

Physical education with the TPSR model: Building characters and basic manipulative movements in elementary school students

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ABSTRACT

Character education is an essential aspect of education that transcends academic development. However, its implementation is frequently hindered by students' lack of social responsibility and mutual respect. Through the development of a physical education learning model based on the Teaching Personal and Social Responsibility (TPSR) approach, this study sought to address the fundamental problems inherent in the implementation of character education in schools. Using an experimental method and a pretest-posttest design with 56 elementary school students, this study employed the game *Engklek* to promote character development and enhance fundamental manipulative skills. The results demonstrated a positive impact on the character traits, knowledge, and abilities of the students, with increased scores at levels 1 and 2. However, there were identified limitations, such as the need for adequate facilities and the limited habituation of character characteristics in daily life due to time constraints. Overall, this research contributes to the development of a physical education learning model that enhances the character development and fundamental manipulative movements of elementary school students, whereas future research should explore alternative materials and interactive learning media to further improve physical education.

Keywords: Physical education; TPSR approach; character education; basic manipulative movement

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INTRODUCTION

Physical education learning has a goal of balancing the educational aspects, both in terms of psychomotor, cognitive, and affective. The physical education learning as an educational program contributes to the students' character development (Mashuri, 2022; Suherman et al., 2019). Through the physical education learning, the character of public elementary school students will be well formed (Bausad & Musrifin, 2017). During efforts to implement character education in schools, there are several basic problems. First, the students have less social responsibility to help other students who are in difficulties to do

the task. Second, they have less mutual respect for their fellow students. Third, there are some female students who are lazy to do physical activity (Dwijayanto et al., 2023; Hayati & Utomo, 2022; Suwandi et al., 2022). Responsibility and tolerance among fellow students in physical education learning is still considered less good (Dupri, 2019).

We can use this interaction in learning and teaching as a forum for the formation of the value of responsibility and tolerance among fellow students (Yuliawan, 2017). The values of responsibility and tolerance will certainly be able to shape the character of students, and they will certainly be able to support the formation of the nation's character in accordance with the 2013 curriculum (Praja & Hyangsewu, 2021; Yulia, 2018). Responsibility and tolerance are cultural values that need to be continuously developed as moral values that will shape the success of a nation (Çalışkan et al., 2019). Responsibility and tolerance are cultural values that are very important in an effort to avoid all forms of crime and other negative behaviors (Paquet-Clouston et al., 2018). Being responsible means carrying out a job or obligation in the family, at school (Paquet-Clouston et al., 2018), as well as at work wholeheartedly and giving their best efforts.

Each student has their own personal character that is different from one another. Character development in students is greatly influenced by surroundings, particularly the school environment (Agustini, 2021). Learning Physical Education in schools will have a collection of students who are heterogeneous in terms of character (Amalia & Yani, 2021). When applying the Physical Education learning process, it is hoped that there will be a process of directing student attitudes to a better one in the hope of forming a better personal character as well. The application of physical education learning in the context of building student character requires a learning approach that also focuses on affective aspects (Alifah, 2019; Rohi, 2022).

Nowadays, there are various learning models in the context of learning Physical Education (PE), which are developing so rapidly that can develop the affective (character) realm (Gustiawati et al., 2019). There are personal and social responsibility learning model (TPSR) (Manzano-Sánchez et al., 2020), cooperative learning model (Sulistio & Haryanti, 2022), as well as character values learning model (Sudrajat et al., 2021). This Teaching Personal Social Responsibility model was discovered by Hellison in 1970, it was created to develop social and personal responsibility in children, both in sports and life in society (Manzano-Sánchez et al., 2020).

TPSR is a learning approach that is often used in the physical education learning process (Carreres-Ponsoda et al., 2021; Toivonen et al., 2021). This approach is used to make character changes or shape the child's character (Dupri, 2019; Rahayu et al., 2018). The concept of TPSR was developed by Don Hellison, and the development of this model has grown rapidly since 1986 (Mu'arifin et al., 2022). The growth of students' personal and societal responsibilities is made easier by this TPSR model, which has a solid humanistic foundation (Richards et al., 2018). This strategy stands out because it emphasizes daily objectives for student participation in class. The fact that this approach motivates students to communicate their thoughts, interests, and feelings and assists them to make more reflective judgments is another crucial component of it (Ardiansyah et al., 2022; Elmeiri et al., 2022).

This TPSR model's underlying assumption is that this kind of instruction will enable pupils to see options for suitable behaviors and activities (Raharjo et al., 2021; Richards & Shiver, 2020). More care will be shown for the well-being, safety, and standard of the educational experience thanks to this. The instructor's or teacher's role in establishing or setting up situations for the establishment of attitudes of personal responsibility and social responsibility is another way in which this program's strength will shape participants' attitudes toward personal and social responsibility (Keiler, 2018; Richards & Shiver, 2020). Given the significance of the TPSR program, it is a part of the educational curriculum in schools (Watson & Clocksin, 2013).

Donald R Hellison stated that by integrating TPSR principles and tactics into physical activity, the discussion of responsibility levels in the TPSR approach aims to encourage children to take more personal and social responsibility (Carreres-Ponsoda et al., 2021; Muñoz-Llerena et al., 2022). The cumulative growth of pupil learning occurs with each level change, from the lowest level to the highest level (Manzano-Sánchez et al., 2020). This approach provides a framework for developing character and promoting responsible behaviour among elementary school students during physical education classes.

Level Zero stands for careless attitudes and actions. Students at Level I exhibit respect for the rights and emotions of others while barely participating in educational activities (and without self-direction or concern for others). Students at Level I demonstrate students with minimal social responsibility possessing no distractions but little personal responsibility (it considers their participation as beneficial and not a contraindication to their educational experience). Level II describes the students who participate in supervision, being cooperative, and respect other people's rights and feelings. Level III represents the students who respect, participate, and Level IV is a level of caring where a sense of sacrifice for the sake of others included into this category (Manzano-Sánchez et al., 2020).

Table 1. Character Identification in TPSR

No	Level	Character Identification
1	Level 0 (zero), irresponsible attitude.	Students who are operating at Level Zero create excuses, point the finger at others, and refuse to accept personal responsibility for their actions or inactions.
2	Level I Respect,	Students at Level I are capable of controlling their conduct by not interfering with other students' or the teacher's right to teach. They may not participate in everyday activities or demonstrate significant mastery or improvement, but they are able to do so. This behavior may not always be known to the teacher, and there is no ongoing supervision.
3	Level II, Participation,	Students at Level II exhibit little consideration for others and are eager to play, take on challenges, hone their motor skills, and engage in physical activity as the teacher watches.
4	Levels III, Self-directed,	Students at Level III behave respectfully, take part in class, and can complete tasks without direct supervision. They could decide what they needed, and they could begin to design and carry out their own physical education programs.
5	Level IV, Caring	Students at Level IV are able to respect others, participate, and develop self-direction. They are encouraged to widen their sense of accountability to others by cooperating, offering support, demonstrating concern, and lending a hand.

The fundamental manipulative movement skills of primary school pupils will be addressed through physical education in character development using the TPSR approach. One type of fundamental movement action performed by the limbs is manipulating objects. Examples include kicking, throwing, pushing, hitting, bouncing and rolling, receiving, catching, stopping, and more. The manipulative basic motion is a movement to move an object or objects from one place to another (Ardini et al., 2019). Therefore, this learning material is given in the form of a game, especially traditional games.

Some previous findings show the benefits of traditional hopscotch games on the cognitive development of children aged 5-6 years (Adprijadi, 2017; Desvarosa, 2016). Traditional hopscotch games have many benefits in terms of children's gross motor skills (Jati et al., 2020). This is also in line with the results of research from Indriyani et al. (2021) which revealed that traditional hopscotch games have the benefits of gross motor aspects for early childhood and make children more active, disciplined and responsible, and understand the concept of cooperation in a game.

The implementation of the game activity above cannot be separated from the interaction between students. This interaction is a manifestation of the character of each student (Rosarian & Dirgantoro, 2020). In the application of socialization among students, there are various kinds gesture and verbal character. In line with the goals of physical education, the character building is carried out in the rules of sportsmanship, such as the participants should respect for the opponent, participate in the game, not commit to cheating, and have awareness of self-monitoring and most importantly, they should not have an irresponsible attitude (Yuliawan, 2017).

The game that will be used in this study is *Engklek*. Dani (2021) states *Engklek* is a game that was introduced for the first time by the Dutch when they colonized Indonesia. In Dutch, this game is known as *Zondaag Maandag*. Then, this name was adopted in the local language to become Sunda Manda. This game is similar to a game from the United Kingdom called hopscotch. The hopscotch game is very old, dating back to the time of the Ancient Roman Empire.

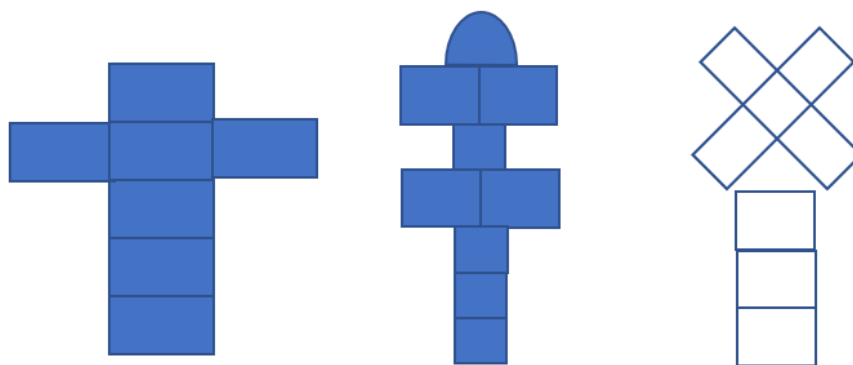


Figure 1. Type of *Engklek* Playing Field

Figure 1 shows of the *Engklek* Playing Field. This traditional game that has existed since the Dutch colonial era is usually played in a large field or yard. *Engklek* is usually played in groups, and the playing field is made using chalk by drawing the field surface. In addition to the playing field, players must also prepare *gacuk* as a pawn that determines the player's movement (Mardayani et al., 2016). According Anggriani et al. (2021) the following are some of the basic skills needed to play the *Engklek* game, namely: hop ability, leg muscle strength, agility, accuracy, balance, and sportsmanship. Those are the 6 basic skills needed to play the *Engklek* game. The relationship between the game and manipulative movements is found in the movement of hopping, jumping and throwing gaco.

The purpose of this research is to analyze the effectiveness of the learning model of the *Engklek* game with the TPSR approach to the basic manipulative movement abilities of elementary school students in the domains of attitude, knowledge, and skills. This research will develop a basic manipulative movement learning model product for the lower grades of elementary school which contains complete material and sharp discussion of the material. This product will present the TPSR approach as a basis for forming student character which is equipped with clear instructions accompanied by pictures as a visual medium so that it will be easy for teachers to use in carrying out the learning process in class, besides that it can also be used by students to implement activities at home and as a reading material. This product is in the form of a manual for teaching physical education on basic manipulative movement material for grades 1, 2, 3 of elementary school.

The urgency of this research is that teachers really need teaching guidelines that are practical to use in the basic movement learning process at school and have a context that prioritizes character building for children. Characters that are formed early on, children will be able and able to determine the direction of their lives and prepare them to face a life full of challenges. In addition, to answer the problem, it is necessary to develop a program for developing Physical Education learning materials for the lower grades that are adapted to the objectives of Physical Education, namely developing attitudes/characters, developing knowledge and developing students' skills. In this case, the researcher will develop basic motion material with the TPSR (Teaching Personal and Social Responsibility) model into the lower class learning process. This TPSR model has a strong foundation in humanism to create a student-centred approach with the aim of facilitating the development of students' personal and social responsibility.

The uniqueness of this model lies in its focus on setting goals for students' participation in the class. Another important aspect of this model is that it encourages students to be more reflective in making decisions and provides access for students to express their opinions, interests, and feelings. The aim is that students will be able to demonstrate appropriate behavioral and activity choices through this type of learning, and will demonstrate greater concern for the well-being, safety, and quality of the experience of their peers (Watson & Clocksin, 2013). When properly implemented, this program will be able to form an attitude of personal responsibility and social responsibility of the participants, and the role of the instructor/teacher also plays an important role in creating such a situation, so that this TPSR model can be integrated into learning programs in schools.

Since the TPSR model deals with concerns relating to pressing and motivating children to take responsibility of their own physical, emotional, and social needs, it naturally fits as a learning model in the curriculum (Pan et al., 2019). This TPSR model has been widely used in various studies (Baker et al., 2023; Gordon et al., 2016). However, there has been no previous research that has tried to improve aspects of basic manipulative movements for the lower grades of elementary schools in the domains of students' attitudes, knowledge and skills. This TPSR approach is integrated in the *Engklek* game which is a game model excavated from local wisdom. The game is fun but packaged so that it can improve students' character, with a change in attitude that substitutes for the role of the game.

METHOD

Research Design

A randomised, experimental, and controlled investigation was used to design this intervention. The research subjects were divided into two groups at random: the *Engklek* group (PG) received *Engklek* learning, while the control group (CG) received no special treatment and received the identical instruction as the first group. At the baseline and eighth week of the intervention, participants' attitudes, knowledge, and skills were assessed. Additionally, the Director of Semarang City Education Office gave authorization (Disdik). Prior to recruitment, participants received full verbal and written explanations of the research design and data collection techniques.

Participants

This study involved children aged 10 to 11 years old. In total, 56 elementary school students from Semarang (30 boys and 26 girls) made up the study's sample. *Engklek* group received twice a week with 60 minutes time allocation through the *Engklek* teaching and learning time.

Instruments

This research instruments used the assessment observation sheets with indicator of attitude, knowledge, and skills.

Data Collection and Analysis

Basic statistics and a t-test were utilized in the data analysis. The rule of thumb used was if the t-count value was bigger than t-table, so the change occurred is significant.

RESULTS AND DISCUSSION

After receiving their consent, 56 participants were chosen at random and put into either the *engklek* group (n = 28) or the control group (n = 28). All the participants attitude, knowledge, and skills measures (Table 2).

Table 2. Effects of *Engklek* Games on Attitude, Knowledge, and Skills

Parameter	Pre-test (%)		Post-test (%)	
	EG	CG	EG	CG
Attitude				
<i>Irresponsible</i>	0	0	0	0
<i>Respect</i>	100	100	64.3	70.4
<i>Participation</i>	0	0	28.6	24.3
<i>Self-directed</i>	0	0	7.1	5.3
<i>Caring</i>	0	0	0	0
Knowledge				
<i>Irresponsible</i>	10.7	11	0	0
<i>Respect</i>	25	24.6	0	1.6
<i>Participation</i>	39.3	50.1	7.1	48.2
<i>Self-directed</i>	21.4	14.3	21.4	30.1
<i>Caring</i>	3.6	1.1	71.4	20.1
Skills				
<i>Irresponsible</i>	17.9	18.1	0	0

Parameter	Pre-test (%)		Post-test (%)	
	EG	CG	EG	CG
<i>Respect</i>	28.6	28.2	7.1	3.6
<i>Participation</i>	39.3	41	21.4	43
<i>Self-directed</i>	10.7	10	14.3	13
<i>Caring</i>	3.6	2.6	57.1	40.4

Note. EG= *Engklek* Group, CG: Control Group

Attitude Assessment (TPSR)

The researchers first did early observation to gather attitude data before conducting the attitude evaluation. The roles that the students played during the learning process were subsequently determined using this data in a large-scale test. The attitude assessment result shows that there is an enhancement of attitude on the level II and III. However, there are 18 students, who do not experience any enhancement or they still have the same attitude. The result of statistical test shows that t-count is -5.104, and p.value is 0.000 or less than 0.05. According to the aforementioned information, it can be inferred that this game is capable of examining the attitude skills of the majority of Grade I students in the elementary school. This exploration is important in providing support for the students so they can understand the impression for improving their attitude as what has been taught from the game. It is due to the change of attitude cannot occur in a short time, or in other words, it takes long time even using the K13 curriculum assessment.

Knowledge Assessment

The knowledge test result was achieved from an actual test that was administered utilizing an oral technique. Direct quotes from the introduction, main discussion, and conclusion were used to conduct the assessment. The instruments used in this stage were the interview guideline according to the growth and development level of the Grade I students. The outcomes of the knowledge examination reveal that every student can achieve the same scores. The result of statistic test shows that t-count is -20,542, and p.value is 0.000 or less than 0.05. As a result, it can be said that the game can test students' knowledge as well as their bravery to speak in front of their peers and teachers. This exploration is important in providing supports for the students so they can understand the impression to improve themselves in terms of speaking in front of the teacher and other students as the game has taught. It is due to the change of bravery, students cannot occur in a short time, or in other words, it takes a long time, even in the K13 curriculum assessment.

Skills Assessment

According to the growth and development level of Grade I students, an observation guide instrument was used to assess the students' ability levels. The outcomes of the skills test demonstrate that all students are capable of achieving scores with a distribution similar to that in the graph above. The findings of the statistical test indicate that the p-value is 0.000 or less than 0.05 and the t-count is -20,719, respectively. Writers can draw the conclusion that this game allows children to explore their manipulative movement skills.

Based on research findings, it shows that, the learning model of the *Engklek* game with the TPSR approach has an effect on the basic manipulative movement abilities of elementary school students in the domains of attitude, knowledge, and skills. This is in line with the research results of [Yuwono et al. \(2020\)](#) which states that TPSR is able to stimulate students' character to become better. TPSR is proven to result in an increase in the percentage of better characters, although not fixed, but it has an effect on changing students' attitudes.

The results of research from [Rusdiyanto et al. \(2018\)](#) show that TPSR has a knowledge or cognitive impact because in learning *Pencak Silat* cognitive skills are needed, especially in solving problems as one of the elements in *Pencak Silat* and in learning tactics which can influence students' cognitive aspects. *Pencak Silat* requires students to perform many movement skills. There are several movement skills that must be learned and require thinking skills. This shows that there is a relationship between cognitive skills in

learning *Pencak Silat*. When facing problems in learning *Pencak Silat*, it will only be solved by following a cognitive process.

The research results from Umegaki et al. (2017) show the TPSR model promotes the acquisition of social skills that students can use outside of physical education classes. The TPSR model appears to promote the acquisition of social skills by encouraging students to imagine scenes in their daily lives that are similar to scenarios in physical education classes, in which they are encouraged to behave responsibly. The results of this study also support Adi et al. (2018) who stated that there are seven aspects of an effective teaching and learning process, namely teacher-student interaction centered on students, democratic situations, variations in teaching models, useful and acceptable materials, conducive environment and good facilitation. Through this theory, it is known that the ideal teaching and learning process shows the relationship between teaching and developing.

Students' responses that researchers can capture when conducting this research are students feeling happy with the games that are applied. The happy atmosphere when playing together with peers, attracts participants to carry out the movements specified in the game. Participants are not immediately aware of the exercise of the movements. When each has a role to play, participants will voluntarily follow the rules, and respect the roles of other participants. Children who have the opportunity to take part in a game, obviously, feel free from all pressures, so that the feeling of joy and happiness they have. In this atmosphere, children usually easily accept the new things they want. So this good opportunity must be filled with a game that is quite directional and contains noble educational elements. This educational element will certainly easily enter the child's personality (Khadijah & Armanila, 2017).

The combination of the *Engklek* game, tossing, catching, and bouncing the ball is the end result of the Physical Education learning development model material for the manipulative movement patterns for Grade I. Movement with tools outside of the individual was a component of the manipulative movement game. The positive environment created by playing with others has drawn participants to carry out the game's prescribed movements. They are unaware that the movements are being directly exercised. Each student will voluntarily follow the rules and respect the roles of other participants when they are required to play their part (Iswinarti, 2018).

Through basic movement exercises and games that involve physical activity, students' fundamental movement learning primarily aims to build their movement abilities, stability of movement skills, and manipulative skills. Since humans must move in order to survive, movement is a prerequisite for human achievement. Basic movement, which includes locomotor, non-locomotor, and manipulative movements, is one of the topics covered in Physical Education classes in lower-grade elementary schools. The expert claims that: basic movement education is taught naturally, which implies that the development of typical human movement corresponds to one's chronological age and the environment in which one grows up till one develops in accordance with nature (Hendra & Putra, 2019). The fundamental component of all human movement is movement. The three types of basic human movement are locomotor, non-locomotor, and manipulative. The definition of locomotor movement is simply defined as movement that involves moving objects. Non-locomotor movement is defined as movement that does not involve any displacement or pivots just on the body. Manipulative movement involves manipulated things. Examples of manipulative movement include throwing and catching, stretching and twisting for non-locomotors, and walking and sprinting for locomotors (Grillner & El Manira, 2019).

Children must move around as much as they can because by doing so, they will be able to realize all of their potential. Children must investigate their world if they are to develop their cognitive capacities to their full potential, according to Piaget Jean and Clark in Syahril Bakhtiar. Early on, children spend a lot of time moving around and engaging with their surroundings, such as crawling, walking, jumping, and moving slowly (Bakhtiar, 2015). Children's basic movement abilities are developing throughout this crucial time, and basic movement skills are thought of as the fundamental coordination patterns that underlie movement skills. A fundamental skill for more sophisticated movement patterns is basic movement. It is a skill that uses the brain with the strength of the arms and legs to carry out a physical activity or action, like throwing a

ball, jumping, or keeping one's balance. It is often referred to as the basic motor. Only the little hand muscles are used in fine motor activities like writing (O'Brien et al., 2023).

As a result, it is apparent that children's basic motions need to be developed as optimally as possible because having a wide range of motion abilities will enable them to function and manage their life. Additionally, the 2013 Curriculum very clearly states that basic locomotor, non-locomotor, and manipulative movements should be developed in order to develop children's basic movements in basic competencies. Therefore, teachers must be able to incorporate these movements into the learning process in the classroom in order to meet the curriculum objectives.

CONCLUSION

This study provides a notable contribution to the field by demonstrating the effectiveness of a Physical Education learning model that utilises the TPSR approach in building character and improving basic manipulative movements among elementary school students. The implementation of the Engklek game within the TPSR framework has shown positive effects on the domains of attitude, knowledge, and skills, resulting in enhanced character development and motor abilities for the students. This research highlights the significance of incorporating the TPSR approach and game-based activities in physical education classes to promote character development and improve the fundamental motor skills of elementary school students.

Nevertheless, it is important to acknowledge the limitations of this study. The implementation of the learning model requires suitable fields and facilities, which may pose challenges in certain educational settings. Furthermore, due to time constraints, the character development achieved through the Engklek game has not yet reached the stage of habituation in students' everyday lives. Future research should address these limitations by considering the availability of resources and expanding the timeframe for implementation. Additionally, there is a need for further exploration and development of similar learning models in physical education, incorporating various materials and interactive learning media that align with the characteristics and preferences of elementary school students.

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CONFLICT OF INTEREST

There are no disclosed conflicts of interest for the authors.

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