

The Impact of Basic Motion Activities on Social Interaction in Elementary School Students

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Abstract Social interaction in elementary school students is one thing that must be considered. This is important considering that in learning in elementary schools there are still many learning systems that use a play approach. This study aims to see the impact of children's passive basic movement activities and reduce mastering basic movements as a provision for socializing in social life. The sample used in this study involved elementary school students in Medan City using a Purposive Sample with a total sample of 66 students by dividing into two groups with each group receiving a different treatment, group A 33 students, and group B 33 students. This study used randomized posttest-only control group designs. The instrument is a social interaction questionnaire (validity of 0.700 & reliability is 0.915). Data analysis is carried out in several stages, namely descriptive analysis, difference testing, and hypothesis testing. The results in this study show the value of $t_{\text{count}} 3,545$ with Sig. $0,002 < 0,05$ so H_0 rejected and value $t_{\text{count}} 2,011$ with value Sig. $0,225 > 0,05$ H_0 accepted. The conclusions of this study explain that there is an influence of basic motion activities on the development of social processes (associative) in elementary school students, but no influence of basic motion activities on the development of social processes (dissociative) in elementary school students. This research contributes to the need to continue in the form of

developing basic movement activities to improve social interaction and other aspects.

Keywords Motion Activity, Associative, Dissociative, Student

1. Introduction

Physical education, sports, and health (PJOK) is one of the integral parts of total education that tries to achieve the goal of developing fitness, mental, social, as well as emotional [1]–[3]. Physical education is an indispensable part of human life [4]–[6]. Physical education is the exercise of the body related to the activity of motion [7]–[9] explains that everybody's exercise begins with making movements both consciously and unconsciously which will become automation of the movements performed. Movements made through physical education are often carried out in everyday life by human beings both consciously and unconsciously [10]–[12]. Physical Education, Sports, and Health at school, are aimed at developing physical, mental emotional, and social. In general, education is a process of forming individual character starting from the earliest possible [13]–[15].

Physical education is highly affiliated with physical activity (movement skills) [16]–[18]. Basic movement skills in children are essential for healthy physical and social development as well as in everyday life [19]–[21]. Children enter the world with many needs to grow well, many child education leaders agree that the purpose of basic education is to stimulate and guide the development of child behavior so that they will function in life activities [22], [23]. PJOK is an integral part of overall education, which aims to develop the individual organically, neuromuscular, intellectually, and emotionally [24]

In carrying out daily life, every human being cannot live alone to meet the needs of life. A student is a social being a citizen of a society that coexists with other humans of different ethnicities, languages, and religions [25]. Although man has a high position and position, man always needs another human being in doing something he cannot do. Every human being tends to communicate, interact, and socialize with other humans. It is in this socialization that humans always adjust to the surrounding environment, but not a few of them have difficulty adjusting. In the context of physical education learning, interaction occurs between teachers with students, male students with male students, male students with female students, and vice versa. These interactions can affect each other, these influences can be in the form of positive influences, and they can also be negative influences. The process of influencing each other can occur in cognitive, affective, and psychomotor aspects [6]. At the elementary school level, the factors of teachers, peers, and the school environment have a greater influence compared to the influence of parents or other parties who are in the community. An example is when a teacher gives organizational instructions to create a group of students, immediately the student forms a group, the activity has indirectly occurred as an interaction between the students in the group.

Student activities carried out in the PJOK learning process reflect real social life even though it is in a smaller scope, namely in the school environment [26], [27]. Indeed, from the learning process carried out at school, students begin to interact with other individuals, who have different social backgrounds, families, environments, and even different religions. The school as a formal institution provides good rules and norms that apply in the community environment that in the future can be implemented by students in the actual community environment.

In the context of physical education learning, interaction occurs between teachers with students, male students with male students, male students with female students, and vice versa. These interactions can affect each other, these influences can be in the form of positive influences, and they can also be negative influences. The process of influencing each other can occur in cognitive, affective, and psychomotor aspects [28]–[30]. At the elementary school level, the factors of teachers, peers, and the school environment have a greater influence compared to the

influence of parents or other parties who are in the community. An example is when a teacher gives organizational instructions to create a group to students, immediately students form a group, the activity has indirectly occurred as an interaction between students in the group. Learning is the process of interaction of students with educators and learning resources in a learning environment.

This process will grow the process of students interacting with each other. Social interaction is the main requirement for social activities to occur [31]. Social theory is based on the belief that the individual actively builds knowledge and understanding and construction.

Good social interaction with students will create harmonious relationships. Good forms of social interaction can be seen in the existence of cooperation, mutual respect, and mutual respect. Cooperation is increasingly created when a problem is found in the learning process in schools [32]–[34]. The course of an interaction process is based on various factors, including imitation, suggestion, identification, and sympathy factors [32], [35]. Social interaction factors can affect basic movement ability in elementary school students this is in accordance with previous studies [33], [36], that there is an influence of basic motion capable of having a significant influence on the development of social (associative) processes [37]. Through the research conducted, it can be concluded that the formation of children's social skills cannot be done instantly, it takes time and a continuous learning process in achieving these goals [38], [39]. The results showed that there was a significant influence of traditional games on the fundamental movement skills of elementary school students [21] explains that basic motion is heavily influenced by game factors designed to improve the basic motion ability of elementary school students [41], [42]. Basic motion learning can encourage students to carry out social activities in a study conducted under the title of optimization of character building and discipline of elementary school students through physical education of sports and health showed that the cultivation of indigo-character values must begin from elementary school age so that it will improve the movement ability of elementary school students [43], [44].

In improving basic motion skills, a program called the Fundamental Motor Skill (FMS) program has been developed, this program is program that provides a foundation (Building Blocks) for mastery of motion techniques in various sports. This FMS program provides an opportunity for students to develop their basic motion skills through learning various types of motion activities [45]. The social development that occurs in students is a basis that is in accordance with the expectations of the teacher and society does not occur by itself. Through PJOK learning, for example, basic motion learning is presented with various learning patterns, one example is with the FMS program, it is hoped that the social aspects of students can be optimized. The learning program in question is to

provide all activities contained in the FMS program, namely locomotor, non-locomotor, and manipulative activities. This FMS program is expected to be one of the learning programs that can develop students' basic movement skills and develop student social processes, especially associative social processes (cooperation, accommodation, assimilation) and try to reduce the negative impact of dissociative social processes (competition, contravention, conflict).

From the following explanation, several factors, especially social factors, can affect the basic movements of elementary school students, so it is necessary to conduct a study to test the background that the researcher has put forward.

2. Methods

Participant

This study used the participant population of 66 elementary school students in grades 4, 5, and 6 with aged 10-13 (boys numbered 24 children and girls 42 children). The total participants were divided into two groups in this study. The first group that received the "FMS" treatment consisted of 33 elementary school students. Furthermore, the second group was the "conventional" group which did not get treatment with a total of 33 students as well.

Research Design

The research method used in this study uses experimental research methods [46]. The experimental method is research carried out by conducting manipulations of the object of study and the existence of control. The design used in this study was Randomized Posttest-Only Control Group Design. The variables contained in this study are divided into two free variables (variables that affect) and bound variables (affected variables). The free variable in this study is the Fundamental movement skills program. This free variable is also a form of treatment given to the treatment group, while the other group is called the control group, which is the group that is not given treatment.

Instruments

The instrument is a social interaction questionnaire (SIQ) developed by researchers seeing that there is no literature related to the availability of this instrument in Indonesia. Given the urgency of the availability of instruments as a measuring tool for this research, the SIQ instrument was then compiled to pay attention to the theory of social interaction and application to physical education learning of elementary school children. The result of the draft drafting is the SIQ instrument has 6 dimensions along with indicators and items, namely 1. The dimensions of creating an interactive environment (consisting of 3 indicators and 3 items); 2. The dimensions of creating an emotional atmosphere (consisting of 4 indicators and 4

items); 3. The dimensions of the existence of a specific purpose (consisting of 4 indicators and 4 items); 4. The dimensions of the existence of a leader (consisting of 4 indicators and 4 items); 5. The dimensions of creating a cooperative environment (consisting of 3 indicators and 3 items); 6. The dimensions of empathy (consists of 5 indicators and 5 items). The SIQ instrument has been tested for validity as well as accuracy as a measuring instrument as evidenced by a validity value of 0.700. Provisions and measurements of validity use content validity by comparing the assessments of two raters [47], who have social interaction and applicable expertise in the field of physical education. The SIQ instrument has also been tested for consistency as a measuring instrument as evidenced by the reliability value of 0.915. The provisions for measuring the reliability test are to test the instrument on 30 students other than participants but it must be the same as the overall characteristics [47]. The lattice of the SIQ instruments can be seen in Table 1.

Table 1. Dimensions, Indicators, and Items of Social Interaction Instruments.

| No | Dimensions/Indicators |
|----|--|
| 1 | Dimensions of Creating an Interaction Environment 1. I often participate in group activities 2. I love to communicate with friends at school 3. I often chat with friends outside my class |
| 2 | Dimensions of Creating an Emotional Atmosphere 1. I have positive feelings about the group of friends 2. I enjoy doing tasks by discussing them with friends 3. I can accept opinions and criticisms from others 4. I respect every other person's choice/decision |
| 3 | Dimensions of The Existence of a Specific Purpose 1. I joined a group because of the same goal 2. I understand that everyone has different thoughts 3. Have a certain purpose in obtaining value. 4. I want to be a leader in the team |
| 4 | The Dimensions of The Existence of a Leader 1. Recognizing leadership within peer groups 2. Want to follow the rules in the peer group 3. I do not want to be ruled by anyone 4. I want to be a leader in my environment |
| 5 | Dimensions of Creating a Cooperative Environment 1. I only think of myself when I am with friends 2. I am happy if the teacher scolds a friend I do not like 3. When a friend has difficulty in learning, I help him to understand |
| 6 | Dimensions of Empathy 1. I can feel what friends, as well as others, feel/think/experience 2. I give input to a friend for his good 3. I accept the shortcomings and advantages of friends 4. When a friend does not have pocket money, I try to share it with him 5. When a friend has difficulties, I try to give the solution |

Source: Primary Data

Procedures

In the context of this study, the group that was manipulated was group A with the FMS treatment, while the control group was group B without the FMS treatment. variable on other variables under strictly controlled conditions [33]. In the context of this study, the variable that causes or influences (independent variable) is the FMS program.

Frequency in 3 times/ week (total treatment in 4 weeks) for the participant population of 66 elementary school students in grades 4, 5, and 6. The variable that is affected (the dependent variable) or that gets the result of treatment from the causal variable is the development of social processes which are divided into two forms, namely associative processes and dissociative processes. Experimental research data were obtained through a final test (post-test) using numbers for later analysis. Implementation of the final test on the development of social processes (associative and dissociative) is to determine whether there is an effect of treatment on each research sample group.

The research sample was divided into two groups (group A and group B) with a different treatment for each group. Group A was given the FMS program treatment, while group B was given conventional learning. The dependent variable consists of one variable, namely the process of social development with two sub-variables, namely the process of social associative development which consists of aspects of cooperation, accommodation, and assimilation. The two processes of dissociative social development consist of aspects of competition and conflict/contravention. These two sub-variables are indicators of changes in social processes due to the treatment of the two independent variables.

In filling out the questionnaire, he obtained approval from the parents of the students and was accompanied by the parents of the students so that the ethics of filling out the questionnaire was in accordance with the applicable research principles. Questionnaire measurement or judgment uses the 4,3,2,1 system. And the assessment that is obtained is the appearance of the mean value, SD and after that it is tested using the t-test. The four-week treatment (FMS) was carried out three times applying motor skills to the study sample.

Data Analysis

The research data is obtained through the final test results of each research group using research instruments that have been tested for validity and reliability [46]. The post-test data were analyzed using SPSS Software Version 2.1. Data analysis is carried out in several stages, namely descriptive analysis, difference testing, and hypothesis testing. Specifically, the last one is a hypothesis test carried out to answer the formulation of the research problem proposed.

3. Results

The results of the data taken through social interaction questionnaires in elementary school students were then analyzed descriptively and quantitatively. This analysis presents an analysis in the form of mean and SD from both experimental groups "FMS" and "Conventional", which can be seen in Table 2.

Table 2. Data Description of the Effect of FMS On the Associative Process of Elementary School Students

| Group | N | Mean | SD |
|--------------|----|--------|-------|
| FMS | 33 | 100.20 | 7.243 |
| CONVENTIONAL | 33 | 92.65 | 6.346 |

Based on table 2 above, the average social process development score (Associative) in the FMS program group is 100.20, while in the conventional group it is 92.65. So that a conclusion can be made that the average social process development score (Associative) in the FMS program group is greater than the average social process score (Associative) for conventional groups, the FMS program has a significant effect on the development of social processes (Associative) in elementary school students, which can be seen in Table 3.

Table 3. Test Results of Differences in Associative Social Processes Between FMS and Conventional Programs

| t-test for Equality of Means | | | | |
|------------------------------|----|----------------|-----------------|-------------|
| T | DK | Sig (2-tailed) | Mean Difference | Information |
| 3,545 | 64 | 0,001 | 6,46 | Significant |

3.1. Hypothesis

From the results of testing the research hypothesis, it can be seen that:

H_0 : No effect of FMS programs on the development of social (associative) processes of elementary school students.

H_1 : There is an effect of FMS programs on the development of social (associative) processes of elementary school students

Known t_{count} as big as 3,545 with Sig. 0,002<0,05 so that H_0 rejected. The value t_{count} 2,011 with value Sig. 0,225>0,05 H_0 accepted. This means that "There is an influence of the FMS program on the development of the social (associative) processes of Primary School students". When viewed from the average value that the development of social processes (Associative) of the FMS group has a higher average than the conventional group with an average difference of 6.46. Effect of FMS Program on Social Process Development (dissociative) of Primary School Students, which can be seen in Table 4.

Table 4. Data Description of the Effect of FMS Programs on the Development of Social Processes (Dissociative)

| Group | N | Mean | SD |
|--------------|----|-------|-------|
| FMS | 33 | 77.48 | 5.243 |
| CONVENTIONAL | 33 | 75.19 | 6.346 |

Based on table 4 above, it is known that the average score of social process development (Dissociative) in the FMS program class is 77.48, while in the conventional class it is 75.19. with the difference in the average score is 1.56, so we can conclude that the average social process development score (Dissociative) in the FMS program class is greater than the average social process scores for conventional classes, the FMS program has no significant effect on the development of social processes (Dissociative) students because from the data from the research results it states that the significance value is $0.257 > 0.05$, which can be seen in Table 5.

Table 5. Different Test Results

| t-test for Equality of Means | | | | |
|------------------------------|----|----------------|-----------------|-------------|
| T | DF | Sig (2-tailed) | Mean Difference | Information |
| 2,102 | 64 | 0.257 | 1.56 | Significant |

Hypothesis:

H_0 : There is no effect of the FMS program on the development of social processes (dissociative) in elementary school students.

H_1 : there is an influence of the FMS Program on the Development of Social Processes (dissociative) of Primary School Students.

Decision Criteria:

If the probability value (p) of Sig. > 0.05 then H_1 is accepted If the probability value (p) of Sig. < 0.05 then H_0 is rejected Known value of t_{-count} 1.010 with probability (p) Sig. $0.257 > 0.05$ then H_0 is accepted and H_1 means that "There is no influence of FMS program on the development of social processes (dissociative) elementary school students".

4. Discussions

Basic gross motor skills from the base of the baby's phase to more complicated locomotor and manipulative movements serve as building blocks for more complex movements [48]. It can be understood that children who have a proficient basic movement (FMS), will allow participants with high self-confidence in various activities that involve the physical, it will be directly proportional to the level of social interaction because they do not hesitate to join a social community with a high provision of basic skills. These basic skills become a medium for children to

be able to join social communities and interact with other friends [49]. A child who has good motor skills will have great self-confidence. The environment of their friends will also accept children who have better motor or movement abilities, while children who do not have certain movement abilities will be less accepted by their peers.

Acceptance of friends and their environment will cause children to have good self-confidence. For example, a child who from a young age has learned to run or draw better than his other peers will be well-received by his peers. He will have many friends and his activities will be more and more because he will be invited to participate in various other activities. Therefore, it is better when young children can start learning various types of physical / motor activities freely according to their own abilities and without comparison with other children. It will make children willing to do various activities happily without fear and shame. The Effect of FMS Program on the Development of Social Processes (dissociative) of elementary school students. Traditional learning is still rigid, bound to basic rules and techniques with the demands of mastery of achievement/ sports Oriented [50], [51].

In conventional learning, students are directed to master the basic techniques of a sports branch, and usually, the learning tends to be a competitive method. This is possible for students to be trapped in mastering one or two sports, which should be students, especially elementary school students, who should be given a lot of movement experience (Multilateral). Based on research that has been carried out that conventional learning that is competitive affects social processes (Dissociative). Dissociative/ Oppositional/ Oppositional Social Processes can be interpreted as a way of fighting against a person or group of human beings to achieve a certain goal [52].

Social Processes (Dissociative) include competition/ competition, contravention/ contravention, and conflict / conflict or conflict. Other opinions about children who are less proficient in doing FMS will get some negative things [53] as follows, Children who do not have Basic Movement Skills tend to experience frustration and difficulty learning more advanced skills, thus reducing their enjoyment of sports and physical activity. Children tell us that not having the skills to play is one of the main reasons they quit sports and physical activity. Research shows that 'negative self-perception of motor abilities is a major barrier to participation, and "without the development of Basic Movement Skills, many children withdraw from physical activity and exercise, and turn to more inactive and/or unhealthy options during their leisure time."

The above opinion explains that children who have deficiencies in carrying out Fundamental Movement Skills (FMS) tend to experience frustration and difficulty learning further skills, thereby reducing them in enjoying sports activities and other physical activities [54], [55].

Teachers learn by doing, reading, and reflecting (as

students do); by cooperating with other teachers. Learning like this allows teachers to make leaps from theory to achieve practice. In addition to a solid foundation of theoretical knowledge, such learning requires arrangements that support teacher inquiry and collaboration and strategies based on teacher questions and concerns. To understand deeply, teachers must learn about, see, and experience learning-centered teaching and practical learner-centered learning [56], [57].

The formation of children's social skills cannot be done instantly, it takes time and a continuous learning process in achieving these goals [58]. The substance of the results of this study can be formulated that physical education through a variety of games, teaching sports techniques, and traditional games are able to contribute knowledge and skills to children in carrying out social life in society [47], there was an influence of social interaction on the learning activities of grade VI students of SD Negeri Salebu, Mangunreja District, Tasikmalaya Regency by 65.4%, the remaining 36.4% were influenced by other factors outside this study. The influence is said to be high because it is on a scale of 0.654. In addition, the hypothesis test of this study showed that in the study there was a positive influence of student social interactions on student learning activities.

Surveys conducted in previous studies [50] mentioned that children who do not have the basic skills to play are one of the main reasons they abandon sports activities and other physical activities. This research shows that negative self-perception of motor abilities is the main barrier to being able to participate in sports activities and other physical activities, without having a lot of development of Fundamental Movement Skills (FMS), children will withdraw from physical activity and exercise and switch to choosing passive and/or unhealthy activities during their free time.

5. Conclusions

The conclusions of this study are as follows: The Fundamental Movement Skills Program can have a significant influence on the development of social processes (associative) consisting of aspects of cooperation, accommodation, and assimilation. The Fundamental Movement Skills program cannot influence the development of social processes (dissociative) consisting of aspects of competition (competitive), contravention (contravention), and conflict. In general, the results of this study can illustrate that FMS programs can influence psychomotor aspects in the form of skills of various forms of motion (locomotor, non-locomotor, and manipulative). This FMS program also provides benefits in the form of understanding to students about various forms of basic motion and various types of motion contained in it, with good skills and understanding of various basic movements students can use their skills and understanding as a medium to interact and socialize with the surrounding environment,

be active in physical activities, and provide more value at the level of self-confidence in social life, especially in aspects of aspects social processes. This research contributes to the need to continue in the form of developing basic movement activities to improve social interaction and other aspects. Further research is expected to be able to add other variables as well as by comparing samples, for example, divided between lower and upper grades of elementary school. Lower-class elementary schools are grades 1-3 while upper classes cover grades 4-6 so that they are able to provide or serve as a reference for the application of motor skills that can be applied in learning.

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