

## Special exercises using tools and their effect on learning the skill of landing with Salto backward tucked to stand on the horizontal bar

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### Abstract

Special exercises in individual games are an important pillar in learning their basic skills. **The aim of the research** is to prepare special exercises using tools and their effect on learning the skill of landing with Salto backward tucked to stand - knowing the effect of special exercises using tools and their effect on learning the skill of landing with Salto backward tucked to stand on the horizontal bar. **Either the research assumes** the existence of significant differences in the pre- and post-tests in learning the skill of landing with Salto backward tucked to stand on the horizontal bar in favor of the post-test. **The researchers used the experimental** method with a single sample design to suit the research problem, as the research community was determined by (12) players affiliated with the Baghdad Governorate Gymnastics Training Center and affiliated with the Iraqi Central Gymnastics Federation, and their ages ranged between (9-13) years, and they are the junior category. As for the research sample, the researchers chose (8) players, and the research sample was chosen intentionally and (4) players were excluded from the original research community, while the exploratory sample consisted of (3) players from the research community, and the research sample constituted (66%) of the research community. The exploratory sample (25%) of it. The researchers concluded: **Conclusions:** Special exercises affected learning and improving the performance of the skill of landing with Salto backward tucked to stand on the horizontal bar for juniors - The use of special tools also had a not insignificant role in learning and improving the performance of the skill of landing with Salto backward tucked to stand. The researchers recommend using special exercises using tools to teach other basic skills on the horizontal bar and other devices.

**Keywords:** Gymnastics, Horizon, Special exercises.

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## introduction

Special exercises in individual games are an important foundation in learning the basic skills. It is a powerful tool that facilitates athletes to make the most of their physical and motor capabilities. This is done by customizing a multi-exercise educational program, in addition to the fact that there is no single educational model that suits all players, so special exercises are the ideal solution to complete the individual needs of each player. It takes into account his technical level and serves as a road map that guides the athlete towards achieving his goals .

Artistic gymnastics for men is one of the difficult individual games that require many devices and tools to learn its basic skills. Each device has a special feature for learning the basic skills on it, and the pull-up device is the sixth device in it. This device is considered one of the important devices and has very high technical requirements, and its motor skills require movement. Permanent and without stopping. When the player performs, he is not permitted to stop and lean on the bar. In addition to the requirement to leave the device, fly, and return to it again, it is a second requirement. Among the requirements of this device is the landing skill, which is the fourth group, as the player must perform a landing skill in order to obtain the group's requirement and skill. Landing with a ball of air is one of the basic skills for young people. Teaching this skill is very difficult and the player needs physical strength and special motor strength, in addition to psychological factors .**Since** The psychological factor in sports cannot be ignored and constitutes an essential part of an athlete's performance, and is no less important than the physical factor. In the landing skill, the player keeps his head and body away from the bar so that he does not collide with it and get injured. The second is landing and relying on the legs in the final stage, and from here it stands out .

**The importance of research** In developing innovative and unconventional exercises, using training tools, by learning the skill of landing with a back flip on the horizontal bar .**Research problem** The balled-out back flip skill is the basis of landing skills with difficulty (A), which is considered the lowest degree of motor difficulty. If the player does not master the correct movement paths, he cannot perform a more difficult skill because the player is required to have a high level of difficulty in order to obtain the value of the group requirement, which is ( 0.5) Therefore, the researchers used special exercises using training tools to bring the player to a high technical level of performance and reduce future mistakes in developing and performing a skill of higher difficulty. Much research has dealt with special exercises, including a study (Saadi & Lafta, 2023). The researchers concluded that the educational approach using the device The assistant has a major role in helping the student and the teacher reach the speed of learning the skill - 2 - The assistant device provided safety for the students in performing the skill. As for the study (Nasser et al., 2024), the researchers concluded that the special exercises had a clear impact on learning the skill (Healy). (The tools used in learning

the skill and its three stages, the initial, main and final parts, as for the study (Hussein et al., 2022) ((The researchers concluded that special physical exercises similar to skill performance have a significant effect in developing the performance of the Staalder and Endo skills on the pull-up apparatus, and the necessity of using devices and assistive tools in improving the performance of the Staalder and Endo skills on the pull-up apparatus. As for the study (Al-Reda et al., 2022), the researchers concluded that special exercises The stomach has a major role in learning the skill of sliding pronation based on the parallel device, and the group that learned the skill of sliding pronation based on the parallel device is better at learning the skill than the control group .

### **Research objective**

-Preparing exercises using tools to learn the skill of landing with a rounded back air flip to stand on the barbell apparatus

-Knowing the effect of exercises using tools by learning the skill of landing with a rounded back flip to stand on the horizontal bar .

### **Force the search**

There were significant differences in the pre- and post-tests regarding learning the skill of landing with a backflip on the horizontal bar, in favor of the post-test .

### **Method and tools**

The researchers used the experimental approach with a single sample design to suit the research problem, as the research population was defined as (12) players belonging to the training center of the Baghdad Governorate for Gymnastics and affiliated with the Central Iraqi Gymnastics Federation, and their ages range between (9 - 13) years, and they are the junior category. As for the research sample, the researchers chose (8). ) players. The research sample was chosen intentionally, and (4) players were excluded from the original research community, while the exploratory sample consisted of (3) players from the research community, and the research sample constituted (66%) of the research community. And the survey (25%) of it

**Table(1)**

Shows the sample size and percentages

Percentage	number	the society	T
100%	12	Research community	1
66%	8	Search sample	2
25%	3	Exploratory sample	3

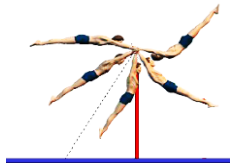



The researchers used research methods (Arabic sources and references, observation and analysis, tests and measurement, the Internet), as well as (tools and devices, including a stopwatch, a photographic camera, a legal pull-up device, a low pull-up device, a rug 1 meter high, and a sponge roller with a diameter of 20 cm) .

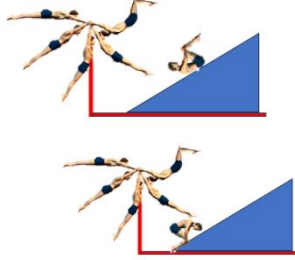

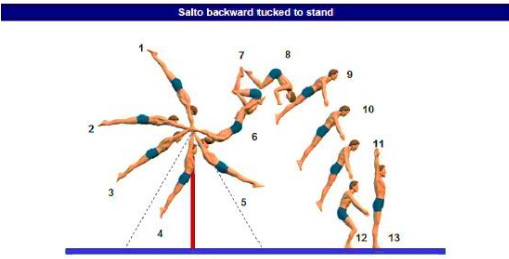
**Exercises**

The researchers did Preparing exercises that would teach the technical performance of the skill under research, taking into account the level of the sample and their training period, as well as the major psychological aspect of the injury that accompanies the process of training this skill, through the use of exercises with special tools, as shown in the following table.

table(2)

**Explains the exercises and how to perform them**

supply	Explanation and details	T
	Correct swing, with emphasis on performing the snatch under the pull-up bar correctly and reaching the insteps of the feet to the highest point above the bar	1
	The same exercise as before, after the snatch phase under the bar, the player bends his legs to prepare for the correct curl position	2
	The same second exercise, emphasizing reaching the athlete's waist and touching it with the sponge roller at the correct height of the body before the part in which the athlete begins to leave the bar .	3
	The same third exercise: When the player reaches the balling stage and leaves the bar and reaches the correct height, he leaves the bar and gets down on the mat with the correct body position.	4

	<p>The same exercise as before, when the athlete reaches the mat and gets down on his back, he curls up and performs a back roll</p>	<p>5</p>
	<p>The same exercise as before. After leaving the bar, the player performs a backflip and lands on the mat</p>	
	<p>The same exercise as before raises the rug, and the player performs the full skill and lands on the legal rug</p>	<p>6</p>

**Field research procedures:**

**Exploratory experiment**

The researchers conducted a reconnaissance experiment on 1/15/2024 to learn about the exercises using special tools. The exploratory experiment was conducted in the Baghdad club hall on (3) players outside the research sample, to initially try the special exercises as well as to find out whether they were suitable for conducting the curriculum on them .

**Pretests**

The pre-tests were conducted after conducting the exploratory experiment, which included a skills test, and were conducted on 1/20/2024. The researchers took into account all the circumstances related to the tests - in terms of time, place, tools used, method of implementation, and the supporting work team in order to work to provide them in the post-tests.

### Skill tests

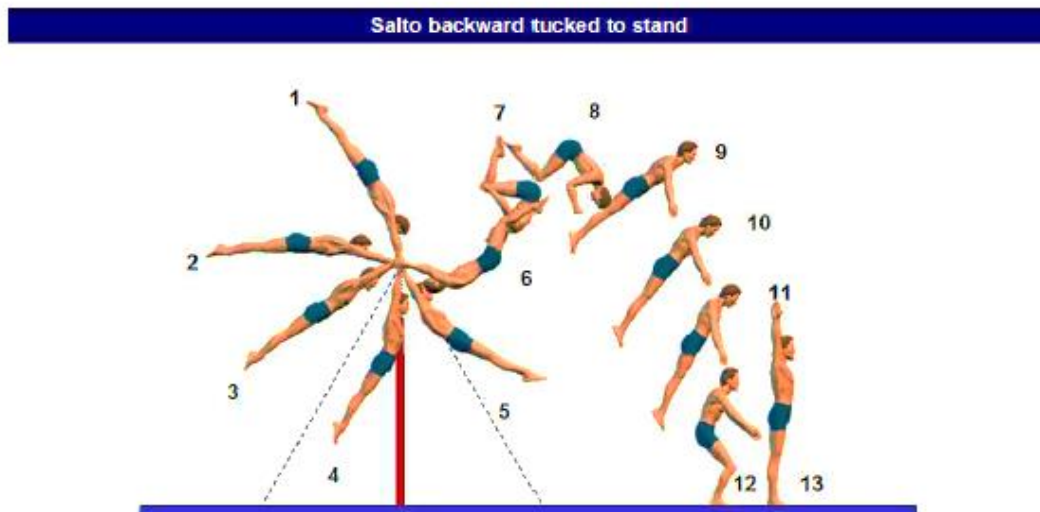
**The purpose of the test** Measuring the performance ability and knowing the final score that the athlete obtains for performing the skill of landing with a balled back air flip to stand up

**Test tools** :The mental health device is legal

**Test evaluation** The test is evaluated according to the technical performance according to what the arbitrators agreed upon by calculating the player's errors, as the highest score he obtains on the device is (10) degrees .

**Test procedures** The athlete takes the prepared position of hanging on the pull-up device, and after performing three swings, he performs the skill of landing with a rounded back air flip, and takes into account the correct form for its performance according to the international law of the game of gymnastics in terms of correct performance, rising, correct rounding, and landing with legs extended and pointed.

**To register** :The evaluation is carried out by four referees and according to an internal evaluation of the referees. The average of the two scores is taken and divided by (2) for the purpose of extracting the player's final score. The performance evaluation is made up of (10) scores according to agreement and as shown in the following figure .



Figure(1) Demonstrating the performance of the skill of landing with a curled up back flip on the barbell device



### Exercise application:

After completing the pre-test, the researchers began applying the training curriculum and based the curriculum on the vocabulary prescribed and developed by the trainer. As for the educational curriculum prepared by the researchers, it was developed by them and aims to raise the skill level of the emerging players. The exercises were applied within the units.

The special training in the main section, which was implemented by the trainer, did not change the established vocabulary, and used special exercises in the curriculum developed for the sample. The experiment lasted for (10) weeks and included (30) educational units at a rate of (3) units per week, and the time was The total educational unit is (145) minutes of device time from the main part of the unit with a time period of (35) minutes for the horizontal bar. He also applied the principle of (repetitions) in one educational unit, and he made sure that the educational curriculum that was developed by him was in accordance with scientific foundations and principles .

Table (3) Shows the experimental design of the research group

Posttest	Pilot program	Pretest	Group
Skill performance test	Use exercises	Skill performance test	Research group

### Post-tests

After completing the components of the educational curriculum for applying the skill on the floor movements mat, the post-test was conducted on 5/11/2024 at the same time and in the same manner as was done in the pre-test procedures, as the researchers prepared the atmosphere and conditions in which the pre-tests were conducted .As explained in the skill test regarding the evaluation of the players, their evaluation was carried out directly by the referees approved by the Central Gymnastics Federation, and the evaluation score was based on a range of (10) degrees for skill .The researchers adopted the arithmetic mean of the two middle scores of the judges 'scores. Divide it into two to extract the player's final score.

**The researchers used the SPSS program for statistical methods** Arithmetic mean, standard deviation, percentage, T-test for related samples



## Results

Table (4) shows the means, deviations, their differences, the calculated (t) value, the level of error, and significance in the pre- and post-tests of the research group.

Skill	N	Inonline ss	Pretest		Posttest		F.S	F. A	T	themsel ves	Connotat ion
			Q	A	Q	A					
	8	of the	1.8 0	.25 0	4.9 1	.29 0	3.11 2	.25 8	34.0 2	.000	Dal

\*Significant at the confidence level (0.05) if the error rate.(0.05) ≥

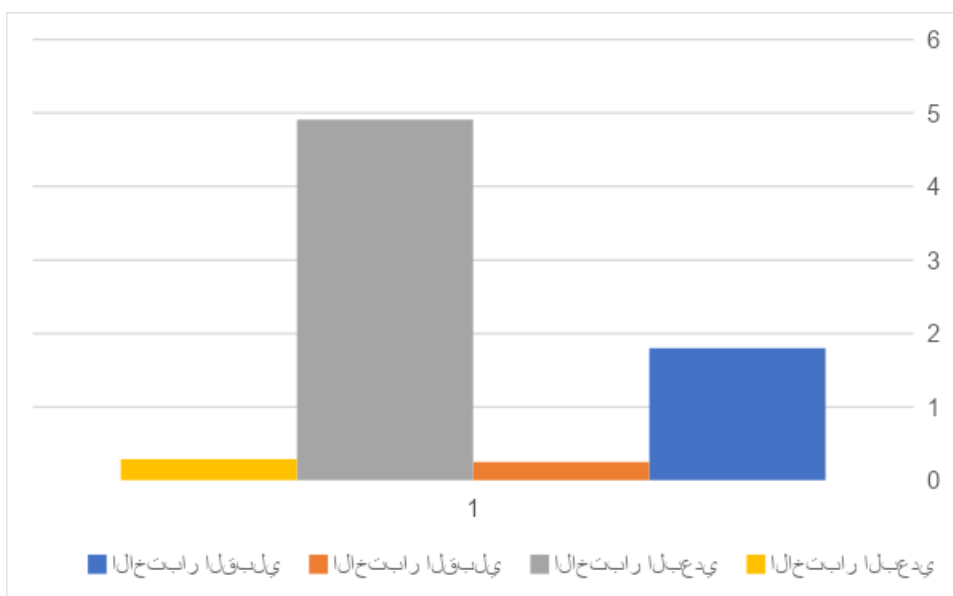


Figure (2) shows the histogram of the means and standard deviations in the pre- and post-tests for the research variables

## Discussion

Through the results presented in Table (4) and Figure (2), which show their arithmetic means, the researchers see that the learning rate among the sample is clear and good because learning this skill is very difficult as it constitutes a psychological barrier for the players because any leaving the bar is accompanied by a bend in the joint of the hands and shoulder, which leads to... To the head hitting the bar, and thus the player's learning of this skill will be delayed. Through the researchers 'use of a good safety group, especially the method used by leaving the bar and descending on the inclined mat, it gave them good repetitions and a good safety method. Also, using a foam roller to reach the hip to the required level before curling up and landing gave

them a path to correct performance. The researchers also believe that the arithmetic means in the first test and the second test there was an improvement in the level of the test score and in favor of the post-test of the sample, and if this indicates anything, the method used by the researchers brought about a change in the curriculum that lasted 30 training units, in addition to the true moral value, which is a very acceptable percentage, which is considered A value that indicates development because it causes a change from the pre-test of the sample, and that exercises have a role in changing the results of the test .

The tools used have a major role in learning, and as (Al-Reda et al., 2022) points out, special exercises to learn any of the skills are equivalent to giving the player an important means of assistance, as the coach must stimulate the work of the muscles working in skill performance through some exercises. On some tools and aids, as well as the correct paths of performance through neuromuscular work, i.e. the correct alignment of the paths of performance. Every skill in its form requires a special device or tool to teach it, as the form of performance is very necessary when using any form of auxiliary tools, in addition to the coach's assistance to the player. The importance of the research lies in the use of special tools (p69 Hussein et al., 2022) . (Repetition also generates knowledge of the requirements for skill performance, as Al-Rida et al., 2021 (p155) indicates .The interest of coaches in preparing players in an integrated manner requires focusing on developing the various motor abilities related to technical performance, and they can be developed as a result of practice, repetition, and the accumulation of motor experiences.

### **Conclusions**

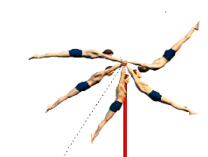

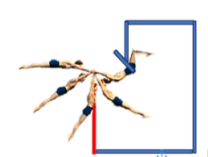
- 1- The special exercises affected learning and improving the performance of the skill of landing with a rounded back air flip to stand on the barbell device .
- 2- The use of special tools also played a not insignificant role in learning and improving the performance of the skill of landing with a rounded back air flip to stand.
- 3- The researchers suggest using special exercises using training tools to teach other basic skills on the pull-up machine and other devices

**Right(1) Build a daily educational unit**

**Group: Research Unit time: (145)**

**minutes**

**Objective: Learn to perform artistically the skill (backward air curl). Number of group members : (8)**

week	Unity	the time		the details	Figure
The first week	The first is Saturday			Correct swing, with emphasis on performing the snatch under the pull-up bar correctly and reaching the highest point above the bar with the balls of the feet	
		Aql a	35 D		
	Second Monday			The same exercise as before, after the snatch phase under the bar, the player bends his legs to prepare for the correct curl position	
		Aql a	35 D		
Three Wednesday			The same second exercise, emphasizing reaching the athlete's waist and touching it with the sponge roller at the correct height of the body before the part in which the athlete begins to leave the bar.		
	Aqla	35D			

\*Repetitions as permitted by the time of the educational unit

## References

- Abbas Abdul-Jabbar Muhammad Saleh, 2023, Psychological toughness and its relationship to throwing 7 m with handball among second-stage students, Department of Physical Education and Sports Sciences/ College of Basic Education, University of Diyala, *Karbala Journal of Physical Education Sciences*, Volume 8, Issue 2,
- Abdulhussein, A. A., Dheyab, A. S., Abdulkareem, O. W., mutar Albadri, E. H., Hammood, A. H., Musa, M. F. A. H., Kadhim, M. J., & AbdulMaged, T. S. (2024). AN ELECTRONIC SYSTEM ACCORDING TO THE COOPERATIVE METHOD AND ITS IMPACT ON DEFENSIVE MOVEMENTS IN YOUTH BASKETBALL. *International Development Planning Review*, 23(1), 1253–1266.
- Adnan, Y., Atiyah, H., & Neamah, I. H. (2024). THE EFFECT OF THE IMPERATIVE METHOD IN TEACHING PHYSICAL EDUCATION CURRICULA FOR THE PRIMARY STAGE. *International Development Planning Review*, 23(1), 1337–1353.
- Ahmed Amer Abdul Hussein, M. D. A. S. S. (2020). he use of the electronic system with special exercises and its impact in the development of shooting on the basketball for young people. *Journal Mustansiriyah of Sports Science*, 2(4), 24–29.
- Ali, Y. S., Abdulhussein, A. A., & Jassim, A. H. (2023). EMPLOYMENT OF RESISTANCE EXERCISE IN ACCORDANCE TO VARIABLE BIOMECHANICAL MARKERS TO DEVELOP THE STRENGTH AND THE SPEED OF ARM MUSCLES OF WATER POLO PLAYERS. *International Development Planning Review*, 22(2), 589–605.
- Al-Rida, M. D. n. E. A., Lafta, M. M. A. A., & Hamza, M. D. C. S. (2021). The effect of special exercises on some physical abilities and learning the skill of landing with a balled back air flip on the parallel apparatus in artistic gymnastics for juniors. *Sports Science Journal*, 13(48), 153–170.
- Awad, M. K., Qasim, K. J., & Ali, S. H. (2024). Using an educational method according to special exercises to perform the skill of bow and develop flexibility for cub wrestlers in Iraq. *Eximia*, 13, 38–50.
- Easa, F. A. W., Shihab, G. M., & Kahdim, M. J. (2022). the Effect of Training Network Training in Two Ways, High Interval Training and Repetition To Develop Speed Endurance Adapt Heart Rate and Achieve 5000 Meters Youth. *Revista Iberoamericana de Psicología Del Ejercicio y El Deporte*, 17(4), 239–241.
- HalahAtiyah, M., Alhamayd, Q. A., QasimKhalaf, S., AmerAbdulhussein, A., JawadKadhim, M., KohChoonLian, D., HashimHammood, A., & YahyaFaris Mohsen, G. (2024). EXTRAPOLATION OF THE MACHINE AND ITS EFFICIENCY IN DEVELOPING THE SKILL PERFORMANCE AND ACCURACY OF DRIBBLING IN YOUTH FOOTBALL. *International Development Planning Review*, 23(1), 1037–1047.
- Hammood, A. H., Qasim, K. J., Atiyah, H., Abdulhussein, A. A., FARAJ, L. F., SALAH, A., Munshed, A. H., AbdulMaged, T. S., Hasib, N. R., & Fadhil, A.

- H. (2024). STUDYING THE REALITY OF ADMINISTRATIVE PROBLEMS FOR MEMBERS OF THE ADMINISTRATIVE BODIES OF FIRST-CLASS FOOTBALL CLUBS FROM THE PLAYERS' POINT OF VIEW. *Proximus Journal of Sports Science and Physical Education*, 1(5), 23–34.
- Hussein, M. D. and. S. C., gesture, m. M. A. A. A., & Hamza, A. M. D. C. S. (2022). The use of special devices and tools and their impact on developing some stability skills on the ring's apparatus for Artistic gymnastics for men. *Wasit Journal Of Sports Sciences*, 11(iv).
- Kadhim, M. J. (2023). Examining The Relationship Between Social Classes And The Culture Of Poverty: A Case Study. *International Journal of Social Trends*, 1(1), 23–27.
- Kadhim, M. J. (2024). Social Networks' Place in Contemporary Political Movements. *International Journal of Social Trends*, 2(2), 51–59.
- Kamal Abdel Hamid, Muhammad Sobhi Hassanein, Measurement in Handball: 1980, Cairo, Dar Al-Fikr Al-Arabi.
- Kazar, F. H., & Kazim, M. J. (2020). THE EFFECT OF AN ACCELERATED REHABILITATION METHOD BY USING THE AQUEOUS MEDIUM TO REHABILITATE WORKING MUSCLES ON THE KNEE JOINT AS A RESULT OF INJURY TO THE ATHLETIC CRUCIATE LIGAMENT. *International Journal of Research in Social Sciences and Humanities*, 10(2), 331–335. <https://doi.org/10.37648/ijrssh.v10i02.031>
- Mohsen, A. S., SabreenHamedShehab, A. J., & SakranHamza, J. (2024). DESIGNING AN AUXILIARY DEVICE AND ITS IMPACT ON LEARNING THE SKILLS OF ANGULAR SUPPORT AND OPEN SUPPORT FOR HANDSTAND PUSH-UPS ON THE PARALLEL APPARATUS IN ARTISTIC GYMNASTICS FOR BUDS. *International Development Planning Review*, 23(1), 273–285.
- Muhammad Hamza, & Jamal Sakran. (2023). The motivational characteristic and its relationship to the performance of the court defense skill among Baghdad University volleyball team players. *Wasit Journal of Mathematical Sciences*, 17(4), 367-378.
- Muhammad Sobhi Hassanein, Ahmed Kasra Maani: 1998, Encyclopedia of Applied Sports Training, 1st edition, Cairo Book Center for Publishing.
- Nasser, K. H., Manna, Th. T., & Hamza, J. S. (2024). The effect of special exercises using training tools in learning the skill Healy to upper arm hang on the parallel apparatus for men. *Al-Mustansiriya Journal of Sports Sciences*, 1(5), 17–29.
- Saadi, J. S. H.-P. A., & Lafta, M.-P. A. A. (2023). The effect of special exercises with training tools in teaching the skill of circular sloping on the parallel apparatus in men's artistic gymnastics. *Iraqi Journal of Humanitarian, Social and Scientific Research*, 3(8S).
- Salih, I. H., Yaseen, A. M., Naseer, K. J., Attieh, A., & Kadhim, M. J. (2024). THE IMPACT OF COMPETITIVE SPEED EXERCISES ON JUNIOR BOXERS' EFFECTIVENESS OF SKILL PERFORMANCE AND COUNTERATTACK SPEED. *International Development Planning Review*, 23(1), 149–162.