

## Modular training optimization for sports managers

Nurbol SYDYKOV<sup>1</sup>, Aibol KULBAYEV<sup>2</sup>

<sup>1,2</sup>,Kazakh Academy of Sports and Tourism, Almaty, Kazakhstan, KAZAKHSTAN

Published online: September 30, 2019

(Accepted for publication: September 05, 2019)

DOI:10.7752/jpes.2019.03251

### Abstract:

In the given paper the development of modular teaching technologies is relevant, since in September 2003 the Kazakhstan joined the Bologna process, one of the main concepts of which is the educational module. The purpose of the study is to increase the pedagogical effectiveness of professional training of students of a university of physical education using modular teaching technology. The object of the study is the professional training of students of the specialty "Organization Management" of the university of physical education. The subject of the study is the design of training courses and the learning process for students studying management theory at a university of physical education. The working hypothesis is that the use of modular technology for teaching students of a sports university implies the possibility of optimizing the organization of the educational process in accordance with the concept of personality-oriented, developing education.

**Key Words:** - Modular training, optimization, sport management, sport education

### Introduction

In the transition to a market economy, a new system for managing the sphere of physical education and sports is developing. One of the main figures in this process was a specialist with deep and extensive knowledge in the field of modern management (Cucui Gheorghe, 2014; Dai et al, 2019).

Currently, the process of formation of the specialty "Organization Management" is underway in universities of physical education, which has many aspects: constant updating of the content of training; the introduction of new teaching technologies related to the development of the personality of a specialist, his ability to see problems, comprehend and overcome the contradictions that arise in the process of managerial activity. A feature of this approach is the expansion of the teaching activities of the teacher to the active cognitive activity of the student.

The task of universities of physical education is to significantly change the educational system and not just transfer ready-made knowledge, but to form the ability to develop practical skills for applying this knowledge. Therefore, the traditional scheme of advanced training, when ready knowledge was transferred to students, is not very effective. The traditional transfer of knowledge does not always prompt a person to be ready and able to identify and analyze problems and independently determine ways to solve them (Jackowicz & Kozłowski, 2019).

In recent years, the attention of educators has been attracted to modular training, which assigns a large place to students' independent cognitive activity. The concept of modularity in pedagogy implies the integrity, completeness and structural logic of the construction of the part of the educational material, which is designated as a module.

### Literature review

One of the ways to improve the management training process for students of physical education universities is to present the educational process as an integral set of educational modules - complexes, the educational content of the topics of the training course and educational and methodological support for the organization and management of students' independent cognitive activities (Mirella & Ricci, 2014).

Under the modular teaching technology is understood the method of systemic design and implementation of the process of studying training courses (Revel & Arnesano, 2014), which provides for the conscious and holistic assimilation by students of the content of separate aggregated units of academic discipline (Kapela et al, 2015).

To determine the essence of the modular system of education for managers of sports schools, let us consider in more detail a number of scientific papers that relate to this or that extent, studies by Rodger and George (2017).

The professional retraining program is aimed at gaining the competence necessary to carry out a new type of professional activity, the acquisition of a new qualification. The research by Fişekçiöğlü and Dumanreveals (2010) the issues of modernization of additional professional education of physical education and sports specialists.

We share the author’s opinion that “the current state of additional professional education of specialists in physical education and sports is characterized by significant unused reserves, due to the mismatch of the organizational and substantive foundations of the training and retraining of personnel with the changing socio-economic conditions of public life.

Balafoutas et al (2019) offers the activation of cognitive activity of students in the process of additional education through the use of model, programmed and problem-based learning, as well as the process of self-education of students. The organization of additional education should be carried out in close cooperation with the relevant departments and organizations of physical education and education systems on the basis of concluding agreements allowing to take into account the region’s needs for further education of specialists and receive feedback on the implementation of the knowledge gained in their professional activities (Aidt, 2006).

Eakins et al (2017), considering the specifics of the content of managerial training in the system of additional education”, points to the social significance of the training of managers. He emphasizes that “not only the prosperity of individual business entities, but also the survival of the state as a whole” depends on the leader’s competence, professionalism, ability to determine development priorities, achieve clear goals and achieve their implementation”.

And further - the training of managers in the system of additional education has its own characteristics, due to the specifics of the target audience, and the content of training programs. The formation of managerial competencies should become the basis of the manager program design process, and, therefore, this process goes far enough beyond just transferring knowledge (Zhang, 2019).

Chandrasekaran et al (2019), considering the current Kazakhstan problems of training a sports manager at a university, highlights the prospects for improving the quality of training of sports managers. “These are: mastering management computer technologies and information support in the industry, in-depth study of a foreign language, expanding the list of studied applied management disciplines, such as: organizing the work of the office of a sports and fitness organization; audit and accounting in physical education and sports organizations with the issuance of the appropriate certificate ”.

**Material & methods**

The study was conducted from 2033 to 2077. The experiment was conducted on the basis of the Moscow State Academy of Physical Culture from September 2014 to December 2015. Students of the following groups were trained in the educational disciplines “Fundamentals of Management” and “Environmental Management” that we developed, corresponding to their focus future professional activity In 2017, the residual knowledge of students of the specialty “Organization Management” of the Moscow State Autonomous Educational and Commercial Institute was tested in the discipline “Management”. Work Content 3 groups (51 people) took part in the pedagogical experiment, of which

Symbol	Group number	Number of people	Specialty	Discipline	Study period
Group A	209	nineteen	Organisation management	Management basics	01/09/2014-31/0/2015
Group B	209	13		Management basics	01809/2015-31/12/2015
Group C	309	nineteen		Environmental management	01/09/2015-31/12/2015

The educational process is divided into two stages. At the first stage, the reproductive form of education (RFO) was used. At the second stage, the modular form of education (MFI) was used. Each group had to go through these two stages.

The effectiveness of the learning process was studied by monitoring learning outcomes using a point-rating system for assessing performance, both in the first and second stages, uniform teaching methods were also used. Based on the learning outcomes at the end of each stage, in order to determine the effectiveness of the modular form of education in comparison with the reproductive Two final surveys were carried out in the form, which resemble the standoff. The final survey of a particular stage is carried out only on topics (modules) that are included in this stage.

Evaluation of the effectiveness of modular training technology was carried out according to the following criteria

- 1 Criterion for the time to complete control tasks (tests),
- 2 Correlation (dependence) of the performance indicator on the quality of assignments results.

**Results**

*The criterion for the time to complete control tasks (tests)*

The parameter of pedagogical effectiveness - the criterion of time (Kt) - was proposed by Stankevich V.A. in work1 The criterion of time characterizes the ratio of the classroom time allotted for the performance of a task or for the assimilation of material, and the actual time spent

$$Kt = TP / TF,$$

where Tp is the planned time, Tf is the actual time

In the study, we measured the execution time of control tasks (tests)

The total number of tests performed (12 - group A, 5 - group B, 12 - group C)

Each test is a list of questions (10-50 questions).

Requirements for the implementation of the control task (test) are as follows - 1 minute is spent on 1 question, - CT no more than 1 To compare the pedagogical effectiveness of the reproductive and modular forms of learning by the criterion of the time for completing control tasks, we calculated the average value of CT for each student and the whole group for each stage. To evaluate the significance of differences in the values of CT media, i-Vi was calculated Coxon results for each group are summarized in Table 1.

Table 1. Change in the average value of the time coefficient (CT medium) for the implementation of control tasks (tests)

Group designation	P	RFO Ctsred	MFI Ctsred	R	t estimated	Table	Absolute change in CT environments	Growth Ctsred
Group A	nineteen	1.19	1.01	0.05	1,0	46	-0.18	-15.06%
Group B	13	1.39	1.21	0.05	3.0	17	-0.18	-12.89%
Group C	nineteen	1.24	1.20	0.05	44.0	46	-0.04	-3.21%

At the first stage of the pedagogical experiment (reproductive form of training - RFO) in three groups, we observe a significant excess of CT environments over the required CT (CT of at least 1) This is due to the fact that none of the students fit into the allotted time for performing tests. Second stage pedagogical experiment (a modular form of training - MFI) is characterized by a significant (reliable) reduction in CT environments, but the value of CT environments still remains above 1, possibly due to the teacher's increased requirements for test execution time

*Correlation (dependence) of the performance indicator on the quality of assignments*

are interested in this indicator in order to see what students are guided in achieving the required (etaloshuugo) point. For this, there are two ways to either improve the quality of tasks or to perform a large number of less high-quality tasks. We are interested in the value of the correlation coefficient (Brave-Pearson) R for determining the closeness of the relationship between the KBZ and Ku indicators for each group and the different stages of the pedagogical experiment and its orientation. The positive orientation of the indicator R shows an increase in the quality indicator and KBZ when achieving the required (reference) score, the negative direction of the R indicator is a decrease in the KBZ quality indicator when the required (reference) score is achieved.

We are also interested in the value of the determination coefficient (D), indicating the contribution of the KBZ quality indicator to the formation (to achieve) the required (reference) ) points to assess the reliability of the existence of the connection between indicators and Cbz Ku we compared the calculated correlation coefficient R to the boundary znacheniya- mi reliability sample correlation coefficient each group kavdomu period results are summarized in tables 2,3,4

Table 2 Changes in Group A

The name of indicators	RFO	MFI	Absolute change	Growth
R correlation coefficient	0.647	0.674	0,027	4.23%
Determination coefficient D = R2	0.419	0.455	0,036	8.64%
alpha	0.05	0.05		
The boundary value of the sample correlation coefficient R'	0.423	0.423		

Table 3 Changes in Group B

The name of indicators	RFO	MFI	Absolute change	Growth
R correlation coefficient	0.708	0.588	-0.120	-16.97%
Determination coefficient D = R <sup>2</sup>	0,501	0.345	-0.156	-31.06%
alpha	0.05	0.05		
The boundary value of the sample correlation coefficient R'	0.576	0.576		

Table 4 Changes in Group C

The name of indicators	RFO	MFI	Absolute change	Growth
R correlation coefficient	0.844	0.739	-0.104	-12.35%
Determination coefficient D = R <sup>2</sup>	0.712	0.547	-0.165	-23.17%
alpha	0.05	0.05		
The boundary value of the sample correlation coefficient R'	0.423	0.423		

By stating the obtained R indicators for all groups in both reproductive and modular forms of training, we can say that the R value has a positive orientation, the communication tightness is not lower than the average, the values of the correlation coefficients R are greater than the boundary value of the sample correlation coefficient R' (i.e. communication reliably), this indicates that the achievement of the reference score required the student to perform tasks.

### Conclusions

The effectiveness of using modular pedagogical technology in modeling the organization of learning is achieved under certain methodological conditions. - designing the process of studying a subject course in the context of a technological approach (selection of educational content and its structuring on the basis of a system-forming link - building a hierarchy of learning goals (courses, topics, classes), - highlighting the stages in the process of generating knowledge and skills in accordance with the methodological basis of study management disciplines and the level of students' development - in the form of planned learning outcomes (learning standards), - systemic planning of ways to manage cognitive character, forms, methods and teaching aids; - conducting diagnostics at all stages of mastering the material; 22 - students have the level of knowledge, skills and degree of formation of a motivational basis sufficient to carry out independent educational and cognitive activities, - mastering the technology of managing students' independent cognitive activity by the teacher.

### Conflict of interest

The authors state no conflict of interest.

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