



Structural and functional model of involving preschool children to hockey activities

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**S.O. Istomin**¹PhD, Associate Professor **E.S. Naboychenko**¹Dr. Hab., Professor **D.V. Kachalov**²¹Ural Federal University, Yekaterinburg²Ural State University of Railway Transport, Yekaterinburg

Corresponding author: istomin-spartakovez@mail.ru

Abstract

Objective of the study was to determine the effectiveness of the implementation of the structural-functional model of introducing children aged 5-7 years to hockey.

Methods and structure of the study. Conducted pedagogical experiment, quantitative and qualitative analysis; methods of mathematical statistics. The contingent of the study is children aged 5-7 years (n=120) who have been studying at the Sports school of the Olympic Reserve "Spartakovets" for three years (2014-2016).

Results and conclusions. Groups of children in which the structural-functional model of introducing children aged 5-7 years to hockey lessons was implemented have a high level of involvement in sports activities according to the criteria: motivational, emotional-volitional, evaluative-behavioral, physical readiness. The presented results can be used in the implementation of sports and recreation programs with elements of the chosen sport.

Keywords: *introducing children to sports activities; criteria, indicators and levels of involvement of children aged 5-7 years in hockey; young hockey players, structural-functional model.*

Introduction. Exploring the specifics of the concept of involvement in sports activities, based on the analysis of existing studies, Dvorkina N.I., Adashkavichene E.I., Manzheley I.V. [1-3], it can be noted that the introduction of children of senior preschool age to sports activities acts as a process aimed at forming interest in sports activities, awareness in sports and its types, striving to achieve goals, the formation of motor experience, activity and independence. In sports activities, the specificity of which is to create unified starting opportunities for children of senior preschool age. In this regard, the question arises of possible ways of constructing the process of initiation.

In our opinion, the process of introducing sports activities will be effective if a structural and functional model is developed for introducing children aged 5-7 years to hockey. Such models, as a rule, are used in the study of various pedagogical processes, when it is necessary to reveal the interaction of subjects, which results in the formation of complex personal qualities [4].

Objective of the study was to determine the effectiveness of the implementation of the structural-functional model of introducing children aged 5-7 years to hockey.

Methods and structure of the study. The study of the process of involving children aged 5-7 years in hockey can be approached as a certain pedagogical system. This implies the allocation of components in the structure of the model and the pedagogical conditions for its implementation.

The structural components of the developed model reveal the internal organization of the process of introducing children aged 5-7 to hockey, are responsible for the constant interaction between the elements of this process and include: target, content, procedural, environmental and evaluative-effective.

By pedagogical conditions we understand the totality of the possibilities of the educational and material-spatial environment that affect the personal and procedural aspects of this system and ensure its effective functioning and development.

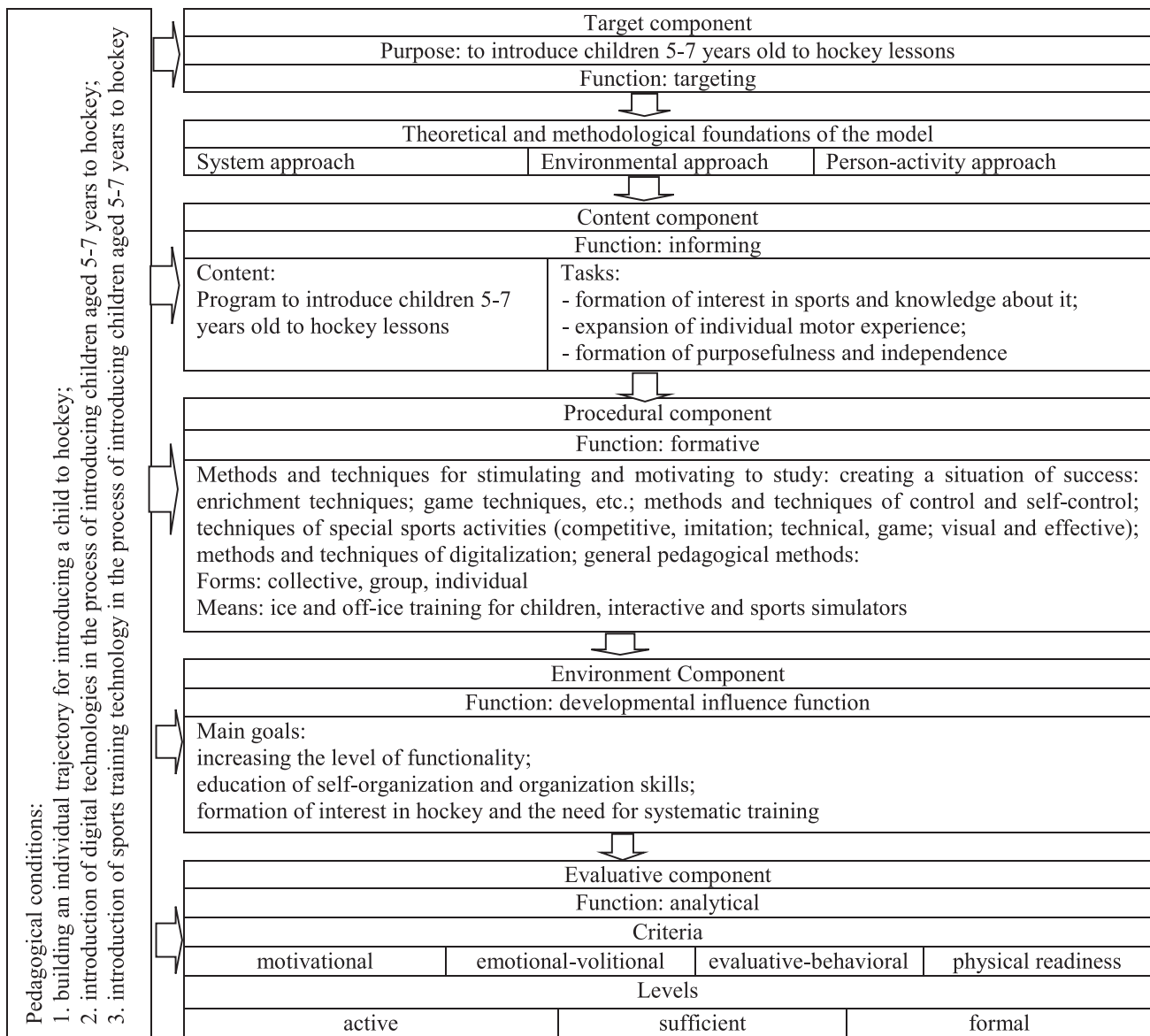


Based on this provision, considering the pedagogical conditions for introducing children 5-7 years old to hockey, we mean the totality of the possibilities of the environment of a sports organization that affect the personal and procedural aspects and ensure its effectiveness. We include in the complex of necessary and sufficient pedagogical conditions: building an individual trajectory for introducing a child to hockey; the introduction of digital technologies in the process of introducing children aged 5-7 years to hockey; introduction of sports training technology in the process of introducing children aged 5-7 years to hockey.

The structural-functional model makes it possible to form a holistic view of the phenomenon under study, the degree of influence of pedagogical conditions in

the process of its implementation, which is clearly shown in the figure.

The experimental work was carried out in several stages: the ascertaining stage - the selection of scientific and methodological research tools, the definition of goals, objectives and the development of an algorithm and conditions for the experimental work, the identification of the initial level of the subject under study - the level of involvement of children aged 5-7 years in hockey, the definition of experimental groups ; the formative stage - the implementation of the structural-functional model, the verification of the implemented pedagogical conditions for introducing children aged 5-7 years to hockey lessons; generalizing stage - the final evaluation of the results according to the selected indicators, summarizing the results



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and comparing them with the goals and objectives of the study, formulating conclusions.

To carry out the formative stage of the experimental work, the distribution of children (n=120) into four groups was carried out: EG-1, EG-2, EG-3 and CG.

The sampling base for the formative stage of the experimental work at was determined as follows: in EG-1 (n=30), an individual trajectory of initiation was built and the technology of sports training was introduced into the process of introducing children aged 5-7 years to hockey; in EG-2 (n=30), digital technologies were introduced in order to involve children in sports activities and the introduction of sports training technology in the process of introducing children aged 5-7 years to hockey; in EG-3 (n=30) the whole complex of pedagogical conditions was introduced; in the CG (n=30), the structural-functional model of initiation was implemented fragmentarily.

Results of the study and their discussion. As a result of the implementation of the developed structural-functional model, a comparative analysis of the level of involvement of children aged 5-7 years in hockey was carried out (Table 1).

Comparing the dynamics of involvement, it can be noted that the difference between the results of the experimental groups and the control group convinc-

ingly indicates that the implementation of the structural-functional model has a positive effect on the involvement of children aged 5-7 years in hockey.

To quantitatively prove the scientific validity, objectivity and reliability of the research results, the data obtained in the course of experimental work were processed by mathematical statistics methods, since the observed changes in the structure of the distribution of involvement levels can, in principle, be due to random facts. The results of calculating the χ^2 criterion based on the results of experimental work in groups, in accordance with the developed levels of involvement of children aged 5-7 years in hockey, are presented in Table 2.

As can be seen from the calculation results presented in Table 2 using the χ^2 criterion based on the results of experimental work at the ascertaining and generalizing stages in the groups of children participating in the experiment, the implementation of the structural-functional model developed by us reliably indicates an increase in the level of involvement of children aged 5-7 years to hockey lessons.

Conclusions. It has been established that the effectiveness of the process of introducing children aged 5-7 years to hockey lessons depends on the implementation of the structural-functional model, which

Table 1. Comparative data of the results of experimental work

Stage	Group	Quantity	Formal level		Sufficient level		Active level	
			%	Quantity	%	Quantity	%	Quantity
Stating	EG 1	30	36.67%	11	56.67%	17	6.67%	2
	EG 2	30	30.00%	9	63.33%	19	6.67%	2
	EG 3	30	33.33%	10	60.00%	18	6.67%	2
	KG	30	36.67%	11	60.00%	18	3.33%	1
Formative	EG 1	30	16.67%	5	53.33%	16	30.00%	9
	EG 2	30	16.67%	5	70.00%	21	13.33%	4
	EG 3	30	10.00%	3	56.67%	17	33.33%	10
	KG	30	23.33%	7	70.00%	21	6.67%	2
Generalizing	EG 1	30	13.33	4	40.00	12	46.67	14
	EG 2	30	16.67	5	43.33	13	40.00	12
	EG 3	30	3.33	1	23.33	7	73.33	22
	KG	30	20.00	6	66.67	20	13.33	4

Table 2. Calculation results of the χ^2 criterion based on the results of the experimental work

Compared groups	Received value (χ^2_{emp})	Table value for significance level		
		0,01	0,03	0,05
EG-1 and EG-1	12,06	9,21	7,4	5,99
EG-2 and EG-2	13,13			
EG-3 and EG-3	29,04			
KG and KG	5,11			



includes: purposeful organization of the process of familiarization; correspondence of the methods and content of classes to the age characteristics of children; phasing; software, the content of which includes an orientation towards the unity of the personal and physical spheres of the child; methodological and procedural support; provision of pedagogical conditions.

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