# On the Improvement of the Pedagogical Staff Training System in the Field of Physical Education and Sports

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*Within the framework of this article, the organizational-methodological foundations and practical situation of the systematic approach to the organization of teacher training in the field of physical education and sports, as well as the importance of the gradual implementation of the development of the teacher training system, the importance of solving problems related to professional training in the training of teacher personnel, have been studied. Also, the importance of monitoring the activities of expert pedagogues in the field of physical education and sports, providing sports facilities with pedagogical personnel, and constantly improving the monitoring work in this regard was highlighted.*

*Keywords: physical education, sport, pedagogic staff, professional skills, continuous education, expert, management, motivation, sports training, professional, epistemology, ontology, axiology, conceptual, sports object, innovative activity, mechanism*

## INTRODUCTION

To improve the system of training of pedagogical personnel in the field of physical education and sports, many scientific studies are being conducted in the world aimed at the development of physical education and sports. Analytical review of existing scientific literature, theoretical and practical foundations for teaching physical education and sports, the introduction of additional training on the physical activity of pedagogues, increasing the effectiveness of the educational process through the modern approach and professional skills of the pedagogue in personnel training, personnel supply in the field of physical education and sports and based on the needs, special attention is paid to the scientific research on the problems related to the issues of teacher training. In the action strategy for the development of the Republic of Uzbekistan for 2017-2021, "...further improvement of the continuing education system, increasing the possibilities of quality education services, continuing the policy of training highly qualified personnel in line with the modern needs of the labor market" are considered urgent issues1.

Even in rapidly developing countries, the need for more high-quality specialist personnel in specific fields is currently one of the main problems. Such problems are gradually being solved in our country. Pedagogues have always played the main role in training specialists in all areas.

Currently, large-scale reforms are being implemented in Uzbekistan further to develop the system of physical education and sports education, provide quality education services in the field, and improve the design of training highly qualified personnel.

The problem of the research is to improve the organizational and methodological foundations of the pedagogical personnel training system in physical education and sports.

Several tasks were set to solve this research problem:

- Determining the organizational-methodical basis and practical situation of the systematic approach to the organization of pedagogic personnel training in the field of physical education and sports;
- analysis of the step-by-step implementation of the development of the teacher training system in the field of physical education and sports;
- determining the influence of physical education and sports based on the formation of a sports cluster in the training of pedagogic personnel;
- developing recommendations for solving problems related to the activity of pedagogues in physical education and sports and their professional training.

## ANALYSIS OF LITERATURE ON THE TOPIC

Following the priority direction of the education system development strategy, the need for pedagogic personnel in physical training and sports training institutions is growing in the future.

In particular, based on the idea that the creative behavior of the teacher in the training of specialists in the field of physical education and sports education allows us to know that teachers are engaged in stimulating the creative component through their didactic activities, the ideas of such scientists as Tatiana Dobrescu, Ion Mihaila, Gloria Rata have been researched. done[2]

In the field of physical education and sports, scientists such as Anna Gerke, Kathy Babiak, Geoff Dickson, and Michel Desbordes have thoroughly studied the nature of the sports cluster and the knowledge and skills that a specialist must know.[3]

It should be noted that effective physical education is considered the main factor of teaching, which in turn has a direct impact on student's physical literacy, according to K.W.R. Sum, T. Wallhead, S.C.A. Yes, H.P.C. St., etc., expressed their opinion based on their research.[4]

Silvia Teodorescu, and Constanţa Urzeală, in the framework of their research, spoke about improving the activities of pedagogues and coaches in the field of physical education and sports, that is, ensuring their participation in the fulfillment of each set goal will fundamentally change the activity.[5]

Critical thinking is a necessary central competence of university graduates in various professional fields. Many articles identify and explain the need for critical thinking pedagogy combined with sound moral and ethical thought and behavior. Scientists such as Dwight H. Zakus, David Cruise Malloy, and Allan Edwards emphasized their conclusions regarding identifying the central aspects of critical thinking within the framework of the ethical conceptual conditions of ontology, epistemology, and axiology for activities in the field of physical education and sports.[6]

Scientific research related to the research of the theoretical and methodological bases of training of specialists in the field of physical education and sports was conducted by foreign scientists, including V.I. Utkin, V.A. Salnikov, E.V. Bondarenko, L.P. Matveev, scientists of our country N.T. Tokhtaboev and others.[7-11]

It was reflected in the scientific works of I.I.Pereverzin, V.I.Joldak, O.N.Stepanova, K.D.Yarashev, M.S.Akhmatov, and others in physical education and sports organization.[12-16]

Based on the above, the relevance of this work is that scientific research on improving the teacher training system in physical education and sports has not been carried out enough.

The analysis of our country's and foreign scientific literature on physical education and sports, as well as the construction of sports facilities in the regions and the increase of various sports services in the field as a result of the reforms implemented in our country, show that the issue of providing pedagogic personnel has not been solved in practice and that sufficient research has not been conducted in this regard.

## RESEARCH METHODOLOGY

In 2017-2018, to evaluate the situation of the factors affecting the development of the management of pedagogic personnel in the field of physical education and sports, to assess the situation as an experiment (experiment-test), we carried out our research, in the center of scientific-methodical provision, retraining and professional development of specialists in physical education and sports, in 2017-2018 among the participants of the "Leader and Deputy Leader" course of the institutions. An experimental study was conducted to evaluate the knowledge and experience of 25 heads and 150 deputy heads of sports institutions regarding the management of pedagogic personnel in physical education and sports educational institutions. In the course of our research, their knowledge and experience were evaluated.

The matrix of correlation coefficients and regression factors showing the efficiency of mastering the knowledge of the field was determined based on the evaluation of the situation at the beginning and end of the experiment at the participants of the "Leader" and "Deputy Leader" course of the physical education and sports education institutions.

**TABLE 1**
**THE LEVEL OF DEVELOPMENT OF THE MANAGEMENT OF THE INSTITUTION BASED ON THE EVALUATION OF THE SITUATION CONDUCTED BASED ON THE RESULTS OF THE EXPERIMENT AT THE BEGINNING AND THE END OF THE "LEADER" AND "DEPUTY LEADER" COURSE PARTICIPANTS OF PHYSICAL EDUCATION AND SPORTS EDUCATION INSTITUTIONS**

| № | Indicators | Number | Mastery levels are in numbers and percentages | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Respondents (number, in %) | | Difficulty answering (number, in %) | | Those who did not want to answer (number, in %) | |
| **"Leader" on staff** | | | | | | | | |
| 1 | At the beginning of the experiment | 25 | 4 | 16 | 12 | 48 | 9 | 36 |
| 2 | At the end of the experiment | 25 | 15 | 60 | 8 | 32 | 2 | 8 |
| **On "Deputy Leaders."** | | | | | | | | |
| 1 | At the beginning of the experiment | 150 | 41 | 27 | 60 | 40 | 49 | 33 |
| 2 | At the end of the experiment | 150 | 105 | 70 | 30 | 20 | 15 | 10 |

Source: the experiment was developed by the author based on the results of the research.

Specific correlation coefficients indicate sufficiently strong connections between factors. There is an average relationship ($r_{YX1} = 0{,}5578$) between the knowledge of directors of physical education and sports management activities (Y) and the ability of regulatory and legal documents on management (X1). There is a moderate relationship ($r_{YX2} = 0{,}5623$) between the knowledge of principals about physical education and sports management activities (Y) and the influence of higher organizations' intervention or inspections in the management of the field (X2).

It can be seen that there is a strong relationship ($r_{YX3} = 0{,}7549$) between the directors' knowledge of physical education and sports management activities (Y) and their age (X3). At the same time, it can be seen that there is an above-average correlation ($r_{YX1} = 0{,}6742$) between knowledge (Y) and education (X4).

In addition, we check the reliability of correlation coefficients using the t-Student test. For this, we compare the t-statistics and probability of the calculated correlation coefficients with the table values of the t-statistics.

The tabular value of t-statistics in the degree of freedom $df = 149\alpha = 0{,}05$ and probability of employment is equal$t_{kp} = 1{,}9759$.

If we look at the t-statistics and probabilities of the specific correlation coefficients between the resulting factor (Y) and the factors affecting it, they are as follows:

Calculated between (Y) and (X1) factor is equal to $t_{YX1} = 8{,}1757$, $prob = 0{,}0000$. This is greater than the table value of the calculated t-statistic ($t_{YX1} = 8{,}1757 > t_{kp} = 1{,}9759$) shows that the relationship between them is reliable.

Calculated between (Y) and (X2) factor is equal to $t_{YX2} = 8{,}2729$, $prob = 0{,}0000$. This indicates that the calculated t-statistic is greater ($t_{YX2} = 8{,}2729 > t_{kp} = 1{,}9759$) than the table value, and the relationship between them is reliable.

Calculated between (Y) and (X3) factor is equal to$t_{YX3} = 13{,}9081$, $prob = 0{,}0000$. This is greater than the table value of the calculated t-statistic ($t_{YX3} = 13{,}9081 > t_{kp} = 1{,}9759$) indicates that the relationship between them is reliable.

Calculated between (Y) and (X4) factor is equal to $t_{YX4} = 9{,}9513$, $prob = 0{,}0000$. This is greater than the table value of the calculated t-statistic ($t_{YX4} = 9{,}9513 > t_{kp} = 1{,}9759$) indicates that the relationship between them is reliable.

It should be noted that the validity of the final results in forming the multifactor regression model is explained by the condition of the low joint effect between the factors (the absence of multicollinearity). If the value of the pairwise correlation coefficient, which considers the strong relationship between two elements, is greater than 0.87, then such factors are multicollinear. We perform a multi-factor regression analysis between the resulting factor and the factors affecting it (Table 4.7).

**TABLE 2**
**REGRESSION ANALYSIS RESULTS**

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| X1 | 0.392444 | 0.066467 | 5.904348 | 0.0000 |
| X2 | 0.496660 | 0.074546 | 6.662450 | 0.0000 |
| X3 | 0.177104 | 0.068091 | 2.600984 | 0.0103 |
| X4 | 0.292552 | 0.087426 | 3.346300 | 0.0010 |
| C | 0.141038 | 0.123292 | 1.143935 | 0.2545 |
| R-squared | 0.795917 | Mean dependent var | | 1.286667 |
| Adjusted R-squared | 0.633484 | S.D. dependent var | | 0.726642 |
| S.E. of regression | 0.525746 | Akaike info criterion | | 1.584769 |
| Sum squared resid | 40.07931 | Schwarz criterion | | 1.685123 |
| Log-likelihood | -113.8577 | Hannan-Quinn criteria. | | 1.625540 |
| F-statistic | 34.90662 | Durbin-Watson stat | | 1.856020 |
| Prob(F-statistic) | 0.000000 | | | |

A multifactor econometric model looks like this:

$$\hat{Y} = 0{,}1410 + 0{,}3924 \cdot X_1 + 0{,}4967 \cdot X_2 + 0{,}1771 \cdot X_3 + 0{,}2925 \cdot X_4 \quad (1)$$
$$(0{,}123)\quad (0{,}066)\quad (0{,}074)\quad (0{,}068)\quad (0{,}087)$$

(The values in parentheses are the values of the standard errors of each factor).

The obtained multi-factor econometric analysis shows that a one percent increase in the factor (X1) of directors' knowledge of management regulations leads to an average increase of 0.3924 percent in the result indicator – directors' understanding of physical education and sports management activities (Y). coming.

A one percent increase in the factor (X2) of the influence of the higher organization in the management of the field management of directors ensures an average rise of 0.4967 percent in the knowledge (Y) of the directors of the management of physical education and sports. As the principal's (X3) age increases by 1%, the principal's knowledge of physical education and sports management activities (Y) increases by 0.1771% on average. A 1 percent increase in principals' education (X4) factor causes an average 0.2925 percent increase in principals' knowledge of physical education and sports management (Y).

We use the coefficient of determination to check the significance of the constructed multifactor econometric model (1). The coefficient of determination shows how much percent of the resulting factor (Y) consists of the elements included in the model. In our study, the resulting factor – directors' knowledge of physical education and sports management activities (Y) is 79.59 percent dependent on the elements included in the multifactor econometric model. The remaining 20.41 percent is the influence of factors that have yet to be considered.

We use Fisher's F-criterion to determine the statistical significance of the constructed multifactor econometric model (1) and its compatibility with the studied process.

The calculated value of the F-criterion$Fcalc = 34{,}9066$ is equal to. If the computed value is greater than the value in the table, then the constructed multifactor econometric model is likely statistically significant or adequate for the studied process.

We find the tabular value of the F-criterion. For this, we calculate the degrees of freedom $k_1 = m$and $k_2 = n - m - 1\alpha$significance level. Based on the level of significance $\alpha = 0{,}05$and degrees of freedom $k_1 = 4\, k_2 = 150 - 4 - 1 = 145$, the F-criterion $Ftable = 2{,}3719$ table value equals 7.

$F_{calc}$>$F_{table}$ satisfies the condition, which indicates that the calculated value of the F-criterion is greater than the value in the table, and the constructed multifactor econometric model is statistically significant.

(1) We use Student's t-test to test the reliability of the parameters in the multifactor econometric model. By comparing the calculated and table ($_{table}$) values of Student's t-test, we accept or reject the $H_0$ hypothesis.

To do this, we find the tabular value of the t-criterion based on the conditions of the selected reliability probability ($\alpha$) and the degree of freedom d.f. $= n - m - 1$. Here$n$ is the number of observations $m$is the number of factors.

When the reliability probability $\alpha = 0{,}05$is, and the degree of freedom d.f. $= 150 - 4 - 1 = 145$is, the table value of the t-criterion is$t_{\text{table}} = 1{,}9759$.

Therefore, the calculated (t $_{calculation}$) values of the Student's t-criterion for all factors are more significant than the table (t $_{table}$) values. This shows that these factors are reliable. Also, when $\alpha = 0{,}05$is, the probabilities of all factors are less than 0.05.

(1) we check the autocorrelation in the residuals according to the multifactor econometric model. If there is no autocorrelation in the residuals of the resulting factor, then the value of the calculated DW criterion will be around 2. In our example, the value of the computed DW criterion is 1.856020. This indicates that there is no autocorrelation from the resulting factor residuals.

In conclusion, it can be said that the directors' knowledge of the management of physical education and sports, their knowledge of regulatory and legal documents on management, the influence of the intervention or inspections of the higher organization in the direction of the field, their age and education are essential.

The management of innovative activities of pedagogues in educational institutions in the field of physical education and sports starts with the planning of management practices and, secondly, with the creation of conditions for implementing management. In this regard, it is appropriate to use the following influencing factors in the management system of the head management system in the direction of innovative activities of pedagogues in educational institutions in the field of physical education and sports:

- in educational institutions in the field of physical education and sports, the pedagogue should make management decisions appropriate to the goals and opportunities set in the management of the innovative activities of the personnel;
- to achieve the final result in the direction of the creative activities of the pedagogical personnel only through specific management decisions of the manager;
- management decisions in the order of innovative activities of pedagogic personnel should be elaborated and implemented;
- it is necessary to clearly define the obligations and duties of the team, to limit the labor standards in the management of the innovative activities of the pedagogic personnel;
- it is necessary to create a good working environment and job satisfaction so that everyone in the team can show themselves and reveal their potential in the management of the innovative activities of pedagogic personnel;

In educational institutions in physical education and sports, pedagogues should strive to manage the innovative activities of the staff and not give additional work that others have not done without encouraging them. It extinguishes his desire to work quickly and qualitatively; in another, it extinguishes his attitude to work and awakens a mood of carelessness.

## CONCLUSIONS AND SUGGESTIONS

1. The analysis of the special scientific and methodical literature of our country and abroad, the provision of pedagogic personnel in physical education and sports, and the systematic solution of complex scientific research are almost nonexistent. For this reason, it is considered urgent.
2. The regulation of the pedagogic personnel system in physical education and sports and the activities of educational institutions engaged in the training of pedagogic personnel were analyzed, and the elimination of problems in the field was based.
3. In the field of physical education and sports, leaders in the management of the pedagogic personnel training system should take the initiative to approach innovative activities together with personnel, organize work in established laboratories, monitor and evaluate the process, identify and draw conclusions about shortcomings in the work process, and manage the pedagogic personnel participating in the activity. Directs to improve the common incentive mechanism.
4. There is a great need for regional personnel in the training of specialist pedagogues in the field of physical education and sports; therefore, faculties of physical education are operating in higher educational institutions in the regions, and the trained personnel are directly in local preschool educational institutions, general education schools, sports schools for children and teenagers and various monitoring of personnel in the positions of pedagogue-coach and sports methodologist in schools and sports colleges specializing in sports, as well as provision of sports facilities with pedagogical personnel in the field of sports and continuous improvement of monitoring work in this regard.
5. To effectively manage the personnel in the field of sports and support their ideas by introducing the sports cluster development model, relying on the experiences of foreign countries in the development of the sports cluster in the practical organization of the activities of pedagogical personnel in the field of physical education and sports, and scientific research on physical education and sports methodical recommendations on the implementation of specific sports-cluster procedures in the performance of projects are given.
6. To educate young people in physical education and sports and ensure their employment is to gradually implement the system of ownership and training and selection of talented young athletes on the principle of “educational institutions - sports school - higher sports.”
7. Leaders participating in the system of pedagogic personnel training in the field of physical education and sports should take the initiative to approach the activities together with the personnel in the system, organize work in the established laboratories, monitor and evaluate the process, identify and draw conclusions about shortcomings in the work process, and regularly train the

personnel participating in the organizational and pedagogical activities. as a result of encouragement, it is recommended to increase the activity of pedagogues in the field.

8. Recommendations for improving the system of pedagogic personnel training in physical education and sports in the interregional field. The measures of the Ministry of Physical Education and Sports to regulate the management of pedagogic personnel in the field of physical education and sports in the regions and to eliminate the dissatisfaction of pedagogic personnel are recommended to increase the activity of pedagogic personnel in the area.
9. Simplification of certification requirements for coaches and instructors working in regional physical education and sports institutions, which are held every three years, further improvement of the system of training of trainers and instructors working in regional physical education and sports institutions, the introduction of ONLINE (distance learning) system, as well as attestation work by the Center implementation under the leadership is recommended to reduce interruptions in the supply of personnel and lack of personnel.
10. Introduction of "Physical fitness level" physical fitness tests among all population strata based on the priority development of the field of physical education and sports.

## ENDNOTES


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