



Growth And Development Of Movement In Early Childhood Movement Learning Model

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Abstract

This research aims to produce a basic movement learning model for children aged 2-4 years. The basic movement learning model is tailored to the aspects of growth and development as well as the characteristics of children at this age, packaged through physical activities focused on basic locomotor, non-locomotor, and manipulative movements. The method used in this study is development with seven stages, namely: (1) collecting research results and information, (2) analysis of the product to be developed, (3) developing the initial product, (4) expert validation, (5) small-scale trials and revisions, (6) large-scale trials and revisions, and (7) creating the final product. The subjects of this research are children aged 2-4 years. The result of this research is a basic movement learning model for children aged 2-4 years that includes seven movement activities, namely: (1) Crawling and Creeping, (2) Walking on a Rope, (3) Throwing Bean Bags into Hoops, (4) Bowling Games, (5) Parachute Games, (6) Climbing, and (7) Jumping and Hopping. The conclusion is that the learning model developed is very appropriate for the characteristics as well as the growth and development of children aged 2-4 years and is suitable for basic movement learning in Playgroups.

Keywords: *learning model, movement development*

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INTRODUCTION

Early childhood refers to children aged 0-6 years. Children in the early age stage represent a crucial period for providing stimuli to achieve optimal development. Young children have a very high learning ability due to their excessive curiosity, which occurs especially in early childhood. Brain development in early childhood experiences rapid growth, earning this period the title of the golden age. Research in the field of neurology has proven that 50% of a child's intelligence is formed in the first four years of life, after which, by the age of eight, the child's brain development reaches 80%, and by the age of 18, brain development reaches 100% (Selamet Suyanto, 2005:6)

Providing stimulation is a way to help children develop; children who are well-

stimulated can achieve developmental aspects well. Stimulus can be given through early childhood education, where learning is facilitated through play. The potential and intelligence possessed by children will develop through the provision of appropriate stimulation during early childhood. Thus, what is given from an early age will influence the child's development in later stages. Early childhood development is holistic, meaning it can develop optimally if the child is healthy, has adequate nutrition, and is educated properly. Children develop in various aspects including physical development, both gross and fine motor skills, cognitive aspects, and social and emotional aspects. Based on preliminary studies on the growth and development of children, it is known that the scope of basic movement learning consists of: locomotor basic movements, non-locomotor basic movements, and movements manipulative basis. It is also known that basic movement learning has not been implemented well because the basic movement learning process still concentrates solely on fine motor skills and is not yet suitable for the stages of children's physical growth and development.

The learning process for early childhood always utilizes physical activities. Through these physical activities, it is expected to help children to: (1) fulfill their desire to move, (2) transform values of self-concept, appreciation, and a healthy lifestyle, (3) explore and develop skills competencies, (4) develop physical fitness, (5) develop various open skills oriented towards the process of physical activities, (6) encourage harmonious, aligned, and balanced growth and development of the child. The principles of movement learning for early childhood, besides referring to the theme, must also consider several principles as follows: (1) implementation in a safe place to ensure the child's safety, (2) playing on soft grounds, such as grass, sand, and mats, (3) types of games that can stimulate and encourage the optimal use of both hemispheres of the brain, for example, through movement and songs, (4) types of games involve gross motor skills and fine motor skills, (5) types of games involve the extremities of upper and lower limbs, left and right, (6) types of games encompass all basic fundamental movement abilities, (7) types of games must contain elements of mammal, reptilian, and human movements. (8) minimum frequency of 3 times/week. (9) types of games must evoke feelings of joy and happiness, (10) repetition of 2-3 types of face-to-face games.

The learning model will explain the activities carried out by educators during the learning process. Each teacher or educator will have their reasons for determining a certain attitude in learning. Learning should be able to develop the overall potential of students; all potential will develop if students are free from fear and tension. Therefore, efforts are made to create a pleasant learning process (enjoyful learning), which can be done, for example, by

arranging an attractive classroom. The learning model is a description of the learning environment, including the behavior of teachers when using the model. The learning model has many uses, including: learning planning and curriculum for designing teaching materials, including multimedia programs. The learning model is defined as a systematic procedure for organizing learning experiences to achieve learning objectives; it can also be interpreted as an approach used learning activities.

Three-year-old children tend to be calm, relaxed, and cooperative. Three-year-olds usually want to follow adult instructions. Children at this age find joy in themselves and life in general and show an irresistible urge to know everything about the world around them. At the age of 3, children enjoy simple movements, such as hopping, jumping, and running back and forth, which they do simply for the joy of the activity. Children feel quite proud to show their abilities in running and jumping. At the age of 3, children demonstrate more mature fine motor skills, allowing them to look for and handle objects compared to when they were babies.

The motor development of a 4-year-old child is: 1) Walking on a straight line (draw a straight line with chalk on the floor); 2) Jumping on one foot; 3) Pedaling and steering wheeled toys confidently; turning at corners; 4) Drawing and coloring; 5) Stringing small wooden beads with thread.

Playgroup is one form of early childhood education through non-formal education that provides educational services for children aged 2-6 years, to assist in the growth and development of children, so that they are prepared to enter further education (priority for children aged two to four years). It is clear that in playgroups, children are stimulated in their development through enjoyable play activities that motivate them to keep trying, practicing, and growing. Playgroups are a place for children to play and learn before entering kindergarten.

Good motor development in early childhood can conclude that the child has good health; there are several contributions from good motor development, namely: (a) good health, good health partly depends on exercise which is important for the child's development and happiness. If motor coordination is poor, the child's performance is below standard, the child only gains little satisfaction from physical activities and lacks motivation to participate; (b) emotional catharsis, through intense exercise, a child can release pent-up energy and free the body from tension, anxiety, and despair; (c) independence, the more children engage in activities themselves, the greater their sense of happiness and self-confidence; (d) self-entertainment, motor control can bring pleasure in engaging in activities independently; (e) socialization, good motor development can influence a child's acceptance and provide opportunities to learn motor skills. Good motor development has the advantage of allowing

children to take on leadership roles; (f) self-concept, motor control creates a sense of physical safety and generates a sense of psychological security. Psychological security fundamentally affects behavior.

METHOD

This research uses a development approach. The subjects of this study are preschool children aged 2-4 years. The data collection instruments used are: (1) interview guidelines, and (2) learning observation guidelines. The data analysis techniques employed include quantitative descriptive analysis and qualitative descriptive analysis. In conducting development research, there are several steps, namely: 1) information gathering, 2) analysis of the developed product, 3) developing the initial product, 4) expert validation, 5) small-scale trials, 6) large-scale trials, 7) creation of the final product. The data used in this study consists of qualitative data and quantitative data

Commented [RV1]: The explanation of who the validator is (competence/qualification) and the model assessment criteria are not strong enough. It would be better to include the background of the experts.

RESULTS AND DISCUSSION

Result

To understand the learning problems that occur in the field, especially those related to basic movement activities of children in early childhood, as well as the solutions to these problems, a needs analysis is necessary. This activity is carried out by analyzing the actual learning processes taking place in the field, conducting learning observations, and performing literature studies. The trial data is the data generated from assessments by experts and practitioners related to the material regarding the produced product.

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The discussion is not deep enough in connecting the findings with previous theories or studies.

Based on the description above, the researcher decided to develop a basic movement learning model for children aged 2-4 years. The researcher hopes that the resulting product can: (1) Maximize the ability and learning potential of children's basic movements at their age, thereby stimulating their growth and development in a positive manner, (2) Serve as a reference for teachers in providing basic movement learning so that the learning activities become more varied and enjoyable, (3) Assist teachers in creating lesson plans focused on movement or motor skills, (4) Develop a basic movement learning model for children aged 2-4 years that aligns with the characteristics and stages of growth and development for children at that age.

Table 1. Categorization of Basic Movement Learning Models for Children Aged 2-4 Years

No	Score	Assessment Category
1	Sama atau lebih besar dari 40 (equal to or greater than 40)	Very suitable
2	30 to 39	according to
3	20 to 29	Quite appropriate
4	less than 20	Not suitable/very unsuitable

Note: (1) The lower boundary score for the very appropriate or very effective category is: $0.80 \times 50 = 40$, and the upper boundary is 50, (2) The lower boundary score for the appropriate or effective category is: $0.60 \times 50 = 30$, and the upper boundary score is 39, (3) The lower boundary score for the fairly appropriate or fairly effective category is: $0.40 \times 50 = 20$, and the upper boundary is 29, (4) The scores classified in the very inappropriate or very ineffective category are: less than 20.

Table 2. Recapitulation Data of the Draft Product Initial Score Scale from Experts and Teachers

No	Activities	A1	A2	G
1	Crawling and creeping	45	46	41
2	Walking on a tightrope	44	44	41
3	Throwing a bean bag into the hoop	45	45	42
4	Climbing	41	44	45
5	Parachute game	41	45	39
6	Bowling game	41	46	43
7	Jumping and leaping	43	46	42
	Score	305	316	293
	Mean	43,5	45,1	41,8
	Percentage	87%	90%	84%

Information:

A: Expert

G: Teacher

The validation experts provided input to add one model, bringing the total number of models to 7 learning models. This was deemed insufficient, so the last learning model is the jumping and hopping learning model. During the validation process, the subject matter experts assessed and provided feedback on the initial product. Based on this, revisions were made to the initial product. This revision process continued until the initial product reached a certain threshold score that had been set, indicating that the initial product was valid and suitable for testing.

In this small-scale test phase, it can be observed that all observers stated that the draft offered meets the observation items in the small-scale trial. This can be seen from the score or

the lower limit number being 40 and the maximum score being 50. Meanwhile, from this data, it can be identified that it falls within the range above the lower limit. The observation items for each model can be stated as suitable for the basic movement learning of children aged 2-4 years.

The results of the observational assessment in the large-scale trial indicate that the revised model from the small-scale trial increasingly aligns with expectations, namely the agreement among experts and teachers as well as the consistency and accuracy of the observational results regarding the fundamental movement learning model for children aged 2-4 years, which is highly appropriate. This can be seen from the average score of the observational assessment and the percentage of conformity of the learning model.

Discussion

The concept of fundamental movement learning for children aged 2-4 years is structured based on the movement elements of mammals, reptiles, and humans. The form of movement learning activities in this model takes into account the characteristics and developmental stages of children at that age, so the movements selected are ones that are already familiar to the children, such as walking, running, jumping, crawling, climbing, and throwing. Furthermore, learning movement in children should be done while playing or playing while learning.

Physical development is the growth and changes that occur in a person's body. The most apparent changes are changes in the shape and size of a person's body. Motor development refers to the progressive changes in control and the ability to perform movements that are acquired through the interaction between maturation factors and practice or experiences throughout life, which can be observed through the changes/movements performed. Motor development includes gross motor development and fine motor development. Gross motor involves large muscles, while fine motor involves small muscles. The movements made by children involve muscles, and children in the early age stage are more likely to be active/enjoy moving, enjoy experimenting or practicing, and enjoy playing both games that require a lot of energy and games that only show little movement. Whether the movements are small or large, they still involve muscles, so motor development greatly supports other aspects of development. Gross motor skills involve body movements using large muscles or most of the muscles in the body or all body parts, influenced by personal maturation.

The growth of a 2-year-old child results in struggles over time as the child tries to take a stance on conflicting desires between independence (autonomy) and dependence. The growth and physical characteristics are: 1) Weight gain; 2) Growing taller; 3) Their posture becomes

more upright, their stomach is still large and protruding, the back curves because the abdominal muscles have not fully developed; 4) The brain reaches 80% of adult size; 5) Most teeth have emerged. The motor development includes: 1) Walking more upright; 2) Running with confidence; 3) Squatting for extended periods while playing; 4) Climbing stairs without assistance (holding onto the edge of the stairs); 5) Being able to maintain body balance.

CONCLUSION

Based on the research results, a conclusion can be drawn that a model of basic movement learning for children aged 2-4 years has been developed, consisting of seven learning activities, namely: (1) Crawling and Creeping, (2) Walking on a Rope, (3) Throwing bean bags into hoops, (4) Bowling Games, (5) Climbing, (6) Parachute Games, and (7) Jumping and Leaping. From the assessments of experts and teachers on the developed learning model, it is concluded that the model is very suitable for the characteristics as well as the growth and development of children aged 2-4 years, as indicated by the observation results between experts and practitioners. Therefore, it can be concluded that the developed learning model is feasible to use. Based on the research questions that have been formulated, the results of this study address the issues: (1) the basic movement learning process consists of three aspects: locomotor movement, non-locomotor, and manipulative, which are the main foundation for instilling movement awareness. Basic movement learning views movements of mammals and animals such as climbing, crawling, and creeping. Basic movement learning refers to the principles of physical motor learning for early childhood. (2) The basic movement learning model is in accordance with the growth and development of children aged 2-4 years, as evidenced by the existence of activities that contain elements for developing both small and large muscles, body shapes and sizes of children, as well as motor development. (3) The basic movement learning model makes students more active and happy because these physical activities can facilitate and explore children's engagement with their surroundings, as demonstrated by the presence of physical activities that is crawling, creeping, climbing, throwing, jumping and hopping, climbing, walking, and running.

The utilization suggestion based on this development research is that the developed learning model can be used by teachers as one of the references in teaching basic movements to children aged 2-4 years in a more fun way. To realize this, it is necessary to improve preparation before teaching movement, the willingness and creativity of teachers to continually enhance the quality of learning with various enjoyable movement learning variations, thereby

stimulating growth and development. In implementing teaching, preparation should be made thoroughly by the teacher. To address the limitations of facilities and tools, teachers need to be creative and can maximize the equipment available at school as well as utilize items that are no longer in use. For example, used aqua bottles can be targets in bowling games, walking on a rope can use raffia string, etc.

The dissemination of the results of this research can be conducted through seminars and in the form of article production. In addition, it can also be carried out through classroom action research or experiments involving teachers to find real evidence of the learning products.

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REFERENCES

- Allen dan Lynn. 2010. Profil Perkembangan Anak: Prakelahiran Hingga Usia 12 Tahun (Terjemahan dalam Bahasa Valentino). Jakarta. Indeks.
- Burhaein E. 2017. Aktivitas Fisik Olahraga Untuk Pertumbuhan dan Perkembangan Siswa SD. *Indonesian Journal of Primary Education*, 1(1), 51-58.
- Chairunnisa, C., & Masyhuri, A. A. (2019). Peningkatan Kemampuan Menulis Anak Usia Dini Dengan Menggunakan Metode Meniru Tulisan. *eL-Muhbib: Jurnal Pemikiran dan Penelitian Pendidikan Dasar*, 3(1), 72–82.
- Farida A. 2016. Urgensi Perkembangan Motorik Kasar Pada Perkembangan Anak Usia Dini. *Jurnal Raudhah*, 4(2).
- Fitriani R, Adawiyah R. 2018. Perkembangan Fisik Motorik Anak Usia Dini. *Jurnal Golden Age*, 2(01), 25-34. Prayitno B, Sukadiyanto S. 2014. Pengembangan Model Pembelajaran Gerak Dasar Untuk Anak Usia 2-4
- Fitriani, R., & Adawiyah, R. (2018). Perkembangan Fisik Motorik Anak Usia Dini. *Jurnal Golden Age*, 2(1), 25–34.
- Ghony, M. D. (2008). Penelitian Tindakan Kelas. Pustaka Pelajar.
- Kinasih, E. A. (2016). Peningkatan Kemampuan Motorik Halus Anak Kelompok A2 Melalui Kegiatan Menulis Di TK Ilmu Al-Qur'an Sempusari Kaliwates Jember Tahun Pelajaran 2015/2016.
- Miranda, D. (2016). Peningkatan Kemampuan Menulis Permulaan Melalui Aneka Media Pada Anak Usia 5–6 Tahun. *Jurnal Pendidikan dan Pembelajaran Khatulistiwa*, 3(10).
- Nermala, D. A. (2016). Upaya Meningkatkan Kemampuan Menulis Anak Melalui Media Pasir Pada Peserta Didik Kelompok B TK Aisyiyah Bustanul Athfal Dukuhtuluh Kecamatan Kembaran Kabupaten Banyumas Semester Genap Tahun Ajaran 2015–2016 (Doctoral dissertation, Universitas Muhammadiyah Purwokerto).

- Pratiwi, W. A. (2017). Tingkat Pencapaian Perkembangan Motorik Halus pada Anak Kelompok B di TK Gugus Dahlia Kecamatan Weru Sukoharjo. *Pendidikan Guru PAUD S-1*, 6(5), 530–537.
- Sanjaya, D. H. W. (2016). *Penelitian Tindakan Kelas: Konsep, Model, dan Aplikasi*. Kencana.
- Slamet Suyanto. 2005. *Dasar-Dasar Pendidikan Anak Usia Dini*. Yogyakarta: Hikayat Publishing.
- Sukadiyanto. April 2012. Prinsip pembelajaran fisik motorik pada anak usia dini. Pelatihan pembelajaran fisik motorik bagi guru TK se-DIY. Yogyakarta: Pascasarjana UNY.
- Tahun. *Jurnal Keolahragaan*, 2(1), 11-21.