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Development of Pommel Mushroom Media for Stimulating Circle Technique Ability in Junior Male Athletes of Persani Medan City'

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Abstract
This research aims to develop Pommel Mushroom media as a tool to enhance the circle technique skills of junior male athletes in PERSANI, Medan City. Through a research and development (R&D) approach, needs analysis, design, validation, trials, and implementation of the product are conducted. The results of the observations show that junior athletes have difficulty mastering the circle technique, especially in maintaining balance and body rotation. The existing media is less suitable for beginner athletes. By using a modified Pommel Mushroom, this research aims to create a safer, more comfortable, and effective training tool. The trial results show that 93% of athletes find this medium engaging, 92% feel more comfortable, and 89% find the circle technique easier. The average rating from the experts reached 94.29%, indicating that this tool is worthy of use. This research is expected to contribute positively to the implementation of the artistic gymnastics training program and improve the performance of junior athletes. he modified pommel mushroom helps athletes master the circle technique safely and progressively. Once they can perform the circle smoothly and with stable control on this media, they gain sufficient technical readiness and confidence to advance to training on the standard pommel horse. Thus, this media serves as an effective transitional stage before practicing on the actual competition apparatus.

Keywords: *Wushu Media Development, Pommel Mushroom, Circle Technique, Junior Athletes, Artistic Gymnastics.*

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INTRODUCTION

Sports are physical activities that are positive in nature, can improve physical and mental health, and can encourage, nurture, and develop physical, mental, and social potential. Sports are inseparable from infrastructure as a form of facility provision for conducting sports activities. Sports are a global phenomenon and an integral part of life for humans on this earth. Sports essentially play a very strategic role in efforts to develop and improve the quality of human resources for development (Soedjatmiko, 2019).

The results of this interview reinforce the findings of the observation that circle technique training in this club is still carried out conventionally without any innovation in

learning media (Siregar & Sinaga, 2022). The unavailability of beginner-friendly training media causes coaches to have difficulty in providing technical instructions in stages, and athletes become unmotivated due to fear and discomfort during training.

The results of this interview reinforce the findings of the observation that circle technique training in this club is still carried out conventionally without any innovation in learning media (Herlambang, T., Royana, I. F., Kresnapati, P., & Setyawan, D. A, 2025). The unavailability of beginner-friendly training media causes coaches to have difficulty in providing technical instructions in stages, and athletes become unmotivated due to fear and discomfort during training. Therefore, there is an urgent need for training media that can be modified in terms of size, safety, comfort, and visual appeal, which can stimulate athletes' courage and readiness to perform circle techniques effectively and efficiently. This media is expected to not only assist coaches in the learning process, but also encourage athletes to practice independently with more confidence and safety.

METHOD

The purpose of this study is to determine and find out whether squat training has an effect on increasing leg muscle power in athletes at the Sasana Wushu Sanda Karo Simalem Fighter gym. Therefore, the research method used in this study is the experimental method, where a pre-test will be conducted before the training, followed by a post-test. test at the end. The variables in this study consist of two independent variables, namely fast and moderate squat training, and one dependent variable, namely leg muscle power.

RESULTS AND DISCUSSION

Result

The results of the observations made by the researchers through observation, observation, and interviews led the researchers to conduct a needs analysis of seven junior male artistic gymnasts. The analysis revealed that 100% of the athletes needed modified pommel mushroom equipment to facilitate their training. From the results of the needs analysis, it can be concluded that athletes and coaches need modified pommel mushroom equipment in the hope of improving the ability of junior male athletes in performing circle techniques.

This modified pommel mushroom apparatus can assist coaches in training junior male athletes in circle movements with the aim of improving their performance in artistic gymnastics.

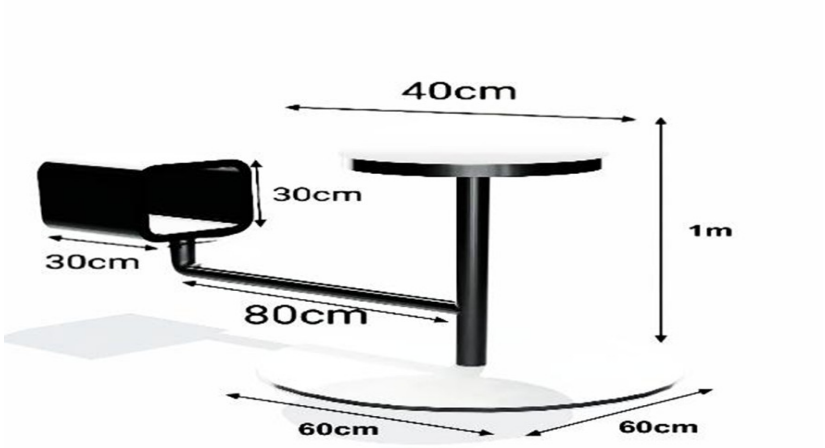


Figure 1. Design Model of the Modified Pommel Mushroom Apparatus

In the validation conducted by experts, the average percentage score obtained was 89.1%. Thus, it can be stated that according to sports experts, coaches, and equipment/media experts, the tool falls into the "Good/Usable" category. An evaluation was conducted to improve and refine the target training tool that had been created. The results of the evaluation of the model design created by the researchers are as follows:

Table 1. Total Questionnaire Scores

Expert	Name	Skore
Sports	Drs. Nono Hardinoto, M.Pd	33
Coach	Renaldy, S.Pd	33
Equipment	Ir. Batumahadi Siregar, S.T, M.T	33

Table 2. Recapitulation of Average Assessments by Each Expert

Expert	Maximum Score	Total Score	Percentage	Category
Sport	35	33	94,29%	Good/Used
Coach	35	33	94,29%	Good/Used
Equipment	35	33	94,29%	Good/Used
Total Score	**105**	**99**	**94,29%**	Good/Used

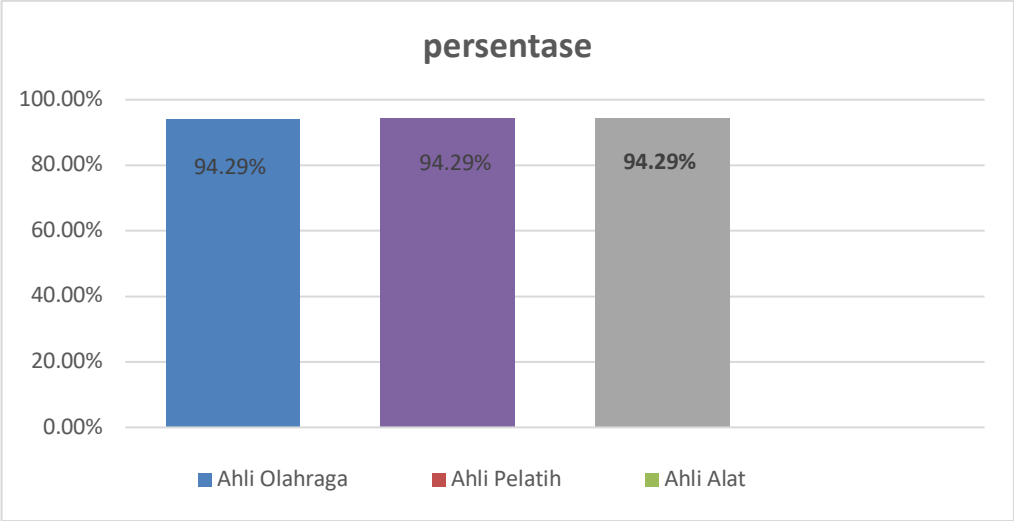


Figure 2. Graph of Expert Results

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Table 3. Coach Evaluation of the Model Design

No	Name Of Expert	Items Revised	Expert Statement/Advice
1	Renaldy, S.Pd.		Excellent for junior athletes.
2	Drs. Nono Hardinoto, M.Pd.		Developed to be age-appropriate.
3	Ir. Batumahadi Siregar, S.T., M.T		Consider the size of the pommel head mount for the K3 level.

Discussion

The development of this product aims to improve the abilities of novice athletes when practicing circle techniques in artistic gymnastics. The quality of "the development of pommel mushroom media to stimulate circle technique abilities in junior male athletes of the Medan Persani" includes the criterion of "Usable." This statement was concluded from the results of an assessment by three experts, which obtained an average of 94.29%, expert coach validation of 94.29%, expert sports validation of 94.29%, expert equipment validation of 94.29%, in a

small group trial of 3 athletes with 6 questions, the results were 92%-100%, and in a large group trial of 7 athletes with 6 questions, the results were 89%-96%.

This tool is very helpful for coaches in circle technique training for junior athletes (Yamasaki, T., et all, 2024; Fahmi, D. A. 2026; Tarigan, B, 2024). Based on the discussion of the development of the pommel mushroom tool for stimulating circle technique skills, it has several advantages, including: Athletes are more enthusiastic in carrying out exercises with the developed pommel mushroom equipment. Athletes gain new experiences in training when using the developed pommel mushroom equipment. It can help coaches in training circle techniques with the developed pommel mushroom equipment.

Despite these advantages, this equipment also has several drawbacks, such as the need to repeatedly adjust its height and the length of the leg supports to suit the physique of the athlete using it.

CONCLUSION

Based on the results of the development process, expert validation, small group trials, and large group trials of the modified Pommel Mushroom media, it can be concluded that the developed product is feasible, practical, safe, and effective for use in circle technique training for junior male athletes of Persani Kota Medan.

REFERENCES

Fahmi, D. A., Herlambang, T., Wiyanto, A., Setyawan, D. A., & Yulianti, F. (2026). The Impact of Specialized Equipment on Motor Skills and Motivation in Junior Male Artistic Gymnasts. Indonesian Journal of Physical Education and Sport Science, 6(1), 151-164.

Herlambang, T., Royana, I. F., Kresnapati, P., & Setyawan, D. A. (2025). Development of saddle horse with electric motor drive to improve circle skills in junior male artistic gymnasts. Jurnal SPORTIF: Jurnal Penelitian Pembelajaran, 11(2), 202-221.

Siregar, I. H., & Sinaga, J. (2022). Pengembangan Alat Kuda-Kuda Pelana Jamur Pada Latihan Spindle Atlet Senam 7-15 Tahun Kota Medan. All Fields of Science Journal Liaison Academia and Sosiety, 1(2), 24–28. https://doi.org/10.58939/afosj-las.v1i2.50

Soedjatmiko. (2019). *Olahraga dan Pembangunan Manusia*. Jakarta: Rajawali Pers.

Tarigan, B., Muzaffar, A., Saputra, A., & Widowati, A. (2024). Pengembangan Alat Bantu Latihan Rings Senam Artistik Putra Persani Jambi. Journal of SPORT (Sport, Physical Education, Organization, Recreation, and Training), 8(3), 975-984.

Yamasaki, T., Nishiwaki, K., Nawa, M., Yamawaki, K., Nakamura, Y., Xin, X., & Izumi, S. (2024). Dynamic balance of circles with one support point on pommel horse exercise. Scientific Reports, 14(1), 20886.