



Application of the digital format in the educational practice of the university

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Abstract

Objective of the study was to assess the degree of students' awareness of the emergence of a new format of physical culture and sports - digital sports. The study of interest in the use of the digital format in the classroom at the university.

Methods and structure of the study. The study was conducted in the period November 2022 - March 2023 at Irkutsk State Transport University (ISTU) and Nizhnevartovsk State University (NVSU). The study used a specially designed questionnaire. 127 people took part in the survey. Of these, 50 girls and 77 boys of 1-3 courses of various areas of training. 10 training groups of boys and girls participated in the pilot training in the phygital format.

Results and conclusions. The development of digital sports solves the current problem by combining the achievements of young people in the field of computer games and physical activity, thereby contributing to an increase in the level of physical activity, the development of new skills and the improvement of existing ones against the background of increasing physical fitness. Digital transformation, on the part of the pedagogical community, caused sharp rejection by its ill-conceivedness, hasty decisions and, most importantly, the complete disregard for hygienic, psychological and medical recommendations related to the peculiarities of the age development of students when using digital devices.

The new format for integrating computer gaming technologies and active motor activity arouses increased interest among students and can positively influence the increase in young people's motivation to perform physical exercises and increase the level of physical activity of the younger generation.

Keywords: digital format, VR and AR technologies, digital transformation, physical culture, motivation.

Introduction. Modern students are not always motivated to physical culture. At the same time, there is a rather pronounced dependence on digital devices of various formats, starting with smartphones, but at the most primitive level. Both boys and girls are interested in computer games, and they need an incentive to increase their physical activity. According to Skypro online university, 83.9% of high school graduates and prospective students (16-18 years old) play computer games. At the same time, the level of physical fitness of students (which is a vital need), according to a number of researchers, is in the range of about 13-15% high, 35-40% medium and 46-50% low level of preparedness [5].

The digital format is a technology that integrates the need for physical activity and passion for computer games into a new method for developing psychophysical abilities.

Without a doubt, the newly emerged format of physical culture practice, which combines the virtual and real worlds that the human nervous system does not distinguish, requires serious study, since, by using a number of physiological mechanisms, it affects both the psychological and physical spheres of a person [2,3].

Based on the foregoing, we can state the current problem: on the one hand, the younger generation has a pronounced need and interest, almost addiction, in



digital devices, computer games, and on the other hand, the majority have mastered them at the level of primary literacy. Young people understand the importance of physical activity for health, but the habit of systematic physical activity has not been formed.

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people took part in the survey. Of these, 50 girls and 77 boys of 1-3 courses of various areas of training. 10 training groups of boys and girls participated in the pilot training in the digital format.

Results of the study and their discussion. The development of digital sports solves the current problem by combining the achievements of young people in the field of computer games and physical activity, thereby contributing to an increase in the level of physical activity, the development of new skills and the improvement of existing ones against the background of increasing physical fitness. Virtual reality simulators are already being used in medicine and education. As a rule, in education they are focused on a three-dimensional environment and network resources [4].

Table 1. Results of a survey of students on awareness of digital sports

Questions	% of total responses	
	boys	girls
Do you play video games?	100	61
Are you as good at video games as you are at real sports?	11	92
What platforms do you use when playing video games? (multiple answers)		
PC (personal computer)	53,8	100
Xbox	30,7	-
PlayStation	46,1	-
Nintendo Switch	-	-
Mobile phone	61,5	44,4
Wii	-	-
VR	15,4	-
Your own answer	15,3	-
What genres of video games do you prefer? (multiple answers)		
Action (shooters)	15,3	77,8
MMORPG	-	33,3
MOBA	-	44,4
RPG	-	44,4
Arcade	-	33,3
Strategies	15,3	55,6
Race	61,5	44,4
Puzzle	38,5	-
Sports	-	-
Fighting games	7,7	33,3
Simulators	53,8	44,4
Adventures	38,5	44,4
Horror	30,7	22,2
Your own answer	-	-
Are you ready to take on the role of the protagonist or video game character in the real world?	55,5	23,0
Do you know what a digital is?	44,5	23,1
Digital sports is a combination of the results of actions in a computer game and subsequent real competitions in similar sports.	88,9	61
Do you think this format can be used in the educational process (in physical education and sports)?		



To identify the degree of students' awareness of the emergence of digital sports, a survey was conducted, the results are fragmentarily presented in Table 1.

The results of the survey of boys and girls do not match. Among girls, 61% play various video games, and among boys - 100%. 92% of girls play well, as they do in real sports, but only 11% of boys. The most frequently used personal computers and mobile phones - from 53.8% of girls to 100% of boys. The most popular genre is "action" for boys and "race" for girls. However, only 23% of girls and 55.5% of boys are ready to take on the role of the protagonist of the game. Students are not aware of the emergence of digital sports: 76.9% of girls and 55.5% of boys have not heard of it. After clarification, 61% of girls and 88.9% of boys wished that this format be used in the educational process. Moreover, the types of digital disciplines are called very different.

The classes were conducted using VR and AR technologies, PC and game consoles of the PS (Sony PlayStation 4 game console) and XBOX architectures. When using PC, XBOX, PS without VR and AR, depending on the direction of the main activity (strength or coordination), the nature of the game is selected (martial arts, auto-, aircraft-, motorcycle simulator, sports simulator).

The formation of students depends on the location of the device that reproduces the image to ensure that there are no blind spots in the observation. Two students are given controllers to control the characters, and the group receives a task. The strength orientation of the lesson involves the use of static exercises at the time of the game action (starting position - semi-squat with different positions of the feet, with different positions of the hands; starting position - lunge forward with the right/left, with different positions of the hands; wide stance, bending over, arms to the sides or hands forward, etc. The exercise is performed by both the players and the whole group until the end of the round if the choice fell on martial arts, a circle or a track when working with an auto-, aircraft-, motorcycle simulator, half, period, end of the match in the sports simulator. After the end of the round (or others), the winner, together with the whole group, performs a series of dynamic exercises (push-ups, squats, jumps, bends, etc.), and the loser receives a head start to start the next round. The handicap time depends on the speed of the winner's series of exercises. After the game is over, the players are replaced with the same work algorithm, but with a change of exercise. As the strength abilities develop, we introduce weights, starting with the minimum weights.

The coordination orientation of the lesson involves the use of exercises: with a change in the support area (for example, on one leg), including with the help of various equipment. In our case, a group of exercises was tested on a fitball and on a hemisphere. The use of the type of dynamic exercises in this case depended on the initial level of physical fitness of students, their ability to perform complex coordination exercises such as jumps from turns around its axis by 180 degrees and 360 degrees, somersaults, side flips. Otherwise, a series of general developmental exercises were used.

Students expressed great interest in this format. Nevertheless, it should be noted that the use of VR and AR technologies throughout the entire training time of the lesson is not rational, as it causes rapidly developing fatigue in unprepared players.

The combination of two different types of load: information processing and reproduction of the necessary game actions associated with the performance of a game task and an additional motor task create a complex control program consisting of several components that are supposedly associated, uniting the control of large and fine motor skills against the background of game information processing. The process includes the musculoskeletal, higher and autonomic nervous systems, which contributes to the enrichment of both the motor experience and the expansion of the mental sphere of the player [1]. However, due to the complexity of this process, this type of training should be introduced gradually.

Conclusions. Digital transformation, on the part of the pedagogical community, caused sharp rejection by its ill-conceivedness, hasty decisions and, most importantly, the complete disregard for hygienic, psychological and medical recommendations related to the peculiarities of the age development of students when using digital devices.

The new format for integrating computer gaming technologies and active motor activity arouses increased interest among students and can positively influence the increase in young people's motivation to perform physical exercises and increase the level of physical activity of the younger generation.

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