Practices of pedagogical skills in the implementation of courses in the field of physical education and sports in a distance format

Svetlana Kalmykova. Open Education Center. Peter the Great St. Petersburg Polytechnic University. Russian Federation.

Vladislav Bakayev. Institute of Physical Education, Sport and Tourism. Peter the Great St. Petersburg Polytechnic University. Russian Federation.

Valeriya Vasilyeva. Institute of Physical Education, Sport and Tourism. Peter the Great St. Petersburg Polytechnic University. Russian Federation.

ABSTRACT

In modern conditions, no one doubts that physical culture and sports are useful and necessary for every person. A team of SPbPU authors have developed and introduced into the educational process of MOOC courses "Physical culture" in 2016, "Fundamentals of the training process of cybersports men" in 2020, posted on the National portal "Open Education". The Physical Education online course can be one example of organizing such resources. Today (and especially during a pandemic) this is one of the most popular courses with a massive audience. At the Polytechnic University, it is involved in all curricula and is compulsory for all students. Our research is devoted to further prospects for the development of the resource. Of course, it is very difficult to define the concept of "pedagogical skill" in the context of this article. However, we tried to do this, highlighting the main, from our point of view, the criteria of pedagogical excellence, which are necessary for the high-quality implementation of courses in a distance format. The online resources we have created allow us to stimulate and motivate students for personal development, organize their educational activities, including building a training system, organize pedagogical activities, monitor the success of students' development of resources, and structure classes. The implemented system made it possible to organize training during the COVID-19 pandemic without interruptions and without reducing the quality of education.

Keywords: Performance analysis of sport, Physical conditioning, Teaching skills, Online courses, Physical education, Distance learning.

Cite this article as:
Kalmykova, S., Bakayev, V., & Vasilyeva, V. (2022). Practices of pedagogical skills in the implementation of courses in the field of physical education and sports in a distance format. Scientific Journal of Sport and Performance, 1(4), 266-272. https://doi.org/10.55860/PAKA1302
INTRODUCTION

Universal digitalization brings change to many aspects of our daily lives, including the educational process. However, its implementation should be justified, phased and gradual; qualitative changes should have no sudden “leaps” that disrupt the progress in the training process (Bespalko, 1995; Bakayev et al., 2018; Kerry, 2021; Littlejohn & Milligan, 2015; Makarova & Makarova, 2018; Garavan et al., 2020; Olesov et al., 2020; Bolotin, & Bakayev, 2017).

The spring-autumn period of 2020 (lockdown) required urgent and disruptive decisions in order to keep the educational process going. Unfortunately, not all universities were prepared to make this transition. Implementation of Emergency Remote Teaching required involvement of additional human and information resources (Figure 1).

![Figure 1. Key differences in organization of conventional and emergency training.](image)

Despite all challenges of the pandemic, it was necessary to ensure both quality of the educational process and its full implementation in accordance with the curricula. Teaching Physical Education online raised many questions that had to be resolved in an unusual format of training. Based on the available experience, teachers of our University have implemented the educational process at due level of quality during this difficult period. However, any information technology or online resource would be of limited use, were it not for the pedagogical excellence of the faculty.

MATERIAL AND METHODS

Analysis of literature showed that many famous teachers and psychologists had delved into the topic of pedagogical excellence. V.A. Slastenin (2002) wrote that... “among teachers, the opinion was firmly established that the pedagogical excellence is purely individual, so it cannot be directly transferred. However, from balance between technology and mastery, it is apparent that pedagogical technology can indeed be mastered; like any other, is not only mediated, but also determined by the personal parameters of the teacher. One and the same technology can be implemented by different teachers showing their professionalism and pedagogical excellence”.

Other researchers argue that pedagogical excellence is the highest level of mastery of pedagogical technology; however, “it is not limited solely to the operational component but is a synthesis of personal and...
professional qualities and properties that determine high efficiency of the pedagogical process” (Bolotin, & Bakayev, 2018).

The team of authors from Peter the Great St. Petersburg Polytechnic University has developed and implemented Massive Open Online Courses published at Open Education National Portal (https://openedu.ru/). Implementation of online courses prompted a conclusion that a teacher of higher education should seek to combine scientific and educational activities and possess a whole range of digital competencies that he or she can use in constructing an educational process in digital environment. In the course of our study, we have established the main qualities and skills that a physical education teacher should possess in order to deliver an online training course. Those were:

- Excellence in organizing group work of students;
- Excellence in organizing individual work of students;
- Excellence in transfer of knowledge and skills on organization of physical education and sports classes;
- Excellence in involving students in educational and sports activities.

Pedagogical excellence is closely interlinked with pedagogical technology. Perfect knowledge of pedagogical technology is the definition of excellence. Thus, it can be concluded that pedagogical excellence in the digital environment is additionally measured by the digital competencies of teachers in delivering their disciplines. Despite the fact that in the digital environment the problem of upbringing is understudied, in physical education this aspect of pedagogical technology is quite relevant.

Pedagogical technologies are usually represented by didactic technologies and upbringing technologies, namely:

- Technology for transfer of knowledge and technology for personality development;
- The technology chain of the actions sequence arranged in accordance with target assumptions having the form of a specific expected result;
- Technologies implementing the principles of individualization and differentiation, enabling optimal fulfilment of human and technical capabilities and dialogue;
- An integral part of pedagogical technology consists in diagnostic procedures containing criteria, parameters and tools for measuring performance (Pikan, 2005; Toni Mohr, et al., 2012; Suárez-Llorca, et al., 2010; Bakayev, 2015; Obidallah et al., 2019; Popovic, et al., 2021; Yan, et al., 2021).

RESULTS AND DISCUSSION

Pedagogical technologies implemented during organization and delivery of the Physical Education discipline in the digital environment suggest a fairly high level of pedagogical excellence of the teaching staff. As a result of the introduction and integration of online courses into the curriculum, the team of authors gained an invaluable experience.

For the first time, the course was launched in 2016. It was a highly non-typical course due to its subject matter. However, the authors of the course seriously worked through the material to create suitable content, including video and tests. At the initial stage in 2016, the authors of the course did not aim at practicing hands-on skills; it was solely devoted to the theory of physical education.
Today, the total number of students on the course exceeded 63,000; the course is included in Top 3 at the platform by the number of students attending it Figure 2. During the pandemic (spring semester of 2020), more than 15 Russian universities included this course in their educational process.

Figure 2 Number of students in the Open Education National Portal courses in spring 2020.

Table 1. Procedural and descriptive aspect of online course design.

| Planned result                                      | Course organization                                                                 | Methodological requirements                                           |
|-----------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Forming the knowledge competencies of students in   | The theoretical material including videos (duration – up to 10 minutes) delivering  | Systematic arrangement. Clear learning plan. Transparent grading     |
| the field of theoretical and methodological        | theory and case studies, summaries and presentations                               | system. Available deadlines and explained consequences of failure to   |
| practical principles of physical education and      | Material for self-development. Training process arrangement rules. Training load  | meet them.                                                          |
| healthy living                                       | control rules.                                                                      | Manageability. Diagnostic targeting of the material.                    |
| Development of personal healthcare and physical     |                                                                                     | Possibility to plan the educational trajectory in order to correct the |
| self-improvement skills                             |                                                                                     | results.                                                              |
| Improvement and development of skills of           | Material for self-development and self-testing, including tasks on developing a    | Reproducibility. The used pedagogical technologies and recommendations  |
| independent use of methodological principles of     | training schedule and self-check plan.                                             | on the organization of the course (methodological recommendations for  |
| physical education                                   |                                                                                     | teachers) help conduct classes at various universities of the Russian  |
|                                                     |                                                                                     | Federation, apart from the developer university.                        |

Theoretical knowledge check-up tests
The course owes its success, among other things, to its good selection of pedagogical technologies. Distinguished researcher V.P. Bespalko defined pedagogical technology as "a meaningful technique for implementing the educational process". Pedagogical technology has a procedural and descriptive aspect which is closely related to the design of the online course (Table 1).

During the pandemic period, methodological recommendations were developed for personal physical training in a variety of sports, as it was necessary to organize practical classes. The principles laid down in the theoretical material helped students build the correct training system, and the practical part was therefore implemented quite quickly.

Practicing teachers who conducted physical education classes recorded video content demonstrating the exercising process. In the case of team sports, those were individual trainings of players. According to the methodology set out in the theoretical part, students were asked to prepare a schedule of trainings and also schedules for recording their achievements and general health status.

The Institute of Physical Education, Sports and Tourism of Peter the Great St. Petersburg Polytechnic University (IFKST SPbPU) is registered within the remote training system of SPbPU on a separate portal https://dl-ifkst.spbstu.ru/ posting videos of practical exercises, webinar rooms (for teacher and student meetings if necessary), and additional methodological recommendations (Figure 3).

![Figure 3. IFKST portal in SPbPU remote training system.](image)

**CONCLUSION**

The practice of implementing the discipline in “full online” format or “emergency remote learning” format in spring 2020 showed that despite the quite high level of educational process organization and almost complete absence of negative feedback from students, improvement of the following is required:

- Enhancing the digital competencies of all teachers involved in the implementation of the discipline. This will make training more effective and introduce a competitive component even between students who are far away from each other;
- Redesigning the main theoretical course, supplementing it with interactive elements that allow to carry out the corrective effect of the training trajectory (self-training) depending on the obtained results (interactive feedback);
- Supplementing and revising the course on the IFKST portal, matching the monitoring of successful completion of the practical part of the discipline with the sections of the main theoretical course. This will enable implementation of the pedagogical mono technology and the unity of information.
environments for organizing and managing the educational process using various types of diagnostics and monitoring.

AUTHOR CONTRIBUTIONS

Conceptualization, V.B. and S.K.; methodology, S.K.; software, V.V.; data analysis, S.K., V.B. and V.V.; investigation, SK., V.B. and V.V.; data curation, S.K., V.B.; writing—original draft preparation, V.B.; writing—review and editing, V.B. and V.V. All authors have read and agreed to the published version of the manuscript.

SUPPORTING AGENCIES

No funding agencies were reported by the authors.

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

REFERENCES

Bakayev, V. (2015). Determining the significance of practical military skills applied by the special purpose regiments of the Internal Troops of the Russian Ministry of Internal Affairs to deliver combat objectives. Journal of Physical Education and Sport, 15(4), pp. 615-618.

Bakayev, V., Vasilyeva, V., Kalmykova, S., & Razinkina, E. (2018). Theory of physical culture - a massive open online course in educational process. Journal of Physical Education and Sport, 18(1), 293-297. DOI: 10.7752/jpes.2018.01039

Bespalko V.P. (1995). Pedagogy and progressive teaching technologies. Moscow, p412.

Bolotin, A., & Bakayev, V. (2017). Success criteria of the pedagogical pattern of physical training on self-guide basis with individual assignments among futsal referees. Journal of Human Sport and Exercise, 12(3), 607-615. https://doi.org/10.14198/jhse.2017.123.05

Bolotin, A., & Bakayev, V. (2018). Scientific and Theoretical Prerequisites for Improvement of Modern Pedagogical Technologies, In N. Llevot-Calvet & O. Bernad (Eds.) Advanced Learning and Teaching Environments Núria Llevot, IntechOpen (pp. 195-221). Cavero: IntechOpen. https://doi.org/10.5772/intechopen.72342

Garavan, T., O’Brien, F., Duggan, J., Gubbins, C., Lai, Y., Carbery, R., Heneghan, S., Lannon, R., Sheehan, M. & Grant, K. (2020). Learning and Development Effectiveness in Organisations: An Integrated Systems-Informed Model of Effectiveness. https://doi.org/10.1007/978-3-030-48900-7

Kerry, T. (2021). Ethics for Teachers and Middle Leaders: A Practical Guide (1st ed.). Routledge. https://doi.org/10.4324/9781003136606

Littlejohn, A. and Milligan, C. (2015). Employers are becoming aware of the potential of Massive Open Online Courses (MOOCs) as a significant form of learning for work. eLearning Papers 42.

Makarova E. and Makarova E. (2018). “Blending pedagogy and digital technology to transform educational environment.” International Journal of Cognitive Research in Science Engineering and Education, vol. 6, no. 2, pp. 57–65. https://doi.org/10.5937/ijcrsee1802057m

Obidallah, W.J., Raahemi, B. and Ruhi, U. (2019). Clustering and association rules for web service discovery and recommendation: a systematic literature review. SN Comput. Sci. 1(1), 1–33. https://doi.org/10.1007/s42979-019-0026-8
Olesov, N. P., Sergin, A. A., Alekseev, V. N., Nikiforov, N. V., & Baishev, I. I. (2020). Preparing Students of the Institute of Physical Education and Sport to Use Distant Learning Technologies in the Course of Pandemic. Journal of Educational Psychology - Propositos y Representaciones, 8(S3), e709. https://doi.org/10.20511/pyr2020.v8nspe3.709

Open Education – Retrieved from: https://openedu.ru/
Pikan B.V. (2005). Management of Variative Education in School. Monograph. - Moscow, - 270 p.

Popovic, S., Zarubica, M., Vukovic, J., & Matic, R. M. (2021). Attitudes and Preferences of Students in Sports Science Concerning the Use of E-Learning and Social Media at the University of Novi Sad. Sport Mont, 19(2), 11-15. https://doi.org/10.26773/smj.210616

Slastenin V.A., Issaev, E.N. & Shilyansov; Ed. (2002). Pedagogy. Textbook for students of higher educational institutions. – Moscow. Publishing Center "Academy", - 380 c.

Suárez-Llorca C, Carrasco-Embuena V, Fourcade-López A, Chinchilla-Mira JJ, & Andreu-Cabrera E. (2010). The effects of the use of blogs on the learning process of sea sports in the framework of higher education. J. Hum. Sport Exerc., 5(2):288-294. https://doi.org/10.4100/jhse.2010.52.16

Toni Mohr, A., Holtbrugge, D., & Berg, N. (2012). Learning style preferences and the perceived usefulness of eLearning. Teaching in Higher Education, 17(3), 309-322. https://doi.org/10.1080/13562517.2011.640999

Yan L., Yin C., Chen H., Rong W., Xiong Z. & David B. (2021) Learning Resource Recommendation in E-Learning Systems Based on Online Learning Style. In: Qiu H., Zhang C., Fei Z., Qiu M., Kung SY. (eds) Knowledge Science, Engineering and Management. KSEM 2021. Lecture Notes in Computer Science, vol 12817. Springer, Cham. https://doi.org/10.1007/978-3-030-82153-1_31

This work is licensed under a Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0).