

STUDY OF STUDENTS' ATTITUDES IN APPLYING INNOVATIVE FORMS OF TRAINING IN PHYSICAL EDUCATION AND SPORTS AT THE UNIVERSITY OF MINING AND GEOLOGY "St. IVAN RILSKI"

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ABSTRACT. The current study was conducted with first- and second-year students from all courses of study at the University of Mining and Geology "St. Ivan Rilski"-Sofia who are offered the course unit in *Physical Education and Sports*. The aim of the study is to establish the attitude of students in applying new, contemporary forms of training in physical education and sports that are imposed, on the one hand, by the global pandemic of the corona virus disease (Covid-19), but also by the need for physical activity of students in a crisis situation throughout the world. Applying the survey method, results have been obtained of the sportological attitude of students and their stand on modern digital tools and methods of teaching through the distance form of communication and the use of electronic sources for gaining knowledge, including the level of their foreign language education. The obtained results are processed by applying mathematical and statistical tools. Following a thorough analysis, conclusions have been drawn regarding the level of sportological attitudes of students, their opinion on the innovative forms of education and their place in future classes in physical education and sports at the University of Mining and Geology "St. Ivan Rilski" as a successful pattern of education in higher schools in Bulgaria.

Keywords: physical education and sports, sportological analysis, models, innovation, electronic education

ИЗСЛЕДВАНЕ НАГЛАСИТЕ НА СТУДЕНТИТЕ ПРИ ПРИЛАГАНЕ НА ИНОВАТИВНИ ФОРМИ НА ОБУЧЕНИЕ ПО ФИЗИЧЕСКО ВЪЗПИТАНИЕ И СПОРТ В МГУ „СВ. ИВАН РИЛСКИ“

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РЕЗЮМЕ. Настоящото изследване е проведено със студенти от първи и втори курс от всички специалности в МГУ „Св. Иван Рилски“ - София, изучаващи дисциплината „Физическо възпитание и спорт“. Целта на проучването е да установи нагласата на студентите при прилагане на нови, съвременни форми на обучение по физическо възпитание и спорт, наложени от една страна от световната пандемия от Covid-19, но и от необходимостта от физическа активност на студентите в създадалата се кризисна за света ситуация. Чрез приложения анкетен метод са получени резултати за спортологичните нагласи на студентите и отношението им към съвременни дигитални средства и методи на преподаване, чрез дистанционната форма на комуникация и използване на електронни източници за обогатяване на знанията, в т.ч. и нивото на чуждоезиковата им подготовка. Получените резултати са обработени чрез математико-статистически инструментариум. След задълбочен анализ са направени изводи относно нивото на спортологичните нагласи на студентите, отношението към иновативните форми на обучение и тяхното място в бъдещите занимания по физическото възпитание и спорт в МГУ "Св. Иван Рилски" като успешен модел на обучение във висшите училища в България.

Ключови думи: физическо възпитание и спорт, спортологичен анализ, модели, иновации, електронно обучение

Introduction

In our daily contacts and conversations, the expression that sport is a social phenomenon is often used. This is a well-known fact which has been confirmed in full force in recent months. Forced by the Covid-19 pandemic, governments all over the world have severely restricted free movement and physical activity. The ban on the use of stadiums, gyms, fitness centres, swimming pools, tennis courts and many other sports facilities has brought about immobilisation and in many cases nervous breakdown. All those measures have resulted in the awareness of the need and significance of physical activity and

sports. The issue has largely turned into social and institutional.

Along with the outbreak of the pandemic, the issue of prolonging educational activities from the academic year 2019/2020 until the end of the epidemic has come to the fore. On the instructions of the Ministry of Health and of the established National Crisis Headquarters, all universities closed. In an address to the personnel at the University of Mining and Geology "St. I. Rilski", the Rector Prof. Dr. Eng. Ivaylo Koprev appealed for a transition to distance learning up until the removal of the extraordinary measures (www.mgu.bg).

Despite the specific character of its activities, the Department of Physical Education and Sports has been among the first to respond to this challenge adequately and in a professional manner. Presentations were made for every individual sport on pre-assigned topics. Video materials were offered for self-study, as well as exercises for motor activity at home. As an additional incentive for physical activity, several challenges were addressed to the students to respond to and perform. All of the above were uploaded in the Google Forms platform, so that each student could have access to the materials and be prepared for the forthcoming final test in the sport for which they had registered. The social network on the Facebook page of the department has also been extensively used for further information. At the end of the academic year, students were examined by taking a test.

Aims of the study

The crisis situation which we were faced with at the beginning of this year has required establishing students' attitudes towards distance learning (DO) and the effect of the electronic form of teaching in view of storage and enhancement of the training process in the course unit of *Physical Education and Sports*.

The aim of our research is to explore students' opinion and attitude to innovative forms of education, to examine their stand, and to make analyses of the future work of the Department of Physical Education and Sports at the University of Mining and Geology "St. Ivan Rilski, given the extraordinary epidemiological circumstances throughout the world and in Bulgaria.

Purpose

To study the attitudes of students regarding their need for sports, a survey has been conducted with target groups who participated in distance learning. In developing the questionnaire, we have resorted to the experience of Y. Ivanov and B. Tsolov (2003), Y. Ivanov et al. (2005), V. Tsoleva and Y. Ivanov (2013), M. Parvanova et al. (2014), P. Yusein and M. Purvanova (2018). With the aim of adapting the course unit in *Physical Education and Sports* to the profesiograms of students and their future occupational and applied activities, the questionnaire includes major key and priority issues that determine the contemporary trends in the attitude of students to their classes in physical education and sports activities. The main part of the current study is to establish the attitudes of students towards distance and e-learning in a crisis situation and their preferences for choosing a foreign language in relation to their sports awareness.

Research tasks

The tasks we have assigned are as follows:

1. To conduct a comprehensive survey with students in order to determine the benefits of physical education and sports;
2. To establish the attitude of the respondents to distance learning, the contemporary means and methods of communication in the training in physical education, sports knowledge, and the effect of using a foreign language to obtain additional information on the type of sport chosen;
3. To analyse and summarise the results obtained and to give recommendations for future work with students in their classes in physical education.

Significance

The implementation of the tasks set will allow us to give an accurate assessment of the success in employing new models and in applying innovative approaches in the training in physical education and sports at the university. This will enhance the learning process in higher schools with regard to the educational component and the students' motivational basis.

Research methods

The research contingent were 98 university students of both sexes; 75 (76.5%) of those were male students and 23 (23.5%) were female students. The average age of all respondents was 21.3 years. In terms of gender, the average age of men was 21.1 years, and 22.4 years of women. The survey was conducted anonymously, whereby we aimed at greater freedom and objectivity of the respondents. The participants in the survey were 72 first-year students and 26 second-year students from the 3 faculties at the University of Mining and Geology: the Faculty of Mining Technology (MTF), the Faculty of Mining and Electromechanics (MEMF), and the Faculty of Geo-Exploration (GPF). They are distributed by number and by course of studies in the respective faculties as follows:

- **FACULTY OF MINING TECHNOLOGY**

The overall number of surveyed students from the faculty is **34** distributed in 5 courses of studies as follows:

- *Mine Surveying and Geodesy* - 15 students;
- *Management of Resources and Production Systems* - 8 students;
- *Development of Minerals* - 6 студента;
- *Underground Construction* - 4 students;
- *Mineral Processing and Recycling* - 1 student;

- **FACULTY OF MINING AND ELECTROMECHANICS**

The total number of surveyed students from the faculty is **47** distributed in 5 courses of studies as follows:

- *Computer Technologies in Engineering* - 36 students;
- *Electrical Power Engineering and Electrical Equipment* - 5 students;
- *Gassy, Combustion, and Purifying Equipment and Technologies* - 4 students;
- *Automation, Information, and Controlling Equipment* - 1 student;
- *Complex Mechanisation and Computer Design in Mechanical Engineering* - 1 student;

- **FACULTY OF GEO-EXPLORATION**

The overall number of surveyed students from the faculty is **17** distributed in 5 courses of studies as follows:

- *Ecology and Environmental Protection* - 7 students;
- *Biotechnology* - 3 students;
- *Drilling, Extraction, and Transport of Oil and Gas* - 3 We surveyed the students' sports attitudes with questions about their attitude to physical education and sports, the need to study the discipline "Physical Education and Sports", as well as whether they play sports in their spare time. students;
- *Geology and Exploration of Mineral and Energy Resources* - 2 students;
- *Hydrogeology and Engineering Geology* - 2 students.

Result analysis

The survey was conducted immediately after the end of the academic year and after the removal of the restrictive measures by the government. The aim was to ensure that the acquired knowledge and the impressions gained would guarantee the clear, correct and timely completion of the surveys. The overall number of questions was 11, but we are going to analyse 8 of them. The 3 remaining questions will be the object of a separate research.

The questions included are indicative of the research innovativeness which also lies in its interdisciplinary nature. So far, the Department of Physical Education and Sports has not affiliated to other non-sport university departments.

All of the 98 students surveyed study a foreign language and are distributed into the following proportions: 72 students (74%) study in English, 11 students (11%) study Russian, 10 students (10%) are engaged in Spanish, and 5 people (5%) study German. Figure 1 shows the percentage of students in terms of the foreign language studied.

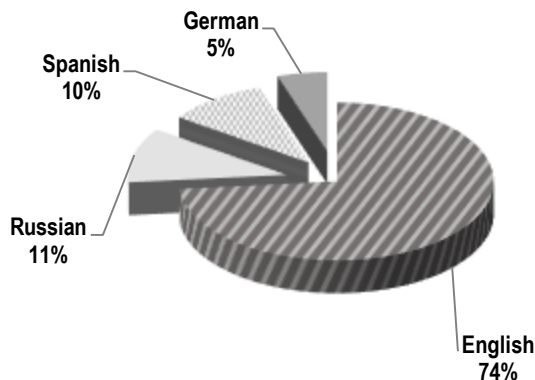


Fig. 1. Distribution of students in terms of foreign language studied (in percentage)

The students' sportological attitudes were surveyed by means of questions concerning their attitude to classes in physical education and sports, the need to study the course unit in *Physical Education and Sports*, as well as whether they play sports in their spare time.

Fig. 2 presents the answers to the question about students' attitude to PE and sports activities. 91% of the surveyed students are positive and 8% of the contingent are indifferent, which we consider might change with the necessary talks about the benefits of sports. Only 1 student has a negative attitude, which, statistically, is no cause of concern.

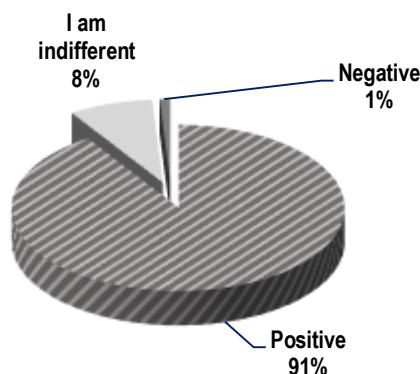


Fig. 2. What is your attitude to classes in *Physical Education and Sports*?

The numerical expression of the answers to the question about the need to study the course unit of *Physical Education and Sports* at the higher school is presented in Fig.3. 82% of the students gave a positive answer and 18% supplied a negative one. At the beginning of each class, the practice of delivering micro-lectures has already been established whereby further explanation is supplied regarding the benefits of PE and sports for students' health, physical ability (Ivanov, 2003), and above all its professional and applied orientation for their future occupational fulfilment in the vocational field. We believe that such explanations will contribute to the broadening of students' sports knowledge and are a powerful motive for developing positive attitudes towards physical education. Besides, the scientific team has carried out research in this direction: see V. Tsoleva and Y. Ivanov (2013), Y. Ivanov et al. (2016) and I. Stavreva (2019). Their research has proved the significance and established the occupational and applied effectiveness of physical education and sports for students at the University of Mining and Geology "St. Ivan Rilski".

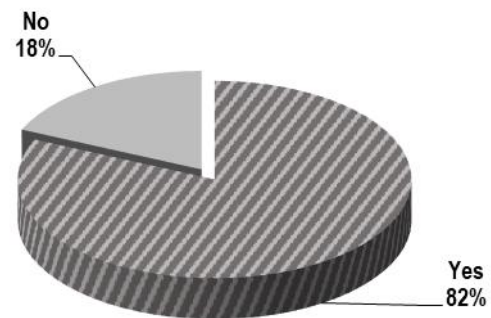


Fig. 3. Do you consider that it is necessary to offer the course of studies in *Physical Education and Sports* at the higher school?

Part of the survey was focused on how students perceived the organisation of the educational process in physical education and sports. When asked about their preferences for the organisation of the process under normal conditions, 49% (48 students) favoured classes conducted in general sports groups. The second largest group, 37% of the respondents (36 students), voiced their desire for classes in groups by the type of sport chosen. Only 14% of all wanted to join teams by type of sport, i.e. to be trained in sports improvement groups (see Fig. 4). Establishing the types of sport of an applied nature has been the topic of a research work by I. Stavreva (2019) which aimed at facilitating the occupational development of future engineers at our university.

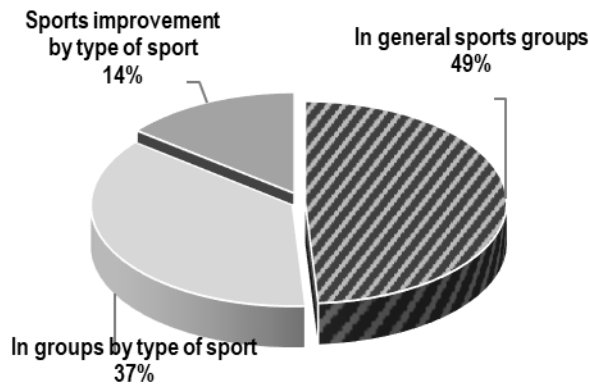


Fig. 4. What are your preferences for the form of organisation of the educational process in *Physical Education and Sports*?

For the first time ever, classes in the course of the semester have been conducted in an emergency crisis situation. This has led to the inclusion of a question about the opinion of students on the organisation of distance learning. The results are presented in fig. 5. 46% of the surveyed group have answered that they positively accept the distance form of education. This is almost half of the respondents (45 people). The rest are divided as follows: 22% have certain reservations, whereas the assessment of 32% is negative and they have stated that they do not accept this form of training. To us, these are logical answers, given the nature of the activities themselves and the lack of accompanying emotion and communication when conducting them under normal conditions.

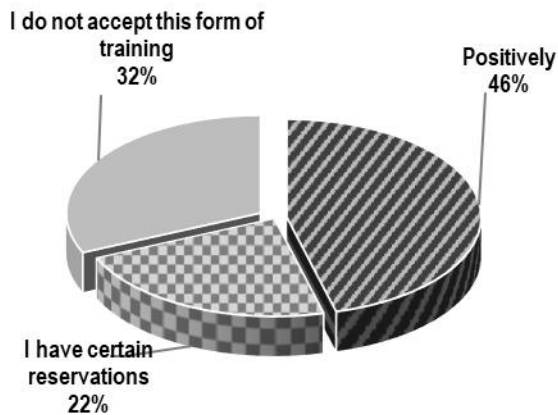


Fig. 5. How do you accept distance learning in a crisis situation?

In the fifth question from the survey, we asked the students whether they would choose the same sport in the next academic year. The majority have stated their willingness to go in for the same type of sport. A few have claimed that they would switch to another, more dynamic or more interesting, sport. Three students from the total panel have voiced their desire for new sports which are not on the curriculum of the department, such as *kickboxing, tennis and folk dances* (rather like extra-mural activities).

Logically, the next question we asked concerned students' sports activities outside the classroom, in their free time. This issue is also extremely important. Through it, we establish whether we have achieved one of the functions of physical education in higher school, namely for students to acquire the

habits and to create the need to continue physical activity and sports after the educational process is over. 67% of the respondents who go in for some sport in their free time have given a positive answer. 30% play some sport from time to time, and only 3% (which amounts to 3 students out of all respondents) do not go in for sports (Fig. 6). We are specifically interested in the group of students who answered this question with "sometimes" or "no" in view of a future study related to their arguments for restraining from or non-practicing of any sports.

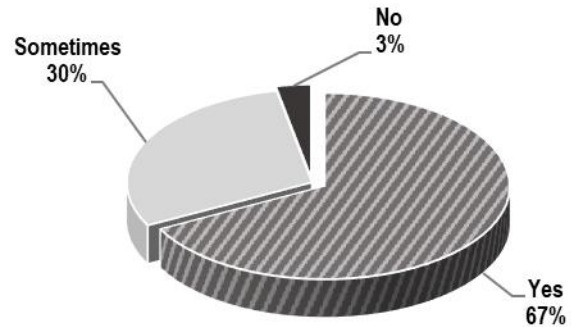


Fig. 6. Do you play sports in your free time?

It has been of a particular interest to collect data on the study of foreign languages and to what extent students have employed them to gather up-to-date information about sports in the course of the distance learning. The results in fig. 7 show that 35% of the students believe that the use of a foreign language has considerably facilitated the process of their acquisition of information about sports. 43% of the participants in the survey have answered that their knowledge of a foreign language has helped them gather information on certain sports topics. The remaining 22% have relied only on sources in their mother tongue during distance learning in physical education. To sum up the answers, in the emergency situation, all respondents have sought for sports information which is a testimony to their extraordinary interest and serious approach to the course unit in *Physical Education*.

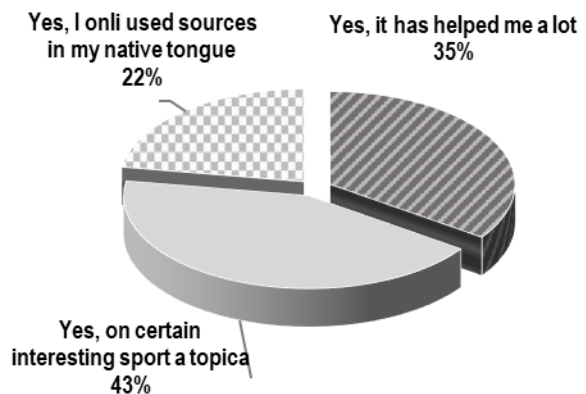


Fig. 7. Have you been facilitated by your knowledge of a foreign language in obtaining up-to-date information about sports during the distance learning?

In conclusion, we aimed to summarise the opinion of the tested contingent on the approach applied to the education

during the pandemic. 48% of the respondents have answered giving a positive assessment, 25% of the students have certain reservations, and 27% do not approve of the approach (Fig. 8). We believe that as this first attempt in this direction has achieved a lot in the name of the course unit and of the students themselves. All the more that this has been the first research with an emphasis on the importance and benefits of foreign language proficiency for the training in *Physical Education and Sports* to be carried out so far.

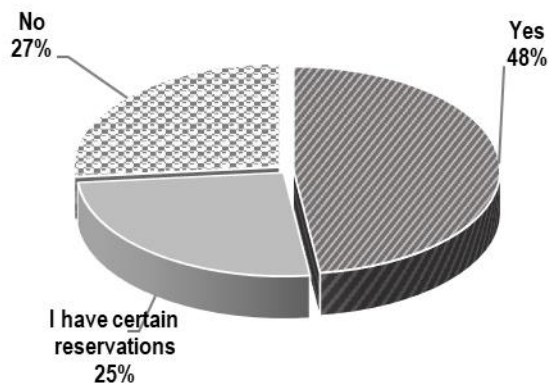


Fig. 8. Did you like our approach during the pandemic?

The research will help improve the educational pattern. It gives an idea of students' sportological attitudes and indicates the degree of readiness to accept innovations in the system of training in the course unit in *Physical Education and Sports*. Last but not least, it introduces the educational body to a successful model of work which has been established in the newly created epidemiological conditions of this year.

Conclusion

- Students' positive opinion of the course unit in *Physical Education* and their positive attitude to the distance form of learning in the emergency environment have been established;
- Students' preferences for the type of sport and for the possible inclusion of new sports at the University of Mining and Geology "St. Ivan Rilski" have been revealed;
- The excellent work has been attested by the acquisition of habits and the creation of a need for physical activity in students. Those are proved by the 67% of the students going in for sports on a regular basis and a further 30% doing it sometimes in their spare time;
- Students' interest in the course unit in *Physical Education* has been confirmed by their search for alternative sources of information in foreign languages.

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