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Badminton Learning Model Using Media Rubber Tires and Barbels to Improve Smash Jump Skills in Athletes University Achievement Development Lampung

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Abstract
Research and development (R&D) is a systematic study process to develop and validate products used in education (Andi Ibrahim et al., 2018). Research and development (R&D) is a systematic study process to develop and validate products used in education (Andi Ibrahim et al., 2018). The development of a smash learning model using rubber tires and barbells to improve jumping smashes for athletes at Lampung University is aimed at producing training models that are effective and more varied. Apart from that, validation data will be presented by four experts, namely badminton experts, learning experts, language experts and media experts obtained through questionnaires.1. Based on the calculation results, the average of the four experts was 84.5%, so this training model was declared valid and suitable for use in supporting the training process for Lampung University athletes.

Keywords**:** *Development, Smash, Training*

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INTRODUCTION

Sport can improve the quality of life and human welfare, so that by exercising a person can develop physically, spiritually and socially and form a dignified national character and personality. As stated in the national sports law, the purpose of sports is to maintain, improve health, fitness, performance, instill morals, competitive sportsmanship, discipline, which can strengthen national resilience and elevate the dignity, dignity and honor of the nation as well as strengthen and foster national unity. in maintaining world peace. Sports is one of the scientific fields that has advanced and in line with this development, almost all countries have embraced sports as a sport science to improve performance. Sport has become a historical success story in today's modern world in an effort to consider the growth of academic knowledge related to its professional application (Saunders & Lutan, 2020).

Sport is a physical activities that can improve physical and spiritual health. (Akbar Adi Pamungkas etal., 2021). The development of badminton in Indonesia is becoming increasingly popular, this can be found in the PP information system. PBSI states that there is an increase in the number of badminton clubs or associations at all age levels, which are oriented towards creating potential athletes to achieve achievements (Athletes - PBSI, n.d.). This is a manifestation of coaching in fulfilling people's desires to train and become outstanding athletes. Coaching aged between 6 and 14 years is very good for training prospective athletes whose training focus begins with basic badminton playing techniques (Muhammad Rinaldi, n.d.). The smash is a basic technique that must be mastered by the player, the smash must be done hard, fast, sharp and purposeful, in line with the new regulations from BWF, regarding calculating scores using a point rally system, a player is required to play with an attacking pattern. , fast, aggressive and careful.

The smash is an overhead blow that relies on arm strength and speed as well as a flick of the wrist to make the ball go into a sharp dive. Both straight smashes and cross smashes can both be hit with the same swing. The quality of a smash is largely determined by correct technical ability to achieve maximum results as desired, accompanied by encouragement of dominant muscle abilities. Based on the facts and conditions in the field, some badminton coaches only provide training without prioritizing fundamental basic technical movements. This can be seen in every match, where every smash that is made is not optimal, even though what is desired from a smash is a shuttlecock that produces results. speed, sharp and directed crossing over the net.

Based on the results of the observations I carried out in the development of achievements at the University of Lampung, I saw that some of the teaching was less effective and the learning was less interesting, making it possible for athletes to feel bored and fed up quickly. There were several errors ranging from foot movements, shoulders to how to hold the racket. Based on this background, the researchers saw several factors that made this teaching less effective. These factors include: learning methods that are less attractive to athletes so that learning does not go well and many athletes do smashes with the wrong foot position so that their jumping smash ability is not there. Therefore, researchers are interested in carrying out research with the title Badminton Learning Model Using Rubber Tires and Barbells to Improve Jump Smash Skills in Lampung University Athletes.

METHOD

This research uses the research and development (R&D) method, which is a systematic study process to develop and validate products used in education (Andi Ibrahim et al., 2018). It is certainly hoped that this research and development will produce a product that can be used as a learning model for learning badminton using rubber tires to improve smash skills with a new model design or complete an existing one so that it can be used as another learning resource in the learning process. Development of the characteristics of a smash learning model using rubber tires to improve jumping smash skills in Lampung University athletes which will be compiled and developed in the form of a new model based on modifications to existing models. The target in this research is the user who is the target in research on developing a target game learning model for smash skills in badminton, while the subject in this research is the subject sampling technique applied in this research is saturated/census sampling, which is also known as all members of the population used as a research subject.

Preliminary research was carried out using literature studies, field data collection studies, process observations, identification of problems encountered in learning target games regarding smash skills in badminton and descriptions and findings obtained in the field. These results are used to assess the conditions in the field with the aim of finding out whether the product to be developed will later be used by the subject. This means that the model developed by the researcher is needed or not.

There are 7 assessment instruments given to Badminton experts to assess the suitability of the products produced. On each instrument there are 5 value options starting with the best with a score of 5 and the smallest with a score of 1. The way to score the results of all assessment instruments is as follows:

$$\sum = \frac{\text{Maximum score obtained}}{\text{Maximum score}} \times 100$$

There are 10 assessment instruments given to learning experts to assess the suitability of the products produced. On each instrument there are 5 value options starting with the best with a score of 5 and the smallest with a score of 1. The way to score the results of all assessment instruments is as follows:

$$\sum = \frac{\text{Maximum score obtained}}{\text{Maximum score}} \times 100$$

There are 7 assessment instruments given to language experts to assess the suitability of the product produced. On each instrument there are 5 value options starting with the best with a score of 5 and the smallest with a score of 1. The way to score the results of all assessment instruments is as follows:

$$\sum = \frac{\text{Maximum score obtained}}{\text{Maximum score}} \times 100$$

There are 7 assessment instruments given to media experts to assess the suitability of the products produced. On each instrument there are 5 value choices starting with the best with a score of 5 and the smallest with a score of 1. The way to score the results of all assessment instruments is as follows:

$$\sum = \frac{\text{Maximum score obtained}}{\text{Maximum score}} \times 100$$

The percentage analysis of evaluation results in this research is as follows:

Tabel 1. Percentage of Evaluation Results

Percentage	Information	Meaning
80%-100%	Valid	Worth Using
60%-79%	Fairly Valid	Worth Using
50%-59%	less valid	Fixed
<50%	invalid	Fixed

RESULTS AND DISCUSSION

Result

The development of a smash learning model using rubber tires and barbells to improve jump smashes for athletes at Lampung University's performance development is aimed at producing effective and more varied training models. Apart from that, the validation data will be presented by four experts, namely badminton experts, learning experts, language experts and media experts obtained through questionnaires. This research uses an instrument based on expert validation in the fields of badminton, learning, language and media. The aim is to obtain the feasibility of the model developed based on the results of consultations with several experts.

Starting from planning the model developed and the results from small group trials to large group trials until the product developed is declared suitable for publication and dissemination.

Based on the assessment of badminton experts by filling in a questionnaire instrument consisting of 7 questions, each question has a maximum score of 5 and a minimum score of 1. The maximum score for all questions is 35 and the minimum score is 7 which will be converted to a score. The following are the results of the badminton expert's assessment:

$$\sum = \frac{\text{Maximum score obtained}}{\text{Maximum score}} \times 100$$

$$\sum = \frac{33}{35} \times 100\%$$

$$\sum = 98{,}28\%$$

The results obtained based on badminton expert assessment were 98.28%, which means they are valid and suitable for use.

Based on assessments from learning experts by filling out a questionnaire instrument consisting of 10 questions, each question has a maximum score of 5 and a minimum score of 1. The maximum score for all questions is 50 and the minimum score is 10 which will be converted to a score.

$$\sum = \frac{\text{Maximum score obtained}}{\text{Maximum score}} \times 100$$

$$\sum = \frac{44}{50} \times 100\%$$

$$\sum = 88\%$$

The results obtained based on badminton expert assessment were 88%, which means they are valid and suitable for use.

Based on the assessment of language experts by filling out a questionnaire instrument consisting of 7 questions, each question has a maximum score of 5 and a minimum score of 1. The maximum score for all questions is 35 and the minimum score is 7 which will be converted to a score.

$$\sum = \frac{\text{Maximum score obtained}}{\text{Maximum score}} \times 100$$

$$\sum = \frac{26}{35} \times 100\%$$

$$\sum = 74{,}28\%$$

The results obtained based on the assessment of language experts were 74.28%, which means it is quite valid and suitable for use.

Based on assessments from media experts by filling out a questionnaire instrument consisting of 7 questions, each question has a maximum score of 5 and a minimum score of 1. The maximum score for all questions is 35 and the minimum score is 7 which will be converted to a score.

$$\sum = \frac{\text{Maximum score obtained}}{\text{Maximum score}} \times 100$$

$$\sum = \frac{29}{35} \times 100\%$$

$$\sum = 82{,}85\%$$

The results obtained based on media expert assessment were 82.85%, which means they are valid and suitable for use. The data above is an assessment model produced by badminton experts, learning experts, language experts and media experts. The following is a recapitulation of the values from expert judgment.

Tabel 2. Percentage Results

No	*Expert judgement*	Precentage
1	Badminton Expert	98,28%
2	Learning expert	88%
3	Linguist	74,28%
4	Media expert	82,85%
Average		**85,85%**

Based on the data above, the average value produced by badminton experts, learning, language and media is 85.85%, so this badminton smash jumping learning model is declared valid and suitable for use.

Discussion

Research and Development (R&D) is a research model that is widely used in educational development. According to Borg and Gall quoted in the book Research and Development Methods (R&D) by Sugiyono (2015: 28) research and development is a process used in

developing and validating educational products. Meanwhile, Sugiyono himself (2015:30) defines the research and development method as a scientific way to research, design, produce and test the validity of the products that have been produced. Research and development (R&D) is a process or steps to develop a new product or improve an existing product (Farida, 2016). Then, based on the understanding of research and development methods that have been explained, the product that will be developed by the author in this research is a badminton learning book.

After the researcher carried out direct observations and observations at the badminton UKM at the University of Lampung, there were several problems that the researcher found in the training process, namely the lack of understanding of athletes about smashes in badminton, the lack of training time which also had an impact on the athletes' understanding, the lack of additional facilities such as reading books that could be studied. independently by the athlete so that there is a misunderstanding in carrying out the basic smash movement in the game of badminton.

Based on the results of initial data collection and observations made by the author, it is necessary to develop a learning media that is easy to understand and can be used as a tool or guide to train the abilities of athletes from all walks of life in practicing badminton skills. Based on the results of the assessment provided by badminton, learning, language and media experts, it can be concluded that the calculation results from the four experts state that the smash learning model using Karety Ban and Barber is valid and suitable for use.

The badminton expert validation test was validated by Hendri Irawan, M.Pd., after being converted using a conversion table, the achievement level percentage was 98.28%, which is a valid qualification, so this media is suitable for use. The learning expert validation test was validated by Ziko Fajar Ramadhan, M.Pd., after being converted using a conversion table, the achievement level percentage was 88% in valid qualifications, so this media is suitable for use.

The linguist validation test was validated by Rahmat Prayogi, S.Pd., M.Pd., after being converted using a conversion table, the achievement level percentage was 74.28%, which is a fairly valid qualification, so this media is suitable for use. The media expert validation test was validated by Daniel Rinaldi, S.T., M.Eng., after being converted using the conversion table, the

achievement level percentage was 82.85%, which is a valid qualification, so this media is suitable for use.

CONCLUSION

The conclusions obtained by researchers from the results described are: 1. Based on the calculation results, the average of the four experts was 84.5%, so this training model was declared valid and suitable for use in supporting the training process for Lampung University athletes. The results obtained from this research are in the form of a learning book product with the title "Guidebook for badminton learning models using rubber tires and barbells to improve jumping smash skills", where in this book there are training models developed and packaged and adapted to the athlete's characteristics with pictures and explanations that are easy to understand.

REFERENCES

Arifin, Syamsul. (2017). Peran Guru Pendidikan Jasmani Dalam Pembentukan Pendidikan Karakter Peserta Didik. *Multilateral: Jurnal Pendidikan Jasmani dan Olahraga*. 16(1), 78-92.

Aji, S. (2016). Buku Olahraga Paling Lengkap (R. Ilmu (ed.)).

Anugrah. (2017). Buku Pintar Bulutangkis (I. T. N. M. Deli (ed.)).

Arifin, Syamsul. (2017). Peran Guru Pendidikan Jasmani Dalam Pembentukan Pendidikan Karakter Peserta Didik. *Multilateral: Jurnal Pendidikan Jasmani dan Olahraga*. 16(1), 78-92

Bagaskara, E. (2017). Pengaruh Latihan Smash Sasaran Tetap Dan Sasaran Berubah Terhadap Peningkatan Kemampuan Smash Pada Atlet Bulutangkis Di Pb Ac Quality Yogyakarta. Pend. Kepelatihan Olahraga-S1,

Bagaskara, S. D., & Setiyawan, S. (2022). Keefektifan Antara Model Pembelajaran Project Based Learning Dan Discovery Learning Dalam Pembelajaran Teknik Dasar Smash Bulutangkis Terhadap Hasil Belajar Siswa SMA N 2 Pemalang. SPIRIT EDUKASIA, 2(02), 387–392.

Fattahudin, M. A., Januarto, O. B., & Fitriady, G. (2020). Upaya Meningkatkan Keterampilan Pukulan Forehand Smash Bulutangkis Dengan Menggunakan Model Variasi Latihan Untuk Atlet Usia 12-16 Tahun. Sport Science and Health, 2(3), 182–194.

Lutan, Rusli. (2015). Materi Pokok Belajar Motorik. Universitas Lampung, Bandar Lampung.

Pujianto, Agus. 2012. Modifikasi Pegangan Raket Untuk Meningkatkan Kemampuan Teknik Pegangan Bulutangkis. *Jurnal: Media Ilmu Keolahragaan Indonesia,* 2(1), 1-8.

Roji & Eva, Yulianti. (2017). *Pendidikan Jasmani Olahraga dan Kesehatan/ Kementerian Pendidikan dan Kebudayaan*. Kementerian Pendidikan dan Kebudayaan, Jakarta.

Sholeh Mochamad dkk,(2022). Peningkatan kemampuan backhand atlet bulutangkis utpb Surakarta. Surakarta: pendidikan kepelatihan olahraga,Universitas Tunas Pembangunan Surakarta.

Sugiyono. (2015). Metode Penelitian Pendidikan: Kuantitatif Kualitatif dan R&D. Bandung:Alfabeta.Sukmara , A. (2016). Pengaruh Metode Latihan Drill dan Pola Pukulan Terhadap Ketepatan Smash Atlet Bulutangkis Putra Usia 10-12 Tahun di PB Jaya Raya Satria Yogyakarta. Yogyakarta: FIK UNY.

Sukmara , A. (2016). Pengaruh Metode Latihan Drill dan Pola Pukulan Terhadap Ketepatan Smash Atlet Bulutangkis Putra Usia 10-12 Tahun di PB Jaya Raya Satria Yogyakarta. Yogyakarta: FIK UNY.

Yuliawan, D. (2017). Bulutangkis Dasar. Yogyakarta: CV Budi Utama.

Zarwan, Hardiansyah, Sefri. (2017). Pengaruh Media Video Dan Media Chart Terhadap Ketepatan Smash Bulutangkis Siswa SD Negeri 52 Kuranji Padang. *Jurnal Penjakora.* 4(1), 51-63.

Zhannisa, Utvi Hinda. (2015). Model Tes Fisik Pencarian Bakat Olahraga Bulutangkis Usia di Bawah 11 Tahun DIY.Jurnal: Keolahragaan, 3(1), 117-126.