PHYSICAL EDUCATORS' PERSPECTIVES ON INSTRUCTIONAL METHODOLOGY OF SYNCHRONOUS DISTANCE PROFESSIONAL DEVELOPMENT

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ABSTRACT

Teachers' continuing professional development, that is an essential part of their professional career, is the subject of constant demand of them and of each educational reform interest. The rapid growth of technology and the choices of teaching and learning that it provides give possibilities for synchronous and asynchronous methods of distance continuing training which get over the problems traditional face to face methods create. A synchronous e-learning software provide virtual environment of teaching in which the possibility for enhance interactive and collaborative learning is given.

The purpose of the present study was to investigate the perspectives of physical educators for the synchronous online teaching method process. The participants were 15 in-service teachers of elementary physical education who took part in a training program which was conducted with the synchronous Centra software. The results show the participants' satisfaction from the particular instructive method and their conviction that it allows the active presence and the collaborative learning, without influences by the lack of physical presence in the same space of instructor and learners.

Keywords: synchronous online professional development, physical education

INTRODUCTION

The knowledge, skills, and practices of educators are important factors in determining how much a child learns and how prepared that child is for entry into society. So teaching is a complex, fluid and dynamic process; a demanding profession whose integrity is founded on teachers who learn continuously throughout their careers (Armour, 2002, p. 203). Teachers, to be able to respond to their responsibilities over time, can not be sufficient equipped by the undergraduate curriculum. It is required constant informing on developments in both their subject matter and the science of education, updating their knowledge. Given the rapid aging of knowledge, today's world characterized by the need for continuous lifelong learning; consequently, training of teachers becomes essential part of their professional career (Hatzilelekas, 2006).

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Important characteristics of teachers' continuing training is the response to identified needs, the short duration and repetition, a close relationship with research and school practice, the large number of participation, decentralization, the evaluation to improve the orientation in the future and the use of adult education methods (Mavrogiorgos, 1989).

The teachers, as participants in adult education, bring with them a set of experiences and values, have expectations for the learning process, given intentions to education and learning models developed (Rogers, 1996).

In Greece, educational training programs carried out mainly in the capitals of prefectures because of the great dispersal of schools; as a result, teachers confront the difficulty of access to them (Papadouris, 2001). Apart from the travel difficulties, participation in training programs comes up against family and professional obligations. Additionally, the teachers' dispersion posted in schools and education offices abroad, cut them from training activities in Greece resulting in reduced contact with their educational development. However, a high percentage of teachers wishing to train or participate in postgraduate programs (Dimou, 2003).

Distance Learning

The rapid development of information and communication technology brings along many impacts to education and training. It provides teachers with more flexible mechanisms for training through distance education, new methods and tools for learning, overcoming the obstacles mentioned above (Unesco, 2002).

The technological development and access to high quality telecommunications links create the conditions for future major changes in distance learning, creating a new best educational practice, education via the Internet. The Internet, for years, is an environment of creativity and active learning (Becker & Dwyer, 1994), which supports and encourages behaviours associated with learning like the exploration and information gathering (Thuring, Mannemann & Haake, 1995). The Internet and particularly the World Wide Web offers an innovative system to provide courses in synchronous and asynchronous manner, which directly connects learners with educational material sources and human resources to create virtual classrooms with potential interaction and cooperation (Owston, 1997).

The Internet provides various opportunities for learning and teaching with important advantages the opportunity given to teachers and apprentices with flexibility in the place and time. It gives the possibility of learning that does not require the simultaneous physical presence of teacher and students in the same place as with traditional methods. Thus difficulties and problems arising from movements in the training centrums away from the workplace or residence are bypassed. It also provides opportunities for "commingling" of trainees and trainers from around the world without unnecessary movements, timely access to knowledge, updating and information, exchange ideas and experiences and cooperation. Also a distance learning environment allows participants to practice technology may be necessary in the future. In addition to this, the teaching material can be presented in an interesting way and people with disabilities can benefit and gain knowledge and come in contact with colleagues.

Among the disadvantages of such environments is that access depends on external factors such as potential provider of service accessibility, availability and access speed of the download data are unpredictable, and difficulty in scheduling when including foreign countries (Holmberg, 1995).

Also weaknesses such as the creation of dependency on technology, and time to adapt to new and "impersonal" process of learning are referred (Franklin, Yoakam, & Warren, 1996), while the highest rates of withdrawal presented in online training due lack of online education (Antoniou & Siskos, 2007). According to Giossos, Mavroeidis and Koutsouba (2008) quite a lot of investigations conducted in the context of new technologies in education, especially education that uses the Internet to connect the sense of social presence in an educational program with factors such as the degree of satisfaction or the perception of trainees for learning. Comparative studies on the effectiveness of distance versus traditional face to face education revealed no significant differences in learning and satisfaction of participants (Johson & Aragon, 2003).

On the other hand, Brower and Klay (2000) consider the lack of physical presence as a disadvantage of distance environments, and express reservations about the possible impact on the socialization of the participants. Nevertheless, they note that synchronous distance environments provide such opportunities and may partially cover this disadvantage. With the above terms agree Stodel, Thompson and MacDonald (2006) since they consider that the physical presence and social interaction which affect the learning and interest of participants are elements in which distance environments are inferior to traditional face to face. However, this difference mitigated in courses conducted in synchronous distance learning environments.

Sahin (2007) investigated the factors contributing to satisfaction of 917 undergraduate law students from the pedagogy of distance courses. The investigation revealed that instructor support, the relevance of the content to students' experiences, cooperation and interactions with other participants in order exchange information are factors that increase motivation, participation and thus learning in distance learning environments. Also, Wang and Reeves (2007) examined the perceptions of five students from Taiwan, on synchronous online environment, their interactions in this environment and their comparisons to traditional physical classroom courses. Participants attended a synchronous online course for the first time at a university in the U.S.A and they declared that it was much better than imagined, and despite their preference to traditional face to face courses, they found it effective for learning. They described the attendance pleasant and comfortable because they do not need to move from their homes without diminishing their attention in relation to f2f classes. Also they mentioned as important factors for success the instructional design and instructor experience. In Greece, Antoniou and Siskos (2007) explored 24 physical educators' perceptions for the learning environment of a training program in which synchronous and asynchronous technologies were used. The results showed that the training program met the expectations of the participants for active participation and collaborative learning.

Centra: A Platform of Synchronous E-Learning

E-Learning procedures require instructive and learning approaches which derived mainly from cooperative and constructive theories of learning because virtual environments focus on enhancing the participation and involvement of participants in an active learning process and a productive interaction with the learning environment (Makrakis, 1999; Rees, 1998). Russell, Coplan, Corrigan and Diaz (2003) indicate that the design of teaching process and the degree of interaction between teacher and students and students with each other, which determines the involvement of students with educational materials, are the keys for a qualitative e-Learning program.

Centra Software (Saba, 2008) is an online platform which ensures the implementation of synchronous distance education with the possibility of presenting educational material in form of slides or other application files and interactive real-time audio communication between teacher and participants.

Furthermore it allows large number of participants around the world to interact, cooperate and learn, simulating the interaction of the traditional class in real time. Painter-Morland, Fontrodona, Hoffman and Rowe (2003) evaluated the value of synchronous distance education in ethical knowledge and skills development of students who attended the course from the U.S.A., South Africa and Europe through Centra platform. Participants reported feelings of enthusiasm from their participation in classroom activities and exchanging ideas and views from around the world and they reported that they would repeat the experience if they had the opportunity.

Only the need to stop the debate because of time limitation of the session on the platform was mentioned as a point of annoyance. So authors suggested the increase in the short two-hour weekly meeting.

Factors affecting the effectiveness of education programs and satisfaction of learners using the Centra Software in business and universities areas have been explored by Petropoulou and Tsalgatidou (2004). The researchers concluded that concerning the teaching process, the effectiveness of online tools depends on the use of appropriate pedagogical principles and teaching techniques that contribute to good interaction between teachers and learners, to enhance collaborative learning and active participation of learners. On the other hand, the lack of physical presence is more noticeable among older participants because of their difficulty to adjust to the new education system. In Greece there is a lack of research in the field of physical educators' professional development with distance learning methods. So the purpose of this study was to identify perceptions of in-service elementary physical education teachers for teaching methodology of synchronous distance learning with the use of Centra Software.

METHOD

Sample
Fifteen physical educators who teach in elementary schools of different Greek regions, with experience of 7 to 20 years (M = 12.86, SD = 4.5) were the sample of the research. They participated voluntarily, without any gain but the experience and knowledge on issues of their interest in an innovative way for them.

Procedure
Participants had access to a virtual room using their personal codes where watching and participating in a two-hour session once a week for five weeks out of their class time at school. In each session, which included PowerPoint slides as educational material in the environment of Centra platform, there was initially a short repetition and linking to the previous section and then reference to the objectives and expected results of the current session. The slides (in accordance with the possibilities offered by the platform) (Antoniou, 2008) included apart from plain text, drawings, pictures and small videos, references to literature for further information and hyperlinks to websites. The participants and the instructor communicated through audio chat and a written text. There were also small tests during the process either in the form of questions by the teacher where participants answered through written communication or orally. In addition, the option "survey" of the platform was used for assessing knowledge or collecting impersonal participants' views. Feedback was given to participants either orally by the teacher or through Centra system. During the session, participants were split into small groups to conduct cooperative assignments; the results were then announced to all participants by the leader of each subgroup. At the end of the session there was a summary of what are taught and relevant literature suggestions for further information.

Also assigned drafting work, individually or cooperatively, the results of which were exchanged with the other participants at the beginning of the next session.

The data collection was done after completing the training program using a semi-structure format of interview, conducted face to face with each of the participants, in which they evaluated the teaching methodology of synchronous model of training.

The questions to which respondents answered reported in

> - their satisfaction of synchronous model of training versus the traditional face to face,
> - the significance for them to attend a professional development program without moving,
> - the impact of teacher's physical absence to them,
> - the existence of an isolation sense,
> - the convenience of active participation using Centra Software,
> - the adequacy of time for questions and discussion, and
> - the enhancing of collaborative learning.

The responses were consolidated into a five-point Likert type scale (1=extremely, 2=very, 3=fairly, 4=somewhat, 5=not at all).

RESULTS

The results showed that all participants had positive impressions and comments about the program. Analysis of deviation using the one sample t-test analysis showed a statistically significant degree of satisfaction of the teaching methodology (t=10.289, p <.001) with the average ranging from «extremely» to «very» (M=1.77, S.D.=.27). Regarding the responses to each question, the frequency analysis by applying the x^2 test revealed the following results: For questions 1, 2, 5 and 6 there are statistically significant differences between actual and theoretical values of the variable (x^2=14.8, x^2=11.27, x^2=11.2 and x^2=19.2 respectively with p<.05). Specifically for the questions 1 and 2 outnumbered the answer «extremely», for the question 5 the answer «very» and for the question 6 the answer «fairly».

On the other hand, there were no statistically significant differences for the remaining three questions where the responses to 3 and 4 questions were «not at all» and «somewhat» and to 7 question «very» and «fairly» (Table 1).

The percentages of participants at the five-point scale are shown in Figure: 1.

Table: 1
x^2, degrees of freedom and significance level per Question (Q)

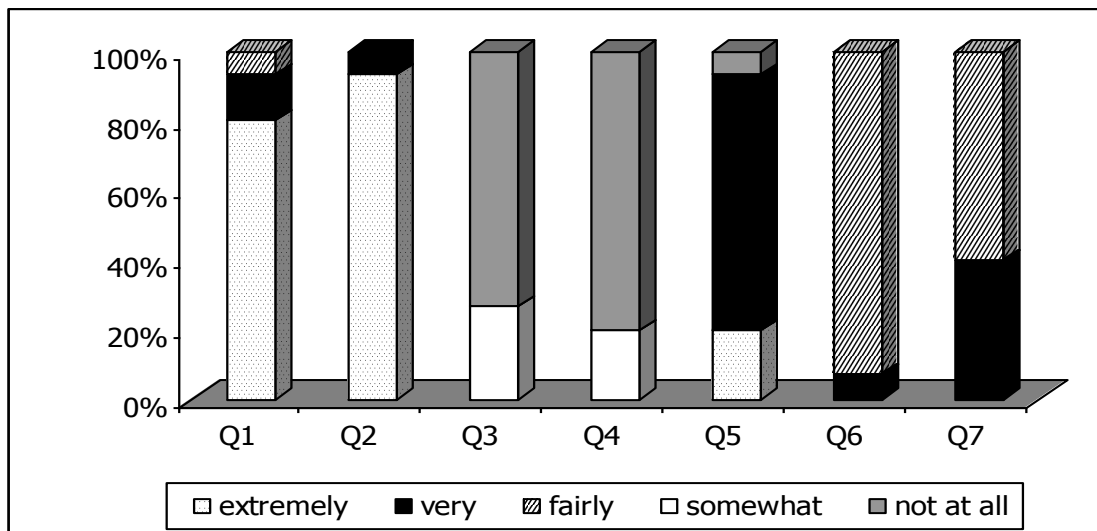|	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Chi-Square(a,b)	14,8	11,27	3,27	5,4	11,2	19,2	,6
df	2	1	1	1	2	2	1
Asymp. Sig.	,001	,001	,071	,020	,004	,000	,439

Figure: 1
Percentage of respondents at the 5-point scale per question (Q)

DISCUSSION

Participants generally expressed interest about their experience with the new method of professional development. They were too satisfied with the program, and as one of them said

> «… I feel that I was technologically illiterate. So must be the training programs and I hope to have the chance to join again in an attempt like this».

One of the main reasons for satisfaction of the synchronous method of training was the lack of movement because family and professional obligations would obstruct the involvement of the majority of participants.

Characteristic were the comments of participants such as

> «… it was innovative and fun for me when at night with a drink for relaxation at home I could attend and discussed with colleagues on issues of my job …», while participating mother commented «… it is important that the child sleeps in the next room and I can check his temperature without losing a lecture and discussions in my interesting».

The degree of participants' satisfaction is in agreement to previous research results (Petropoulou & Tsalgatidou, 2004) where the trainees considered it was too important to be trained without having to move avoiding tiredness, wasted time and expenses for accommodation and travel. The lack of physical presence of the teacher seems to have little or no influence on the program attending and was almost non-existent sense of isolation felt by the participants confirming other researchers' observations (Brower & Klay, 2000; Stodel et al., 2006).

On the other hand, these results agree with the findings of Petropoulou and Tsalgatidou (2004) but only to perspectives of university students. The companies' employees involved in that investigation notified that they influenced very much by the lack of physical presence of instructors, and researches' justification was that they were unfamiliar with technology. However, participants in present study had not ever before participated in a virtual classroom, and they stated their level in the use of technology as medium.

In a distance learning environment instructors, trainees, and technicians are a group of people participating in a training program without being in a common physical space, but they have the same opportunities for interaction between them as if they were in a real classroom.

The issue of active participation and the time devoted to questions and answers seems to satisfy the participants of the present program, since throughout the sessions' time they could «raise» their hand in order to express concerns, to answer instructor's questions or to interact with their colleagues. However, some of them indicated that they would prefer to have more discussion time suggesting the reduction of time spending on lecturing or the extension of session time. The results in this issue agree with comments of participants in other investigation using the Centra Software (Painter-Morland, et al., 2003) and given the importance of the interaction between adults in learning should be taken in to account by the instructors of such programs. In relation to collaborative learning, at the half time of each session, participants divided into small groups were sent by Centra Software into separated virtual rooms where they trying to solve problems exchanging experiences and ideas. After that, they presented the results into to entire class. Participants argued that synchronous online teaching enhanced their collaboration very much. In the same way were the results from previous studies (Antoniou & Siskos, 2007; Petropoulou & Tsalgatidou, 2004).

In conclusion, distance professional development with the use of synchronous Centra Software appears to meet the expectations of physical education teachers. They believe that synchronous online training reinforces the interaction and cooperation, without creating feelings of isolation due to lack of physical presence. Further investigations could determine the benefits of this approach to participants' learning, so it will be used widely as a method of in-service teachers training.

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