04	3.01	4.68	5.69
<i>Minimum</i>	70.00	79.00	70.00	72.00
<i>Maximum</i>	85.00	90.00	86.00	92.00

Table 1 presents descriptive statistical data. For *pretest* and *posttest* group experiments and controls on before and after follow process learning . Results analysis explain that second group experiments and controls experience improvement mark motivation Study after done treatment , as indicated by descriptive statistical results . Group scores experiment increased on average from 78.59 in pretest to 85.29 on the posttest, the group score control increased on average from 76.62 in pretest to 79.44 on posttest . Results standard deviation analysis *pretest* experiment of 4.04 *posttest* of 3.01 indicates response group experiment relative same . Result standard deviation analysis *pretest* of 4.68 and the group posttest control of 5.68 shows response group are relatively the same . The results analysis minimum group value Experiment on pretest of 70.00 and on *posttest* 79.00, whereas on group control of 70.00 to 72.00 in the posttest so that can interpreted there is improvement mark on second group . Results analysis maximum group value experiment on pretest of 85.00 and in the posttest 90.00, while on group control by 86.00 to 92.00 in the posttest so that can interpreted there is improvement mark on second group .

Increase number the show that intervention influence approach *Small- Sided Games* more Good in increase desire fourth grade students of public elementary schools Petemon Surabaya for study

Table 2. Paired Sample T-Test Results

Variables	Sig. (2-tailed)
Pretest experiment - Posttest experiment	0.000
Posttest t control - Posttest control	0.000

Based on Table 2, results of the paired sample T test for the experimental pretest and posttest experimental groups obtained mark significant 0.000 which shows mark said $<$ of alpha value (0.05) which means there is significant improvement in both group student Grade IV at Petemon Public Elementary School, Surabaya.

DISCUSSION

Study results shows data that use approach *small-sided games* in PJOK learning can increase motivation Study student in a way significant . Comparison of motivation data student before and after intervention show existence clear improvement on level motivation For participate in activity learning sports , in particular material football . This is in line with study by (Thenu et al., 2023) which revealed that SSG approach can create more learning experiences fun and interesting , which encourages student For more involved in activity physical . In this case, *small- sided games* No only functioning For teach skills sports , but Also as tool For grow enthusiasm and commitment student to physical education learning .

Small- sided games own superiority compared to with method learning conventional in education physical . One of the profit main is his abilities For increase involvement student in a way active . With size more teams small , every student get more Lots chance For participate in games and contribute direct on process Study . (Lugaya et al., 2019) state that SSG gives room for student For feel more involved and appreciated in every activities , in context education physical , where involvement active very determine results cooperative and fun , which is very important For maintain interest and motivation student in term long .

Besides increase involvement in activity physical , SSG too proven can influence motivation social students . (Yuliana et al., 2024) emphasize that when game served with interesting way , like in SSG approach , students No only involved in exercise physical , but Also participate in dynamics positive social , such as Work team and interaction healthy social life . This study shows that motivation student For participate in Physical Education learning increases in a way significant Because they feel motivated by peers and the environment supportive social environment . (Paton et al., 2017) Also take notes that element cooperative in SSG strengthen

relationships between students and create atmosphere more learning inclusive and fun , which can strengthen motivation they For Keep going learn and practice sports , in particular in activity like football .

Studies by (Beltrán et al., 2018) give outlook important that *Small- Sided Games* can in a way significant increase motivation intrinsic student in participate in sports . Motivation this intrinsic appears when student feel that activity the physical itself give pleasure and satisfaction , not solely for get present or confession external . In In this context , SSG does not only functioning For teach skills physical , but Also functioning as learning that encourages interest term long to sports . When student experience direct the excitement and pleasure it brings by activity physique in more game formats small , they more tend feel motivated For participate in a way voluntary , even outside of class hours . This underlines that *Small- Sided Games* No only become a teaching medium skills , but Also as effective way For push involvement term long in sports . With Thus , SSG provides contribution positive on change attitude student to sports , which is not only influence performance they in physical education lessons , but Also can form habit healthy that they bring throughout life they .

CONCLUSION

This research proves that that approach *small- sided games* impact positive will increase motivation For Study students in the fourth grade of a public elementary school Petemon Surabaya compared with learning conventional . Results statistical analysis shows that motivation Study different in a way significant between before and after implementation method *Small- Sided Games*. Emphasize that approach low-stakes small- sided games approach motivation Study students , in particular in material that is considered theoretical and not enough interesting . In terms of overall , integration small- sided games approach during process teaching in elementary schools makes learning more interesting , fun , meaningful , as well student involved more active .

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