



Research on specific exercises to improve freestyle swimming performance for talented swimmers aged 11-12 in My Tho City, Tien Giang Province, Vietnam

Nguyen Quang Son¹, Pham Thai Vinh^{2*}, Nguyen Thi Kim Chi³, Nguyen Quang Sang⁴

¹ Director, Physical Education Center, UEH University, Ho Chi Minh City, Vietnam

² Lecturer, Faculty of Ball Sports and Recreational Sports, Ho Chi Minh City University of Physical Education and Sports, Vietnam

³ Deputy Director, Department of Culture, Sports and Tourism of Dong Thap Province, Vietnam

⁴ Specialist, Department of Science, Technology and International Cooperation, Ho Chi Minh City University of Physical Education and Sports, Vietnam

Abstract

The freestyle performance of young athletes depends on the coordination of many factors such as technique, strength, speed, specialized endurance, starts, and turns. The selection of a training regimen that aligns with the age characteristics and training conditions is crucial for improving performance. The research aims to select and evaluate the effectiveness of specific exercises to improve freestyle swimming performance for talented athletes aged 11–12 in My Tho city, Tien Giang province, Vietnam. The research uses document analysis, interviews, pedagogical testing, pedagogical experimentation, and statistical methods. The interview subjects included 30 experts, coaches, and specialists, the experiment was conducted on 20 talented athletes aged 11–12, consisting of 10 men and 10 women. The freestyle swimming performances of 50 m, 100 m, and 200 m were evaluated before and after the experiment. The research selected 18 exercises classified into the categories of land exercises, water exercises, starts, turns – finishes, and physical conditioning. After the experiment, the 50 m, 100 m, and 200 m freestyle performances of both men and women improved significantly ($p < 0,01$). For males, the growth rates were 3.41%, 2.96%, and 1.78%, with an average of 2.72%, for females, they were 2.26%, 3.15%, and 1.71%, with an average of 2.37%. Conclusion: The system of 18 selected exercises is appropriate and effective in improving the freestyle swimming performance of 50 m, 100 m, and 200 m for talented athletes aged 11–12 in My Tho City.

Keywords: Exercise, freestyle swimming, swimming performance, talented athlete, young athlete, My Tho

Introduction

Freestyle, in modern competitions, is mainly performed using the front crawl technique, which is the fastest swimming style in competitive swimming. The performance in freestyle swimming is the result of a complex interaction between technique, physical fitness, energy supply capacity, and the ability to maintain effective movement throughout the distance. According to Maglischo, swimming efficiency significantly depends on the ability to generate propulsion with the arms and legs, reduce drag, maintain a proper body position, coordinate breathing, and optimize the relationship between stroke frequency and stroke length^[1]. Therefore, improving freestyle swimming performance is not only based on increasing training volume but also requires selecting exercises that effectively target the factors determining performance.

From a physiological perspective, the energy requirements of freestyle swimming vary significantly with distance. Short and medium-distance events require a combination of anaerobic power, aerobic capacity, strength, and the ability to maintain speed. The overview by Aspenes and Karlsen shows that swimming training programs can improve both aerobic and anaerobic capacity as well as professional performance, but the effectiveness depends on the characteristics of the subjects, intensity, volume, and training organization methods^[2]. Among Vietnamese athletes, Do T. T. has also pointed out the significance of simultaneously developing aerobic and anaerobic capacities for speed swimmers^[9], while Nguyen K. O. continues to develop a system of methods and exercises to enhance these

two components of capacity for young athletes aged 12–14^[10]. The above results indicate that the selection of exercises for young athletes should be placed in the context of the technical requirements and the energy supply characteristics of the competition distance.

Recent studies continue to clarify the role of strength in freestyle swimming performance. Wirth and colleagues argue that land-based strength training can support the development of force production, power, starts, and turns, thereby contributing to improved swimming performance^[3]. The systematic review by Fone and van den Tillaar also shows that various forms of strength training, including resistance training, plyometric, and core training, have a positive impact on the performance of competitive swimmers, although the effectiveness depends on age, level, and program structure^[7]. In particular, the meta-analysis by Jin and colleagues on studies of front crawl swimming identified that strength training can improve performance in distances of 25–200 m; this effect is related to an increase in force production and the adjustment of swimming cycle parameters^[4].

For young athletes, core strength is increasingly being regarded as an important component of swimming performance. Liu and colleagues showed that core stability training has a positive impact on the performance of young swimmers^[8]. This mechanism can be explained through the ability to maintain a streamlined posture, limit unnecessary body oscillations, support trunk rotation, and effectively transmit force between the upper and lower limbs. Additionally, Gao and colleagues emphasize that the

performance of the crawl stroke in adolescents does not depend on a single strength index but may be related to the coordinated configuration of multiple land-based strength components^[6]. This suggests that the training program for young athletes should be designed in a comprehensive manner rather than focusing on developing a single quality. The difference in physiological requirements between distances is also an issue that needs to be considered when selecting exercises. Strzala and colleagues' study on adolescent swimmers showed that oxygen uptake kinetics play different roles in the performance of 100 m and 800 m freestyle swimming^[5]. This result reinforces the opinion that at different distances, the proportion of speed, speed endurance, anaerobic power, and aerobic capacity also varies. Therefore, for talented athletes aged 11–12, the training system needs to both support the development of speed and specialized strength, and create an appropriate endurance foundation to maintain technique and velocity. In Vietnam, research on training young swimmers has been approached from various angles. The works of Chung^[20], Le^[19], and Vu^[22] focus on establishing criteria for evaluating the training level and physical abilities of young athletes, while Nguyen Thi My Linh^[19], Vu Cong Truong^[24], and Pham Thi Ngoc H^[15] focus on developing or selecting a system of general and specialized physical training exercises. For young athletes, Le Van Chi^[13], Nguyen Nhat Huy Hoang^[17], Ngu Chi Thanh^[21], and Nguyen Viet Trung^[23] have provided evidence of the development of physical fitness, endurance, and technique through the training process. Specifically for freestyle swimming, recent domestic studies have gradually shifted toward a specialized approach based on distance and physical attributes. Huynh T. H. researched the improvement of specialized physical training exercises for male 100 m freestyle swimmers aged 11–13 in An Giang Province^[11]; Vo T. P. evaluated the effectiveness of speed endurance training exercises for national young male 200 m freestyle swimmers^[12]; Nguyen T. N. H. studied physical training exercises for male 50 m freestyle swimmers aged 12–14 in Long An Province^[16]. Phan T. H. also developed a system of exercises aimed at improving the 100 m performance for athletes at the National Sports Training Center in Da Nang^[14]. These works show an increasingly clear trend in customizing exercises according to the distance, level, and age group of the athletes. However, most domestic studies focus on a single component such as specialized physical fitness, speed, or speed endurance, or they study different age groups and regions. Meanwhile, for talented athletes aged 11–12, freestyle performance needs to be considered based on the synchronized impact of multiple components: hand and foot technique, movement-breathing coordination, force generation ability, speed, endurance, supporting strength, starts, and turns. This is an important stage to consolidate technique and build a physical foundation for the next specialization process. In the city of My Tho, Do Tang Truong has researched the application of exercises to improve breaststroke and freestyle performance for talented athletes aged 11-12^[25]. However, when analyzing freestyle swimming according to the specific characteristics of the front crawl, it is necessary to clarify the system of exercises that aligns with the force generation mechanism, speed maintenance, and specific physical requirements of this swimming style, while also

directly evaluating the effectiveness through freestyle performance indicators. This approach not only provides a foundation for specialized training organization but also offers practical evidence suitable for the training conditions of young athletes in the local area.

Based on the above premises, the research was conducted to select and evaluate the effectiveness of several exercises to improve freestyle swimming performance for talented swimmers aged 11-12 in My Tho city, Tien Giang province, Vietnam.

Research materials and methods

Methods

Literature review method: This method involves finding and reading documents to help synthesize related research works, form the theoretical basis, and select appropriate research methods to address research objectives. The research materials include not only the class study materials but also reference studies, additional research from specialized books, and scientific journals related to swimming and freestyle swimming.

Interview method: This method is used by indirectly interviewing experts, swimming coaches, and those with experience in teaching and coaching swimming through questionnaire-based interviews to select tests. The interview subjects selected included 30 experts, coaches, referees, and swimming managers in Ho Chi Minh City and My Tho City. Through the opinions of the interviewed experts and coaches, we identified and selected exercises and evaluation tests that align with the research direction. of the research topic. The interview results aim to select some exercises to improve freestyle swimming performance for talented swimmers aged 11-12 in My Tho City, Tien Giang Province, Vietnam.

Pedagogical testing methods

In this study, we use the pedagogical testing method to assess the freestyle swimming performance over distances of 50m, 100m, and 200m on the research subjects in the initial and post-experimental phases.

Pedagogical experimental method

Through this method, the research will evaluate the effectiveness of freestyle swimming performance enhancement exercises for the research subjects. In the research experiment, a sequential experimental design was chosen for a sample group of 20 athletes (10 male, 10 female) who are talented swimmers aged 11-12 from My Tho City, Tien Giang Province, Vietnam.

Statistical Methods

The study uses this method to analyze and process the data collected during the research. The study uses SPSS 22.0 software to assist in processing the data collected during the research.

Participants

- **Interview subjects:** 30 experts, swimming coaches, individuals with experience in teaching and coaching swimming in Tien Giang province and Ho Chi Minh City.

- **Survey subjects:** 20 talented swimmers aged 11 – 12 (10 males, 10 females) in My Tho City, Tien Giang Province, Vietnam.

Results

1. Selection of exercises to improve freestyle swimming performance for talented swimmers aged 11–12 in My Tho City, Tien Giang Province.

To select exercises to improve freestyle swimming performance for talented swimmers aged 11-12 in My Tho City, Tien Giang Province, the research proceeded with the following steps:

- **Step 1:** The basis for selecting certain exercises.
- **Step 2:** Compile advanced freestyle swimming exercises from various sources, including research works by both domestic and international authors.
- **Step 3:** Interview experts, coaches, and specialists.

1.1 The basis for selecting certain exercises

In order to select methods to improve freestyle swimming performance for talented swimmers aged 11-12 in My Tho city, Tien Giang province. First of all, the selection of exercises is based on training principles, psychological and physiological foundations, and the goals and requirements for training athletes.

Based on that, we initially selected principles to choose exercises to improve freestyle swimming performance for talented swimmers aged 11-12 in My Tho city, Tien Giang province, specifically:

- The physical development exercises must be suitable for the age and characteristics of the training program for the team (at the age of 11 - 12).
- The selected exercises must focus on improving the performance of the freestyle swimming team.
- The selected exercises must be appropriate for the level and psychological characteristics of the research subjects as well as the training process.
- The selected exercises must be suitable for the school's facilities and equipment.
- The selected exercises must be appropriate for the level of the research subjects as well as for each training stage.

1.2 Summarizing advanced freestyle swimming performance exercises from various sources, including research works by both domestic and international authors

A study synthesizing some advanced freestyle swimming performance enhancement exercises for the research subjects from the works of both domestic and international authors, specifically: Maglischo EW (2003) ^[1], Aspenes ST, et.al. (2012) ^[2], Wirth K, et.al (2022) ^[3], Jin G, et.al (2024) ^[4], Fone L, et.al. (2022) ^[7], Liu S, et.al ^[8], Do TT (2008) ^[9], Huynh TH (2022) ^[11], Pham T. N. H. (2024) ^[15], Nguyen T. N. H. (2025) ^[16], Vu C. T. (2015) ^[24], Do T. T. (2017) ^[25].

Research conducted both domestically and internationally shows that the trend in research on exercises to improve freestyle swimming performance has shifted from general

physical fitness development to specialized and multi-component training. Modern studies focus on the combination of land strength training, water resistance, core stability, speed, and speed endurance with specialized technical training. Fone and van den Tillaar showed that a program combining swimming and strength generally yields better results than just swimming training, while Jin and colleagues confirmed that resistance training can improve front crawl performance from 25 to 200 meters. For young athletes, the results of Gao et al. show that freestyle performance is influenced by the coordination of various strength components, while Liu et al. noted the benefits of core stability training for young swimmers' performance. In Vietnam, research has focused on specialized physical fitness, speed, speed endurance, and aerobic-anaerobic capacity across various age groups; in particular, the study by Võ Tấn Phát and Nguyễn Hoàng Minh selected 35 exercises to develop endurance for young male 200m freestyle swimmers and recorded significant experimental results. These results serve as the basis for selecting a system of exercises that integrate technique, strength, speed, endurance, start, and turn skills, suitable for talented 11-12-year-old freestyle swimmers in My Tho city.

Based on the characteristics of physical and physiological development by age, the purpose and objectives of the training program. Through the process of consulting various exercises from multiple authors, the opinions of experienced teachers, based on the actual situation in Tien Giang, and observing the training practices of coaches. The study briefly selected exercises suitable for the training conditions and available equipment to conduct a comprehensive survey of experts and coaches. The exercises include: 05 land exercises, 09 water exercises, 03 starting exercises, 04 turning exercises, finishing exercises, and 13 physical fitness exercises.

All the above exercises have been published in scientific documents and used in training processes, ensuring reliability and informativeness, and can be used in training swimming athletes.

1.2 Interview experts, coaches, and specialists

From the total number of exercises compiled in step 1, the research proceeded to develop an interview questionnaire to gather opinions from experts and coaches. The interview form was developed according to three levels:

- **Frequently used:** 3 points
- **Occasionally used:** 2 points
- **Not used:** 1 point

However, to ensure objectivity and avoid personal prejudice in selecting exercises, each interview form, in addition to the selected criteria, also includes blank spaces for the interviewees to add exercises that they consider important and necessary in the training process to improve freestyle swimming performance for talented swimmers aged 11-12 in My Tho city.

The results of the interviews on advanced freestyle swimming performance exercises for the research subjects in the first and second rounds are presented in Table 1.

Table 1: Results of the interview selecting exercises to improve freestyle swimming performance for talented swimmers aged 11-12 in My Tho City, Tien Giang Province, Vietnam

	Exercise	Results of the first round (n=26)					Results of second round (n=25)					Average percentage rate of 2 rounds
		Priority level			Total score	%	Priority level			Total score	%	
		Frequently (3 points)	Occasionally (2 points)	Not used (1 point)			Frequently (3 points)	Occasionally (2 points)	Not used (1 point)			
A	Land exercise											
1	Stand in place, do a 30-second late arm fan. (2 - 4 times)	23	2	1	74	95	20	3	2	68	91	93
2	Stand in place, do a 30-second early arm fan. (2 - 4 times)	2	10	14	40	51	2	12	11	41	55	53
3	Sit back and kick legs back for 30 seconds. (2 - 4 times)	25	0	1	76	97	23	1	1	72	96	97
4	Lie face down, freestyle kick for 30 seconds (2 - 4 times)	13	9	4	61	78	16	8	1	65	87	82
5	Free arm fan with resistance band for 30 seconds (2 - 4 times)	24	1	1	75	96	20	3	2	68	91	93
B	Underwater exercise											
1	Free leg swings with arms down by the sides, combined with leaning and breathing (2 - 3 minutes)	3	9	14	41	53	2	12	11	41	55	54
2	Free leg swings with both arms extended straight in front (2 - 3 minutes)	25	0	1	76	97	23	1	1	72	96	97
3	Free leg swings with coordinated breathing (one arm extended forward, one arm extended along the body (2 - 3 minutes)	24	1	1	75	96	22	2	1	71	95	95
4	Swing arms forward underwater with a two-sided breathing technique (2 - 3 minutes).	22	2	2	72	92	21	2	2	69	92	92
5	Two-arm freestyle (late coordination) (2 - 3 minutes)	20	1	5	67	86	21	1	3	68	91	88
6	Coordinate one-arm paddling motion with two-leg freestyle swimming (2 - 3 minutes)	19	6	1	70	90	22	2	1	71	95	92
7	Complete freestyle swimming coordination (late coordination) (3 - 4 minutes)	24	0	2	74	95	23	1	1	72	96	95
8	Freestyle swimming with one arm continuously (2 - 3 minutes)	5	12	9	48	62	6	14	5	51	68	65
9	Freestyle swimming with both arms continuously (2 - 3 minutes)	7	12	7	52	67	5	13	7	48	64	65
C	Starting exercise											
1	Start from the block combined with freestyle swimming (2 - 4 times)	15	6	5	62	79	15	7	3	62	83	81
2	Water jet start combined with freestyle swimming (2-4 repetitions)	2	10	14	40	51	2	12	11	41	55	53
3	The action after the start and the first swimming cycle in freestyle swimming Freestyle (2 - 4 times)	22	1	3	71	91	23	1	1	72	96	94
D	Circuit training, finish line											
1	Glide and perform freestyle flip turns (2-4 times)	2	10	14	40	51	22	2	1	71	95	73
2	Swim and turn (2-4 times)	6	15	5	53	68	7	15	3	54	72	70
3	Somersault turn combined with freestyle swimming (2-4 times)	20	1	5	67	86	21	1	3	68	91	88
4	The movement following the turn and the first stroke cycle in freestyle (2-4 cycles).	19	6	1	70	90	22	2	1	71	95	92

The results presented in Table 1 indicate that exercises rated highly during the first interview also received high ratings during the second. Conversely, exercises rated poorly in the first interview failed to gain approval in the second. Observations from Table 1 reveal a strong consensus among experts regarding the exercises designed to enhance performance in the two swimming styles.

Based on the interview results, we selected exercises with an average score of over 80% across both rounds; this resulted in the selection of 18 exercises for use in training 11–12-year-old swimmers in My Tho City, comprising the following:

Land exercises

- Stand in place, do a 30-second late arm fan. (2 - 4 times)
- Sit back and kick legs back for 30 seconds. (2 - 4 times)
- Free arm fan with resistance band for 30 seconds (2 - 4 times)

Underwater exercises

- Free leg swings with both arms extended straight in front (2 - 3 minutes)
- Free leg swings with coordinated breathing (one arm extended forward, one arm extended along the body (2 - 3 minutes)
- Swing arms forward underwater with a two-sided breathing technique (2 - 3 minutes).
- Two-arm freestyle (late coordination) (2 - 3 minutes)
- Coordinate one-arm paddling motion with two-leg freestyle swimming (2 - 3 minutes)
- Complete freestyle swimming coordination (late coordination) (3 - 4 minutes)

Starting exercises

- Start from the block combined with freestyle swimming (2 - 4 times)
- The action after the start and the first swimming cycle in freestyle swimming (2 - 4 times)

Circuit training, finish-line exercises

- Somersault turn combined with freestyle swimming (2–4 times)
- The movement following the turn and the first stroke cycle in freestyle (2–4 cycles).

Physical conditioning exercises

- Push-ups (1–2 sets of 5 reps)
- High-knee running in place (1–2 sets of 10 seconds)
- Endurance jump rope (1–2 sets of 45 seconds to 1 minute)
- Running laps around the pool (2–3 laps)
- Swimming with paddles (2–4 laps of 25m)

Based on the selected exercises mentioned above, we find that these are characteristic drills commonly used in the training of competitive swimmers and are relatively well-suited to the practical conditions in My Tho City.

2. Evaluating the effectiveness of the exercises

The study evaluates experimental results based on improvements in freestyle swimming performance among talented swimmers aged 11–12 in My Tho City, Tien Giang Province, Vietnam. The results regarding the performance gains of these talented swimmers are presented in Table 2.

Table 2: The growth of freestyle swimming performance for talented swimmers aged 11-12 in My Tho City, Tien Giang Province, after the experiment

	TEST	Before experiment		After the experiment				
			S		S		t	P
MALE	Freestyle swimming 50m (s)	42.21	0.91	40.79	0.96	3.41	11.77	<0.01
	Freestyle swimming 100m (s)	85.88	2.06	83.37	1.66	2.96	11.89	<0.01
	Freestyle swimming 200m (s)	175.08	3.82	171.99	3.56	1.78	12.75	<0.01
						2.72		
FEMALE	Freestyle swimming 50m (s)	44.40	1.78	43.41	1.88	2.26	8.76	<0.01
	Freestyle swimming 100m (s)	91.13	2.89	88.31	2.86	3.15	20.42	<0.01
	Freestyle swimming 200m (s)	184.66	5.99	181.53	5.55	1.71	11.81	<0.01
						2.37		

Df = 9, $t_{05} = 2.26$, $t_{01} = 3.25$

The results in Table 2 show that after the experiment, the performance in all tests assessing the freestyle swimming performance of the research subjects significantly increased at a probability threshold of $P < 0.01$, specifically as follows:

bout males:

- The 50m freestyle performance (s) of the male research subjects after the experiment showed growth, with an average growth rate of 3.41%, and the growth is statistically significant because $t_{\text{test}} = 11.77 > t_{01} = 3.25$, $P < 0.01$.
- The 100m freestyle performance (s) of the male research subjects after the experiment showed growth, with an average growth rate of 2.96%, and the growth is statistically significant because $t_{\text{test}} = 11.89 > t_{01} = 3.25$, $P < 0.01$.

- The 200m freestyle performance (s) of the male research subjects after the experiment showed growth, with an average growth rate of 1.78%, and the growth is statistically significant because $t_{\text{test}} = 12.75 > t_{01} = 3.25$, $P < 0.01$.

Through the above analysis, it is shown that after the experiment, the performance of all tests evaluating the freestyle swimming performance of the male research subjects significantly increased at a probability threshold of $P < 0.01$. The average growth rate is 2.72%, with the 50 m freestyle test showing the highest average growth rate of 3.41% and the 200 m freestyle test showing the lowest average growth rate of 1.78%.

About females

- The 50m freestyle performance (s) of the female research subjects after the experiment showed growth, with an average growth rate of 2.26%, and the growth is statistically significant because $t_{\text{test}} = 8.76 > t_{01} = 3.25$, $P < 0.01$.
- The 100m freestyle performance (s) of the female research subjects after the experiment showed growth, with an average growth rate of 3.15%, and the growth is statistically significant because $t_{\text{test}} = 20.42 > t_{01} = 3.25$, $P < 0.01$.
- The 200m freestyle performance (s) of the female research subjects after the experiment showed growth, with an average growth rate of 1.71%, and the growth is statistically significant because $t_{\text{test}} = 11.81 > t_{01} = 3.25$, $P < 0.01$.

Through the above analysis, it is shown that after the experiment, the performance of all tests evaluating the freestyle swimming performance of the research subjects significantly increased at a probability threshold of $P < 0.01$. The average growth rate is 2.37%, with the 100m freestyle test showing the highest average growth rate of 3.15% and the 200m freestyle test showing the lowest average growth rate of 1.71%.

Discussion

The study has selected 18 exercises to improve freestyle swimming performance for talented athletes aged 11–12 in My Tho city, including land exercises, underwater exercises, starts, turns – finishes, and physical conditioning. The exercises were selected through a review of literature, training practices, and two rounds of expert interviews, with an average selection rate of over 80%. This structure shows that the exercise system is built in a relatively comprehensive manner, simultaneously impacting technique, strength, speed, and competition skills.

Exercises such as arm movements with resistance bands, leg kicks in different positions, breathing coordination, one-arm movements combined with leg kicks, and complete coordination are suitable for the characteristics of the freestyle swimming technique. According to Maglischo, the effectiveness of freestyle swimming largely depends on the ability to generate propulsion, reduce drag, maintain body posture, and coordinate the arms, legs, and breathing effectively. Therefore, combining partial exercises with complete coordination exercises is significant in improving technical quality and force efficiency.

One noteworthy point is that the program combines underwater technical exercises with land-based strength support exercises. Resistance band exercises, push-ups, high-knee runs, jump rope, and swimming with a small kickboard can contribute to developing and maintaining force in specialized movements. This result is consistent with Wirth et al., Fone, and van den Tillaar, who argue that strength training combined with specialized underwater training can improve swimming performance. Jin and colleagues also showed that resistance training has a positive impact on crawl swimming performance at distances of 25–200 m. This reinforces the scientific basis for using strength and resistance exercises in training young athletes.

In addition, the study also included start exercises, post-start movements, the santo turn, and the first swimming cycle

after the turn in the program. This is an appropriate approach because freestyle performance not only depends on mid-race swimming speed but is also influenced by the effectiveness of the start, wall push-off, glide, and transition after the turn.

The effectiveness of the exercise system was clearly demonstrated after the experiment. In males, the performance in the 50 m, 100 m, and 200 m improved by 3.41%, 2.96%, and 1.78%, respectively, with an average growth rate of 2.72%. In women, the corresponding increases are 2.26%, 3.15%, and 1.71%, with an average of 2.37%. All differences are statistically significant with $p < 0.01$, indicating that the exercise system has a positive impact on the performance of both genders.

The growth rate at 50 m and 100 m is generally higher than at 200 m. This may be related to the training system focusing quite a bit on technique, strength, speed, starts, and turns – factors that clearly affect short and middle distances. Meanwhile, the performance in the 200 m also depends more on specialized endurance and the ability to maintain technique under fatigue. This result aligns with the views of Aspenes and Karlsen regarding the differences in energy requirements and training structures between swimming distances.

The novelty of the research does not lie in creating entirely new exercises, as most of the exercises are inherited from literature and training practices. The new value mainly lies in the selection, systematization, and specialization of 18 exercises for talented freestyle swimmers aged 11–12 in My Tho city, while also verifying their effectiveness over three distances: 50 m, 100 m, and 200 m for both males and females. The results show that the exercise system is appropriate and has practical application value in training young swimmers in the locality.

Conclusions

The study selected 18 appropriate exercises to improve freestyle swimming performance for talented athletes aged 11–12 in My Tho city. After the experiment, the performance in the 50 m, 100 m, and 200 m events for both males and females improved significantly ($p < 0.01$); the average growth rate reached 2.72% for males and 2.37% for females. The results confirm that the selected training regimen is effective and suitable for the practical training of young athletes in My Tho City.

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