

Pastap Game Development for Learning Badminton of the Mild Mental Retardation

Mulia Romadi Harahap

State University of Medan
Sports Education Study Program
Medan, Indonesia

Hariadi

State University of Medan
Sports Education Study Program
Medan, Indonesia

Isa Hidayati

State University of Medan
Sports Education Study Program
Medan, Indonesia

Sanusi Hasibuan

State University of Medan
Sports Education Study Program
Medan, Indonesia

Friska Indria Nora Harahap

State University of Medan
Sports Education Study Program
Medan, Indonesia

Abstract—Badminton facilities (racket and shuttlecock) which are easily damaged when used by mild mentally retarded students and the lack of knowledge of the parents of mild mentally retarded students about the sports needs of children with mild mental retardation are the basis for conducting this research and development. Pastap game products are used to help teachers carry out non-academic learning and mild mental retardation students to play badminton both inside and outside the school environment. The process of developing this pastap game combines easy-to-find materials such as used boards, rubber carpets and existing badminton infrastructure such as nets, plastic shuttlecocks, and fields. This research and development was carried out at SLB Negeri One Roof in the City of Padangsidempuan. The research stage includes (1) research on existing products, (2) literature studies and field research, (3) product development design, (4) internal design testing, (5) design revision, (6) product manufacturing. The data collection technique used a questionnaire which was analyzed descriptively by percentage. Subjects or users in this research and development are mild mentally retarded students in the One Roof State SLB in Padangsidempuan City. The results of this study are in the form of pastap games that are effective and efficient and in accordance with the characteristics of mild mental retardation with an eligibility percentage of 0-20% (not feasible), 21% -40% (less feasible), 41% -60% (quite feasible), 61% -80% (feasible), 81% -100% (very feasible).

Keywords— research and development, mild mental retardation

I. INTRODUCTION

Modification of learning in inclusive schools for mild mentally retarded students includes modification of time allocation, material modification, and modification of the learning process. The principle of modification in Physical Education is applied with recreational, entertaining, and fun games for mild mentally retarded students. The same thing is also written in Article 1 of Law Number 3 of 2005 concerning the National Sports System, namely sports with disabilities are sports that are specifically carried out in accordance with a person's physical and / or mental disorders.

Researchers obtained information through open interviews with one of the teachers related to badminton teaching material which stated that the cause of the inadequacy of badminton facilities and infrastructure such as racket and shuttlecock was the speed with which it was used by mild mentally retarded students. So that over time the availability of these facilities and infrastructure no longer matches the number of existing students.

On the same occasion, the researcher also interviewed one of the parents of students who stated that when mentally retarded children play outside the school environment, other normal children are always sidelined. Parents assume that mentally retarded children just play in the house with their mother or siblings and don't disturb others. As a result, this mentally retarded child no longer feels happy and has the joy of playing and experiencing recreational, entertaining and fun games.

The root of the problem of playing badminton equipment is the racket and shuttlecock which are quickly damaged when used by mild mental retardation students at school as well as the assumption of parents that mentally retarded children just play in the house, making these mild mentally retarded students no longer feel how happy and excited they are to play recreational games, and entertaining both inside and outside the school environment. Meanwhile, Article 7 of Law Number 3 of 2005 states that citizens who have physical and / or mental disabilities have the right to obtain services in special sports activities

II. THEORETICAL FRAMEWORK

A. The Nature of Development

Sugiyono (2015: 28) research and development functions to validate and develop products. Validating a product means that it exists and the researcher is only testing the effectiveness of the product. Developing pastap games means deepening, expanding and perfecting existing knowledge, theories, actions

and products so that they become more effective and efficient. The product developed in this research and development is an existing pastime game. Pastap game equipment designs will be developed so that they are more effective and efficient for use by mentally retarded students both inside and outside the school environment and can be applied by the teacher to carry out the badminton physical education learning process.

B. Traditional Game

The hallmark of traditional games (M. Hery Yuli Setiawan, Journal of Educational and Learning Dimensions, Vol. 5 January 2016) in playing requires face-to-face interaction between players, moving a lot, and being done together. Empirically, research by Yudiwinata and Handoyo (Saputra N.E. and Ekawati Y.N.) shows that children who play traditional games have much more developed abilities, including the ability to work together, sportsmanship, the ability to build strategies, as well as agility (running, jumping, balance) and character. Traditional games are activities that are entertaining using simple tools and without tools that have been passed down from generation to generation. Traditional games, also known as folk games, grew and developed in the past, especially in rural communities. Piaget (Hikmah Prisia Yudiwinata and Pambudi Handoyo, Paradigma, Volume 02, Number 03) there are concrete operational stages experienced by children at the age of 7-11 years where at that age they begin to recognize games with peers, there are stages of disappearing egocentric concepts in children so that when they enter the formal operational stage to adulthood they are able to develop better.

C. Badminton

Subardjah (Achmad Khoirul Umam, Journal of Sports Health Vol. 05 No. 03 Year 2017, page 1-8), badminton is an individual game that can be played in a single way, namely one person against one person or doubles, namely two against two people. By using the racket as a bat and the shuttlecock as the object being hit, the playing field is rectangular and is bounded by the net to separate the playing area between itself and the opponent's playing area. Sapta Kunta Purnama (Fajar Arie Mangun and Marlinda Budiningsih, Sports Science Journal Rehearsal, 08 (2), October 2017 - 88) basic techniques of badminton skills include: (a) stance, (b) racket holding technique, (c) ball hitting techniques (strokes), and (d) footwork techniques.

D. Adaptive Physical Education

Adapted and modified physical education according to needs, types of disabilities and level of ability are factors that determine the success of education. According to Supandi (Muhammad Hatta Zulfikar El Famoos. Journal of Physical Education, Sport, Health and Recreation. 2, 2013) modification is the reduction or replacement of certain elements. Abdoellah (Irma Kurrotun Ainin. JASSI. Anakku. Volume 10, Number 2, Year 2011) states that the majority of ABK students have low mobilization capacity, and physical performance is lacking, therefore ABK has a greater need for movement, it is only natural that education physical should be

the main program of the education program for students with special needs as a whole, because it becomes the basis for improving bodily functions which are needed by all children with special needs.

E. Play, Games, Sports

1) *Played*. Hurlock (Hartati 2005: 2) states that playing can be defined as an activity that is carried out for the sake of pleasure and without considering the end result of this activity is done voluntarily without coercion or without pressure from outside parties. The same thing was stated by Smith and Pellegrini (2008) which are activities carried out for self-interest, carried out in fun ways, not oriented towards the final result, flexible, active, and positive.

2) *Game*. Ernest Adam (2010) states that the definition of game is "A game is a type of play activity, conducted in the context of a pretended reality, in which the participant (s) try to achieve at least one arbitrary, nontrivial goal by acting in accordance with rules". A game is a type of play activity, performed in the context of a competing reality, in which participants try to achieve at least one arbitrary, trivial goal by acting according to the rules. In game activities, there are rules that must be obeyed so that the game can take place safely without cheating. Game activities in physical education provide students with many choices because they contain movements that are the result of human cultural civilization from generation to generation and become characteristics of the cultural extension of society.

3) *Sports*. According to Law No. 3 of 2005, sport is a systematic activity to encourage, foster, develop physical, spiritual and social potential. Sport is a systematic process in the form of all activities or efforts that can encourage the development and fostering of a person's physical and spiritual potential as an individual or a member of society in the form of games, competitions and peak achievements in the formation of human beings who have complete and quality ideologies based on the basis of the State. or Pancasila (Cholik Mutohir, 1992). According to Mc Namee and Parry (2002), sport is a competition that is governed by rules in which physical ability is pitted. Sport is more formal, more serious, more competitive, more organized, and more structured than other games.

III. METHOD

The process of designing the design of pastap game equipment was carried out at home and testing the equipment at the Padangsidimpuan One Roof SLB, precisely on Ompu Sarundak Street, Padangsidimpuan Hutaembaru District. This is done to be more effective and efficient in the development of pastap traditional game products so that it is well known whether the pastap traditional game product developed is feasible or not. Subjects or users in this pastap game development research are mild mentally retarded students at the Padangsidimpuan One Roof State Extraordinary School. This study uses the method of research and development level 3 from Sugiyono, namely researching and testing to develop existing products. The data that has been obtained from

research on existing products and field research are analyzed by qualitative descriptive consisting of three steps, namely:

- Data reduction. Reducing data means summarizing, choosing the main things, focusing on the important things, looking for themes and patterns.
- Data display. Data presentation can be done in the form of brief descriptions, charts, relationships between categories, flowcharts and the like.
- Conclusion drawing. The initial conclusions put forward are still provisional and will change if no solid evidence is found to support them at the next data collection stage.

$$P = F/N \times 100\%$$

(1)

F: The percentage of which is being searched for

N: Number of case (the number of frequencies from the number of individuals)

P: The percentage number

IV. RESULTS AND DISCUSSION

A. Paddle

The tool used to hit the ball is the paddle. This paddle is made of multiplex wood which is light and strong and does not break easily, measuring 6-8 mm. This bat shape can be made in various shapes such as rectangles and circles. The total length of the paddle is 38 cm. The length of the stem is 16 cm, the top is 22 cm, the width is 19 cm, and the diameter of the stem is 3 cm.



Fig.1. Paddle. Source. Researcher's documents

In addition to the length and thickness of the paddle, this paddle is able to withstand a maximum load of 10 kg and weighs 250 grams.



Fig. 2. Paddle load test. Source: Research documents

B. Ball

Balls for playing pastap games are made of plastic or colorful plastic shuttlecocks and small, colorful balls that are often used by children to play ball baths. The ball is attempted to have a color so that it is more attractive to the eyes of children with mild mental retardation.



Character Building
 UNIVERSITY



Fig.3. Ball. Source. Researcher's documents

V. CONCLUSION

Modifications to playing badminton equipment that can last a long time, are easy to make, safe and comfortable to use, and of course in accordance with the characteristics of mild mental retardation. So that by modifying the badminton playing equipment, students with mild mental retardation have a place to play badminton both inside and outside the school environment.

REFERENCES

[1] Achmad Khoiril Umam. (2017). Analysis of Playing Technique Skills in Men's Singles and Doubles in Badminton. *Journal of Sports Health*, Vol. 05 No. 03 of 2017, pp. 1-8.

[2] Adam, Ernest. (2010). *Fundamentals Of Game Design*, 2nd Edition. Berkeley: New Riders.

[3] Fajar Arie Mangu, Marlinda Budiningsih. (2017). Smash Training Model in Badminton for Multiple Athletes. *Rehearsal for the Journal of Sport Science*, ISSN 2597-8942.

[4] Hartati Sofia. (2005). *Learning Development in Early Childhood*. Jakarta: Ministry of National Education.

[5] Hikmah Prisia Yudiwinata, Pambudi Handoyo. (2014). Traditional Games in Culture and Child Development. *Paradigm Journal*, Volume 02, Number 03 Year 2014.

[6] Irma Kurrotun Ainin. (2011). Adaptive Physical Education Learning Strategies. *JASSI_Anakku*, Volume 10, Number 2 of 2011.

[7] M. Hery Yuli Setiawan. (2016). Practicing Early Childhood Social Skills Through Traditional Games. *Journal of Education and Learning Dimensions*, Vol. 5 January 2016.

[8] Mutohir, Cholik. (1992). *National Sports System Law*. Jakarta: Sunda Kelapa Pustaka

[9] McNamee and Parry. 2002, *Ethics and Sport*, E & FN Spon, London.

[10] Muhammad Hatta Zulfikar El Famoos, et al. (2013). Improving Badminton Learning Outcomes from the Physical Education Program Approach for Class V Students. *Journal of Physical Education, Sport, Health and Recreation*, 2 (9) (2013).

[11] Smith, Peter K And Pellegrini, Antony. (2008). "Learning Through Play". Minnessta: Goldsmiths, University of London, United Kingdom University of Minnesota.

[12] Sugiono. (2015). *Research & Development Methods*. Bandung: Alfabeta.

[13] Saputra, N.E., and Ekawat, Y.N., (2017). Traditional Games as Efforts to Improve Basic Skills. *Journal of Psychology Jambi*, Volume 2, No 2, October 2017