Interactive Learning Means in Higher Education for Physical Education and Sport

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Abstract: The paper presents the interactive means of learning within a higher education institution of physical education and sport after a pandemic. The research group included the second-year students, in the degree program of the Faculty of Physical Education and Sport within the Ecological University of Bucharest (EUB). Taking into account the measures adopted by the National Council for Special Emergency Situations, regarding the prevention of the spread of COVID-19 (coronavirus) infection, and by the EUB Board of Directors as well, it was decided to suspend all face-to-face didactic activities and any other activities involving people agglomerations; the didactic activities will be conducted online, on the university dedicated platform, and the administrative, research and individual study activities will be continued. The research used the bibliographic study method, the questionnaire method, the conversation, the case study method, the interactive means of teaching online classes by means of zoom platform, electronic library of the faculty, YouTube web site, Google forms, WhatsApp and Facebook. The study results highlight the use of the interactive means in teaching courses online. The study focused on the practical experimentation of the questionnaire use by capitalizing on the knowledge, by expressing the motivation of the subject, the tools used and the way of completing the questionnaire. The teaching of courses online through interactive means aimed at transmitting the general theoretical knowledge and important practical-methodical examples. The online classes used the conversation with students, creating situations of collaboration and cooperation, analysis and comparison of the competitive activity and school curriculum.

Keywords: Questionnaire; methods of research; pandemic; teaching online; didactic platform.

Introduction

At this moment, the education process requires continuous improvement. Technological innovations provide new possibilities to transform the teaching and learning process. For this purpose, a radical change in the learning strategy and tactics is needed within the institution (Sessoms, 2008).

Interactive learning is always done with the means of informational technologies, the use of Internet resources, electronic books and online working as well. Modern computerized telecommunications make possible the participation in a “live” (interactive) dialogue with the real partner, the active exchange of information between the user and the informational system in real time (Hastie et al., 2015; Shibaev, 2012).

Interactive learning contributes not only to changing the experiences and attitudes of the participants, but also the surrounding reality, just as often. The training courses are an imitation of the types of activities used in the social and state practice of a democratic society. A practical solution to the problem of students’ cognitive activity motivation is achieved not only through didactic methods and techniques but also through the use of efficient forms of pedagogical communication, creating a stimulating comfortable atmosphere and respecting the personality of the student (Smirnov, 2002).

The introduction of interactive learning methods is one of the main directions of improving the students’ training in a modern institution and a mandatory condition for the efficient achievement of the skills (Gulakova & Harchenko, 2013).

The purpose of the study is to present the use of the learning interactive means in a higher education institution of physical education and sport after pandemic.

Material and method

Research group

The research group included the second year students, in the bachelor degree program of the Faculty of Physical Education and Sport (FPES) within the Ecological University of Bucharest (EUB). A number of n=36 participated in the Kinesiotherapy and special motricity program (KMS) and n=12 in the program of physical education and sport (PES). The subjects volunteered for taking part in this study and were informed about the modalities of conducting the research. The study was conducted in
accordance with the Declaration of Helsinki regarding the research on human beings.

**Research methods of data analysis**

The Board of Directors (BOD) of EUB decided to extend up to April 17, 2020 (with possibility of further extension) the suspension of all didactic activities face-to-face and any other activities that involve a large number of people gathered together. In the of the measures adopted by the National Council for Emergency Special Situations (CNSSU, 2020) of 09.03.2020 regarding the prevention of the spread of COVID-19 (coronavirus) infection, the BOD of EUB, during the meeting of March 12, 2020, decided the following:

- Suspension of all face-to-face didactic activities within EUB and any other activities involving people agglomerations.
- Conducting the online didactic activities on the dedicated platform of the university; the other activities shall be re-scheduled/recovered.
- Continuation of administrative, research and study activities.

The research applied the method of bibliographic study, the conversation, the method of case study in which interactive methods were used in the “Kinesiotherapy and special motricity” program (KMS) in the disciplines: ”Stage of preparation of the Bachelor degree dissertation” and ”Methodology of scientific research” and also in the “Physical education and sport” (PES) program - the discipline “Theory and practice in artistic gymnastics”.

In this regard, at KMS the method of projects was used, enabling the students to develop and strengthen the theoretical knowledge taught through the zoom platform. An individual homework was given in order to develop a questionnaire based on the accumulated experience.

In the case of PES, both the theoretical course and the practical works (PW) were taught online with the help of the zoom platform. Didactic material from the electronic library, practical-methodical material, video recordings from YouTube website were used for this purpose. The method of collaboration and cooperation was applied to increase the level of theoretical and practical knowledge (Mychka & Shatalov, 2015).

The scientific approach of the research was materialized through the use of the statistical-mathematical method by means of KyPlot program. The statistical analysis monitored the descriptive indicators (mean; ±SD) and the t-test, parametric Paired Comparison for Means between the number of questions and the participants in the questionnaires.
Results

The continuity of the didactical activity at FPES was ensured differently. The use of interactive means in teaching online courses was made depending on the specifics of the disciplines (theory, practice, practice-methods, applications and internships).

Table no 1 presents the centralized results concerning the number of questions and the participants in the questionnaires elaborated by the students from the programs KMS and PES in the Stage of preparation of the Bachelor degree dissertation and for the KMS - discipline “Methodology of scientific research”.

Table no 1. Results of the number of questions and participants in accordance with the topics of the questionnaires (mean±SD)

Source: Authors own conception

<table>
<thead>
<tr>
<th>Questionnaire topic</th>
<th>No of questionnaire questions</th>
<th>No of questionnaire participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health (n=12)</td>
<td>11.67±1.83</td>
<td>24.08±14.69</td>
</tr>
<tr>
<td>Nutrition (n=4)</td>
<td>11.0±1.83</td>
<td>19.75±9.64</td>
</tr>
<tr>
<td>Kinesiotherapy (n=8)</td>
<td>10.88±1.73</td>
<td>22.63±9.66</td>
</tr>
<tr>
<td>PAS (n=6)</td>
<td>9.50±1.22</td>
<td>20.17±3.49</td>
</tr>
<tr>
<td>Other concerns (n=2)</td>
<td>14.0±0.00</td>
<td>42.5±28.9</td>
</tr>
<tr>
<td>t-test (n=32)</td>
<td></td>
<td>5.43; p&lt;0.001</td>
</tr>
</tbody>
</table>

Note: PAS – physical activity and sport; t-test, parametric Paired Comparison for Means.

The analysis of the questionnaires highlights that the majority of the students used Google forms application for the elaboration of the questionnaires. The questionnaires were sent by e-mail, mainly using the contacts of WhatsApp group colleagues. Each questionnaire was presented in a descriptive and graphic form, then sent by e-mail to the teacher. All questionnaires were analysed and divided into 5 categories with the thematic of studies: health, nutrition, KMS, PAS and other concerns. The assessment of the questionnaires was carried out through the general approach as a research method, its applicability in the study field (KMS and PAS), the use of knowledge – expressing the motivation of the theme, the tools used and
the way of achieving the questionnaire. Among the most interesting topics we noticed ”Home training”, related to the pandemic, and the ”Influence of Coronavirus pandemic on the health status of the citizens”.

The online teaching of the discipline ”Theory and practice in the gymnastics branch – artistic gymnastics” was made by using the zoom platform. Considering that the students will be future teachers of PES, some of them even coaches of gymnastics, the teaching material included general theoretical knowledge and practical-methodical examples imported from YouTube and existing websites (for example, competitions of artistic gymnastics and video recordings with themes from the school syllabus). During the online classes, the teacher tried to keep talking with the students all the time, asking questions related to the content of the course and the main terminology concepts. Also, situations of collaboration and cooperation with the students were created, in order to analyse and compare the technique, the execution mistakes, the learning preparatory exercises, the granting of the aid to the exercises included in the school curriculum.

**Discussions and conclusion**

In order to carry out the online activities, the teaching staff got in touch through various electronic means of communication: e-mail, directly or through the group/year leader; through announcements posted in the Timetable and Exams sections on the faculty website and online platforms (Guide, 2020).

As for the students’ opinion regarding the online courses at EUB level, there is a recent study conducted by N. Caragea & C. Alexandru (unpublished), which monitored: appreciation, effects, whish, proposals and assessments. The questions also addressed the students’ potential to adapt to the new ways of teaching and assessment, through online means, such as the access to Internet from home, the device used for accessing online courses, the platforms used in online activities.

At the same time, the terms of „interactivity”, „interactive learning”, „interactive methods and techniques of teaching” began to be used in articles and papers on pedagogy, in didactics sections that describe the learning process as communication and cooperation of equal participants, as a model of professional self-training and self-education in the field of distance learning, based on constant interaction (Panina & Vavilova, 2007; Rep'ev, 2004).

The use of innovative learning methods in the higher education system of physical education and sport, in the emergency situation created
by the pandemics, is a relevant and promising direction, especially in the context of continuous development and improvement of the Romanian education system.

The use of interactive learning tools within a higher education institution of physical education and sport after a pandemic situation ensured the continuity of the didactic activity, a more efficient cooperation and collaboration between the teaching staff and the students and also the creation of measures to complete the disciplines taught.

This study is still under research and evaluation until the end of the emergency situation created by the pandemic.

Acknowledgement

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References


