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THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN TRAINING OF SPECIALISTS OF PHYSICAL EDUCATION AND SPORT

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Abstract The infiltration of information and communication technologies in the teaching-learning-evaluation process has become an intense topic addressed by the academic society and closely related to the modernization of education. Thus, the use of information and communication technologies is a necessary trend for the evolution of the field of physical education and sport, as well as for the training of the profile specialists.The process of globalization and the transition to a post-industrial society, focused on information technologies and knowledge, it emphasizes the need of new educational standards of professional training, focused on competences, as tools of realization of educational policies.

Introduction

In a society that is constantly changing, it is necessary to adapt the instructional-educational process in higher education to its requirements. This is achieved in all areas of society and knowledge seems to expand at a speed greater than understanding.

The change is due to the scientific-technical and cognitive advances, as well as the modification of the visions regarding the training of the specialists physical education and sport specialists.

The dynamics of information technologies certainly puts its mark on the specific research of high performance sports as well as on the training of physical education and sports specialists.

Most of the great achievements lately in the field of science and technology are also due to computer science, which has created new possibilities for performing complex calculations and processing large volumes of information in a short time. The emergence of personal computers and computerized mini-labs represents the qualitative leap achieved in technological evolution. Through the

new technologies, a large amount of information is processed, and then stored for later use. Its emergence constitutes the seed and the essence of the new technical-scientific revolution [16].

The problem of applying the computer in training has been thoroughly and multilaterally researched in several countries, and the proposed solutions were determined by the respective stage of development of education in the given country, as well as by the degree of computerization of the society at the time of the investigation. The episodes of implementation of Computer Assisted Training (CAT) in educational practice were, traditionally, the same: knowledge fixation and control; modeling and visualizing processes and phenomena when explaining new matter; word processing; the development of logical thinking [2].

In a well-developed education, different technologies and teaching methods of teaching are used, which aim to develop competencies, professional habits, skills, intuition and creative skills. In countries with quality educational systems based on all the teaching methods, the efficiency of teaching-learning and the final result in the classroom are put. Currently, in the age of information explosion, the development of information and communication technologies (ICT) in modern societies, there has been a pressing need for the implementation and use of new innovative technologies in education systems at all levels. At the same time, it is necessary to ensure continuity, an optimal balance between maintenance learning and innovative learning with the use of ICT. Computer-assisted education is a natural response to the challenges of the digital age and the knowledge-based economy [11].

Some authors [1, 3, 4, 5, 7, 9, 10] highlights the importance of digital skills, including knowledge of technologies from a pedagogical point of view (for example, the application of new technologies for teaching a discipline); of the skills of learning to learn, to research and to be reflective.

Information technology strongly influences the field of science and education, revolutionizing the system based on textbooks. The use of modern information technologies in the field of physical education and sport outlines a new learning model and plays a very important role in the professional training of the profile specialists. Creating a stimulating training process, oriented towards the learners through the acquisition of skills can be done more efficiently by using information and communication technologies [8].

The use of information technologies in the field of physical education and sport is systematized in the following directions (Figure 1): the teaching-learning-evaluation process; sports training; sports competitions; recovery physical culture; recreational physical culture; management of physical education and sport; managing the staff in the field;scientific research activity.

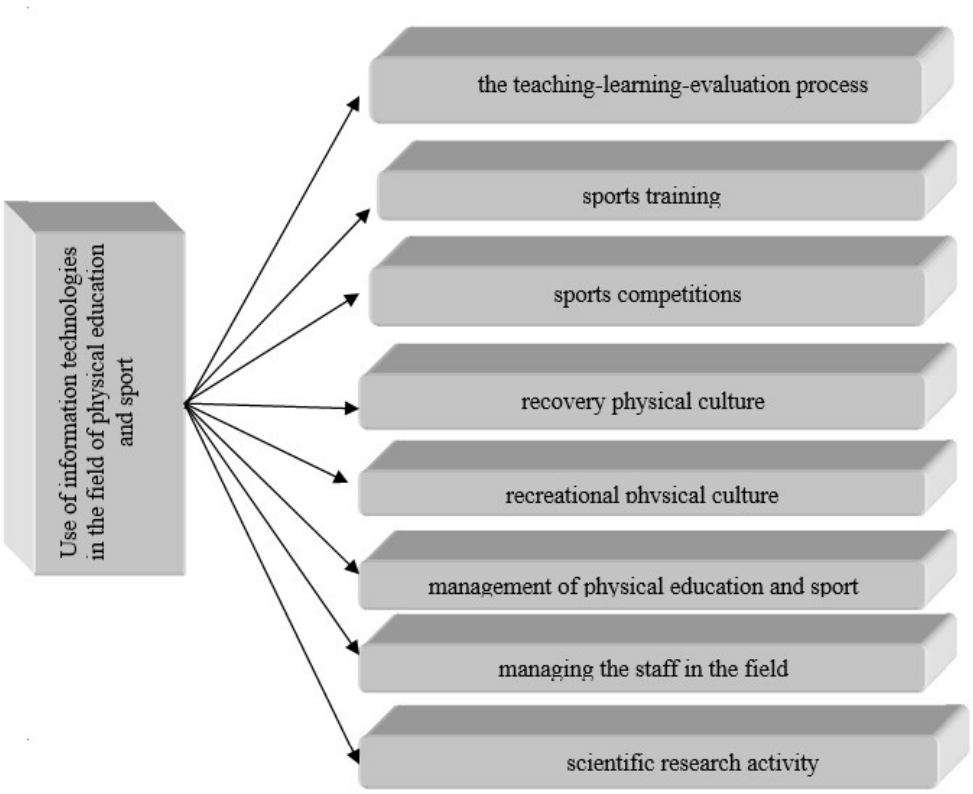

Fig. 1. Use of information technologies in the field of physical education and sport

The infiltration of information technologies in physical education and sport through various electronic assistive devices, expert programs and software improved the quality of training of both specialists and performance athletes.

As an example it is: "An apparatus for increasing the accuracy of the kick at the football gate" [12,], an apparatus that is composed of a compartmentalized panel and provided with sensors to indicate precisely where the ball was sent.

Another example of an apparatus for improving the technical training is the creation of N. Ochiana [17], the auxiliary device entitled "ECD" or "electronic correction device" which is practically a table tennis robot. The electronic device "ECD" can be used successfully in both learning and correcting, self-correcting technique. Moreover, the system of self-control, coupled with the small size and storage capacity of the information, gives researchers, teachers or coaches in the field a high degree of mobility.

These devices used throughout the world, identified on the worldwide patent base, confirm the importance of the information technologies used in the training of athletes and specialists, having a significant impact on the subsequent evolution of the respective sports samples, by influencing the technical, tactical and physical components.

The authors Raţă E., Milici D. consider that „The scientific and technological evolution at an unimaginable pace, in the last ten-year period, the coming into being of extremely sophisticated devices changed the sports domain, holding out large variety and high quality ways" [6].

The application of the IT means such as the audiovisual ones, in the instructive-educational process, is a method contributing to solving the objectives of the practical lessons, bringing the teaching staff closer to the non-standard means and having a positive influence on the work done.

The integration of ICT in the study process brings a series of facilities for both teachers and students (Figure 2).

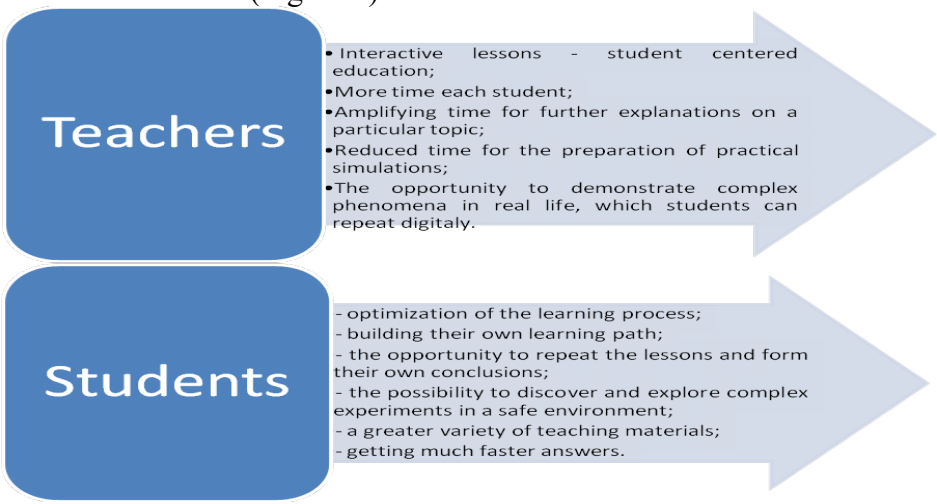

Fig. 2. Advantages of using ICT in the study process: teacher - student

Although the advantages of using ICT in education are numerous, the student should not be transformed into a "robot" who only knows how to use the computer. He must perform when possible real experiments, because he develops his spirit of observation, ability to concentrate, patience, attention, practical skills.

The advantages of implementing ICT in sports education must be corroborated with the danger of reducing practical activities and preventing the installation of somato-functional deconditioning in the musculoskeletal system, due to reduced the physical effort [14, 15].

The authors L. Dan Milici, Elena Rata and Mariana R. Milici, consider that "Using the computer on forecasting can create the possibility to obtain in short time great quantities of information, proving itself extremely important to estimate the most important parameters concerning somatically, functional, motive, psycho-motive, and psychological aspects, specific to the respective event" [13].

Material-method

The purpose of the research is to study the importance of information and communication technologies in the training of physical education and sport specialists.

Analysis, synthesis and generalization of the data of the specialized literature, sociological questioning, mathematical processing of the statistical data and their graphical presentation.

In order to carry out an analysis on the information technologies in the preparation of the future specialists of physical education and sports, we applied a questionnaire on the students of the U.S.E.F.S.

Results and Discussions

The following results were obtained:

Regarding the notion of information technologies, 95% of the respondents gave an affirmative answer, which shows that most are familiar with this notion, and 5% said they do not know such term (Figure 3).

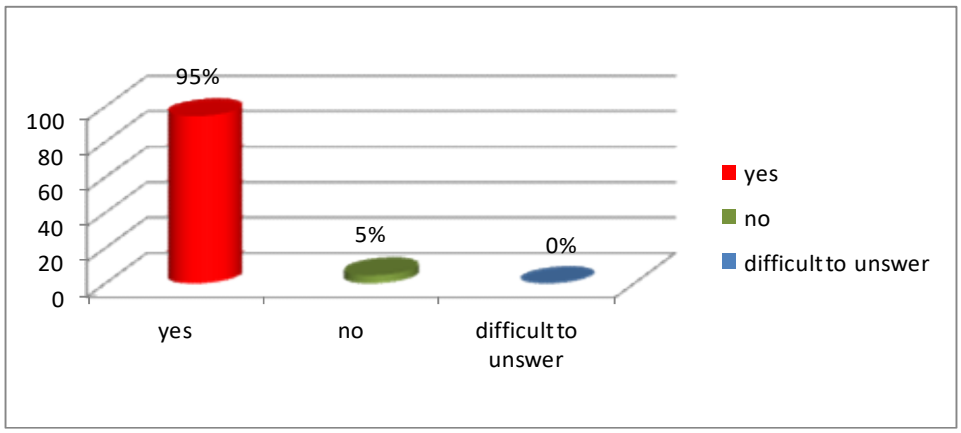

Fig. 3. Percentage distribution of responses regarding familiarization with the notion of information technologies

Regarding the role of information and communication technologies in the training of the specialists in the field of physical education and sport 60% consider

it important, 22.5% - very important, 15% - moderate and 2.5% argue that ICT has no importance in the preparation profile specialist.

These data demonstrate the above and highlight the importance of ICT in the specialized educational process (Figure 4).

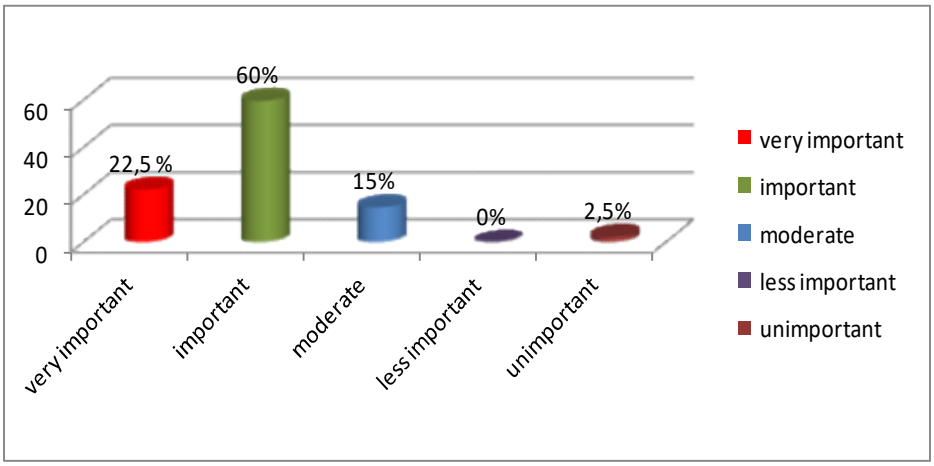

Fig. 4. Percentage distribution of responses regarding the role of ICT in the training of specialists in the field of physical education and sport

At the same time, 95% of the respondents support the efficiency of the use of information technologies in the training of the future specialists in the field and 5% consider inefficient use of IT (Figure 5). These data highlight the efficiency of IT, but there is a resistance to change, regarding the implementation of contemporary IT in the training process.

The computer is very useful for both the student and the teacher, but its use must be made so as to qualitatively improve the instructional-educational process, not to make it difficult. The computer should be used in such a way as to pursue the acquisition of knowledge and the formation of skills that allow the student to adapt to the requirements of a society in permanent evolution. He must be ready for change, to greet them enthusiastically not with fear and resistance. If students are confident of change, they will need to be trained as best they can to cope with new types of professions. Failure to develop the ability to react to change can lead to passivity and alienation. The teacher himself lives in a changing society, and fortunately, on the first line of change, so he has to adapt and continually improve.

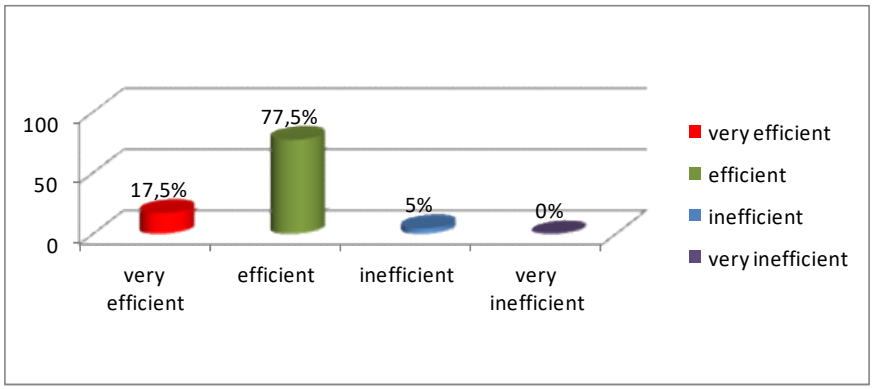

Fig. 5. Percentage distribution of responses regarding the efficiency of the use of IT in the training of physical education and sport specialists

The change in the education system aims to increase the efficiency of the learning activities, the development of competences and the individual study. Their achievement depends on the degree of teacher training in the use of the computer, the style of the teacher, the number of students, their interest, knowledge and abilities, the institutional climate and the quality of the programs used, the time the software is integrated into the lesson, the synchronization of explanations. With the sequences used, the evaluation methods, the elaborated worksheets, etc.

Most of the respondents (95%), are of the opinion that the specialist in physical education and sport, must have competencies for IT use (Figure 6).

Dumbraveanu R. [18] mentions that teachers need to constantly update their skills and adapt them, and this requires critical evidence-based attitudes that allow them to be responsible for the results of the disciples.

Teachers need to help students acquire not only „skills that can be easily learned and evaluated", but, more importantly, develop ways of thinking (creativity, critical thinking, problem solving, decision- making); working modes (communication and collaboration); to familiarize them with relevant working tools (including information and communication technologies), as well as cultivate ethical and civic values that are relevant to life and career and to personal and social responsibility for success in modern democratic societies.

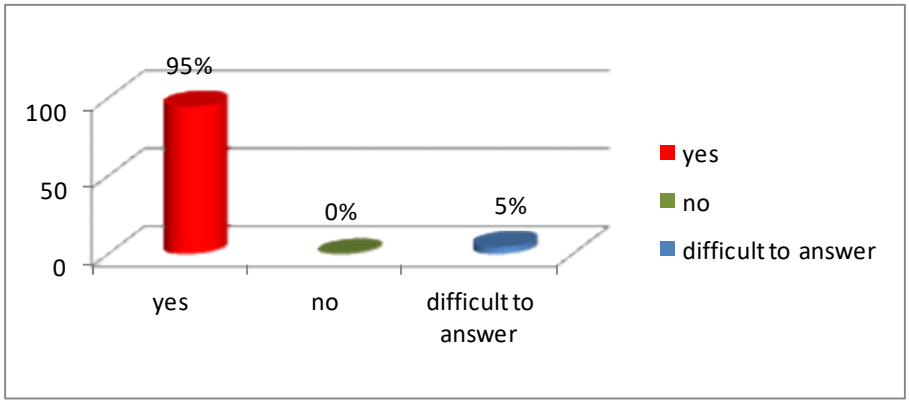

Fig.6. Percentage distribution of answers regarding the need to have the competencies to use IT by the physical education and sport specialists

Conclusions

The use of the computer should not only be limited to a certain area, for example computer science, the computer must find its place in all disciplines, in a rational and well thought out way.

Information and communication technologies (ICT) plays a very important role in the training of the physical education and sport specialist, and implies the possibility of integrating computerized instruments in the didactic activity.

The results of the sociological researches carried out (Figure 4 and 5) showed us that the majority of the respondents highlighted the necessity (82.5%) and the efficiency of using the information technologies in the training of the physical education and sport specialist (95%).

From the accumulated data we see that ICT contributes effectively to the development of the professional skills necessary for the field, being an essential component in the training of the profile specialists, and the knowledge of their use, influences in a timely manner the insertion in the field of work for the future specialists in the field.

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