



**SELECTING SOME MEASURES TO IMPROVE THE QUALITY
OF LEARNING THE OPTIONAL SPORT BADMINTON
FOR FEMALE STUDENTS AT TAN TRAO UNIVERSITY**

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<https://doi.org/10.51453/2354-1431/2024/1134>

Article info

Received: 17/3/2024

Revised: 25/5/2024

Accepted: 26/6/2024

Keywords:

Exercise; Measure;

General fitness;

Professional physical

fitness; Physical exercises;

Technical exercises;

Competition exercises;

Badminton, Tan Trao

University.

Abstract:

Based on the research, the current status of studying the optional sport Badminton of female students at Tan Trao University has been evaluated and 05 measures and 5 test contents suitable for the subject modules have been selected. badminton for students in general and female students at Tan Trao University in particular, in order to improve the quality of learning the optional sport Badminton for female students. These exercises are confirmed to be effective in practice for female students studying elective badminton at Tan Trao University.



LỰA CHỌN MỘT SỐ BIỆN PHÁP NHẪM NÂNG CAO CHẤT LƯỢNG HỌC TẬP MÔN THỂ THAO TỰ CHỌN CẦU LÔNG CHO NỮ SINH VIÊN TRƯỜNG ĐẠI HỌC TÂN TRÀO

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<https://doi.org/10.51453/2354-1431/2024/1134>

Thông tin bài viết

Ngày nhận bài: 17/3/2024

Ngày sửa bài: 25/5/2024

Ngày duyệt đăng: 26/6/2024

Từ khóa:

Bài tập; Biện pháp; Thể lực chung; Thể lực chuyên môn; Bài tập thể lực; Bài tập kỹ thuật; Bài tập thi đấu; Cầu lông, Đại học Tân Trào

Tóm tắt

Trên cơ sở nghiên cứu đã đánh giá được thực trạng việc học môn thể thao tự chọn Cầu lông của nữ sinh viên trường Đại học Tân Trào và lựa chọn được 05 biện pháp, 5 nội dung thi kiểm tra phù hợp với học phần môn học cầu lông cho sinh viên nói chung và nữ sinh viên trường Đại học Tân Trào nói riêng, nhằm nâng cao chất lượng học môn thể thao tự chọn Cầu lông cho nữ sinh viên. Các bài tập này được khẳng định tính hiệu quả trong thực tiễn áp dụng cho nữ sinh viên học tự chọn môn cầu lông trường Đại học Tân Trào.

1. Introduction

Badminton is a popular sport that combines artistic factors, teamwork, and individual willpower, so it appeals to people from all classes. Training in badminton can improve physical qualities while also demanding a high level of functional ability from the body's organs, thereby making various physical qualities better.

In recent years, the optional Badminton program developed by Tan Trao University has faced several shortcomings in its content, teaching methods, and implementation. The

program's effectiveness has not been high and not suitable for the training characteristics of students, resulting in a lack of engagement and participation in badminton activities in the university. It is essential to continuously develop the program, innovate teaching methods, and meet the necessary conditions based on the psychological characteristics, age, gender, and physical fitness of students, aiming to improve the quality of physical education, particularly in badminton. However, there are limitations in finding effective measures to innovate the content,

and teaching methods as well as improve the teaching and learning quality of Badminton at Tan Trao University such as: low academic outcomes, low overall physical fitness that does not meet the physical training standards for students, poor skills, etc. Therefore, researching and selecting some measures to improve the quality of learning the optional Badminton for female students at Tan Trao University is an urgent necessity in the current context.

2. Literature Review

In Vietnam and worldwide, studies on this field are quite diverse and abundant such as: Do Dinh Cuong (2021), Selecting solutions to improve the quality of learning Badminton for students at the University of Economics and Technical Industries; Nguyen Duy Linh (2020), Selecting measures to improve the quality of badminton teaching for students under the physical education program tailored to learner needs at Hanoi Capital University; Nguyen Dinh Trung (2022), Research on measures to develop the badminton training movement among secondary school students in Ha Tinh City; Youling Qian (2024) Badminton teaching methods and student learning outcomes: Basis for teaching and learning methods; Harun Genc (2019) Examination of the Effect of Badminton Education on Physical and Selected Performance Characteristics; Janyu Wang (2021) Changes in Badminton Game Play across developmental Skill Levels among High School Students, and so on. However, these studies primarily focus on students in large cities or developed provinces. There has been no research aimed at improving the quality of learning optional Badminton for female students in Tuyen Quang Province, a mountainous region where the majority of students are mainly ethnic minorities and face significant hardships in their daily lives.

3. Research methods

The research process uses the following methods: Document analysis and synthesis method; Interview and discussion method; Pedagogical assessment method, Pedagogical experiment method; Mathematical statistics method.

4. Results

4.1. Research on developing and selecting measures to improve the quality of learning optional Badminton for female students at Tan Trao University

4.1.1. Select measures to improve the quality of learning the Badminton

Based on theoretical grounds, this study aims to develop measures to improve the effectiveness of optional subjects within the physical education program for students. The research results also serve as the foundation to assess the current status of physical education, as well as physical fitness, knowledge, and skills in badminton for female students at Tan Trao University in recent years based on the condition of facilities, equipment, funding, teaching staff, organizational management of activities, specialized materials and the results of interviews with experts, lecturers of physical education and students.

The study has identified eight measures to improve the quality of learning optional Badminton for female students at Tan Trao University

Measure 1: Organize campaigns to promote awareness of the significance and role of physical education in general and the Badminton training movement in particular.

Measure 2: Improve the organizational structure and professional training for specialized teachers.

Measure 3: Innovate the teaching process of Badminton according to the issued curriculum framework.

Measure 4: Improve the form and method of Badminton teaching to better align with the characteristics of the students.

Measure 5: Innovate the content of the final exam - test (knowledge and practical skills evaluation).

Measure 6: Organize extracurricular activities for students.

Measure 7: Carry out a selection process after students register for the optional Badminton

Measure 8: Ensure facilities, equipment and funding for physical education activities.

To ensure the measures proposed by the research are both practical and scientifically sound, the study conducted interviews using questionnaires with experts, managers, supervisors, and physical education and sports lecturers.

The interview aimed to determine the priority level of the measures proposed by the study with 3 levels. The study will select measures that receive more than 70% agreement:

- Level 1: Very necessary
- Level 2: Necessary
- Level 3: Not necessary

The results are presented in Table 1.

Table 1. Interview results of selecting measures to improve the quality of learning the optional Badminton (n = 35).

No.	Measures	Very necessary		Necessary		Not necessary	
		n	%	n	%	n	%
1	Organize campaigns to promote awareness of the significance and role of optional Badminton	7	20	14	40	14	4
2	Improve the organizational structure and professional training for specialized teachers	13	37,14	19	54,29	3	8,57
3	Innovate the teaching process according to standardized curriculum for the optional Badminton	29	82,86	4	11,43	2	5,71
4	Improve the form and method of Badminton teaching to better align with the characteristics of the students	26	74,29	7	20,00	2	5,71
5	Innovate the content of the final exam - test for each module of the optional Badminton	29	82,86	6	17,14	0	0
6	Promote extracurricular activities for students	31	88,57	4	11,43	0	0
7	Carry out a selection process after students register for the optional Badminton subject	6	17,14	12	34,29	17	48,57
8	Ensure facilities, equipment and funding for physical education activities	25	71,43	10	28,57	0	0

As shown in Table 1:

The measures that the majority of officials, lecturers, and experts in the field of physical education and sports are interested in and selected are measures 3, 4, 5, 6, and 8, with over 70% deeming them necessary to implement.

Meanwhile, measures 1, 2, and 7 were deemed unnecessary by nearly 20%.

Consequently, the study has eliminated measures 1, 2, and 7, leaving only 5 measures to improve the effectiveness of the optional Badminton for female students at Tan Trao University.

After selecting these 5 measures, the study proceeded to develop specific content to improve the quality of learning the optional Badminton for female students at Tan Trao University.

4.2. Application of measures to teaching practice

To determine the effectiveness of the program, the study conducts experiments in Phase II, the optional subject phase of the Physical Education program, as follows:

**** About internal activities:***

- The total number of students participating in the experiment is 62 second-year female students who were randomly selected and divided into two groups:

+ The experimental group consists of 31 female students

+ The control group consists of 31 female students

All participants are aged between 19 and 21. Both groups followed the same initial learning schedule, but the difference was that the experimental group studied according to the proposed Badminton program, while the control group followed the current optional Badminton program.

- The duration of the experiment is 75 periods, arranged in the second semester, over 15 weeks, from February 2016 to the end of June 2016.

- Each week, students had two sessions: the first session consisted of 2 periods, and the second session consisted of 3 main periods.

- During this semester, there were two practical exams and one theoretical exam.

**** About extracurricular activities:***

To make Badminton training and competitions become a regular and continuous activity in the cultural and sports life of students, it is essential

to develop extracurricular activities. The study proposed the following extracurricular activities:

Establish a Badminton Club that operates twice a week, on Thursday and Saturday afternoons. Each session was led by an instructor during training. Club members were students who have had a passion for Badminton and must initially pass simple tests to ensure the club's activities are dynamic and effective.

Organize training courses and provide professional guidance for self-training and physical fitness improvement activities.

Promote Badminton competition activities among students from grade level to School level to encourage the participation and cheerleading of a large number of students.

4.3. Evaluation of the effectiveness of selected innovation measures

To evaluate the effectiveness of the measures developed for female students at Tan Trao University, the study proceeded the following steps:

- Step 1: Collect initial data and then use statistical algorithms to process the data, and compare the test values between the two groups to ensure relative homogeneity.

- Step 2: After students complete the program, the study checked the data and compared the results between the two groups based on learning performance and outcomes.

4.3.1. Comparison of physical fitness of female students in the experimental group and the control group.

The study compared the health and physical condition of the two groups before conducting the experiment. The test results are presented in Table 5:

Table 2. General physical fitness test results of the experimental and control groups before the experiment (n=31)

No.	Tests	Control group (n= 31)		Experimental group (n= 31)		t	p
		X	δ	X	δ		
1	Standing long jump	212.13	11.47	214.23	11.06	0,73	> 0,05
2	Supine crunch	20.68	4.47	21.61	4.35	0,83	> 0,05
3	30m Sprint XPC	5.43	0.4	5.36	0.42	0,67	> 0,05
4	LBTT (kg)	41.81	8.62	42.32	4.62	0,29	> 0,05
5	5-minute endurance run	962.94	79.71	967.26	47.45	0,25	> 0,05

Table 2 shows that the pre-experiment test results for the control and experimental groups are equal, with the difference being statistically insignificant, as indicated by the calculated t value < the table t value at the threshold of P > 0.05. This suggests that the skill levels of the two groups are relatively equal before the experiment.

4.3.2. Comparison of the general physical fitness results of control group students before and after the experiment..

Using the self-comparison method, the results of the physical fitness tests before and after the experiment were obtained. The results are presented in Table 3.

Table 3. Comparison of physical fitness test results of the Control group before and after the experiment (n=31)

No.	Tests	Before experiment		After experiment		t	p
		X	δ	X	δ		
1	Standing long jump	212.13	11.47	214.42	11.12	0,80	> 0,05
2	Supine crunch	20.68	4.47	21.77	4.46	0,96	> 0,05
3	30m Sprint XPC	5.43	0.4	5.51	0.43	0,76	> 0,05
4	LBTT (kg)	41.81	8.62	42.77	8.06	0,65	> 0,05
5	5-minute endurance run	962.94	79.71	956.19	70.48	0,67	> 0,05

Control group: Among the five physical fitness indicators of the 31 female students in the control group, after participating in the experiment for 4 months and following the proposed optional Badminton program, general changes did occur, but they were minimal in 3 out of the 5 indicators: standing long jump, supine crunch, and dominant hand grip strength. The differences in these three indicators did not reach the necessary statistical reliability at the 0.05 (5%) level.

improve but also showed a trend of decline after the experiment.

Thus, the changes in physical fitness levels under the influence of the optional Badminton exercises applied by the Department of Physical Education at Tan Trao University yielded low effectiveness, despite the number of sessions and training time being the same as that of the experimental group.

Meanwhile, in the 5-minute endurance run and the 30m sprint XPC tests, the average performance of the control group not only did not

4.3.3. Comparison of general physical fitness results of female students in the experimental group before and after the experiment

Table 4. Comparison of physical fitness test results of Experimental group before and after the experiment (n=31)

No.	Tests	Before experiment		After experiment		t	p
		X	δ	X	δ		
1	Standing long jump	214.23	11.06	219.61	9.96	2,01	< 0,05
2	Supine crunch	21.61	4.35	24.16	4.3	2,32	< 0,05
3	30m Sprint XPC	5.36	0.42	5.15	0.40	2,01	< 0,05
4	LBTT (kg)	42.32	4.62	45.97	3.86	3,37	< 0,05
5	5-minute endurance run	967.26	47.45	988.61	32.40	2,07	< 0,05

Experimental group:

In all five indicators representing overall physical fitness, the changes are quite evident. Notably, the differences in these indicators, when comparing the superiority and inferiority using statistical methods, show that the differences after and before the experiment achieved the necessary reliability of 0.05 (5%). Thus, in the experimental group, the overall physical fitness of the female students practicing the optional Badminton

program developed by the study has improved significantly compared to the control group.

4.3.4. Comparison of physical fitness results of female students between experimental group and control group after experiment.

To compare the physical fitness of students in the experimental and control groups after four months of the experiment, the study collected the test results and conducted a comparison to evaluate the differences between the two groups. The specific results are presented in Table 5.

Table 5. Comparison of physical fitness results of female students between the experimental group and the control group after the experiment (n=31)

No.	Tests	Control group (n= 31)		Experimental group (n= 31)		t	p
		X	δ	X	δ		
1	Standing long jump	214.42	11.12	219.94	9.54	2,10	<0,05
2	Supine crunch	21.77	4.46	24.16	4.30	2,15	<0,05
3	30m Sprint XPC	5.51	0.43	5.15	0.40	3,41	<0,05
4	LBTT (kg)	42.77	8.06	45.97	3.86	2,0	<0,05
5	5-minute endurance run	956.19	70.48	988.61	32.40	2,32	<0,05

The results showed a clear difference in overall physical fitness between the experimental group and the control group. All five indicators in the experimental group achieved the necessary statistical reliability at the 0.05 (5%) level, outperforming the results of the control group.

4.3.5. Evaluation of the final exam results of the optional Badminton, both in theoretical scores and practical skills for the experimental group.

To clearly demonstrate the effectiveness of the final exam content for the Badminton developed by the study, a comparison between the experimental group and the control group was conducted. The detailed results are presented in Table 6:

Table 6. Comparison of theoretical knowledge and skills between the experimental group and the control group (n=31)

No.	Content	Result (percentage %)					
		Experimental group			Control group		
		Good	Pass	Fail	Good	Pass	Fail
1	Theoretical scores	38,71	51,61	9,69	16,13	45,16	38,71
2	Skill scores	32,26	54,84	12,90	9,68	48,39	41,93

Table 6 shows that the learning results of female students in the experimental group are significantly higher than that of the female students in the control group. The results indicate that thanks to measures to improve the content and test, the quality of the Badminton subject in the experimental group led to better outcomes compared to the control group, demonstrating that the final exam content developed by the study is more suitable for the students' training levels.

5. Conclusion and discussions

5.1. Conclusion

1. The research results have evaluated the current state of implementing the optional Badminton subject at Tan Trao University for students in general and female students in particular and found that it has not been highly effective. The general physical fitness and the results of knowledge and skill tests of many students are unsatisfactory.

2. The study has developed measures to improve the quality of teaching and learning in the optional Badminton for students in general and female students at Tan Trao University in particular, including:

Measure 1: Innovate the teaching process of Badminton according to the issued curriculum framework.

Measure 2: Innovate the content of the final exam - test.

Measure 3: Improve the form and method of Badminton teaching to better align with the

characteristics of the students in general and female students of Tan Trao University in particular.

Measure 4: Organize and promote extracurricular activities for students.

Measure 5: Ensure facilities and funding for physical education activities

3. The study has developed 5 final exam contents suitable for the Badminton subject for students in general and female students of Tan Trao University in particular. These are also 5 tests to evaluate the effectiveness of the optional Badminton subject:

Forehand serve technique

Hitting deep overhead shots to the backcourt.

Smash technique to the sideline. Perform 10 shots into a 1x1.2m area.

Professional physical fitness

4. The innovative measures to improve the quality of the optional Badminton subject have been applied in teaching practice at Tan Trao University and have shown better results compared to the previous methods being used for the optional Badminton subject.

5.2. Discussions

It is necessary to expand the scope of the research topic to other research directions to develop and innovate measures for optional sports in particular and the physical education program in general.

The application of the research results of the measures aimed at improving the effectiveness

of the optional Badminton subject into teaching practice for both students in general and female students at Tan Trao University in particular. The physical fitness tests for female students selected by the study can also be used in testing and assessing the physical fitness of students.

Additionally, the research results can serve as a reference for lecturers and students in teaching and learning the optional Badminton subject.

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