PREMISES TO IMPLEMENT E-LEARNING FOR IN-SERVICE PHYSICAL EDUCATION AND SPORTS TEACHERS

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Abstract: Nowadays, lifelong learning is one of the main priorities in adults’ education. Relying on the physical education and sports field specificity, this paper aims at approaching the possibility to insert the e-learning system into a curriculum designed to improve the in-service teachers’ professional standards.

To fulfill this aim, we analyzed the initial and continuing education curricula, namely the bachelor, master, and doctoral degrees, as well as the educational programs issued within an institutional project co-financed from the European Funds. We shall synthesize our previous research in this field and we shall emphasize our e-learning institutional experience acquired due to the Comenius project we were involved in. Thus, we identified some premises that could influence the e-learning application to in-service teachers’ continuing education in our specialty domain (ICT use skill level, people’s and institutional attitudes toward ICT, curriculum design). By considering the e-learning system as an opportunity for our institution to develop its own educational system, this research synthesizes the knowledge our future project will rely on.

Key-words: e-learning, physical education and sports, in-service teachers.

I. INTRODUCTION

Physical education and sports represent nowadays a very interesting area characterized by interdisciplinarity. To develop this study field, we must accept the support provided by different related sciences: human and social sciences, biomechanics, mathematics, management and so on. A really significant contribution is brought by informatics, which has lately discovered in physical education and sports a huge application area [1], [2].

Although ICT is more and more applied to the educational sphere, the most important problem of our modern society is digital education and education through ICT means, this representing a first step to accomplish such an education type [3]. Thus, the focus must be placed on teachers’ training level that can be improved by using specialized ICT training programs [4].

Under these conditions, we can identify at least two challenges the specialists in our field must cope with. We have to build up the competences required by modern technology, both to the education benefit and for an assisted sports training process [5], [6], [7]. We must add that the continuing education process based on the e-learning system provides the learners more and more frequent opportunities to acquire new competences [8]. Problems that can be solved by means of the e-learning education are already well known:

- Physical distance (rural dwelling, out of campus students, teachers from different geographical areas) - space barriers are removed.

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1 Research conducted within the project Professionalization of the teaching career in physical education and sports from the continuing education perspective (ID 13096), co-financed by FSE through POSDRU 2007-2013.
Time and schedule related issues (difficulty to regularly organize student meetings, to cope with work, family, personal or community problems) - time and learning pace are eliminated.

Limited available learning spaces (number of learners, institutional insufficient spaces destined to the educational process).

Limited or dispersed enrollment (less admitted applicants in certain periods or in some particular areas).

Limited number of available teachers (lack of specialization, uneven geographic dispersions).

Different cultural, religious and political conceptions (discrimination, immigration, territorial-administrative barriers) [9].

However, this system relying on continuing education programs is absent in our field. The need for a methodology stipulating the credit acknowledgment when graduates complete their distance learning studies discourages the providers to promote such offers [8], [10].

The UNEFS specialists, as ICT promoters in a predominantly practical domain, fully aware of their role importance, have constantly supported the educational offer development.

II. PREMISES TO IMPLEMENT E-LEARNING

2.1 The National University of Physical Education and Sports Bucharest (UNEFS) experience in organizing e-learning courses

A first initiative was determined by our partnership within the project “Comenius 2.1 Project: 118766-CP-1-2004-1-RO-COMENIUS-C21: FISTE - A Future Way for In-Service Teacher Training Across Europe” (2004-2007). Due to this cooperation, our institution developed some activities in the ICT area, such as: designing some course chapters for ECSUT – Educational Challenges & Solutions in Using ICT (on-line course for European educators), organization of the e-learning course, participants’ training and co-tutoring, results dissemination at the national and international levels. This course main challenge was to identify, together with the learners, their possibilities to teach by means of ICT. The issued teaching projects expressed educators’ creativity and innovation capacity. However, 16% out of the 30 learners, subscribed in UNEFS, gave up this course [11], [12].

At the same time, the on-line course organized within the FISTE project helped us to find out more information about the teachers’ ICT using skill level. In our research, we inquired 180 undergraduate teachers (elementary and secondary schools) who participated in different lifelong education programs (100 teachers in course of getting their permanent appointment and 80 teachers, their 2nd grade). Teachers’ answers led us to the conclusion that 49% out of the educators included in the first category and 79% out of those belonging to the second category attended at least once a PC course, and 46%, respectively 59%, an ICT instruction course (Graph 1).

Graph 1. Physical education and sports teachers’ participation in a PC course

We can notice that most of the teachers in the second category attended a PC course, probably because they had become aware of its importance to their professional carrier. We consider that as an
important premise to a future educational offer in e-learning system. But teachers in the first category, still in the beginning of their activity, proved to be less interested in this aspect.

2.2 UNEFS ICT initial instruction offer

Relying on the above-mentioned findings related to the beginner physical education teachers’ minor concern with computer use in pupils’ instruction, the UNEFS DPPD proposed a training content within the discipline *Computer-assisted instruction* (28 hours allocated to courses and 14 hours to practical works), allowing the graduates to use computer in our domain specific activity. In this sense, we aimed at developing competences related to computer use in the teaching design and evaluation, but also to software utilization in the motion graphical analysis. The idea that possessing ICT competences supposes both specialty knowledge and abilities, skills and favorable attitudes toward the computer use in the physical education teaching process, in athletes’ methodological assistance or in some kinesi-therapeutic approaches, revealed new aspects currently promoted at the world level: software for the specialty knowledge testing, slides for the evaluation of motor, functional and biochemical parameters, simulators for the motor learning specific to different sports branches. Parts of these subjects are studied within master courses, within discipline *Statistics and informatics in sports*.

We think that an ICT approach appropriate to our specialty content would facilitate the future specialists’ involvement into various e-learning training forms, by generating an open attitude [8], [10], [12].

2.3 The continuing education program “ICT applications to physical education and sports teaching”

Having in view that e-learning courses are based on a certain computer use skill level, the next step to develop students’ favorable attitude toward these virtual instruction environments was represented by the insertion of a purposely assigned program into the UNEFS DPPD continuing education offer.

Within the project “Professionalization of physical education and sports teaching career from the lifelong learning perspective” (ID 13096), co-financed by FSE through POSDRU 2007-2013, specialists in the field are proposed an educational offer including six instruction programs. Among them, that one focused on the development of competences required by the ICT application to our specialty domain. The program accredited by MO no. 4260/5.08.2010, for having been fulfilled all the conditions specified in the Accreditation methodology for lifelong instruction programs, issued by MECTS (Ministry of Education, Research, Youth and Sports), is assigned to physical education teachers and coaches.

This program was requested by all our partner institutions involved in the project, as follows - CCD Giurgiu (25 learners), CCD Teleorman (25 learners), CCD Dambovita (25 learners), CCD Olt (25 learners), ISMB (50 learners).

When graduating, learners are granted an attestation confirming the 15 accumulated professional transfer credits, as well as their acquired competences. The competences are presented on following categories:

**Teachers’ required competences to efficiently fulfill their role:**
- to know and use computer tools when designing, teaching and evaluating the physical education and sports discipline;
- to draw up functional products, able to enhance pupils’ attractiveness to the physical education and sports.

**Teachers’ specialty competences in physical education and sports field:**

**at the theoretical level:**
- to know the ICT role in studying and analyzing human motricity;
- to apply informatics knowledge and notions, to use computerized data collecting and processing;
- to identify the possibilities of using audio-visual aids in the educational process specific to physical education and sports field.

**at the operational level:**
- to use a calculation system for some widely spread software products;}
to use the ICT means in the documentation activity required by the physical education and sports discipline;
- to use computer in the measurement and evaluation process specific to physical education and sports discipline;
- to use different computerized applications when designing and carrying out activities in the physical education and sports domain;
- to draw up planning documents by using different software applications;
- to take, process and insert images in specialty presentations.

*at the creative level:*
- to creatively apply the ICT methods and means to the design, measurement and evaluation processes specific to physical education and sports;
- to valorize the computerized resources for a physical education and sports modern teaching.

**Teachers’ psycho-pedagogic competences:**

*at the theoretical level:*
- to identify the formative valences of the ICT methods and means;
- to properly and contextually use the specialty terminology;
- to psychologically and pedagogically substantiate the ICT use in physical education.

*at the operational level:*
- to select and adapt the ICT means according to the physical education instructional objectives;
- to integrate ICT-related knowledge into the physical education teaching;
- to insert the ICT basic utilization principles into the instruction process;
- to apply the ICT instruction methods and means appropriate to pupils’ age particularities, to their training level and to the aimed objectives.

*at the creative level:*
- to conceive applications able to valorize the ICT means in the instruction process;
- to stimulate pupils’ participation in the lesson activities, by encouraging their autonomy;
- to conceive various instruction situations, depending on the aimed objectives.

**Teachers’ psycho-relational competences:**

*at the theoretical level:*
- to analyze the ICT application modalities when designing, leading and evaluating physical education and sports.

*at the operational level:*
- to communicate by using a specialty language;
- to use notions and concepts specific to the physical education and sports domain.

All these competences could represent important landmarks for the teachers who would like to participate in organized e-learning courses.

The conceived curriculum needs 60 hours to be implemented (TABLE 1).

### TABLE 1. Curricula for the continuing education program “ICT applications to physical education and sports teaching”

**Compulsory disciplines**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Course</td>
</tr>
<tr>
<td>ICT - general notions</td>
<td>3</td>
</tr>
<tr>
<td>Computer-assisted instruction in physical education and sports</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
</tr>
</tbody>
</table>

**Optional disciplines (option for 4 disciplines)**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Course</td>
</tr>
<tr>
<td>ICT use in programming activities specific to physical education and sports</td>
<td>3</td>
</tr>
<tr>
<td>Measurement and evaluation in physical education and sports by using ICT means</td>
<td>3</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>Audio-video aids in physical education and sports</td>
<td>3</td>
</tr>
<tr>
<td>Document drawing up and management in physical education and sports by using ICT means</td>
<td>3</td>
</tr>
<tr>
<td>Informing documentation</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
</tr>
<tr>
<td><strong>Final evaluation</strong></td>
<td><strong>Course</strong></td>
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<tr>
<td></td>
<td></td>
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<tr>
<td><strong>Total hours</strong></td>
<td>18</td>
</tr>
</tbody>
</table>

### III. CONCLUSIONS

In physical education and sports there are some important premises which could facilitate a sustainable project concerning the development and the implementation of e-learning courses.

Teachers’ participation in the ICT courses provides the access to different technologies used in the physical education and sports area and also builds up competences that would allow teachers and coaches to get involved into the on-line instruction.

UNEFS could apply their positive previous experience to an institutional e-learning system. However, in physical education and sports there is no acknowledgement for an on-line continuing education course. But the teacher’s profile claims many competences, because he has to do with human relationships, communication, social groups. So, an easier access to some specialty areas within it could be organized e-learning courses, it is really necessary. These areas could be: sports after school activities, sports training at different ages, nutrition, sports management, sports marketing, and specialty terminology in a foreign language. Of course, the blended learning could be also a solution for some contents. We can assert that, due to their space and time flexibility, user centered learner, interaction, the e-learning courses must become a permanent presence in the lifelong education programs specific to our domain, together with the face-to-face teaching methods.

An important premise (and condition!) to involve more and more teachers in e-learning courses, is to help them to get basis ICT competencies. E-learning courses are an efficient alternative for traditional education, from the professional, social and financial points of view. It should be organized more post-graduate courses, with a specialized curriculum, such we offer in FSE POSDRU grant. At the same time, we have to notice that e-learning courses compel the academic teaching staff to make supplemental efforts for each member’s familiarization with the virtual teaching area.

### References

