



www.ijemst.net

Increasing Students' Gymnastic and Rhythmic Activities through Locomotor, Non-locomotor, and Manipulative Movement Patterns

Cahyo Yuwono 
Universitas Negeri Semarang, Indonesia

Tandiyo Rahayu 
Universitas Negeri Semarang, Indonesia

Sulaiman 
Universitas Negeri Semarang, Indonesia

Tri Rustiadi 
Universitas Negeri Semarang, Indonesia

To cite this article:

Yuwono, C., Rahayu, T., Sulaiman, & Rustiadi, T. (2022). Increasing students' gymnastic and rhythmic activities through locomotor, non-locomotor, and manipulative movement patterns. *International Journal of Education in Mathematics, Science, and Technology (IJEMST)*, 10(1), 57-73. <https://doi.org/10.46328/ijemst.2164>

The International Journal of Education in Mathematics, Science, and Technology (IJEMST) is a peer-reviewed scholarly online journal. This article may be used for research, teaching, and private study purposes. Authors alone are responsible for the contents of their articles. The journal owns the copyright of the articles. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of the research material. All authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations regarding the submitted work.



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.

Increasing Students' Gymnastic and Rhythmic Activities through Locomotor, Non-locomotor, and Manipulative Movement Patterns

Cahyo Yuwono, Tandiyo Rahayu, Sulaiman, Tri Rustiadi

Article Info

Article History

Received:

12 May 2021

Accepted:

12 November 2021

Keywords

Learning models

Gymnastics learning

Locomotor

Movement patterns

Abstract

This research aims to develop a model of floor gymnastics learning and rhythmic activities with the TPSR approach. The subjects of this study were students of grades 1, 2, 3 of State Elementary School 01 Sampangan Gajah Mungkur District of Semarang City and SDN Sronдол Kulon 02, with a total of 76 students. The development research design has used the procedure of investigating the needs followed by developing the information, developing the product design, validation tests, and trials to the product. The results show that the traditional game "Ride the Train" is considered appropriate and effective as a learning model which consists of the objectives, the roles, the characters, the provisions, and the regulations following school conditions and situations. The results of the skill the assessment showed that all students were able to get grades with increased distribution, according to statistical tests, showing a count of -22,477, and p-value of 0.000 or less than 0.05. The conclusion is a significant difference in learning outcomes after being given this game model. The game using the TPSR method approach can explore the ability of gymnastic and rhythmic activities through locomotor, non-locomotor and manipulate the student's movements.

Introduction

The "bullying" case decreased with participants from various elements of society voicing to reject "bullying" (Setyawan, 2017). The physical education teacher of Sarirejo Elementary School 1 reveals "fights in grades 1-3 average child does things that are responsive to his friends. One example of a friend who wants to borrow stationery or toys but not borrowed, so the child insists on getting the thing they want. As one of the owners of the goods maintaining his goods even put up a fight. There are small fights that sometimes leave bruise marks." It can conclude that the elementary school children in the lower classes fight responsive as results in just crying. However, from the teacher's recognition, there is an attitude where students do not have a mutually helpful nature towards their friends. A sense of responsibility is when you have items to share with friends in need. The main highlight of researchers is to increase the sense of responsibility, cooperation, mutual care through the TPSR (Teaching Personal Social Responsibility) approach.

Physical education in terms of processing personal feelings occupies a unique condition. Activities that always involve children in small and large groups are the right vehicle to communicate and get along in the social sphere. Socially, each individual will learn to responsibly carry out his or her role as a member of society. In a life society, many norms must be adhered to and the rules of the game that underlie it. Through Physical Education, the rules are also learned, lived, and practiced. To take part in an active role, children will also realize that individuals and groups must master some necessary skills. Physical education is required to practice skills of life, therefore that a person can live usefully and not trouble the community. One of the effects of physical education learning is to foster self-confidence and positive assessment of self-ability. This impression is required to grow in children to master learning tasks, arousing motivation to other psychological effects that encourage a state of mental health in a person or be prosperous mentally or mentally. It is covered:

- a. Positive feelings about self-image and body condition will increase the self-assessment that feels more to complete tasks and achievement
- b. Successful experience
- c. Increased self-confidence

Social benefits are much obtained from physical education programs. Through physical or sports activities, a person gets the opportunity to get along and interact with each other. Attitudes and behaviors that are approved by society can be fostered through the sports environment. Likewise, about the value, something that is considered the most sublime and becomes a reference or code of behavior. In sports, many values can be instilled in children, such as tolerance between others, cooperation, respect for hard work, prioritizing quality, and others.

Physical education is an inseparable part of a general education because the role of education can be pursued to develop individual personalities. The educational process in schools will be crippled without physical education. The real contribution of physical education is to develop psychomotor skills. The position of physical education is unique because it has more opportunities than the other subjects to develop skills. If other subjects are more concerned with intellectual development, through physical education, aspects of reasoning, attitudes, and skills are developed as well.

Education for children must deliver with pleasure and joy. According to Samsudin (2008), physical education is a process of education of a person as an individual or member of society that is carried out consciously and systematically through various physical activities to obtain personal growth, personal health, freshness, abilities, and skills, intelligence and development of character and personality in the framework of the form of quality Indonesian people based on the Pancasila. The program of Physical Education needed to develop three main areas: psychomotor, affective, and cognitive. There is peculiarity and uniqueness of the Physical Education program become different from the other educational subjects, namely in terms of the development of psychomotor areas, which are usually associated with the physical fitness of children to achieve their movement skills (Samsudin, 2008).

The aims of Physical Education can classify into four categories : (1) Physical development, which is related to

the performing activities ability involving the physical strength of various person's organs (physical fitness); (2) the development of motion, which is related to the performing motion ability effectively, efficiently, smoothly, beautifully, and perfect (skillful); (3) Mental development, which is related to the thinking and interpretability the overall knowledge of Physical Education into its environment to enable the growth and development of students' knowledge, attitudes, and responsibilities; (4) Social development. This goal relates to the student's ability to adapt to a group or society (Suherman, 2001). Based on the results of observations and research on learning approaches conducted by Husdarta and Saputra (2000), it was concluded that there are four groups of learning models as follows:

1. *Information model group*: This group aims to develop students' intellect in receiving, storing, processing, and using information. In this way, students are expected to accommodate a variety of innovations, give birth to future-oriented ideas, and solve problems faced by both themselves and others.
2. *Personal model group*: this group aims to develop students' personalities. The main focus is on processes that provide opportunities for each student to manage and develop his or her identity.
3. *Social interaction group*: this group aims to develop the ability of a person who will and must interact socially with other environments. Thus, students are expected to develop themselves and their minds to contribute to the social environment.
4. *Behavior model group*: this group aims to change measurable student behavior. The main focus of this behavior change is based on the principle of stimulation and response.

One of the physical education learning models that fall into the category of social interaction models is the Hellison model (1995), entitled Teaching Personal and Social Responsibility through Physical Activity. Physical Education learning in this model emphasizes the total well-being of individuals, and the approach is more student-oriented, namely self-actualization and social reconstruction. Steinhart called it a humanistic model. This physical education learning model from Hellison is named the level of affective development. Hellison's model aims to improve students' personal development and responsibility from irresponsibility, self-control, involvement, self-direction, and caring through various motion learning experience activities following the applicable curriculum.

Hellison stated some evidence of the success of his model in addressing students' personal and social problems. However, there have been some criticisms, but it is not explicitly related to physical education matter such as exercise or fitness skills but is general to other lessons. Hellison's model is often used to foster student discipline (self-responsibility). This model is often used in schools that have problems with student discipline. Hellison believes that changes in feelings, attitudes, emotions, and responsibilities are very likely to occur through Physical Education, but they do not occur independently. The changes are well planned and exemplified and reflect the desired. Naturally, students want to do something good and want extrinsic rewards to be counterproductive.

Through the TPSR, teachers expect students to participate and enjoy activities for their benefit rather than to get extrinsic awards. Fair play in Physical Education will be reflected in his daily life. Hellison's model was created to help students understand and practice a sense of personal responsibility (self-responsibility). The goals of

TPSR itself include respecting the rights and feelings of others, self-control or temperament, conflict resolution, self-motivation efforts, new tasks or staying on duty, self-direction (working independently, setting goals and developments, peer pressure resistance (resistance from friend pressure), helping others and leadership, caring and compassion, sensitivity, and responsiveness. Because the TPSR (Teaching Personal Social Responsibility) model has been successfully applied by its creators, the study combines the existing learning model with the TPSR model. In its implementation, TPSR also has a level of achievement by its students, namely;

1. Level 0: irresponsibility, blaming others, not participating and deny responsibility for what they did or failed to do.
2. Level 1: respect, students may not participate or show improvement if they do, but they can control their behavior well enough not to disturb others.
3. Level 2: participation, students show respect for one another and actively and enthusiastically participate and activities under the teacher's supervision.
4. Level 3: self-direction, students show respect and participation and work on skills development without direct supervision. This student begins to identify their own needs and be able to start implementing the physical education program.
5. Level 4: care, in the edition, to meet all other levels, these students express a sense of responsibility outside of themselves by working the same, showing care, and helping others.

This 2013 curriculum has begun to be tested to several schools as a pilot, and with various limitations owned by some schools, not all schools in Indonesia can implement it appropriately because the success of a curriculum must be coupled with specific standards or prerequisites. The demands for educational success should refer to eight national education standards, namely: management standards, cost standards, facilities and infrastructure standards, educator and education personnel standards, content standards, process standards, assessment standards, and graduate competency. So, it is evident that implementing a quality curriculum requires standards that must be met.

Gymnastics is one of the practical physical activities to optimize the growth and development of children by stimulating the development of physical fitness components such as strength, balance, and muscle endurance of all parts of the body (Adisuyanto, 2009). The movements contained in gymnastics are very suitable to fill physical learning programs. Elementary school children like the rhythmic element of their movements, and when they can catch, bounce, and throw a ball or other device, they feel an additional mastery in their movement repertory. Rhythm gymnastics series can be done by walking, running, jumping, jumping, swing, and hand rotation. The basic principles of rhythmic activity are rhythm, body flexibility, and continuity of movement (Muhajir, 2007). Movement in rhythm gymnastics prioritizes the formation of attitude, harmony, and the beauty of gestures. Children's success in learning movement skills is determined by environmental factors that can affect changes in children. One of the efforts to realize children's success in learning motion skills is through physical teaching programs in schools.

The Physical Education Program held in Elementary Schools (SD) through various forms of movement provides an enormous and meaningful contribution for elementary school children to develop their knowledge, values,

and attitudes. Thus, it is not an exaggeration to say that the Physical Education teaching program implemented in elementary schools can be used as a tool to achieve educational goals. The findings in the field are the results of brief observations. With the direct interview method in the field, it is obtained that the character of children in the lower class has decreased (1, 2, 3). Where in childhood today is more daring, especially in speaking? The etiquette seems to be fading. Students in the lower grades have uttered obscene, defiant words and even sang with adult content. Changes in the character of children are worrying over time. The FGD discussed supporting equipment in teaching. One is a handbook for both teachers and students. The quality of this handbook dramatically affects the level of understanding by teachers to students. So that it will have an impact on the learning outcomes obtained. If the quality of the books in circulation is very decent and good, then the educational goals will be fulfilled to the fullest. However, it is unfortunate that issues are circulating among Physical Education teachers about the book used as a guide that does not meet the eligibility criteria for teaching. So the results of the FGD require observation as well as data collection with the results in Table 1.

Table 1. Analysis of the Content of Integrated Thematic Textbook Material Curriculum 2013 for Physical Education Teachers and Students

No.	Question	Class 1		Class 2		Class 3	
		Yes	No	Yes	No	Yes	No
1.	Does the content of the material in the teacher's book and the student's book contain an invitation to live the religion he embraced?		10		10	1	9
	Does the material's content in the teacher's and student books contain an invitation to practice the religion he embraced?		10		10	1	9
2.	Does the content of the material in the teacher's book and the student's book develop personal proficiency? (Disciplined, independent)	2	8	3	7	4	6
	Does the content of the material in the teacher's book and the student's book develop social prowess? (cooperation, respect for others, responsibility)	2	8	3	7	4	6
3.	Is the material of floor gymnastics activities and rhythmic movements following the purpose of physical education learning? (KD 3.5, KD 3.6)		5		5	6	4
	Is the material wide enough? (Lots of it). Is the material presented in-depth? (details)		10		10	2	8
4.	Is the material presented following the development of learners?	4	6	5	5	5	5
5.	Is the material presented free from SARA, pornography, and bias (gender, region, and profession)?	8	2	8	2	9	1

Based on data in Table 1 taken on the spread of 10 questionnaires, it can be explained that the teaching book related to floor gymnastics materials and rhythmic activities for elementary schools grades 1-3 circulating and used by teachers is now not following the guidelines of BNSP (National Education Standards Agency). Various initial observations will be made. The hope is to improve and perfect the teaching book related to floor gymnastics materials and rhythmic activities following BSNP and redesigning with the teaching methods using TPSR that is considered adequate to form a better student character. This improvement is in line with the 2013 curriculum objectives used now. The development of learning models plays a vital role in teaching and learning activities. In addition, development also provides variety in learning and fosters the spirit in students to follow the learning.

According to Husdarta and Saputra (2000), the learning model is a plan that is used to design teaching. The content contained in the learning model is in the form of teaching strategies used to achieve instructional goals. Teachers usually apply teaching strategies during the teaching and learning process: classroom management, student grouping, and teaching aids. Operationally, each learning model has four aspects, namely 1) the steps (syntax), 2) the social system that supports the implementation of each model, 3) the principle of student and teacher interaction, 3) an explanation of the support system. Each model has response principles. Teachers need to give awards for student achievements in the form of prizes and praise. Giving rewards to students gets an incentive to repeat the expected behavior so that a more stable change occurs. Seeing the various conditions of the results of the survey analysis in the field, of course, it is necessary to improve the quality of modules or teaching materials related to floor gymnastics and rhythmic activities in elementary schools. Then, it can optimize learning outcomes and instill a responsible personal character in lowergrade elementary school children. Physical education is a subject that allows changing feelings, attitudes, emotions, and responsibilities. Based on this reason, researchers will develop a physical education learning model for floor gymnastics and rhythmic activities for lower grade elementary school students with a Teaching Personal Social Responsibility (TPSR) approach. The learning model will later be made into modules according to the teaching materials that develop materials, teaching techniques, and assessment systems.

Method

This research uses the concept (Gall, 1983) with ten steps of R&D development quoted in Sugiyono (2015). The development research is mentioned as research and development (research and development). Development research is a cycle that starts from a need and requires solving using a particular product. Steps from the development process include information, developing product design, validation tests, product trials, revisions, extensive trials, mass products. Our development research steps are based on the Research and Development (R&D) method.

1. Potential and Problems

Research can lead to potential or problems. Potential is everything that, when used, will have added value.

2. Data Collection / Information

Once potential and problems can be demonstrated, then collect various information or data that can be used as material for product planning of learning development models that are expected to overcome the problem. As for the preliminary research results, it was obtained that the success of physical education learning of elementary school students (grades 1, 2, and 3) has not been maximal compared to the goals that should be achieved.

The research subjects involved in the study were students in grades 1-3 in each school. There are 6 Primary Schools taken as research subjects, with four expert panelists. The trial was conducted on a small scale and a large scale. The data to be collected in this study consists of two data, namely qualitative and quantitative data.

- a. Qualitative data is data on the learning model development process in the form of criticism and advice from experts who have been selected.
- b. Quantitative data is the primary research data in the form of assessment data about learning models from experts and research subjects.

Data Collection Instruments

The data collection instrument used is a questionnaire or questionnaire. This questionnaire is a combination of open and closed and is made to find out the student's opinion or response about the product that has been made (see Table 2). Learning media feasibility instruments generally use the Likert scale with four alternatives: excellent, good, sufficient, and less. Opinions or responses will be shared with teachers as respondents.

Table 2. Research Instrument Grid

No.	Subject	Indicators	Sub Indicator
		(Level 0) I'm not responsible, it means you can't control yourself yet.	Blaming others for playing I'm not responsible for what you do. Many reasons not to participate (ruin the learning atmosphere)
		(Level 1) Respect means being passive but being able to respect others	Do not interfere with other students in learning Not bothering the teacher in teaching
1.	Attitude	(Level 2) Participation, meaning to participate in the learning process	Have a sense of tolerance with friends Playing really - really Willing to accept the challenge
		(Level 3) Self-direction means starting to identify their own needs	Can work together unsupervised Give friends support Helping friends
		(Level 4) Caring means expressing with action.	
2.	Knowledge	Explain how to play with simple sentences and examples	Doing floor gymnastics Doing rhythmic gymnastics activities
3.	Skills	Doing gaming activities	Doing floor gymnastics Doing rhythmic gymnastics activities

The research uses experimental approaches and model development methods. The data collected in this study, both at the initial stage of obtaining data and at the trial stage, is qualitative. Instrument in this study was obtained through observation activities, interviews, and documentation. To maintain objective research, utilize handy-cams and portraits.

At the data analysis stage, the test results data is analyzed descriptively by conducting an in-depth discernment and review of the information and feedback that can be netted from the test subject. The product of learning model development is said to function well when it can be used following the design, which can be used for the physical education learning process with a success rate by the intended objectives (curriculum).

Results

The needs analysis in the development of model learning of gymnastic activities and rhythmic activities of grades 1, 2, 3 Elementary Schools is conducted with FGD (Forum Group Discussion). FGD participants as many as ten teachers spread in the Semarang area, and ten teachers spread across several cities in Central Java. FGD results can be seen in Table 3.

Table 3. FGD Results of Physical Education Teachers

Teacher Book Material Content	Complete	Incomplete	Incomplete	None
The content of the book material related to Religious attitude (living and practicing the religion he embraced) and social attitudes			20	
Content of social education materials related to children's character, for example, discipline, independence, cooperation, and respect for others.			4	16
Primary motion material content (gymnastic activities and rhythmic activities),		16	4	
Conformity of material with the development of learners		14	6	

As the needs analysis results, the first step is to make the basic motion pattern learning model in class 1, class 2, and grade 3. The first steps in designing a model are:

1. Make initial observations to find out the characteristics of students' movements in grade 1, grade 2 and grade 3, game materials taught, and the vast conditions of the school environment area. Observation results are used as a reference to design the development model and the shape of the field to be used to play. The results show that 1) traditional games are rarely used for learning, 2) the average elementary page area equals the area of $\pm 400 \text{ m}^2$. Based on the findings of observations, researchers raised the traditional game "Ride the Train" as a model to be used for research products assuming that the game could be used for many students and mastery of movement was easy to do and did not

require large areas of land.

2. Perform an attitude character analysis in student classes 1, 2, 3. Character analysis results show that students, in general, are not used to having a responsible attitude towards tasks, respect and care for others, and respect for others. For example, during PBM process activities, the habit is the atmosphere is crowded, often disturbing friends while playing, lack of time discipline, mocking habits when playing.
3. Perform a technical analysis of the play. The results of the technical analysis show that the game should include: a. Purpose of play, b. The role that will be played, c. Characteristics of motion in play, d. Rules of the game, e. Determine how to play, f. Surprise to be used in play, g. Study the principles or how to develop the game.

Result observation obtained then can be explained that the traditional game "Ride the Train" is considered appropriate. Overall, the reason is the traditional game "Ride the Train" according to the conditions and situation of the school, and it is effectively used for research Learning Model. There are objectives, roles, characters, provisions, and regulations as stated in the technical analysis above. Design of field shapes development and appropriate and effective size following the characteristics of the environmental condition of elementary school students in grade 1.

Results of Class 3 Small Scale Trial

The results of the final product design of the Game then conducted a Small-scale trial with the object of the study is a 3rd-grade student of Semarang City Elementary School with a total of 29 students with the results.

Attitude Assessment (TPSR)

Before conducting the attitude assessment, the researcher conducted initial observations to obtain attitude data. This data is then used to determine the child's role in the learning process in a small-scale test. The results of observations obtained initial attitude data. The results of increasing the value of attitudes in the small-scale test learning process are presented in the Table 4.

Table 4. Results of Attitude Improvement

No.	Information	Observation results	Small-scale Test attitude value results
1	Level 0 Irresponsible Attitude	6	0
2	Level 1 Respect Amounted to	16	12
3	Level 2 Participation Attitude	7	16
4	Level 3 Self-Direction	0	1
5	Level 4 Care	0	0

The attitude assessment results showed an increase in the attitude character score at levels 0, 1, 2 to 1, 2, 3, 4. The results of statistical tests showed a count of -6.298, and a p-value of 0.000 or less than 0.05. It can be

stated that this game can explore the attitude skills of 3rd-grade elementary school students. This exploration is essential in encouraging the next student to improve the attitudes taught in the game due to changes in attitudes that do not change in a short time /take a long time K13 indirect assessment.

Knowledge Outcome Assessment

The results of the value of knowledge are obtained through authentic assessment. This assessment uses an oral technique, namely conducting direct questions and answers from the introduction, core, and closing processes. The interview guide instrument was adjusted to the level of development and growth of the 3rd-grade elementary school children.

The knowledge assessment results show that all students can get scores with a distribution like the graph above. The statistical tests showed a count of -7.940, and p-value 0.000 or less than 0.05. This result states that this game can explore students' knowledge abilities and the courage to speak in front of friends and teachers. This exploration is vital in encouraging so that the next student gets the impression to be able to improve speaking courage as taught in the game, and this is because the change in student courage does not change in a short time / takes a long time, even Curriculum 13 is an indirect assessment.

Skills Assessment

The assessment of student skills is carried out using an observation guide instrument adjusted to the development and growth of 3rd-grade elementary school children. The skills assessment results show that all students can get scores with a distribution like the graph above. The results of statistical tests showed a count of -9.748 and p-value 0.000 or less than 0.05. It can be stated that this game can explore students' manipulative movement abilities. This exploration is essential in encouraging so that students then get the impression to be able to improve students' basic manipulative movement skills as taught in the game, and this is because the increase in students' manipulative basic movement skills does not necessarily change in a short time / takes a long time, even K13 indirect assessment.

Results of Class 3 Large-Scale Trial

The results of the final product design of the game were then carried out with a large-scale trial with the object of research being the 3rd-grade elementary school students with a total of 76 students in the city of Semarang. The selection of the 3rd-grade elementary school students with the consideration that the location was quite close to the crowds and the socioeconomic level of the community was classified as medium, and the results of the study are as follows.

Attitude Assessment (TPSR)

Before conducting the attitude assessment, the researcher conducted initial observations to obtain attitude data.

Observation results obtained initial attitude data. This data is then used to determine children's roles in the learning process in a large-scale test. The results of increasing the value of attitudes in the large-scale test learning process are presented in the Table 5.

Table 5. Results of Attitude Improvement

No.	Information	Observation results	Large-scale Testattitude value results
1	Level 0 Irresponsible Attitude	0	0
2	Level 1 Respect Amounted to	39	0
3	Level 2 Participation Attitude	37	65
4	Level 3 Self-Direction	0	4
5	Level 4 Care	0	7

The attitude assessment results showed an increase in the attitude score at levels 2, 3, 4, 5. The statistical test results showed that the count was -10.653, and the p-value was 0.000 or less than 0.05. It can be stated that this game can explore the attitude skills of 3rd-grade elementary school students. This exploration is essential in encouraging so that students then get the impression to improve the attitudes taught in the game, and this is due to changes in attitudes that do not change in a short time / take a long time, even Curriculum13 indirect assessment.

Knowledge Assessment

The results of the value of knowledge are obtained through authentic assessment. This assessment uses an oral technique, namely conducting direct questions and answers from the preliminary, core, and closing processes. The interview guide instrument was adjusted to the level of development and growth of 3rd grade elementary school children.

The knowledge assessment results show that all students can get scores with a distribution like the graph above. The statistical tests showed a count of -22.031, and p-value 0.000 or less than 0.05. These finding states that this game can explore students' knowledge abilities and can explore students' courage to dare to speak in front of friends and teachers. This exploration is vital in encouraging so that the next student gets the impression to be able to improve speaking courage as taught in the game, and this is because the change in student courage does not change in a short time / takes a long time, even Curriculum 13 is an indirect assessment.

Skills Assessment

The assessment of student skills is carried out using an observation guide instrument adjusted to the development and growth of 3rd-grade elementary school children. The skills assessment results show that all students can get scores with a distribution like the graph above. The statistical tests showed a count of -22,477, and p-value 0.000 or less than 0.05. This result states that this game can explore students' manipulative

movement abilities. This exploration is vital in encouraging so that students then get the impression to be able to improve students' basic manipulative movement skills as taught in the game, and this is because the increase in students' manipulative basic movement skills does not necessarily change in a short time / takes a long time, even K13 indirect assessment.

Discussion

Analysis of the Effectiveness of Developing Learning Models for Floor Gymnastics and rhythmic activities Product design of physical education learning development model material for floor exercise patterns and elementary school rhythmic activities with the TPSR approach in the form of the traditional game "Take the Train." Activities in this game include walking straight, turning, walking sideways and walking backward; running straight, running turning, running sideways and running backward; jump/ankle legs alternate straight and sideways jump; and jump two straight legs, jump sideways. The movements applied in the "train- rail/spur-spur" game are basic locomotor movements. Through the games developed, lower grade students, mainly grade 1, can practice basic locomotor movements. This game not only contains basic locomotor movements, but game participants must play some roles. Based on this role play, there is a lesson that contains for attitude change 1) Responsibility for self and others; 2) Participation and self-control; 3) Respect for others; 4) Collaborate between friends without supervision, and 5) Caring/helping/sacrificing for others.

The development of the second-grade basic locomotor learning model is the same as that developed for grade 1, namely the train game. This class 2 locomotor motion model applies walking straight, running, turning, jumping, and jumping. The game pattern developed is also carried out at the movement distance, which is longer than the pattern developed in grade 1.

The development method for floor gymnastics and other rhythmic activities is developing basic locomotor movements for grade 3. In third-grade games, the basic movements applied are; walking straight, turning, and playing jump rope; running straight, turning, running sideways and playing hopscotch; jumping and jumping two straight legs, side jump and play stick jump. In comparison, the game pattern design is longer than the model developed for grades 1 and 2.

Design model developed for learning basic locomotor movements for lower grades. The game model developed is a game that is extracted from local wisdom. This game, in general, is a game that is familiar to children. The game is fun but packaged to improve the student's character, with a change in attitude that is substituted with the role of the game. When participants play trains, an attitude of responsibility is instilled so that each role is consistent with what is played. While carrying out predetermined movements, participants must also be able to be part of the game and control their roles so that the roles of other participants complete their tasks.

At the same time, while continuing to make movements, participants must also cooperate and help other participants so that the game follows the game's rules. If one role does not keep each of its roles, the game will be disbanded, and the game will not run well. So there are two emphases in the game so that this game can train basic

locomotor movements and form attitudes based on the characters played in the role of the game. This situation is explained by Suharjana (2010) that social skills are forms of behavior, actions, and attitudes displayed by individuals when interacting with other people, accompanied by accuracy and speed to provide comfort for those around them. Social skills or also called prosocial behavior includes behaviors such as (a) empathy in which children express feelings of emotion by paying attention to someone who is depressed because of a problem and expressing the feelings of others who are experiencing conflict as a form that children realize feelings experienced by others; (b) generosity or generosity in which children share and give something of their property to someone; (c) cooperation in which the children take turns or take turns and obey orders voluntarily without causing quarrels; and (d) providing assistance in which children help someone to complete a task and help someone in need

Effectiveness of Developing Learning Models for Floor Gymnastics and Rhythmic Activity

The product of the physical education learning development model for grade 1 rhythmic activity is to imitate the movements of animals and plants. The non-locomotor basic movement games that are applied include the following movements: walking in place facing right, facing left, turning right; running in place facing right, left and turning; jump one foot in a place holding friends (group); jump two feet in place holding friends (group); playing hulaob; and I catch you playing running by mentioning/imitating (sleeping cranes, planes, trees). These movements provide basic non-locomotor movement exercises in children. A happy atmosphere when playing together with peers attracts participants to perform the movements that have been set in the game. Participants are not aware of the direct exercise of the movements. When each has to play a role, participants will voluntarily follow the rules and respect the roles of other participants.

The product of the physical education learning development model material for non-locomotor class 2 fundamental movement patterns is La La Hab. The activities applied to prioritize exploring children's basic movements, especially non-locomotor movements, namely moving in place—play and sing songs as a medium of joy. The song used is expected to stimulate children's pleasure to sing, and the song's character is adjusted to the age level. In addition, this game is also expected to stimulate children's basic movements (non-locomotor). The movements designed in this game are adapted to the level of development and movement needs of children.

The product of the physical education learning development model material basic movement patterns for the 3rd-grade rhythmic activity is HinBall. The activity applied is non-locomotor motions, which moves in place—play and sing songs as a medium of joy. The song used is expected to stimulate children's pleasure to sing, and the song's character is adjusted to the age level. In addition, this game is also expected to stimulate children's basic movements (non-locomotor). The movements designed in this game are adapted to the level of development and movement needs of children.

In addition to functioning for the soul's progress, children's games also affect the emergence of sharpness of mind, the subtlety of taste, and strength of will. The influences contained in children's games, for example, additional awareness of inner and outer strength than oneself and the habit of adapting every time to every new situation, more firmly correcting any mistakes or shortcomings in oneself. In other words, children practice self-

control, realize the strengths of others and carry out appropriate and wise tactics or attitudes, namely practical-idealist tactics. Children's games are beneficial for educating self and social feelings, discipline, order, getting used to being alert and alert and being ready to face all circumstances and events. Children's games get used to thinking actual and eliminate feelings of reluctance or easily discouragement. Children's games educate children to keep fighting until they reach their goals.

Children receive the education contained in children's games not by coercion or orders but because of the children's willingness and pleasure to accept and experience all these highly pedagogical influences (Escarti et al., 2010a). It means that children's play is also crucial to strengthen the sense of independence. If a child is invited to play by a friend, he will feel happy because he has the opportunity to participate in the game. In playing, children certainly feel pleasure. As mentioned above, one of the conditions for children's games is to be fun. Furthermore, the joy that exists in this child embodies a phase of good opportunities for progress.

Someone who has the opportunity to take part in a game, of course, feels free from all pressure, so that he has a sense of fun and joy. In this atmosphere, children are usually elementary to accept new things they want. So this good opportunity must be filled with a pretty directed game and contains elements of noble education. This element of education will undoubtedly be easy to enter into the child's personality (Escarti et al., 2010b).

Playing together with peers is a blessing for a child. Because not infrequently children who do not have the opportunity to play with their friends. The opportunity to meet is very beneficial because by making friends, children can get to know other people's personalities so that it is pretty valuable in the future if they live in a society with each different individual. In playing, all members have the same position. Whether he is the son of a rich person, the son of a high-ranking official, or the child of a laborer, they are all the same. Social status does not affect the game because their position is the same, namely as game participants. In games, there are always rules. The rules of this game are always based on the existing general rules, which the participants always agree upon before the game starts. Thus, each participant feels involved in determining the game. So it is appropriate that they are also responsible for complying with the rules in the game because they agreed. In playing, children have been introduced to various rules that require them to obey them to run in an orderly and smooth manner.

If any of them disobey, their friends will make fun of them, so that eventually they will feel ashamed if they cannot obey the rules they have made. Thus, in playing, children also get an element of education, namely shame if they cannot obey the rules. Most of the characteristics of children who are often encountered are whiny or easy to cry. Through games, children can be trained not to cry. Games that require children to run and chase allow children to fall. If this happens while playing, and when many other friends are also playing, the child is not allowed to cry because he will feel embarrassed if later made fun of or laughed at by his playmates.

Effectiveness of Developing Learning Models for Lower Grade Manipulative Basic Motion Materials

The product of the 1st-grade manipulative rhythmic activity learning development model for physical education is a combination of crank, throwing, catching, and bouncing ball games. The basic manipulative movement

game that is applied includes movement: with tools outside the individual. A happy atmosphere when playing together with peers attracts participants to perform the movements that have been set in the game. Participants are not aware of the direct exercise of the movements. When each has to play a role, participants will voluntarily follow the rules and respect the roles of other participants.

The main target of students' essential movement learning is to develop movement skills, stability of movement skills, and manipulative skills through basic movement activities and games that involve physical activity. The characteristic of living humans is to move, so motion is the main element of humans to achieve success. One of the materials taught in Physical Education subjects in lower grade elementary schools is a fundamental movement consisting of locomotor, non-locomotor, and manipulative movements. According to the expert, it is said that: Basic movement education is taught naturally, meaning that the development of normal human movement follows the level of chronological age and the environment that forms during his life until he develops according to the nature that shapes it. Basic motion is the essential element of motion for all humans (Faisal, 2013).

Basic human motion consists of three kinds, namely locomotor, non-locomotor, and manipulative. In simple terms, locomotor can be interpreted as motion involving displacement, non-locomotor is motion without displacement or only pivoting on the body, and manipulative motion involving manipulated objects. At the same time, some examples include walking and running for locomotors twisting, stretching for non-locomotors, and throwing and catching for manipulatives.

Piaget Jean and Clark in Syahril Bakhtiar state that: Children must explore their environment if they want to develop their maximum cognitive abilities. Children need to move as much as possible because, with much movement, they will be able to develop all the potential that is in them. During the early years, children interact with the environment through movement activities such as moving slowly, crawling, walking, and jumping. This period is vital for mastering the development of children's basic movement skills and sees basic movement skills as "the basic patterns of coordination which then underlie movement skills." Basic motion is an essential ability that is very important for more complex movement patterns. Basic movement is a skill that involves the cerebrum, muscle strength involving the arms and legs used to achieve an exercise or movement goal, such as throwing a ball, jumping, or jumping through water movements, or maintaining balance. Basic movement is also known as the primary motor skill. Fine motor movements involve only the small muscles of the hand, such as writing.

Thus, it is clear that a child's basic movements need to be developed as optimally as possible because a broad range of motion abilities will help him to exist and run his life. In addition, in the education process in schools, physical education subjects are very clearly mentioned about the development of locomotor, non-locomotor, and basic manipulative movements to develop children's basic movements in essential competencies in the 2013 Curriculum, so teachers must be able to implement them into the learning process in the classroom so that the curriculum objectives can be achieved.

Conclusion

Based on the results of the discussion, the following conclusions can be drawn.

1. A physical education learning model for basic movement patterns for elementary school gymnastics and rhythmic activities using the TPSR approach produces rhythmic gymnastics Basic Motion Products through Locomotor Class 1, 2, and 3. Locomotor dominant movement patterns are developed according to learning needs and tested by expert evaluations, small-scale trials, and large-scale trials. The results of small-scale trials, and large-scale trials, showed an increase in the locomotor dominant movement pattern movement abilities of students in grades 1, 2 and 3. Based on the test, the results of the assessment of attitudes, knowledge, and skills of students in grades 1, 2, and 3 experienced enhancements.
2. Developing a physical education learning model for elementary school gymnastics/rhythmic manipulative activity materials using the TPSR approach produces patterns of manipulative rhythmic activity products for Grades 1, 2, and 3. Manipulative rhythmic activity products are developed according to learning needs and tested by experts' evaluations, small-scale trials, and large-scale trials. The results of small-scale and large-scale trials showed an increase in the basic manipulative movement abilities of grade 1, 2, and 3 students.
3. Development of a physical education learning model for gymnastics and rhythmic activities with non-locomotor lower grade elementary schools using the TPSR approach produces gymnastic and rhythmic activity products with non-locomotor Grades 1, 2, and 3. Gymnastics and rhythmic activities with non-locomotors are developed according to learning needs and tested by expert evaluations, small-scale trials, and large-scale trials. The results of small-scale and large-scale trials showed an increase in students' non-locomotor basic movement abilities in grades 1, 2, and 3. Based on the test, the assessment results of attitudes, knowledge, and skills of grade 1, 2, and 3 students experienced an increase.

Acknowledgments

We would like to thank all the leadership and all colleagues who have supported this paper.

References

- Adisuyanto, B. (2009). *Cerdas dan Bugar dengan Senam Lantai*. Jakarta: PT Gramedia Widiasarana Indonesia.
- Borg & Gall, M. D. (1983). *Educational Research: An Introduction*. New York: Longman Inc.
- Escarti, A., Gutiérrez, M., Pascual, C., & Llopis, R. (2010a). Implementation of the Personal and Social Responsibility Model to Improve Self-Efficacy during Physical Education Classes for Primary School Children. *International Journal of Psychology and Psychological Therapy*, 10(3), 387-402
- Escarti, A., Gutiérrez, M., Pascual, C., & Marín, D. (2010b). Application of Hellison's Teaching Personal and Social Responsibility Model in Physical Education to Improve Self-Efficacy for Adolescents at Risk of Dropping-out of School. *The Spanish Journal of Psychology*, 13(2), 667-676.

- Suharjana, F. (2010). Aktivitas Ritmik dalam Pendidikan Jasmani di Sekolah Dasar. *Jurnal Pendidikan Jasmani Indonesia*, 7(1), 3-12.
- Hellison, D. R. (1995). *Goals and strategies for teaching physical education*. Human Kinetics Publishers: Champaign, IL.
- Husdarta, Y. M. S., & Saputra, Y. M. (2000). *Belajar dan Pembelajaran*. Bandung: Depdiknas.
- Muhajir. (2007). *Pendidikan Jasmani Olahraga dan Kesehatan*. Jakarta: Erlangga.
- Faisal, A. S. (2013). *Pengembangan Model Pembelajaran Gerak Dasar Melompat Pada Siswa Sekolah Dasar*. Tesis Universitas Negeri Jakarta.
- Saputra, H. D. (2000). *Belajar dan Pembelajaran*. Jakarta: Depdiknas.
- Samsudin (2008). *Pembelajaran Pendidikan Jasmani Olahraga dan Kesehatan*. Jakarta: PT Fajar Interpratama.
- Setyawan, D. (2017). *Kekerasan Anak di Sekolah Semakin Memprihatinkan & Kasus Bullying*. KPAI: <http://www.kpai.go.id/berita/kekerasan-anak-di-sekolah-semakin-memprihatinkan>
- Sugiyono. (2015). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta
- Suherman, W. S. (2001). *Pengembangan kurikulum pendidikan jasmani*. Yogyakarta: Fik Uny.
- Menengah.Supriadi, D. (2016). *The Implementation of Teaching Personal Social Responsibility (TPSR) Models to Improve Student Responsibility Attitude at Stkip Pasundan Cimahi*. High School of Higher Learning of Teacher Education (STKIP) Pasundan Cimahi
- Syahara, S. (2004). *Pembelajaran senam dan aktivitas ritmik*. Jakarta: Departemen Pendidikan Nasional Dirjen Pendidikan Dasar dan Menengah Direktorat Tenaga Kependidikan.

Author Information

Cahyo Yuwono

 <https://orcid.org/0000-0003-3169-022X>

Universitas Negeri Semarang

Indonesia

Contact e-mail: cahyoyuwono@mail.unnes.ac.id

Tandiyo Rahayu

 <https://orcid.org/0000-0002-8690-6377>

Universitas Negeri Semarang

Indonesia

Sulaiman

 <https://orcid.org/0000-0001-8086-1019>

Universitas Negeri Semarang

Indonesia

Tri Rustiadi

 <https://orcid.org/0000-0001-8663-794X>

Universitas Negeri Semarang

Indonesia
