



New training goal based technical training model in long-term beginner futsal training system

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Abstract

Objective of the study was to test by experiment a new futsal technical training system with its goals in the long-term training process.

Methods and structure of the study. The new futsal technical training system testing experiment was run at Sergiev Posad Sports School in the Moscow Oblast in 2018 to 2021. We sampled for the three-year experiment the 7-9-year-old (n=36) futsal players. The futsal technical training system was customized in the training times, content and priorities as dictated by the long-term training mission and goals. The technical training was designed on a time- and cost-efficient basis by the training material being well systematized and staged to facilitate prudent sequencing of the individual technical progress. Every technical skill was mastered and excelled by special exercises so that to work out every technical element on a versatile basis, with reasonable repetitions of every motor action.

Results and conclusion. On the whole, the progress was the highest in the non-lead leg and both-legs ball control skills tests. An intergroup progress analysis found the poor progress in the both-legs test in the Control Group being probably due to the backlogs and inefficiencies in the non-lead leg ball control skills training service.

The new combined futsal technical training model complementary to the long-term training process was tested beneficial as it facilitates progress in the 'movement schooling' process with a special focus on the relevant technical fitness and competitive progress elements. The new futsal technical training model analyzed herein is designed on a reasonably customizable basis and, hence, may be recommended for application in the beginner futsal trainings and other team sports basics training systems.

Keywords: futsal, junior footballers, long-term training, playing actions, technical fitness, training methods and tools.

Background. The rapid competitive and physical/technical progresses in modern futsal sport urge the sport community to give a special priority to the technical training elements at every stage of the long-term training system [2, 6], including new specific technical training models, methods and tools to facilitate training and competitive progresses in the beginner futsal groups [1, 3]. Competitive progress in the modern futsal is commonly known to largely depend on the individual technical fitness shaped up in the beginner training stages [5]. The technical progress, as provided by many authors [4], would depend in their turn on the movement coordination, accuracy, general and sport-specific physical qualities and theoretical/ prac-

tical learning ability. This progress in every element needs to be facilitated by modern efficient training models and tools reasonably combined and customized as required by the long-term training goals of the beginner futsal groups.

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Results and discussion. Technical fitness of the sample was tested for the lead/ non-lead leg ball control skills, to produce the technical fitness indices, with the tests run twice a year over the three-year testing experiment period: see Table 1 hereunder.

The technical fitness tests found progress in both groups, with the Experimental Group tested significantly better than the Control Group in six months in every non-lead leg ball control skills test ($p < 0.05$), and a year later - in every lead leg ball control skills test ($p < 0.01$). Later on the intergroup gap in the ball control skills tests had grown as demonstrated by the Student t-test figures of 8,485 and 8,929 for the lead and non-lead leg, respectively. For the three-year experiment period, the lead leg / non-lead leg tests showed progress of 44.7% and 55.5% in the Control Group versus 74.5% and 98.5% in the Experimental Group, respectively.

Furthermore, the technical fitness indices were found to grow with time, with the Experimental Group in six months tested significantly better than the Control Group ($p < 0.05$), with the test gap growing thereafter

to reach $p < 0.01$ in the post-experimental tests. On the absolute and relative progress test scales, the Control Group technical fitness indices grew by 8.6% and 19%, respectively – versus 24.9% and 25% in the Experimental Group. The individual technical fitness index variation range in the pre-experimental tests was 55-96% in the Control Group versus 57-90% in the Experimental Group. The post-experimental tests showed the technical fitness indices varying in the range of 66-94% and 90-112% in the Control and Experimental Group, respectively: see Figure 1 hereunder.

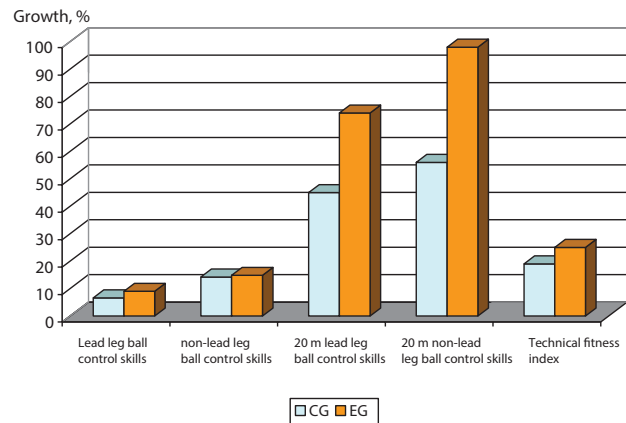


Figure 1. Group progresses in the ball control skills tests and technical fitness indices

The technical fitness tests showed significant progress of the Experimental Group versus Control Group in the lead leg ball control skills ($p < 0.01$), non-

Table 1. Junior futsal sample ball control skills / technical fitness test data, $M \pm m$

Test	Test No.	Control Group	Experimental Group	t	p
20m lead leg BCS test, s	1	21,6 ± 0,8	22,1 ± 0,9	0,415	>0,05
	2	19,3 ± 0,9	17,8 ± 0,6	1,387	>0,05
	3	16,4 ± 0,6	13,8 ± 0,5	3,329	<0,01
	4	14,8 ± 0,4	11,4 ± 0,6	4,715	<0,001
	5	14,2 ± 0,4	10,3 ± 0,4	6,894	<0,001
	6	13,7 ± 0,3	10,1 ± 0,3	8,485	<0,001
20m ball control skills non-lead leg test, s	1	30,4 ± 1,5	30,6 ± 1,4	0,097	>0,05
	2	25,7 ± 1,2	21,5 ± 1,1	2,580	<0,05
	3	19,8 ± 1,2	14,4 ± 1,0	3,457	<0,01
	4	19,0 ± 0,6	12,4 ± 0,4	9,153	<0,001
	5	18,0 ± 0,7	11,2 ± 0,4	8,434	<0,001
	6	17,2 ± 0,7	10,4 ± 0,3	8,929	<0,001
Technical fitness index	1	71,1 ± 2,1	72,2 ± 2,5	0,337	>0,05
	2	75,1 ± 2,3	82,8 ± 2,8	2,125	<0,05
	3	82,8 ± 3,4	95,8 ± 2,4	3,124	<0,01
	4	77,9 ± 3,2	91,9 ± 2,2	3,605	<0,001
	5	78,9 ± 3,1	92,0 ± 2,5	3,289	<0,01
	6	79,7 ± 3,0	97,1 ± 2,6	4,358	<0,001



lead leg ball control skills ($p < 0.001$) and both legs ($p < 0.05$) tests; with the intergroup gap maximized in the post-experimental tests ($p < 0.01$). Thus the post experimental tests found progress in the lead-leg and non-lead leg ball control skills and both-legs tests of 18.6%, 7.4% and 11.0% in the Control Group versus 26.4%; 15.3% and 27.7%, in the Experimental Group, respectively. On the whole, the progress was the highest in the non-lead leg and both-legs ball control skills tests. An intergroup progress analysis found the poor progress in the both-legs test in the Control Group being probably due to the backlogs and inefficiencies in the non-lead leg ball control skills training service.

Conclusion. The new combined futsal technical training model complementary to the long-term training process was tested beneficial as it facilitates progress in the 'movement schooling' process with a special focus on the relevant technical fitness and competitive progress elements. The new futsal technical training model analyzed herein is designed on a reasonably customizable basis and, hence, may be recommended for application in the beginner futsal trainings and other team sports basics training systems.

References

1. Aliev E.G., Andreev S.N., Guba V.P. Futsal. Textbook. Moscow: Sovetskiy sport publ., 2012. 554 p.
2. Andreev S.N., Aliev E.G., Levin V.S. Futsal. Sample program of sports training for youth sports school and Olympic Reserve sports schools. Moscow: Sovetskiy sport publ., 2010. 120 p.
3. Guba V.P. Theory and methodology of futsal. Study guide. Moscow: Sport publ., 2016. 200 p.
4. Ivanov O.N. Modern technology of beginner sports reserve training in football and futsal. Uchenye zapiski universiteta im. P.F. Lesgafta. 2020. No. 11(189). pp. 189-197.
5. Mayevskiy K.V. Integrated training method for junior futsal players with focus on development of attention function. PhD diss.: 13.00.04. Volgograd, 2012. 159 p.
6. Khrustalev G.A., Guba V.P. We teach futsal. Fizicheskaya kultura v shkole. 2013. No. 8. pp. 41-47.