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Silent Remember Model in Adaptive Physical Education Learning for Deaf Students in SLB

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Abstract

Adaptive physical education is physical education that is modified or adapted to make it easier for students with special needs to participate actively in adaptive physical education learning or modifications in adaptive physical education learning are aimed at making it easier for students to have equal opportunities to actively participate safely in enjoyable activities in learning. The aim of this research is to determine the results of developing the silent remember model in adaptive physical education learning for deaf students. The small group sample in this research consisted of 10 people and also involved 3 teachers as respondents, while the large group sample consisted of 20 people. The model development stages carried out are the model analysis, design, development, implementation and evaluation (ADDIE) stages. The instrument used in this research was a questionnaire. Expert validation test results using Content Validity Index (CVI) and Content Validity Ratio (CVR) in Silent Remember Learning with an average CVR value of 0.05. It can be interpreted that the silent remember model has high validity, which means that the silent remember model is safe to use according to the students' conditions and is good as a learning resource.

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INTRODUCTION

Humans are creatures that are always moving and movement is one of the characteristics of life. Effective and efficient movement will make it easier for people to carry out and complete their daily tasks. Each person's motor skills are different because they are influenced by several factors, including; interest or desire, age and experience. The movement learning process, which is usually known as motor learning, consists of several stages, namely the cognitive stage, the associative stage and the autonomous stage. Basic movement skills that are displayed well in childhood will be a provision for them in the future (Kesumawati1 & Damanik2, 2019) . Basic gross motor movements in children stimulate children's ability to do activities by using their large muscles, which consist of basic locomotor, non-locomotor and manipulative movements. Basic movement skills for deaf children need to be taught and trained continuously but in ways and models that are adapted to the characteristics of deaf children (Lumintuarso, 2013) . Movement is a basic element and essence of human life, without movement humans are less than perfect and can cause abnormalities in the body and organs, therefore movement becomes a very important need to fulfill the needs and survival of a child, including deaf children (Kesumawati et al ., 2018) .

Physical education is one part of the curriculum taught in schools at every level of education in Indonesia. Physical education is a learning process that refers to physical activity in order to improve students' skills in affective, psychomotor, social and cognitive aspects (Kurniawan, AW, & Tangkudung, 2017) . Adaptive Physical Education is a physical education learning process that is adapted and modified so that it is easily accepted by ABK. Adaptive physical education is physical education specifically for ABK with the aim of increasing self-confidence, developing cognitive abilities, and increasing the spirit of tolerance (Pangesti & Sudarsini, 2015) .

Problems in the adaptive physical education learning process include the lack of competent physical education teachers to teach adaptive physical education, the lack of understanding by parents about their children getting an education, the lack of training for teachers regarding adaptive physical education learning, and the lack of adaptive physical education facilities and infrastructure (Vai & Lorenza , 2019) . Other obstacles experienced by teachers include difficulty implementing predetermined learning methods (Nopiyanto & Pujianto, 2022) . With the presence of adaptive physical education in education at Special Schools (SLB), students are able to acquire movement skills, physical fitness, personal health, and the ability to socialize. One type of ABK that is the focus of this research is the deaf or commonly referred to as children who have limited hearing (Solihin, 2016) . Deafness is a condition of hearing loss, deafness, hard of hearing and hearing loss are various terms used for deafness as a condition of the inability to hear either partial or total impairment (Nirmaladevi, J., & Raja, 2018) .

1. The Nature of Development

Research and development is research based on a development model. New products and processes are designed from research results, which are then systematically tested, evaluated and further developed in the field. Products to be produced are expected to meet performance, quality, standards and

qualification criteria (Endrawan et al ., 2023) .

Development is a process of designing learning logically and systematically in order to determine everything that will be implemented in the learning activity process by paying attention to the potential and competence of students (Adelia et al ., 2022) .

2. The Essence of Adaptive Physical Education

Physical education in special schools is also called adaptive physical education or physical education that has been adapted to the student's condition. Adaptive physical education is a service delivery system that is comprehensive and designed to identify, find and solve problems in the psychomotor domain (Hidayat et al., 2024) .

Another opinion was expressed by Ragil (2016) that the implementation of adaptive physical education can be said to be good if it can create educational interactions including adjustments to materials, methods, learning media, as well as the facilities and infrastructure used.

3. The Nature of Learning

Learning is the main activity in education. Learning activities are a series of learning processes. Learning is an individual interaction that involves cognitive, affective and psychomotor aspects. Learning is a process of growth because learning involves knowledge as a component of influence to obtain value from an object, experience and social interactions that occur. When learning activities are implemented as an integrated system with systematic planning, the meaning of the word "learning" changes to "learning" (Yohana Febriana Tabun, 2022) .

4. The Nature of Motion

Basic movements are movements whose development is in line with a person's growth. Basic movement skills are movement patterns that are the basis for more complex dexterity. Three basic movements inherent in individuals are, 1) locomotor, (2) non-locomotor movements, (3) manipulative. This movement is a form of motor movement that students must master through physical education (Pangkey & Mahfud, 2020) .

There are three basic types of movement abilities locomotor, basic movements non-motor, and basic manipulative movements:

a. Basic Locomotor Movements

Basic locomotor movements are one of the domains of fundamental basic movements. Locomotor movements are the movement of moving the body from one place to another. There are various types of locomotor movements, namely: running, jumping, skipping, leaping, hopscotch, galloping, sliding, skipping, rolling and climbing (Rejeki et al ., 2021) .

b. Basic Non-Locomotor Movements

Non-locomotor movement is carrying out movements without moving from the original place (Anwar et al ., 2020) . Non-locomotor abilities are defined as the behavior of moving body parts around their axis, where the actor remains in place and does not move. Non-locomotor abilities consist of: bending and stretching, pushing and pulling, lifting and lowering, folding and twisting, shaking, coiling, bouncing, etc. (Arvian & Qoriah, 2020) .

c. Basic Manipulative Movements

Manipulative movement is a person's ability to use body parts to use objects or tools to support the success of

their movement skills, such as attacking, dribbling, kicking, throwing (Chen et al ., 2021) .

5. The Nature of Deafness

a. meaning of deafness

Deaf children are children whose hearing is impaired so that they cannot hear all sounds or cannot even hear at all. However, it is believed that there are no people who cannot hear at all. Even though the number is very small, there are still remnants of hearing that can still be optimized in deaf children (Setyawan et al ., 2018) .

b. characteristics of the deaf

The characteristics of deaf people do not have different physical characteristics. There is no visible disturbance in the body of the deaf, and they have no hearing loss. Due to their lack of hearing, deaf people have different characteristics in intelligence, speech, emotions, and social life. However, deaf people have much lower intelligence than normal children (Muslih Aris Handayani, 2018) .

The sample in this study was Deaf children aged between 11-14 years. This age is the school period at junior high school level. According to Daroni (2018) Children with hearing loss or deafness. Based on the results of researchers' observations at the three SLB B which serve deaf children. Researchers found several problems, namely: (1) students in SLB B were less active, tended to look lazy and got bored quickly when joint sports activities took place, (2) students experienced difficulty in moving due to motor obstacles caused by limitations coupled with a lack of movement experiences provided by the school and the environment closest to them, (3) students are not focused on following PJOK learning and tend to be busy with their own world.

Based on these problems, researchers are interested in developing the physical education learning model into a research entitled "Silent Remeber Model in Adaptive Physical Education Learning for Deaf Students in SLB".

Silent Remember model

The model developed in this research is the silent Remember model. "Silent Remember Model" is learning that is done by jumping over the ladder drill using two legs and then one leg, with each jump alternating left and right with one leg. Then proceed to the next post to guess the letter from the Fuzzel pieces available in that post. After the first student has finished, the next student continues until their turn is finished. Repetition is carried out according to the teacher's orders.

The benefits of this learning are to improve movement skills in deaf children, as well as providing motivation for students to increase concentration during the learning process.

The objectives to be achieved in this game are:

1. To improve students' movement abilities.
2. To improve students' memory/concentration abilities.
3. To increase leg muscle strength in students.

The equipment used in the Remember learning model are (1) Ladder drill, (2) Foot-shaped flashcards, (3) whistle and stopwatch and, (4) puzzle pieces for questions.

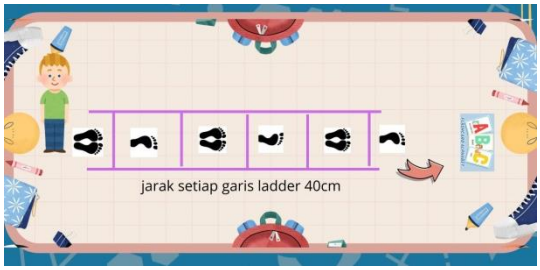

Figure 1. Silent Remember model

Implementation Procedure:

1. Students line up in rows.
2. The student in the front row makes the first movement.
3. Do the movement of jumping two feet then the next one foot, with each jump one foot alternating between left and right.
4. Then students continue to the next post, taking puzzle pieces to match them to other puzzle pieces.
5. After the first student finishes, the next student continues until their turn is finished.
6. Repetition is carried out according to the teacher's orders.

Assessment Rubric psychomotor, affective and cognitive

Table 1. Psychomotor Rubric Assessment

NO	Aspects to be Assessed	Yes	No
1.	The position of the students' feet when jumping with two feet is close together.		
2.	The position of the students' feet when doing the hopscotch, one foot is hanging and one foot is a support.		

Table 2. Affective Rubric Assessment

NO	Aspects to be Assessed	Yes	No
1.	Students show an enthusiastic and happy attitude when doing silent remember learning.		
2.	Students can show focus, calm and joy when doing silent remember learning.		

Table 3. Cognitive Rubric Assessment

NO	Aspects to be Assessed	Yes	No
1.	Students are able to explain the movements of jumping on two feet and standing on tiptoes.		
2.	Students can analyze effective and efficient two-legged jumping and tiptoe movements.		

METHOD

The research model used is the ADDIE (Analysis, Design, Development, Implementation, Evaluation) research and development model (Perbadi, 2016) .The subjects of this research were Deaf children, consisting of 10 small-scale trials and this small group trial also involved 3 teachers as respondents (1 physical education teacher and 2 class teachers) at SLB B Karya Ibu. and the research subjects in the large group test were 20 students at SLB B Negeri Pembina and SLB B YPAC. This research involved 3 experts including 1 expert in Adaptive Physical Education learning media, 1 expert in Athletics and 1 expert in Physical Education practitioners. The expert validation test results were analyzed using the Content Validity Index (CVI) and Content Validity Ratio (CVR) to see whether the silent remember model was worth testing in the field.

RESULTS

Table 5. CVI and CVR analysis
Note that the CVR score for each item ranges from 1 to -1

No	E 1	E 2	E 3	ne	N	N/ 2	Ne-(N/2)	CV R	C
1	4	4	4	3	4	2	1	0.5	V
2	4	4	4	3	4	2	1	0.5	V
3	4	3	3	1	4	2	-1	-0.5	V
4	3	3	4	1	4	2	-1	-0.5	V
5	3	4	3	1	4	2	-1	-0.5	V
6	4	4	4	3	4	2	1	0.5	V
7	4	3	4	2	4	2	0	0	V
8	4	4	3	2	4	2	0	0	V
9	3	4	4	2	4	2	0	0	V
10	4	4	4	3	4	2	1	0.5	V
Total	37	37	37			Total		0.5	
Average	3.7	3.7	3.7			Average		0.05	Valid
Average		3.7							

Based on the results of analysis using CVI and CVR, the silent remember model obtained an average of 0.5 or valid, which means the silent remember model has aspects that are safe to use, including; materials and design, not expensive and easy to make if calculated from the manufacturing costs.

DISCUSSION

Based on the results of the CVI and CVR analysis, the silent remember product was declared valid and met the product standards. From the results of research and expert validation, it was found that the Silent Remember learning model development product was suitable for use by Deaf students. Deaf children are children who experience hearing loss which includes all gradations, including mild, moderate or severe, which, even though they have been given hearing aids, still have an impact on auditory language and communication barriers so that in the learning process they require special education services (Nata et al. , 2023) . Deaf children basically need learning that is fun and not boring. Thus it can be seen that learning is closely related to teaching. Teaching is an integral part of learning and cannot be separated from one another. Where there is learning, there is also a teaching process (Hardiyono et al ., 2023) Apart from that, the Silent Remember learning model also has several advantages that can improve students' movement abilities, increase students' focus and comfort, and can be adjusted to the needs of students and PJOK teachers. The silent remember learning product has good value so it is easy to use and learn. Sports teachers must innovate to help develop the abilities and movement skills of deaf children. Apart from that, teachers must also involve parents to play an active role and be involved in implementing the models and media that have been developed by the teacher. This research shows that the development of the silent remember learning model really needs to be developed for learning in schools and is able to provide high quality and better comfort in the future.

CONCLUSION

Based on expert validation analysis. Silent memory learning can improve movement learning, physical literacy and cheerfulness in deaf students, so this learning is recommended for learning at school and in the family environment as a time filler.

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