A study of improvement in the skills of serve reception through practice in modified volleyball games

Yoshihiro HASHIHARA

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Abstract

This study was designed to investigate the performances of the serve reception in modified volleyball gemes, and to provide information to clarify the coaching program of the serve reception. The subjects were nine varsity female players. The modified volleyball games in which only three players were allowed to play on each side were carried on from August to October 1989, and filmed with VTR. The performances of the serve reception in the games were statistically classified into three grades, that is, Excellent pass, Appropriate pass, and Mistake. The average efficiency of the serve receptions was almost even through the experimental period, ranged from 18 to 25% in Excellent pass, 28 to 32% in Approriate pass, and 43 to 54% in Mistake.

Introduction

In order to gain a score in a volleyball game, it is necessary to have a right to serve, which is called sideout. The sideout results from the first sideout offense or from the other offenses. The first sideout offense is usually a very controlled situation compared with the other offenses which usually occur in a rapid state of transition from defense to offense. Miyakozawa (1989)[2] analyzed statistically the efficiency of the first sideout offenses in 1988 Kantou University Men's Volleyball First League Tournament, and reported that most of the sideouts resulted from the first successfully performed sideout offenses.

Scates (1988)[4] ,UCLA head coach, expressed his coaching about the sideout play. The left-side spiker can be set on any kind of pass whereas the middle spiker can only be set on passes inside of the attack line, and the right-side spiker requires a good pass to be set in the combination offense play with the middle spiker. On 70 percent of the sideout plays, a spiker is approaching for an X or fake X set which is difficult to connect on when the setter is more than five feet from the net. And in other cases, our left power hitter is spiking against a two-man block and a defense that has time to set up correctly.

Therefore, a key play to have the sideout is such a controlled serve reception that the set for the combination offense play can be delivered. Although the importance of the anticipation and moving directly in front of the served ball has been pointed out in the coaching of the serve reception[1),3)] , no research report for an effective practice on the serve reception has been proposed yet. The purpose of this study is to investigate the performances of the serve reception in modified volleyball games, and to provide information to clarify the coaching program of the serve reception.

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Method

The subjects were nine varsity female students of those players who participated in 1989 Tyugoku University Women's Volleyball League Tournamet. Seven of all the subjects were in the first grade, who had not gained their experience in the university-level volleyball yet.

The modified volleyball games in which only three plyers were allowd to play on each side were carried on from August 1st to October 17th 1989. In a game, two players stay deep in the court to receive the serve and the third player stays at the net in the center of the court to set. The players rotate from the left-back position to setter to the right-back or serving position. The modified volleyball games were filmed with VTR camera (National SVHS AG-400) covering the area in Figure 1.

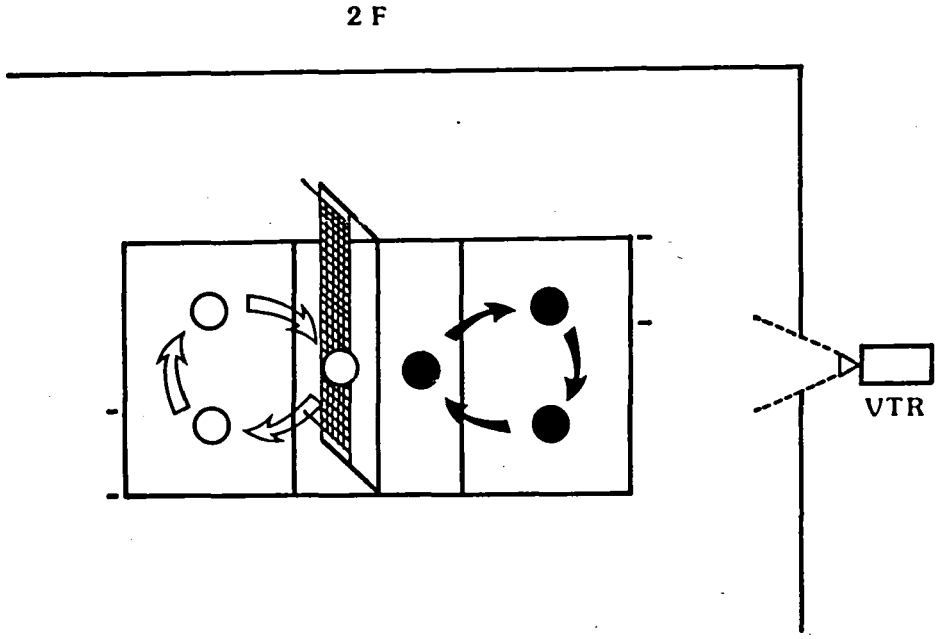

Figure 1 Illustration of experimental site

UCLA passing chart (1988)[4] was referred to the statistics of the serve reception in this study. The performances of the serve reception were recorded by noting the area of the court to which the player passed the served ball. The key to explain the procedure is at the bottom of Table 1.

Results and Discussion

Table 1 shows the distribution of the serve receptions in every practice day. The total attempts of the serve receptions were 1756 in 35 days, and ranged from 25 to 103 in a day. The efficiency of the serve receptions in every practice day ranged from 6 to 41% in Excellent pass, 13 to 55% in Appropriate pass, and 28 to 72% in Mistake. The volleyball practice time in a day was three hours during the period of the summer camp and two hours during the period of the

Table 1 Distribution of the serve receptions in every practice day

DATE	8/1	2	3	4	5	7	8	9	11	16	17	18	19	20	21	24	25	28	30	9/4	6	10	11	13	15	17	18	20	24	27	28	29	10/1	13	17
				I										II										III										IV		
EP	16	17	7	19	9	9	8	12	15	21	11	10	17	13	12	6	5	8	8	2	4	5	12	4	7	13	8	10	16	18	20	7	20	3	4
AP	12	26	12	21	9	25	6	27	18	22	22	12	33	6	10	10	8	11	6	7	8	14	16	13	10	17	14	26	12	16	20	14	9	17	16
M	11	60	14	34	13	42	20	32	19	19	34	16	21	18	17	11	19	19	19	23	13	39	28	10	29	36	33	33	26	30	27	29	39	11	20
TA	39	103	33	74	31	76	34	71	52	62	67	38	71	37	39	27	32	38	33	32	25	58	56	27	46	66	55	69	54	64	67	50	68	31	40
%EP	41	17	21	26	29	12	23	17	29	34	16	26	24	35	31	22	16	21	24	6	16	9	21	15	15	20	15	14	30	28	30	14	30	10	10
%AP	31	25	36	28	29	33	18	38	35	35	33	32	46	16	26	37	25	29	18	22	32	24	29	48	22	26	25	38	22	25	30	28	13	55	40
%M	28	58	43	46	42	55	59	45	36	31	51	42	30	49	43	41	59	50	58	72	52	67	50	37	63	54	60	48	48	47	40	58	57	35	50

I : the former half in the summer camp
II : the latter half in the summer camp after the intermission of Bon festival
III : the period during the first semester final examinations
IV : the period after the second semester started

EP : excellent pass, a pass that can be set in to a middle spiker
AP : appropriate pass, a pass that can be set to eighter end spiker
M : misteke, an ace or pass that can only be set to one spiker or a pass that must be set by a spiker
TA : total attempts

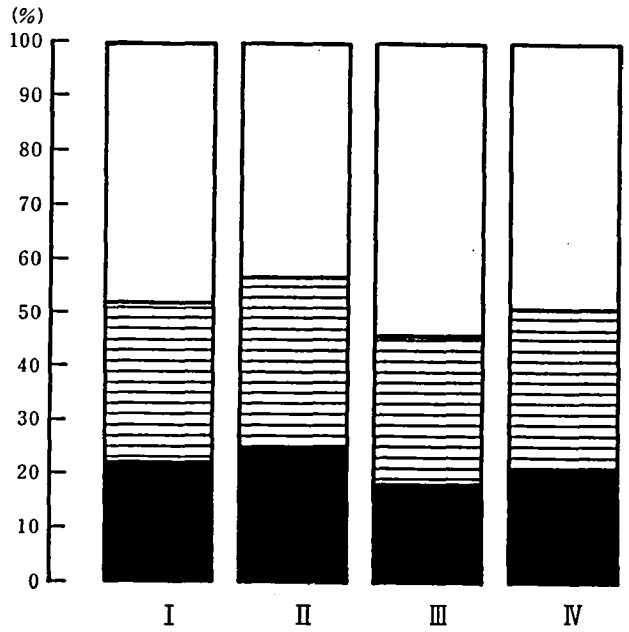

Figure 2 Average efficiency of the serve receptions in every practice period. ■ represents Excellent pass ratio, ⊟ represents Appropriate pass ratio, and □ represents Mistake ratio to all the attempts that a receiver could pass the served ball in every practice period.

semester. The practice time for the serve reception was included in the volleyball practice time, and ranged from 15 to 45 minutes in a day. Any practice plans for the serve reception were not carried out except in the modified volleyball game and the practice match. From the characteristics of the school schedule, the practice period was classified into the four explained at the bottom of Table 1.

Figure 2 shows the average efficiency of the serve receptions in every practice period. The total attempts of the serve receptions in Ⅰ, Ⅱ, Ⅲ, and Ⅳ practice period were 513, 444, 552, and 256 respectively. And the average efficiency of the serve receptions in every practice period was 22, 25, 18, 21% in Excellent pass, 30, 32, 28, 30% in Appropriate Pass, and 48, 43, 54, 49% in Mistake. The distributions of Excellent pass and Appropriate pass were a little larger in Ⅱ period and smaller in Ⅲ period than those in other periods. The smaller ratio of Excellent pass and Appropriate pass in Ⅲ period may result from the bad physical condition that the volleyball practice was made during the final examination. These results may suggest that the improvement in the skill of serve reception should be cancelled out under the bad condition in Ⅲ period. Otherwise, if any practice for the serve reception does not have an effect on the improvement in the skill, the serve reception should be played by a talented digger.

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