



Needs Analysis of Instructional based on Brain Jogging Model for Increase Gross Motor Abilities in Elementary School

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Abstract. Brain jogging is a type of training that helps with both the urge to move and learning activities such as remembering, experiencing, perceiving, and gross motor abilities. This research aims to develop a brain jogging-based learning model to teach games and sports in Physical Education (PE) in Primary Schools. Analysis of needs is focused on four aspects, namely; 1) syntax; 2) social system; 3) reaction principle; and 4) support system. Method this research will be analysed with mix method analysis. The sample in this research is 41 PE elementary teacher respondents in five districts in DIY province who were taken with a purpose sampling system. The quantitative research instrument uses a Likert scale of 1-5. The instrument is compiled based on theoretical studies and has been adapted to measure each indicator, and has been consulted with experts. The qualitative data collected with forum grup discussion. The data analysis technique is performed by using descriptive statistical tests with the help of IBM SPSS 26 software. The results of the research show that the level of need in the aspect of syntax (opening, content, and closing) is relatively high 72.02%, the social system aspect (teachers and students) is relatively high 70,08%, the principle of reaction (reaction of teachers and students) is relatively high 69,25%. The average result of the analysis of the level of need in the support system (facilities and infrastructure) sub-variable is 68.48%. It's concluded that the quality of children's gross motor skills will not develop properly if the teacher does not provide more movement experience.

Keywords: Learning models, Needs analysis, Brain jogging, Gross motor abilities

1 Introduction

Education sector developments continue to change year after year in response to the problems of developing skilled and competitive human resources in the global era. Schools are at the forefront of solving education and teaching issues, with teachers serving as the primary actors in carrying out these tasks [1]. Learning implementation is supported by a curriculum system that is carried out on time; choosing the right curriculum will make the education system good [2]. As a result, a teacher must con

stantly improve his skill in implementing various types of curriculum, learning models, and learning methods relevant to the subject [3]. Physical education is an educational process that uses planned physical activity to develop and improve individuals biologically, neuromuscularly, perceptually, cognitively, and emotionally within the framework of the national education system [4]. Physical Education, Sport, and Health (P.E) is one of the subjects taught in elementary school, and the characteristic of the material is movement [5]. P.E learning activities in schools are accommodated by a sports teacher, a profession whose mission is to teach students movement material; they are standardized and have teacher competency criteria in learning [6]. The role of the P.E teacher as a learning resource and learning facilitator must, of course, be able to run an applicable learning system and design a learning model that is in accordance with the goals of Physical Education in developing the three affective, psychomotor, and cognitive domains carried out to change, educate, and guide students towards maturity [7]. Through sports education learning at school, it becomes an opportunity for a physical education teacher to improve students' motor skills.

So far gross motor skills have not been noticed by a sports teacher, even though gross motor development determines the development of a fine motor skills [8]. In other words, a fine motor skills will not develop properly if their gross motor development is disrupted. Children's gross motor skills develop depending on the child's movement experience, the quality of children's gross motor skills will not develop properly if the teacher does not provide more movement experience during sports learning at school [9]. Brain Jogging learning model has four characteristics movement coordination, visual system, and cognitive ability if all three are included in the principles of an activity, the activity is certain to be rich in complex and simultaneous movements. Complex and simultaneous movements are able to help students in developing movement experiences.

An issue for a P.E teacher will be how to implement a changing curriculum. not to mention the teaching methods that are applied to students using the learning paradigm. KTSP and the 2008 curriculum aren't the only curricula used in Indonesia; there's also the 2013 curriculum, which is incredibly engaging, motivating, and enjoyable and fosters kids' independence and creativity in accordance with their interests, abilities, and physical development [10]. The 2013 curriculum can be categorized as an integrated thematic for primary schools because it employs a scientific method [11].

Giving students freedom of activity does not mean students are left without planning, monitoring and evaluation processes [12]. As a result, instructors play a vital role in both curriculum development and implementation. In order to integrate curriculum content with the needs of students in the classroom, teacher involvement in the curriculum development process is essential. As an educator, teachers can comprehend student psychology and learn about various learning models, methodologies, and strategies [13].

Learning innovations are required to make learning more enjoyable. One of these is the Brain Jogging-based learning approach, which involves students' stimulus and response. Brain Jogging is a type of training that helps with both the urge to move and learning activities such as remembering, experiencing, perceiving, and so on. According to [14] combining physical activity, mental training, and visualization training has huge benefits for the brain, which will obviously have a direct effect on cogni-

tive function. There are numerous advantages to brain jogging, which is unfortunately not widely used in the world of sports coaching, as evidenced by research on Increasing Athlete Motivation Through Brain Jogging Training in Team and Individual Sports Branches by [15] [16] that brain jogging can increase learning motivation during a pandemic, and the most recent research is to increase athlete motivation in the field tennis branch research from [17]. Based on the three research results, it was concluded that brain jogging can increase the learning motivation of athletes in their respective sports, which means the authors believe that learning motivation in the world of Education in P.E learning can be achieved. Because not all students enjoy P.E learning, this is aligned with study [18] that reveals a lack of interest in P.E learning among students who participate, particularly in lower classes.

According to research results from [19], student learning motivation has a favorable link with game-based learning models, because other learning models do not have numerous playing techniques. Thus, the authors provide a model that plays a significant role because the amount of tools and infrastructure required are bigger than those required by other learning models, including such research from [20] that the contents of brain jogging activities include movement changes, movement patterns, and movement flow to the three movement activities. It requires extensive tool adjustment. As a result, the teacher-created game modifications will encourage students to use these tools.

The process of "brain jogging" requires a lot of cognitive effort [21]. When students watch the movements of their peers or teachers, they begin to want to imitate them. This is known as cognitive function in motion learning [22]. Given that about 85 of the senses used by humans are acquired through vision, Lutz (2008: 69). According to Livingstone (2009) in [16] eye-jogging brain activities will be trained optimally, including tracking the movement of items employed, tracking the position of the feet and hands, tracking distance and speed determination. According to study from [23] the stages of motor learning begin with the cognitive phase. The cognitive phase referred to in learning has not been utilized, the cognitive phase referred to is not through the teacher's knowledge in teaching information, but it is referred to how students can learn motion perception of motion through their cognitive understanding to produce effective and efficient movements according to the initial developmental phase morotics in the sensorimotor stage

The study's conclusion [24] is that if the brain-based learning model is not practiced, it can result in a child's inability to process visual perception abilities. Processing visual perception weaknesses were found to be connected to students' reading literacy. A visual perception case study conducted by [25] found that literacy in elementary school children's reading comprehension is very low. More than 75% of children have a weakness in reading, which is due to their weakness in processing visual information. Data visualization According to research findings, visual perception has a significant impact on daily living, particularly in terms of understanding reading literacy [26].

The Brain Jogging model will assist develop the capacity and performance of the human brain since the learning model which characteristics include students actively (student center) undoubtedly involves many cognitive aspects [24]. As a result, studying the Brain Jogging learning model will equip students in processing information on learning material in all subjects at school, developing learning models that are

in accordance with the curriculum and characteristics of students, so that their needs must be analyzed before development is carried out. Therefore, researchers are attempting to create a learning model based on Brain Jogging as a new innovation in the world of education, where students' characteristics are always evolving and changing. As a result, the purpose of this study was to determine the level of need for a brain jogging-based learning model to increase Gross Motor Abilities in elementary schools.

2 Method

The purpose of this study is to determine the extent of need for brain jogging-based learning models to teach games and sports in elementary schools. The research focuses on four sub-variables: 1) syntax; 2) social system; 3) reaction principle; and 4) support system. This research is a combination/comparison of quantitative and qualitative studies simultaneously/together, but the weight of the method is different, the primary method is used to obtain the main data and the secondary method is used to obtain data to support the primary method data [27]. Purposive sampling was used to collect the samples for this study (consideration sample). Purpose sampling is a sampling approach that takes certain variables into consideration (Sugiyono, 2019). The sample in this study included of 41 elementary school teacher respondents from five districts in the Yogyakarta province, indicating the level of need for a brain jogging-based learning strategy to teach games and sports in elementary schools (Table 1).

Table 1. Distribution of Respondents in Each District in Yogyakarta

No	District	Number of Respondents
1	Sleman	11
2	Bantul	8
3	Kulon Progo	9
4	Gunung kidul	8
5	Kota Madya	5
Total	41	

2.1 Procedure

The research was conducted in April-July 2022. The quantitative research instrument used a Likert scale of 1 to 5, with the construction of answer choices 1 = Strongly Disagree, 2 = Disagree, 3 = Doubtful, 4 = Agree and 5 = Strongly Agree. The instruments were developed based on theoretical studies, were adjusted to measure each indicator, and were reviewed by experts. The points for each answer item acquired are then totaled and converted into a score.

Then from the results obtained, the score is calculated using percentages to determine the level of need for a brain jogging-based learning model to teach games and sports to Physical Education in Elementary Schools. The instrument has been tested for validity (Product Moment Pearson Correlation P.E) and reliability (Alpha Cronbach's SPSS) before being used in research. The results of the validity test of the sub-variables syntax, social systems, reaction principles, and support systems on all question items have an r-count value (total Pearson correlation score) greater than the r-table value of 0.301 at the significance level 5%, indicating that all question items are valid.

The reliability test findings for the syntax sub-variable, based on Cronbach's alpha test, have a value of 0.806, the social system sub-variable have a value of 0.789, the principle of reaction sub-variable has a value of 0.754, and the support system sub-variable has a value of 0.874. Cronbach's alpha value (0.806; 0.789; 0.754; 0.874) > 0.60, it can be concluded that all question items are considered reliable or consistent.

2.2 Data Collection

Data collection in the quantitative research was carried out by distributing questionnaires to P.E elementary school teachers who were sampled in five districts in the Province of DIY. The data acquired from the questionnaire item scores is then used to determine the criteria for each sub-variable using the Likert scale criteria strongly agree, agree, doubt, disagree, and strongly disagree. The qualitative data collection technique used suggestions and input from expert judgment and the FGD Forum Group Discussion which was carried out involving several experts including representatives from Curriculum experts, Learning Media, Teachers, Principals, Students, and Parents of students. The conclusions from the FGD results will later be considered to strengthen the quantitative data.

2.3 Data Analysis

Quantitative data analysis techniques were carried out using descriptive statistical tests with the help of SPSS software. Descriptive statistics are statistics that are used to analyze data by describing the data that has been collected as it is without making general conclusions [28]. The Qualitative Analysis technique used is in the form of data reduction, data presentation, and drawing conclusions/verifying the conclusions from expert advice and input and FGDs using interactive models [28].

3 Result

Analysis Syntax, Social Systems, Reaction Principles, and Support Systems Sub-Variables.

In this study, four components were developed to determine the level of needs for a brain jogging-based learning model to teach games and sports in elementary schools

in five key areas: 1) syntax; 2) social system; 3) reaction principle; and 4) support system.

This study, as indicated in (Table 3), presents the results of the respondent's answer score (N = 41) on the syntax sub-variable: Sports activity can improve the brain's ability to store memory by up to 76.4%, P.E learning activities are useful for developing brain activity to reach 80%, the importance of visualization skills (seeing where the hands are positioned and where the feet are) in learning motion learning reaches 73.6%, and the effective drilling method for teaching physical education compared to other methods reaches 60.8%. P.E learning is used as an activity to improve the activity of the human brain reaching 69.6%, whether or not the intelligence element of an individual required in P.E learning reaching 71.2%, The coordination aspect is the most significant in increasing locomotor, non-locomotor, and manipulative basic movements, reaching 74.6%, and movement coordination is one of the motion learning activities in primary class P.E, reaching 70.6%. The average amount of necessity for sub-variable syntax is 72.02%. This descriptive statistic indicates that the level of needs for syntax (opening, content, and closing) is in the high range.

Table 3. Syntax (opening, content, and closing)

X1	FREKUENSI & VALID PERCENT %										MEAN	%
	STS		TS		R		S		SS			
	F	%	F	%	F	%	F	%	F	%		
X1.1	2	4.9	0	0	20	48.8	0	0	19	46.3	3.82	76,4
X1.2	0	0	1	2.4	19	46.3	0	0	21	51.2	4.00	80
X1.3	0	0	0	0	27	65.9	0	0	14	34.1	3.68	73,6
X1.4	0	0	4	9.8	34	82.9	0	0	3	7.3	3.04	60,8
X1.5	0	0	0	0	30	73.2	0	0	11	26.8	3.53	70,6
X1.6	0	0	0	0	31	75.6	0	0	10	24.4	3.48	69,6
X1.7	0	0	1	2.4	28	8.3	0	0	12	29.3	3.56	71,2
X1.8	0	0	0	0	26	63.4	0	0	15	36.6	3.73	74,6
X1.9	0	0	0	0	30	73.2	0	0	11	26.8	3.53	70,6
PRESENTASE %											72.02	

3.1. Level of Need for Social System Sub Variables

As shown (Table 4), this study shows the results of the respondent's answer score (N = 41) on the social system sub-variable: Whether or not the ability to think creatively required in P.E learning reach 78.4%, a teacher should prepare learning to develop cognitive aspects achieve 73.6%, a teacher develops the cognitive aspects needed to develop the brain reaches 69.6%, a teacher trains students' brain abilities to practice information processing for other subjects reaches 66.8%, the teacher provides direct instruction (direct teaching style) that must be followed by students reaches 68.6%, and Pitte Ladder media is easy to obtain as a learning medium reaching 62.8%. As for the average level of need in the social system sub-variable, reaches 70.08%. This descriptive statistic shows that the level of need in the social system (teachers and students) is in the high category.

Table 4. Social system (Teacher and Students)

X2	FREKUENSI & VALID PERCENT %										MEAN	%
	STS		TS		R		S		SS			
	F	%	F	%	F	%	F	%	F	%		
X2.1	0	0	0	0	22	5.37	0	0	19	4.63	3.92	78.4
X2.2	0	0	0	0	27	65.9	0	0	14	34.1	3.68	73.6
X2.3	0	0	0	0	31	75.6	0	0	10	24.4	3.48	69.6
X2.4	0	0	0	0	34	82.9	0	0	7	17.1	3.34	66.8
X2.5	0	0	0	0	32	78.0	0	0	9	22.0	3.43	68.6
X2.6	0	0	2	4.9	35	85.4	0	0	4	9.8	3.14	62.8
PRESENTASE %											70.08	

3.2. Level of Need for Principle of Reaction Sub Variables.

As shown (Table 5) this study shows the results of the respondent's answer score (N = 41) on the principle of reaction sub-variable: A teacher trains students' brain abilities to train information processing for other subjects reaches 66.8%, the teacher as a determinants of activity in P.E learning reached 65.2%, the self-confidence needed in the P.E learning process reached 79.4%, and the multitasking ability needed by students in learning P.E reached 65.2%. In the social system sub-variable, the average level of need is 69.25%. This descriptive statistic indicates that the level of requirement for the reaction principle (teacher and student reactions) is in the high category.

Table 5. Reaction Principle (Teacher and Student Reaction)

X3	FREKUENSI & VALID PERCENT %										MEAN	%
	STS		TS		R		S		SS			
	F	%	F	%	F	%	F	%	F	%		
X3.1	0	0	0	0	34	82.9	0	0	7	17.1	3.34	66,8
X3.2	0	0	1	2.4	34	82.9	0	0	6	14.6	3.26	65,2
X3.3	0	0	0	0	21	51.2	0	0	20	48.8	3.97	79,4
X3.4	0	0	1	2.4	34	82.9	0	0	6	14.6	3.26	65,2
PRESENTASE %											69,25	

3.3. Level of Need for Support System Sub Variables.

As shown (Table 6), this study shows the results of the respondent's answer score (N = 41) on the supporting system sub-variables: Pitta Ladder Media Application is easy to use as an alternative to modified games reaching 62.8%, Tennis balls are easy to get as a learning medium it reaches 67.8%, the tennis ball media application is easy to use as an alternative for modified games it reaches 74%, holahoop is easy to get as a learning medium it reaches 68.2%, and the hollahop media application is used as an alternative for modified games it reaches 69 .2 %. As for the average level of need for the support system sub-variable,

reaches 68.48%. This descriptive statistic shows that the level of need for the support system (facilities and infrastructure) is in the high category

Table 6. Support System (Facilities and Infrastructure)

X4	FREKUENSI & VALID PERCENT %										MEAN	%
	STS		TS		R		S		SS			
	F	%	F	%	F	%	F	%	F	%		
X4.1	1	2.4	2	4.9	33	80.5	0	0	5	12.2	3.14	62,8
X4.2	0	0	2	4.9	30	73.2	0	0	9	22.0	3.39	67,8
X4.3	0	0	1	2.4	25	61.0	0	0	15	36.6	3.70	74
X4.4	0	0	1	2.4	31	75.6	0	0	9	22.0	3.41	68,2
X4.5	0	0	1	2.4	30	73.2	0	0	10	24.4	3.46	69,2
PRESENTASE %											68,48	

4. Discussions

Gross motor abilities Carrying out frequent movement activities and practicing continuously does not guarantee good motoric development for children, as evidenced by research from [29] that the activity of elementary school students who engage in full-day learning still has low motor skills. instrument. Gross motor abilities are closely related to the process of muscle augmentation and the ability for movement activities that involve the large muscles of the body's arms and legs. Basic Movement abilities classifications namely locomotor, non-locomotor and manipulative are abilities movements that underlie more complex physical activities as seen in many sports activities [30]. Motor development occurs sequentially, meaning that movement development occurs in sequence. The maturity Starting from gross motor first then moving on to fine motor [29]. Children's gross motor development will be good if the environment in which they grow is supportive because they can move freely. If the school environment does not have a large yard Outdoor activities can be the best choice to provide free space for children to run, jump and move their whole body in unlimited ways because it can stimulate muscle development through movement.

Brain jogging is an activity whose characteristics aim to improve the ability of the human brain. The ability of the human brain will increase when stimulated by coordinating movements, the visual system, and cognitive abilities. Children's gross motor skills need to be developed because gross motor skills are the key to the early development of fine motor skills in children. To be clearer, below in table 7 is a brain jogging brain-based learning model.

Table 7. The Brain Jogging learning model

Brain Jogging Model	categories	Name of Game
	Movement flow	Bouncing; duration 15'

System coordina- tion	Movement patern	Holahoop jump; duration 20'
	Movement change	Knowing your body; duration 15'
visual System	<i>Tracking eye movemen</i>	Look at the patern ; duration 15'
	<i>Field of view</i>	Move and spin ; duration 15'
	<i>Movement Flow</i> (Aliran Gerak)	Brings a ball ; duration 10'
	<i>Focus</i>	Brings a marbels ; duration 10'
Cognitive skills	<i>Working Memory</i>	Catch a ball ; duration 15'
	<i>Preception</i>	Throwing and cachting ; duration 10'
	<i>Recalling Information</i>	Looks behind ; duration 10'

Movement Exercises for flexible coordination such as Movement Changes change rapidly without stopping, Movement Patterns combine partial movements into one flowing movement, and Movement Flow integrates single movements into continuous movements. (Zulaini, 2016) argues that movements that contain elements of high coordination will hone the brain's ability to remember because it will connect the ability of the right and left brain to work simultaneously. Expert 2 provides suggestions for the BJ Learning model to provide classification of movements such as visual system training including Tracking eye movements, smooth eye movements in the horizontal, vertical and Field of view directions, increasing the field of view and increasing spatial perception, and assessing distance and speed accurately. Visual training abilities are in fact related to early childhood reading skills as in research from (Rakimahwati, 2018) that early childhood reading ability is an activity that involves visual elements as well as the ability to remember symbols in the form of letters in a series of words that contain meaning. Expert 3 provides input "because the BJ learning model involves brain activity, it is better if the movement activity is more towards cognitive skills" cognitive abilities will increase automatically and will increase memory abilities. This is in accordance with the opinion (Sutrisno et al., 2019) that brisk walking can increase the value of short-term memory function in young adults. Expert 4 provided input and suggestions that "the activities should be more varied". Movements that are more varied will encourage students to move more with many varied movements. According to research from (Kurniawan et al., 2022) argues that with lots of movement material in a learning model, it will cause children to always be motivated to move in learning activities.

Essentially, the purpose of this study is to determine the level of need a learning approach brain jogging models for increase gross motor abilities in elementary schools. According Joyce and Weil's learning model, focuses on four components, including sub-variables: 1) syntax (opening, content, and closing); 2) social system (teachers and students); 3) reaction principle (reaction of teachers and students); and 4) support systems (facilities and infrastructure) [31]. According to the quantitative analysis results, the level of requirement for syntax sub variables (opening, content,

and closing) is in the high category. This is also supported by research [32], which found that learning should be designed to enhance students' cognitive abilities in addition to increasing psychomotor and affective skills. This should be promoted by the teacher's school in order to control the implementation of learning so that students gain more from learning P.E. According to the idea [33], some athletic activities can treat a variety of disorders because a moving body stimulates the nerves in the brain, allowing the intelligence process to continue.

Based on the quantitative analysis of the level of needs of the social system sub-variables (teachers and students) provided in the research results sub-section, the average value falls into the high category. The researcher's syntax, in which the brain jogging-based learning model employs an inductive learning technique. An inductive learning technique is a method that involves the processing of material or learning materials from the specific (traits, characteristics, or attributes) to the general, generalizations, or formulas. Inductive strategies can be used in teaching concepts, both concrete concepts and defined concepts Inductive learning can help teachers guide students in finishing learning material more easily (Mertasih, 2020), which can then improve movement pattern abilities. Skinner (1938), a psychologist, writes in [34] that behavior is a person's response or reaction to a stimulus (stimulus from outside). As a result, Skinner's theory is known as the S-O-R theory, or stimulus organism response. So that there is no incorrect learning objective while developing the forms of learning activities. This descriptive statistic depicts the level of need for social system sub-variables (teachers and students) in the high category. The social system in a brain jogging-based learning approach is designed to prepare students to think critically and creatively through brain training. An activity with a balance of motion requires a well-coordinated brain reaction, which can, of course, make a person think, creative, and intelligent [35].

According to the findings of the quantitative analysis of the level of need for the principle of reaction sub-variable (the reaction of teachers and students) described in the research results sub-section, the average value of the level of need for the principle of reaction based on quantitative descriptive statistics is in the high category. This descriptive statistic shows the level of need in the high category for the principle of reaction sub-variable (teacher and student reactions). Physical activity and cognitive training will increase the levels of the neurotransmitters serotonin and dopamine, which will help students feel happy. So that students are engaged and excited about learning at school. The body's production of melatonin (a nighttime hormone) will be replaced by the production of serotonin (a hormone only produced during the day). The serotonin hormone influences psychological balance and regulates body temperature, causing humans to be pleasant and peaceful [36]. The chemicals serotonin and dopamine act as neurotransmitters (signal carriers) that are produced when brain cells are stimulated. As a result, the hormone serotonin is crucial for the human body since it aids in the management of a happy and positive mood, as well as the prevention of depression. According to one study, an imbalance in serotonin levels affects mood disorders such as stress and depression [37]. Other people believe that this hormone will stimulate people to work hard to reach their goals and will make them more alert and focused on the task at hand [38].

Physical exercise in the form of brain jogging training is one technique to boost these hormones. The obtained results can be explained by the fact that the "Brain jogging" exercises based on stimulation of various brain systems (optical-motor, kinesthetic, auditory, visual) increased the flow of sensory information passing through the nervous system, stimulate the work of superior brain functions (speech, gnosis praxis), thereby enhancing the neuroplasticity properties that affect the level recovery of short-term memory, performance of associations [39]. This is also supported by research conducted [40] that the abilities of students and teachers in learning must show a positive attitude so that positive feedback appears. If student feedback is negative, then it is the teacher's duty and responsibility to change it during the reflection or closing phase of learning. Emphasis on feedback in learning will simultaneously instill positive values for students [41]. These positive values are a good provision for future student life, you could say it is the real hidden curriculum. 21st century learning skills according to [42] shape character skills, character is formed in the P.E learning process, because P.E has positive values in it, including: leadership, sportsmanship, mutual respect, honesty, and responsibility.

Based on the results of the quantitative analysis of the level of need for the support system sub-variable (facilities and infrastructure) which has been described in the research results sub-section, it shows that the average value of the level of need for support systems is in the high category. This training is very safe for every age group from 8 to 80 years old to do this exercise' Lutz (2008) in [43]. Therefore, the brain jogging-based learning model is suitable for use with elementary students. The ability of basic movement patterns is included in the basic competencies of elementary school students, so that to increase it requires physical activity and coordination through the brain jogging learning model. The ability to own basic movement patterns is included in the 2013 elementary school/MI curriculum for upper grades (4,5, and 6), namely in Core Competencies and Basic Competencies" 4.1 Understanding factual knowledge by observing and asking questions based on curiosity about themselves, God's creatures and their activities, and objects they encounter at home, at school and at playgrounds. Basic Competence 4.2 Practice variations and combinations of basic locomotor, non-locomotor patterns -Locomotor, and manipulative based on the concept of motion in a variety of traditional small ball and big ball games and/or sports with good control. This is also reinforced by study [44] that shows that providing a good learning environment allows students to get more familiarized with their surroundings, which improves students' focus and motivation to learn. This hypothesis is consistent with the stimulus and response theory of behaviorism, which states that the positive stimulus provided by the teacher during the learning process will elicit a reaction from students [45]. Even if the brain capacity is increased, it will get a lot of benefits. Research from [46] that physical activity carried out regularly will improve blood circulation to the brain which will result in an increase in brain intelligence due to a large supply of oxygen. This is reinforced by the results of research from [47] that providing a physical activity stimulus that involves coordination in children can improve brain function and relax the body so that enthusiasm in learning can increase learning achievement.

5. Conclusions

According to the findings of the qualitative analysis, from the point of view of students, teachers, school principals, experts in the field of curriculum, and in the field of learning media, brain jogging learning models that involve brain abilities need to be carried out because their benefits can also be enjoyed beyond Gross motor abilities. As in sharpening cognitive abilities for other scientific fields. Because so far the PJOK learning model that has been running has not emphasized cognitive abilities, especially the brain.

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