

The System of Professional Supplementary Exercises Applied in Teaching Basic Overhand Volleyball Passing Technique for Volleyball-intensive Students in Danang University of Physical Education and Sports

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Summary

Basic overhand volleyball passing technique greatly affects the competition performance of volleyball athletes. In order to teach and train this technique effectively, it's necessary for teachers and coaches to use a lot of professional supplementary exercises. Through a practical survey of the teaching of volleyball-intensive subject at the school, we have valued the limitations in teaching – training basic overhand volleyball passing technique, in which the application of professional supplementary exercises is an important factor.

Keywords: Selection; system; exercise; volleyball; studen.

1. Introduction

The basic techniques in volleyball in general and the basic overhand volleyball passing technique in particular are increasingly being renovated and improved according to the complex and transforming trend [1,2,3,5]. Therefore, in teaching, it is necessary for us to frequently innovate the teaching methods and training facilities in order to improve those techniques. However, this issue so far has not been paid attention and studied adequately.

Surveying the practice training process for volleyball students at Danang University of Physical Education And Sports in recent years proves that, although the school has innovated the enrollments and teaching methods, the training result on technical practice in general and basic overhand volleyball passing technique for volleyball-intensive students have not achieved the desired results, namely:

Students' technical level of basic overhand volleyball passing in the same course and other courses are unequal. Many students still lack basic technical qualification before their completion of the second academic year.

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The practical technical training after three academic years hasn't achieved the high results, the number of intensive students hasn't reached the athletes level II accounts for a large proportion.

We recognize that the training process has revealed a number of issues that significantly affect the quality of training including the school has not determined the proportion of technical, tactical and physical training sessions. Especially, the system of professional exercises, physical training exercises and professional supplementary exercises have not been built accordingly for the practice of volleyball passing technique and necessary professional physical strength development.

2. Research methods

The research process uses the following methods: documents analysis and synthesis; interview; pedagogical observation; pedagogical examination; pedagogical experiment; mathematical statistics

RESEARCH RESULT

3.1 Selecting the system of professional supplementary exercises applied in teaching basic overhand volleyball passing technique for volleyball-intensive students at Danang University of Physical Education And Sports

Through reference to the general and professional documents, we selected 58 professional supplementary exercises of 6 application groups in teaching - training for basic overhand volleyball passing technique for volleyball-intensive students at Danang University of Physical Education And Sports, including [4]:

- Group 1: Group of supplementary exercises without ball (6 exercises).
- Group 2: Group of supplementary exercises with ball (16 exercises).
- Group 3: Group of supplementary standard ball passing exercises - individual (20 exercises).
- Group 4: Group of group tactical supplementary exercises - the whole team (7 exercises).
- Group 5: Group of whole team coordination training exercises (2 exercises)
- Group 6: Group of physical development exercises (7 exercises).

We conducted the interviews with 30 coaches, experts, teachers who are currently teaching and coaching volleyball on a national scale.

The content of the interviews is to determine the priority of the exercises at 3 levels:

Priority 1: (Important exercise).

Priority 2: (Normal exercises).

Priority 3: (Unimportant exercises).

In addition, we base on the interview results to find and select typical exercises for each element of the basic overhand volleyball passing technique for the research subjects. The results are shown in the Table 3.1

Table 3.1: The interview results for selection of the system of professional supplementary exercises applied in teaching basic overhand volleyball passing technique for volleyball-intensive students at danang university of physical education and sports. (n = 30)

Exercise	Number of selected		Interview results by priority level					
	opinions		Priority 1		Priority 2		Priority 3	
	N	%	N	%	N	%	n	%
Exercise 1.	21	70.00	18	85.71	2	9.59	1	4.76
Exercise 2.	22	73.33	18	81.82	2	9.09	2	9.09
Exercise 3.	24	80.00	20	83.33	2	8.33	2	8.33
Exercise 4.	25	83.33	20	80.00	3	12.00	2	8.00
Exercise 5.	26	86.67	20	76.92	3	11.54	3	11.54
Exercise 6.	25	83.33	19	76.00	3	12.00	3	12.00
Exercise 7.	26	86.67	20	76.92	3	11.54	3	11.54
Exercise 8.	27	90.00	20	74.07	3	11.11	4	14.81
Exercise 9.	21	70.00	18	85.71	2	9.52	1	4.76
Exercise 10.	22	73.33	18	81.82	2	9.09	2	9.09
Exercise 11.	28	93.33	23	82.14	3	10.71	2	7.14
Exercise 12.	26	86.67	20	76.92	3	11.54	3	11.54
Exercise 13.	24	80.00	18	75.00	4	16.67	2	8.33
Exercise 14.	29	96.67	23	79.31	3	10.34	3	10.34
Exercise 15.	27	90.00	22	81.48	3	11.11	2	7.41
Exercise 16.	23	76.67	18	78.26	3	13.04	2	8.70
Exercise 17.	24	80.00	20	83.33	2	8.33	2	8.33
Exercise 18.	23	76.67	18	78.26	3	13.04	2	8.70
Exercise 19.	21	70.00	18	85.71	2	9.59	1	4.76
Exercise 20.	22	73.33	18	81.82	2	9.09	2	9.09
Exercise 21.	24	80.00	20	83.33	2	8.33	2	8.33
Exercise 22.	25	83.33	20	80.00	3	12.00	2	8.00
Exercise 23.	26	86.67	20	76.92	3	11.54	3	11.54
Exercise 24.	25	83.33	19	76.00	3	12.00	3	12.00
Exercise 25.	26	86.67	20	76.92	3	11.54	3	11.54
Exercise 26.	27	90.00	20	74.07	3	11.11	4	14.81
Exercise 27.	21	70.00	18	85.71	2	9.52	1	4.76

Exercise	Number of selected		Interview results by priority level					
	opinions		Priority 1		Priority 2		Priority 3	
	N	%	N	%	N	%	n	%
Exercise 28.	21	70.00	18	85.71	2	9.59	1	4.76
Exercise 29.	22	73.33	18	81.82	2	9.09	2	9.09
Exercise 30.	24	80.00	20	83.33	2	8.33	2	8.33
Exercise 31.	25	83.33	20	80.00	3	12.00	2	8.00
Exercise 32.	26	86.67	20	76.92	3	11.54	3	11.54
Exercise 33.	25	83.33	19	76.00	3	12.00	3	12.00
Exercise 34.	26	86.67	20	76.92	3	11.54	3	11.54
Exercise 35.	27	90.00	20	74.07	3	11.11	4	14.81
Exercise 36.	21	70.00	18	85.71	2	9.52	1	4.76
Exercise 37.	21	70.00	18	85.71	2	9.59	1	4.76
Exercise 38.	22	73.33	18	81.82	2	9.09	2	9.09
Exercise 39.	24	80.00	20	83.33	2	8.33	2	8.33
Exercise 40.	25	83.33	20	80.00	3	12.00	2	8.00
Exercise 41.	26	86.67	20	76.92	3	11.54	3	11.54
Exercise 42.	25	83.33	19	76.00	3	12.00	3	12.00
Exercise 43.	26	86.67	20	76.92	3	11.54	3	11.54
Exercise 44.	27	90.00	20	74.07	3	11.11	4	14.81
Exercise 45.	21	70.00	18	85.71	2	9.52	1	4.76
Exercise 46.	21	70.00	18	85.71	2	9.59	1	4.76
Exercise 47.	22	73.33	18	81.82	2	9.09	2	9.09
Exercise 48.	24	80.00	20	83.33	2	8.33	2	8.33
Exercise 49.	25	83.33	20	80.00	3	12.00	2	8.00
Exercise 50.	26	86.67	20	76.92	3	11.54	3	11.54
Exercise 51.	25	83.33	19	76.00	3	12.00	3	12.00
Exercise 52.	26	86.67	20	76.92	3	11.54	3	11.54
Exercise 53.	27	90.00	20	74.07	3	11.11	4	14.81
Exercise 54.	21	70.00	18	85.71	2	9.52	1	4.76
Exercise 55.	25	83.33	20	80.00	3	12.00	2	8.00
Exercise 56.	26	86.67	20	76.92	3	11.54	3	11.54
Exercise 57.	25	83.33	19	76.00	3	12.00	3	12.00
Exercise 58.	26	86.67	20	76.92	3	11.54	3	11.54

From the results collected in the the Table 2.1, we recognize that all 58 professional supplementary exercises applied in teaching – training of basic overhand volleyball passing technique for the research subjects that we provide are selected by the opinions with the proportion of 70% or more and most of them are ranked at priority 1.

1.3.2. Selecting the contents for testing and evaluating the technical level of basic overhand volleyball passing for research objects

3.2.1. Based on the experts' opinions, selecting the contents for testing and evaluating the technical level of basic overhand volleyball passing for research objects

We selected 08 criteria, tested and evaluated the technical level of basic overhand volleyball passing for research objects. The selected tests meet the above criteria in terms of pedagogy. These tests allow us to identify the general competencies and professional necessary ability to constitute the technical level of basic overhand volleyball passing of volleyball athletes [6] . These are reliable and highly informative tests, including:

- Regarding technique:

1. Passing the ball to the target (point).
2. Passing the ball overhand, in front of to the numbers 3-4 (points).
3. Passing the ball overhand, behind the head to the numbers 3 - 2 (points).

- Regarding physical strength:

4. Run 9 - 3 - 6 - 3 - 9 (s).
5. Jump on with momentum (cm).
6. Run the pine (s).
7. Front-flip jump combined with momentum running for jumping and throwing the ball stuffed with two hands through the net (s).
8. Synthetic test (time).

On that basis, the research interviewed 30 experts. Practical interview results applied the system of criteria, tests to evaluate the technical level of basic overhand volleyball passing for students and volleyball athletes in the process of teaching - coaching at above institutes are presented in the Table 2.2.

From the results collected in the Table 2.2, it is shown that: In order to evaluate the technical level of basic overhand volleyball passing in the process of training - coaching for students, volleyball athletes, the majority of the interviewed subjects selecting the following criteria and tests:

- Regarding technique:

1. Passing the ball to the target (point).
2. Passing the ball overhand, in front of to the numbers 3-4 (points).
3. Passing the ball overhand, behind the head to the numbers 3 - 2 (points).

- Regarding physical strength:

4. Run 9 - 3 - 6 - 3 - 9 (s).
5. Jump on with momentum (cm).
6. Run the pine (s).
7. Front-flip jump combined with momentum running for jumping and throwing the ball stuffed with two hands through the net (s).
8. Synthetic test (time).

Most of the opinions selected the above tests ranking them at a very important level in testing and evaluating the technical level of basic overhand volleyball passing for volleyball athletes (with 75.00% or more opinions selected, of which more than 50.00% of the selected opinions ranking them from important to very important).

Table 3.2: The survey results of the actual situation of tests using in testing and evaluating the technical level of basic overhand volleyball passing for volleyball male athletes in vietnam (n = 30)

TT	Content of the interview	Amount of		Interview results by percentage (%) and ranked by importance level							
		selected people		Very important		Important		Necessary		Unimportant	
		N	%	N	%	n	%	n	%	n	%
- Regarding technique:											
1.	Passing the ball to the target (point).	30	100.00	30	100.00	-	0.00	-	0.00	-	0.00
2.	Passing the ball overhand, in front of to the numbers 3-4 (points).	30	100.00	30	100.00	-	0.00	-	0.00	-	0.00
3.	Passing the ball overhand, behind the head to the numbers 3 - 2 (points).	30	100.00	30	100.00	-	0.00	-	0.00	-	0.00
- Regarding physical strength:											
4.	Run 9 - 3 - 6 - 3 - 9 (s).	29	96.67	13	44.83	12	41.38	2	6.90	2	6.90
5.	Jump on with momentum (cm).	21	70.00	9	42.86	10	47.62	2	9.52	-	0.00
6.	Run the pine (s).	22	73.33	10	45.45	11	50.00	1	4.55	-	0.00
7.	Front-flip jump combined with momentum running for jumping and throwing the ball stuffed with two hands through the net (s).	25	83.33	11	44.00	11	44.00	2	8.00	1	4.00
8.	Synthetic test (time).	30	100.00	30	100.00	-	0.00	-	0.00	-	0.00

3.2.2. Determining the reliability, the notification of the contents for testing and evaluating the technical level of basic overhand volleyball passing for the research subjects

Determining the notification:

In order to determine the notification of the selected criteria and tests, we conducted the determination of a correlation between the criteria, the selected tests and the synthetic test of the research objects. We conducted a preliminary test on the research objects (54 male students in volleyball-intensive subject of the courses 34 and 36 at Danang University of Physical Education And Sports) with 08 selected tests.

The results of the above relationship are presented in the Table 3.3 and 3.4.

Table 3.3: Test results for evaluating the technical level of basic overhand volleyball passing for volleyball-intensive students at danang university of physical education and sports (n = 54)

TT	Test	Test Result ($\bar{x} \pm \delta$)
1.	Passing the ball to the target (point).	7.52±0.53
2.	Passing the ball overhand, in front of to the numbers 3-4 (points).	7.46±0.52
3.	Passing the ball overhand, behind the head to the numbers 3 - 2 (points).	7.38±0.55
4.	Run 9 - 3 - 6 - 3 - 9 (s).	8.60±0.60
5.	Jump on with momentum (cm).	287.63±11.71
6.	Run the pine (s).	24.36±1.71
7.	Front-flip jump combined with momentum running for jumping and throwing the ball stuffed with two hands through the net (s).	20.75±1.45
8.	Synthetic test (time).	6.95±0.54

Table 3.4: The correlation between tests for evaluating the technical level of basic overhand volleyball passing with the synthetic test of intensive male students at danang university of physical education and sports (n = 54)

TT	Test	Correlation coefficients (r)
1.	Passing the ball to the target (point).	0.802
2.	Passing the ball overhand, in front of to the numbers 3-4 (points).	0.839
3.	Passing the ball overhand, behind the head to the numbers 3 - 2 (points).	0.884
4.	Run 9 - 3 - 6 - 3 - 9 (s).	0.803
5.	Jump on with momentum (cm).	0.804
6.	Run the pine (s).	0.811
7.	Front-flip jump combined with momentum running for jumping and throwing the ball stuffed with two hands through the net (s).	0.743

From the results collected in the Table 3.3 and 3.4 showed that: Most of the criteria, the tests selected in the research objects have shown the strong correlation, fully informed ($|r| > |0.6|$ with $P < 0.05$) can be applied in practical valuation of the technical level of basic overhand volleyball passing for volleyball-intensive students at Danang University of Physical Education And Sports (the test results are in bold in the table 3.3).

From the above research results, the research has selected a system of tests with enough notification value to continue the study of their reliability, including the following 08 tests:

- Regarding technique:

1. Passing the ball to the target (point).
2. Passing the ball overhand, in front of to the numbers 3-4 (points).
3. Passing the ball overhand, behind the head to the numbers 3 - 2 (points).

- Regarding physical strength:

4. Run 9 - 3 - 6 - 3 - 9 (s).
5. Jump on with momentum (cm).
6. Run the pine (s).

7. Front-flip jump combined with momentum running for jumping and throwing the ball stuffed with two hands through the net (s).

8. Synthetic test (time).

- Determining the reliability:

In order to determine the reliability of the system of tests that have passed the notification examination for evaluating the technical level of basic overhand volleyball passing for volleyball-intensive students at Danang University of Physical Education And Sports, we conducted the test 2 times in the same process and procedure conditions and at the same time. The testing time is in the first week and the third week of April 2005. The results are shown in the Table 3.5.

Table 3.5: The result of determining the reliability of the system of tests for evaluating the technical level of basic overhand volleyball passing of volleyball-intensive students at danang university of physical education and sports (n = 54)

T T	Test	Test Result		Correlation coefficients (r)
		The 1st time	The 2nd time	
		$\bar{x} \pm \delta$	$\bar{x} \pm \delta$	
1.	Passing the ball to the target (point).	7.52±0.53	7.58±0.45	0.880
2.	Passing the ball overhand, in front of to the numbers 3-4 (points).	7.46±0.52	7.52±0.45	0.894
3.	Passing the ball overhand, behind the head to the numbers 3 - 2 (points).	7.38±0.55	7.40±0.49	0.858
4.	Run 9 - 3 - 6 - 3 - 9 (s).	8.60±0.60	8.56±0.56	0.859
5.	Jump on with momentum (cm).	287.63±11.7 1	289.02±19.44	0.876
6.	Run the pine (s).	24.36±1.71	24.22±1.57	0.858
7.	Front-flip jump combined with momentum running for jumping and throwing the ball stuffed with two hands through the net (s).	20.75±1.45	20.13±1.31	0.861
8.	Synthetic test (time).	6.95±0.54	6.97±0.56	0.811

From the results collected in the Table 3.5 showed: All 08 tests that have passed the notification examination showed the reliability coefficient between the two tests at a very high level ($r > 0.800$ with $P < 0.05$). This presented the above test systems have shown a strong correlation, full of notification, reliability, feasibility and

suitability for the research subjects as well as practical condition at school in evaluating the technical level of basic overhand volleyball passing of research subjects.

Thus, from the aforementioned research results, we have selected 08 criteria and tests of 02 factor groups: Physical strength and basic overhand volleyball passing technique. This system of criteria and tests ensures the reliability, notification and can be used for evaluating the technical level of basic overhand volleyball passing of volleyball-intensive students at Danang University of Physical Education And Sports.

4. Conclusion

The research process has selected a system of 08 tests applied in testing and evaluating the technical level of basic overhand volleyball passing for undergraduate volleyball-intensive students at Danang University of Physical Education And Sports belonging to 02 factor groups: Technique and Physical strength, including:

- Regarding technique:

1. Passing the ball to the target (point).
2. Passing the ball overhand, in front of to the numbers 3-4 (points).
3. Passing the ball overhand, behind the head to the numbers 3 - 2 (points).

- Regarding physical strength:

4. Run 9 - 3 - 6 - 3 - 9 (s).
5. Jump on with momentum (cm).
6. Run the pine (s).
7. Front-flip jump combined with momentum running for jumping and throwing the ball stuffed with two hands through the net (s).
8. Synthetic test (time).

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