

# INTERACTION OF PHYSICAL EDUCATION AND SPORTS TEACHERS WITH STUDENTS IN A DIGITAL EDUCATIONAL ENVIRONMENT: THEORETICAL BACKGROUND

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## Abstract

The relevance of this research is predetermined by the digitalization of education and the problems associated with this process, which require a change in the pedagogical paradigm, a change in the state strategy in the educational field, as well as a theoretical analysis of all aspects of training teachers to interact in a digital educational environment. The need to provide constant feedback to students in order to obtain information about their physical and moral readiness to achieve sports results, as well as the effectiveness of pedagogical tools and methods actualizes the research goal. The purpose of the study is to consider theoretical approaches to determining pedagogical interaction with students in a specific environment of a physical education school, considering work in a digital educational environment, studying the essence, structure, types and interrelations within this pedagogical phenomenon. In the process of studying this problem, methods of generalizing, analysing pedagogical literature and pedagogical experience were used. As a result of the study, a definition of the pedagogical phenomenon is presented, suggesting the need to consider the interaction of physical culture and sports teachers with students in a digital educational environment in secondary vocational education systematically, as a complex multicomponent process with its own structure and specificity. It is determined that the essence of pedagogical interaction between teachers and students in physical education classes should be based on the creation of the most effective conditions for achieving sports results. The study showed that the structure of the phenomenon can include not only the goal, objectives, motives, but external and internal socio-psychological, pedagogical superstructures and interrelations. The specifics of physical education and sports teacher's interaction with students in the digital educational environment are determined by the special nature of its subjects; the purpose of the process itself; special requirements for recognizing the individual value of each student, for considering age psychology and physiology, for building subject-subject relations. The materials of the article may be useful for teachers and researchers working in the field of pedagogy.

Keywords: pedagogical interaction, digitalization of education, physical education and sports teachers, digital educational environment.

## 1 INTRODUCTION

The training of future teachers to interact with students is now becoming the object of an increasing number of scientific studies and a requirement for the effectiveness of the pedagogical process. The state strategy aimed at digitalization of education causes pedagogical problems and at the same time contributes to the emergence of new promising scientific ideas in the field of training teachers in physical education and sports. The need to organize continuous feedback with students in order to receive information about physical and moral readiness to achieve sports results, as well as about the effectiveness of pedagogical tools and methods actualizes the scientific task of researching the theory and practice of pedagogical interaction of physical education and sports teachers with students in a digital educational environment.

It is customary for scientists to consider pedagogical interaction as one of the important pedagogical categories. Researchers analyse communication and interaction of participants in the educational process on the basis of activity and system approaches, studying the essence, structure, types and interrelations within this pedagogical phenomenon, as well as its historical development. The transition from the former authoritarian to the modern humanitarian educational paradigm has caused the need to build pedagogical interaction on the basis of new democratic principles that consider the personal values of a teacher and a student. The strategy for digitalization of education leads to the development and emergence of new pedagogical technologies in the field of training physical education and sports teachers to interact, contributing to the improvement of pedagogical competence and the ability to help students achieve the desired results and ensure the comfort of the pedagogical process.

## 2 METHODOLOGY

In the process of studying this problem, systematic and activity-based approaches were used, allowing to consider the pedagogical phenomenon as a stable system, considering its essential and component structures, external as well as intra-system relationships, allowing to optimize the applied pedagogical technologies, methods and tools in order to achieve the set research goal. Methods of studying, generalization, analysis of pedagogical literature and pedagogical experience were used to obtain objective scientific data.

## 3 RESULTS

The objectives of this study determined the need to review scientific works in the field of organizing interaction in the educational process, professional training of physical education and sports teachers and pedagogy in general, to establish the essence and supplement the definition of the concept under study. Next, the structure of the pedagogical phenomenon and the specifics of pedagogical interaction with students in a physical education school are considered.

### 3.1 Literature review: Definition and Essence of Pedagogical Interaction

The study and analysis of pedagogical research has shown the interest of scientists in considering problems related to various aspects of pedagogical interaction in physical culture and sports activities. Thus, M.S. Ananyin and Z.P. Barabanova investigate pedagogical interaction as an important condition for the effectiveness of educational activities in the field of physical culture and sports [1], [3]. A.V. Andrienko, E.M. Batenko, V.N. Nikeev analyze the interaction of teachers and students in the context of higher education pedagogy [2], [4], [6]. V.P. Zubanov, S.I. Vlaskina, V.N. Tyutchenko studies the features of the construction of pedagogical interaction in physical culture in the models of personality professional formation of personality [5]. Psychological aspects of teacher-student interaction during physical education classes are reflected in the works of O.A. Ostapenko, O.I. Kuzmenko, A.A. Svirid [7]. It should be noted that the digital educational environment is also put forward as a condition for ensuring the quality of student training [8], [9], [10]. At the same time, despite the revealed scientific interest in this problem, there are practically no studies on the training of physical culture and sports teachers to interact with students in the digital educational environment in secondary vocational education. Said above causes the need to consider the theoretical justification, definition, identification of the essence and structure of pedagogical interaction in a specific environment of a physical education college, considering work in a digital educational environment.

Currently, scientists offer various approaches to the definition of such a phenomenon as pedagogical interaction, while it is generally accepted that this is a contact between participants in the educational process, providing for the expected results. Some researchers emphasize the activity-based and communicative nature of pedagogical interaction and its target orientation [4]. V.N. Nikeev notes the social status of the pedagogical phenomenon and the ability to have a developing impact on each participant in the educational process [6]. M.S. Ananyin and I.V. Nikolaev considers it necessary to form individual styles of interaction between teachers and students, taking into account the stages of its formation and development [1].

Considering the above, it can be assumed that the interaction of physical education and sports teachers with students in the digital educational environment in secondary vocational education is a complex multicomponent process that includes didactic, educational, social and psychological aspects, conditioned by the set educational goals, mutually directed, having its own structure, both positive and negative consequences, forming and developing in stages, having its own levels and criteria for evaluating effectiveness.

Considering the essence of the phenomenon under study, we note that pedagogical interaction is the very essence of the educational process, since it consists of two interrelated forms of activity, teaching and learning. At the same time, the essence of pedagogical interaction between teachers and students in physical education classes proceeds from its purpose, namely, the creation of the most effective conditions for achieving sports results, increasing the level of self-motivation to work together with the teacher. Effective pedagogical interaction contributes to ensuring the individual path of development of each student of the school, considering physical fitness, abilities, individual typological and personal characteristics [6].

### **3.2 Structure of Pedagogical Interaction with Students**

In pedagogical scientific literature, it is customary to consider pedagogical interaction as a special activity that should be analyzed from the point of view of the structure of activity, which includes such components as, need, motive, goal and requirements for achieving it, objectives and methods of solving the problems, actions and, finally, the result. A special characteristic feature of the structure of pedagogical interaction between teachers and students in physical education classes is its dynamism, mobility and variability due to the presence of external and internal influencing factors, unpredictability of results, the participation of more than one subject of the educational process and the very specifics of the activity.

For a deeper study of the structure of the phenomenon, within the framework of this study it is necessary to consider the main areas (spheres) of pedagogical interaction, which differ in content and form. The megasphere is connected with the interaction of state and educational social institutions and is reflected in the state educational strategy for digitalization and regulatory documents aimed at the development of physical culture and sports. The metosphere is represented in the system of secondary vocational education, considering the level of training, the type of educational physical education institution, and its content is manifested in the concept of pedagogical secondary vocational education. The metosphere is implemented in the form of the organization of the education process, training, upbringing in an educational institution of physical culture and sports, while the content is implemented with the help of curricula that consider state, national, regional components. The microsphere occupies a significant role in the structure of interaction and participates in the formation of communication of the educational process participants. Theoretical and practical studies show that it is the microsphere that is fundamental for pedagogical interaction, since the above are based on it.

The researchers note that physical activity is determined by the special nature of the interaction of its subjects, which assumes continuity of feedback in order to receive timely information about physical, mental and moral well-being of students [6]. This approach is especially necessary when developing the interaction of physical education and sports teachers with students, because it allows you to distribute physical activity optimally and choose effective teaching methods correctly.

### **3.3 Specifics of Physical Education and Sports Teachers Interaction with Students**

According to scientists, the specifics of the interaction of physical education and sports teachers with students in physical education classes is determined by the main purpose of the process itself, namely the need to create conditions for effective achievement of the goal, solving the tasks of physical education in a physical education school and implementing theory into practice. Pedagogical interaction of the teacher and students in the process of physical education and sports puts forward special requirements for the recognition of the individual value of each student, considering age psychology and physiology and construction of subject-subject relations [6], [7].

A systematic analysis of the phenomenon under study made it possible to attribute the need for unity of internal and external relations to the specific features of effective pedagogical interaction, in which the social component determines the main result of pedagogical interaction, the psychological one indicates the mechanism of its implementation, and the pedagogical one creates conditions for the implementation of the goals in practice. The next characteristic feature of effective pedagogical interaction is the orientation of physical education and sports teacher not only on the result, but also on the process itself with an obligatory positive assessment of the internal state of students. An important characteristic that determines the effectiveness of pedagogical interaction is the construction of a tolerant and empathic style of communication with students, which allows creating favourable and psychologically comfortable conditions for personal growth of students. It is necessary to point out another important feature of pedagogical interaction with students in a digital educational environment – it is orientation to a high level of motivation to use digital technologies in physical education and sports classes, competence in the field of digital pedagogical technologies and creative orientation in solving educational tasks.

The authors used the method of a questionnaire survey to determine the motivational focus on increasing the level of interaction between physical education and sports teachers with students. The survey involved 158 students of the Kazan School of Olympic Reserve. The survey was conducted as part of the first stage of diagnosis. Closed-type questions were used as a diagnostic tool to obtain objective answers; to limit time costs; to facilitate the processing of results; to make filling out the form easier; to obtain an accurate scaled assessment of the survey results. Scaling the answers of the questionnaire made it possible not only to obtain the necessary data, but also to determine the level of interaction between the teacher and students in the digital educational environment. The rating of

answers was estimated according to a predetermined 3-point scale and had a hidden character for students. A survey of school students revealed:

- Whether students consider it important to ensure friendly interaction with the teacher in the learning process;
- Whether the level of pedagogical interaction affects the quality of knowledge acquired by students;
- The level of interaction between teachers and students on a five-point scale, according to students;
- What style of pedagogical interaction creates a more favorable environment for learning the discipline, according to students;
- What digital educational resources students prefer to use in the process of interaction with the teacher;
- What pedagogical technologies can improve the level of pedagogical interaction in the digital educational environment of the vocational school;

Analysis of the survey results showed:

136 (86%) students surveyed consider it important to ensure friendly interaction with the teacher in the educational process (17 students (11%) consider the competence of the teacher in the field of the discipline being taught to be more important; 5 students (3%) ignore this issue);

117 (74%) respondents believe that the level of pedagogical interaction can significantly affect the level of knowledge, skills and abilities of students (33 (21%) - can influence; 8 (5%) - practically does not affect);

51 (32%) survey participants rated the level of interaction between teachers and students at five points (93 (59%) - at four points, 11 (7%) - at three points, 3 (2%) - at 1 point);

133 (84%) respondents believe that the democratic style of pedagogical interaction creates the most favorable learning environment (25 (16%) - liberal style; 0% - authoritarian)

122 (77%) students surveyed noted the active use of YouTube educational channels - BBC Learning English and sapSCIENCE; Google Translate service, an online platform for designing graphics, posters and videos - PosterMyWall and PowerPoint for creating presentations, Microsoft Teams as a platform for learning teamwork, chatting with a teacher and classmates, submitting homework remotely, for participating in a video conference (25 (16%) – use Yandex Translator and Zoom as a service to participate in educational conferences, webinars, group chats more often; 11 (7%) – prefer entertainment platforms and PowerPoint).

76 (48%) respondents indicated that information and communication pedagogical technologies help to increase the effectiveness of pedagogical interaction in the digital educational environment of the school (57 (36%) – chose project technologies; 25 (16%) – consider gaming technologies to be the most effective).

The results of a scaled assessment of the motivational focus on increasing the level of interaction between future physical education and sports teachers and students in the digital educational environment showed that 38 (24%) respondents scored the maximum possible number of points - 18; 88 (56%) of students scored 13 points; 27 (17%) - 9 points and 5 (3%) - 7 points.

## 4 CONCLUSIONS

The study and theoretical analysis of the research pedagogical literature allowed us to conclude that:

There is a conditioned need for theoretical conceptualization and practical testing of the problem of training physical culture and sports teachers to interact with students in the digital educational environment in secondary vocational education.

It is necessary to consider the interaction of physical education and sports teachers with students in the digital educational environment of a secondary vocational education as a complex multicomponent process with its own structure and specifics.

The essence of pedagogical interaction between teachers and students in physical education classes should be based on the goal, namely, the creation of the most effective conditions for achieving sports results.

The structure of the phenomenon includes not only the purpose, objectives, motives, but external and internal socio-psychological, pedagogical components and relationships.

The specifics of the interaction of physical education and sports teachers with students in the digital educational environment is determined by the special nature of its subjects; by the purpose of the process itself; by special requirements for recognizing the individual value of each student taking into account age psychology and physiology; by the level of subject-subject relations, by the unity of internal and external relations; by orientation of a physical education and sports teacher not only on the result, but also on the process itself; by developing a tolerant and empathic style of communication with students; by focus on a high level of motivation and competence in the use of digital technologies in physical education and sports classes.

The analysis of respondents' answers to the questionnaire indicates the need to organize pedagogical work to increase students' awareness of the role of pedagogical interaction and increase the level of motivation to use digital educational resources in the educational process.

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