ONLINE PHYSICAL EDUCATION IN BULGARIA - ADVANTAGES AND CHALLENGES

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Abstract. The aim of the research was to study the advantages and disadvantages of online physical education teaching in the country during the first stage of the COVID-19 pandemic. The study participants were 138 teachers (100 female and 38 male) aged between 24 and 68 years, who had different pedagogical experience and were representatives of all regions of the country. A specially developed international questionnaire with closed-ended questions was applied. As an alternative analysis, the non-parametric Mann-Whitney test was used to compare the results. Teachers rated online teaching in physical education as relatively good. At the same time, the educational work of sports pedagogues during the COVID-19 pandemic reduced their motivation for professional activity. Sports teachers rated highly their competencies in using online technologies to conduct physical education classes. The three most significant negative consequences of online physical education and sports training for Bulgarian schools, as pointed out by sports pedagogues, are: reduced contact with students, lack of control over the quality of training and limited opportunities to monitor student progress, while the three most important advantages of online education are: possibilities of using modern technologies in practice, individual approach to students and greater student control and independence. No significant differences were found in teachers’ responses to any of the questions based on gender, age and pedagogical experience criteria.

Keywords: PE teachers, online teaching, competencies, technology, advantages.

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Introduction

The COVID-19 spread around the world in a short period of time and was declared a pandemic by the World Health Organization (2020). “The pandemic caused a crisis in the health, economic, education, political systems, and social life of all countries of the world. Education systems worldwide were especially impacted by the pandemic, and many countries were forced to change the way education was delivered.” (Korcz et al., 2021, p. 1) More than 92% of students in 188 countries were affected by the pandemic as schools were closed and the teaching process had to continue through distance learning (UNESCO, 2020).

Gradually, educational content was transformed into a digital environment, moving to distance and online learning (Fidalgo et al., 2020; Reimers, 2020).
The educational system in Bulgaria was also seriously affected by the COVID-19 pandemic. The government initiated a country-wide lockdown that included the closing of schools (Getova & Mileva, 2021). Starting in March 2020, all lessons, including Physical Education (PE), were conducted online.

The initial introduction of online learning in schools was accompanied by a number of difficulties. Teachers of all subjects were unprepared for this radical change in the educational process. With the accumulation of experience in electronic and distance learning, educational institutions in many countries are taking steps to provide help and support to educators through the access to specialised learning platforms, the development of electronic resources and software products, as well as by including teachers in educational qualification courses for work in the new online environment. Physical education and sport classes in Bulgaria are also conducted in digital conditions and follow general trends and regularities (Naydenova & Chernev, 2020; Getova et al., 2020).

In the course of their work, teachers used various ways to communicate with students, such as social media groups, instant messaging mobile applications and educational platforms. PE lessons were provided by sharing video recordings, live broadcasting exercise instructions and similar resources. PE teachers were personally responsible for creating content and designing online lessons. The support from schools, educational boards and government was mainly evident in the provision of a platform where PE teachers could communicate and share their best practices and resources (Gobbi et al., 2020).

PE, as a compulsory subject in primary schools in Bulgaria, is taught by either specialised PE teachers or generalist teachers. PE in post-primary schools is taught only by specialised PE teachers, graduates of the National Sports Academy or the pedagogical faculties of the universities in the country. In Bulgaria, mandatory curricula for physical education and sport have been developed and state educational standards have been adopted, which relate to the educational content, the evaluation system, the organization of training and the professional qualification and education of teachers throughout the country.

PE in Bulgaria addresses the need to provide students with opportunities to be physically active and develop motor competencies for participation in lifelong physical activity, but also “the need to encourage young people to lead active and healthy lifestyles by focusing on physical, mental, intellectual, and social development” (Korcz et al., 2021, p. 2).

In recent years, digital technologies have been massively implemented in Bulgarian schools for all subjects. However, online teaching in PE is a challenge for teachers to transfer students’ experiences to a virtual environment, and it is thought that they need to develop their online skills.

The COVID-19 pandemic reduced significantly the physical activity of students at all levels of education. This point of view has already been indicated in different research reports related to the issue (Gallè et al., 2020; Hellewell et al., 2020; Jurak et al., 2021). The social distance between students increased (Oosterhoff et al., 2020). The COVID-19 lockdown had a pronounced negative effect on lifestyle behaviours and the mental health of children with obesity (Pietrobelli et al., 2020; Lee, 2020; Liu et al., 2020; Roe et al., 2021). Some researchers place special emphasis on health-related behaviours in pandemic conditions (Lopez-Bueno et al., 2020).
These processes are also deepened under the influence of online school education and the lack of motor activity of students. Therefore, the present study focuses on some specific characteristics of online PE teaching in Bulgaria during the first lockdown in 2020 (May-June).

The behaviour of teachers in pandemic conditions and their attitudes towards new forms of learning in an electronic environment are of growing interest (Hellewell et al., 2020; Maltagliati et al., 2021; Korcz et al., 2021). Undoubtedly, the implementation of digital training has led to the acquisition of new digital skills and competencies that had been insufficiently developed before the pandemic. It should also be taken into account that physical education is the only school subject in the educational system that is aimed at increasing motor activity and forming complex motor skills. In this regard, conducting physical training online is complicated because the activities are disconnected from the natural learning environment. However, it is suggested that sports educators should use creativity and innovation in the application of new online technologies, which will influence the improvement of the physical education environment even after the pandemic.

In recent years, numerous comparative studies have investigated the attitudes of physical education teachers towards online learning in the pandemic setting (López-Gil et al., 2021). Both similarities and differences are found in the attitudes and behaviours of teachers from different European countries regarding the methods, skills and competencies to deal with learning in the new situation. A number of difficulties and problems that physical education teachers face and must overcome are identified.

The purpose of this research was to study the quality of online PE teaching in Bulgaria during the first stage of the COVID-19 pandemic (its advantages, disadvantages and difficulties).

Methodology

Participants

The research participants were 138 physical education teachers - 100 (72.5%) female and 38 (27.5%) male from different regions of the country. The respondents’ age ranged from 23 to 68 years. The participants had different pedagogical experience. All teachers were specialists in PE, worked on different stages of the educational system in Bulgaria and taught the PE subject at the primary or secondary school levels.

Instruments

The questions concerned the subjective assessment of online teaching in PE during the COVID-19 pandemic. The survey consisted of 25 questions and included single- and multiple-choice questions. The questionnaire was translated into the national languages of the participating countries by the panel experts.
Procedure

The study was organized from May to June 2020, in the midst of the COVID-19 pandemic. A specially developed international questionnaire with closed-ended questions in Google Forms was applied. Technology was connected with the questionnaire distribution on social networks (mainly Facebook) and specialised platforms for distance and online education. Six European countries participated in the research: Bulgaria, Poland, North Macedonia, Croatia, Turkey and Kosovo (Korcz et al., 2021). The study was conducted in accordance with the Declaration of Helsinki (World Medical Association, 2013). Only data for Bulgaria will be presented in this paper.

Data analysis

Microsoft Excel and Statistica 13.0 software programs (StatSoft, Krakow, Poland) were used for data analysis. The non-parametric Mann-Whitney test with the p level set at 0.05 was used for statistical data proceeding.

Results

A clear advantage of positive over negative evaluations made by the surveyed PE teachers was highlighted in Bulgaria. PE teachers rated their online teaching in PE during the first wave of the COVID-19 pandemic as follows: good - 30.4% or very good - 16.7% vs. bad - 15.2% or very bad - 8% (Figure 1).

![Figure 1. Evaluation of online education by PE teachers](image)

It should be noted that physical education teachers in Bulgaria had a much more positive attitude compared to their colleagues from North Macedonia (Mileva & Popeska, 2021) and other European countries such as Turkey, Croatia and Kosovo (Korcz et al., 2021).

Another important result from the present study was related to the personal satisfaction of teachers with online teaching. The collected data show that, for 44.9% of the respondents, satisfaction with their work has changed for the worse, and for 20.3% of them, satisfaction
with their work has changed for the better. For 34.8% of the respondents, online education did not affect their personal satisfaction with teaching. (Figure 2)

![Figure 2. Satisfaction of PE teachers with their work during the pandemic](image)

Almost half of the respondents (43.5%) reported reduced motivation for their work during the pandemic. There was no change in motivation for 29.7% of the PE teachers, and the smallest was the group of respondents with increased motivation (26.8%). Similar results were found in research conducted with teachers in other countries during the COVID-19 pandemic (Gobbi et al., 2020).

Physical education is the only school subject connected with the motor activity of students, and performing it in the online environment is not logical. The pandemic situation had a direct negative effect on the sports educators’ motivation for work.

The results regarding the evaluation of teachers’ competencies for online teaching in PE are very positive. More than 75% of the Bulgarian PE teachers rated their competencies for online education as good or very good (Figure 3).

![Figure 3. Evaluation of teachers’ competencies for online teaching](image)

These results can be considered as a significant progress in the professional development of physical education teachers in terms of online teaching. It is indisputable that Bulgarian...
physical education teachers have had some preliminary work experience in the online environment before the pandemic. This fact coincides with data from international studies for other countries in Europe (Glapa et al., 2018; Mok et al., 2020).

Nevertheless, reorganizing the learning process in an online environment within a short period of time required quick handling of the situation and the acquisition of the necessary knowledge, skills and competencies for work in the new conditions.

The present study reveals the advantages and disadvantages of online teaching in PE. When asked to list the three most important advantages of online education, Bulgarian PE teachers indicated the following (with the most references from respondents):

1. Possibilities of using modern technologies in practice.
2. Individual approach to students.
3. Greater student control and independence.

The three indicators were found equally important for physical education and sports training in the primary and secondary schools of the education system (Mann-Whitney U test was applied) (Table 1).

Table 1. Statistical analysis of responses regarding the positive consequences of online physical education for primary and secondary schools

<table>
<thead>
<tr>
<th>Possibilities of using modern technologies in practice</th>
<th>Individual approach to students</th>
<th>Greater student control and independence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>1421.500</td>
<td>1380.000</td>
</tr>
<tr>
<td>Asymp. Sig. (p &lt; 0.05)</td>
<td>0.23</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.65</td>
</tr>
</tbody>
</table>

The three most significant negative consequences of online physical education and sports training for Bulgarian schools, as pointed out by sports pedagogues, are the following (with the most references from respondents):

1. Reduced contact with students.
2. Lack of control over the quality of training.
3. Limited opportunities to monitor student progress.

The three indicators were found equally important for physical education and sports training in the primary and secondary schools of the education system (Table 2).

Table 2. Statistical analysis of responses regarding the negative consequences of online physical education for primary and secondary schools

<table>
<thead>
<tr>
<th>Reduced contact with students</th>
<th>Lack of control over the quality of training</th>
<th>Limited opportunities to monitor student progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>1588.500</td>
<td>1419.000</td>
</tr>
<tr>
<td>Asymp. Sig. (p &lt; 0.05)</td>
<td>0.86</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.49</td>
</tr>
</tbody>
</table>

The main difficulties of sports educators in Bulgaria during the first wave of the COVID-19 pandemic were related to the lack of access to the necessary online resources and training materials (laptops, tablets, speakers, headphones, microphones, etc.).
No significant differences were found in teachers’ responses to any of the questions based on gender and pedagogical experience criteria (Mann-Whitney U test, p > 0.05) (Table 3).

Table 3. Statistical analysis of responses regarding the negative consequences of online physical education by gender

<table>
<thead>
<tr>
<th>Reduced contact with students</th>
<th>Lack of control over the quality of training</th>
<th>Limited opportunities to monitor student progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>1130.500</td>
<td>1015.000</td>
</tr>
<tr>
<td>Asymp. Sig. (p &lt; 0.05)</td>
<td>0.32</td>
<td>0.09</td>
</tr>
</tbody>
</table>

The results of the study also pointed out that PE teachers used a great variety of ways and approaches to acquire new knowledge and form innovative skills for work in the modern digital environment. First of all, a large part of the teachers (60.9%) studied independently following the instructions on the Internet (Table 4). However, most of them (53.5%) used the method of trial and error. Only 27.5% of the educators mastered the new online technologies through courses organized by the school and from teaching materials uploaded on the school’s website (22.5%). It is noteworthy that a number of teachers (23.9%) were supported by their colleagues and students.

Table 4. Approaches to acquiring new knowledge for work in the online environment

<table>
<thead>
<tr>
<th>Acquiring new knowledge for work in the online environment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Independently, via instructions on the Internet</td>
<td>60.9%</td>
</tr>
<tr>
<td>By trial and error</td>
<td>53.6%</td>
</tr>
<tr>
<td>From courses organized at the school</td>
<td>27.5%</td>
</tr>
<tr>
<td>Through materials uploaded by the school</td>
<td>22.5%</td>
</tr>
<tr>
<td>Through education provided by colleagues and students</td>
<td>23.9%</td>
</tr>
</tbody>
</table>

The results reflect both the state of online physical education training and teachers’ competencies to work in the digital environment at the end of the first school year, with the outbreak of the COVID-19 pandemic in May 2020. At the moment, the picture is different, and the forms and ways of mastering online technologies are more organized.

Discussion and Conclusion

The COVID-19 pandemic has tested the traditional daily life patterns of people around the world. It has completely changed the educational systems in European countries, including PE and sport classes. PE and sports training have been transformed into distance and online education and training (Gobbi et al., 2020). The sports activity of students at all levels of education has greatly reduced (Zhang & Ma, 2020; Bronikowska et al., 2021).

In Bulgaria, the Ministry of Education and Science, school principals and teachers took a number of measures for the successful transition from face-to-face to distance and online learning. A variety of online platforms and digital learning materials corresponding to the specifics of school education were purchased and implemented. Despite the rapid and flexible transition to online learning, this transformation process in the education system had a negative influence on the personal satisfaction of PE teachers with their work. It resulted in a
reduced motivation of PE teachers to work in the online environment, which is inappropriate for the specific characteristics of PE as a school subject.

Despite the reduced motivation for work, the implementation of online physical education training during the first wave of the COVID-19 pandemic was rated by teachers as good and very good.

At the same time, Bulgarian sports pedagogues have significantly improved their skills in working with new technologies during the pandemic. It should be recalled that the main form of acquiring knowledge and skills for online learning during the first stage of the COVID-19 pandemic was through the independent work of physical education and sport teachers.

Different ratings of the advantages, disadvantages and difficulties in online PE teaching were presented. The most significant advantage of online PE teaching was the possibility of using modern technology in practice. This advantage was reported by the respondents teaching PE in primary and secondary schools. A possible explanation is the frequent use of technology in the teaching practice before the pandemic, which provided easier transfer to online teaching. Also, conducting online training allows for a greater individual approach to students and setting independent tasks according to their motor activity levels.

PE teachers pointed out the significant negative consequences of online PE for primary and secondary schools. First, they mentioned limited contact with students and lack of control over the quality of the teaching/learning process. The lack of live communication is clearly a major problem of online schooling.

The lack of proper equipment at home, the lack of adequate IT training and the use of different platforms for online teaching were among the highest-ranked difficulties during online education.

Future trends aim at the use of different digital platforms for online teaching in PE and the application of online resources in PE lessons. This is the future way to motivate students for active motor activities through ICT (Information and Communications Technology). Another trend is towards blended (hybrid) learning and self-training in online format. This approach is especially useful for advanced students and those who have difficulties and problems in physical education and sport.

A number of national programmes focused on the organization of specialised short- and long-term qualification courses and training for teachers in Bulgaria to use online resources in their work are provided by the Ministry of Education and Science. This is also regulated by the new law and requirements of the Bulgarian legislation in the field of education and science, which have been approved in recent years.

The COVID-19 pandemic and the conduct of training in an online environment have significantly changed the education system in the country. Future education requires the active combination of face-to-face training with the application of various online technologies in the training process to increase the quality of training. This is an irreversible trend that will become more and more important in the coming years.
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Informed Consent Statement: The participants provided their written informed consent to participate in this study.

Data Availability Statement: Data are available upon request to the contact author.

Conflicts of Interest: The author declare no conflict of interest.

References


