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Quality analysis model of the e-learning training system for sports occupations

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Abstract

The e-learning training system is becoming increasingly extended as a form of training organization for various professions and occupations. Recognizing the benefits it provides, in 2010-2012 AFAN tested this training tool on 224 persons enrolled in training for various occupations: sports adviser, manager of sports companies, organizer of sporting events, sports steward, referee or in sport-related fields (diet and nutrition, sports journalism or personal branding), within the project "E-learning for social partners" (ESF). In this respect, this paper aims to present a model of analysis regarding the quality of the programs mentioned and the impact on the students' perception about the e-learning training system. The model of analysis is structured on quality standards and indicators whose values were determined by information provided by the e-learning platform (recorded types of interaction, students' preference for certain training tools).

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Keywords: e-learning; sport; occupations; training system.

1. Introduction

E-learning is nowadays the most common form of distance education, being provided through new information and communication technologies**.** The advantages of this training system justify the growing number of training programs offered to students from different fields (medicine, management, engineering, pharmacy, IT, electronics,

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communications). In the Romanian sport science and physical education field, a training system that harnesses the potential of e-learning is just beginning. So far, there aren't any approved programs that use learning platforms for learning environments associated to curricular programs. However, they are used as collaborative learning environments, complementary to classroom activities. During 2010 - 2013, the most consistent promotion of vocational training for occupations in sport was conducted by AFAN within the project "E -learning for social partners" (2010-2013). This project was financed by the ESF through SOP HRD. One of the main concerns of the trainers, at the beginning of this approach, was to ensure the required quality conditions currently required internationally by e-learning training programs. Given the experience of the project partners (Escola Professional Cristovao Colombo) and the fact that it was the first time when e-learning courses were offered for these occupations, the project experts decided to provide blended-learning programs to alleviate some of the disadvantages of the e-learning system.

This paper depicts a model for analyzing the quality of programs offered within the afore-mentioned project, in order to create a reference for subsequent actions in the training of specialists in sports, and thus to prevent the phenomenon of desertion of these kinds of courses, and the increased influence of the national culture on the perception over these courses. (June, 2005)

1.1. Quality in e-learning and b-learning

An e-learning system (distance training or virtual education) consists of a planned teaching-learning experience, organized by an institution providing mediated materials, in a sequential and logic order to be acquired by students in their own ways, without forcing the activity agents to co-presence or synchronicity. In functional terms, the Internet training system responds and adapts the components of traditional / face-to -face teaching: planning, specific content and methodology, interaction, support and evaluation. (Istrate, 2000).

They are part of the model quality analysis promoted in the e-learning system. Some authors argue that the quality of e-learning should be analyzed using the same criteria and indicators used for face-to-face training, while others believe that conventional quality concepts are not suitable because the e-learning system requires a different type of information structuring and a different training methodology (Stella and Gnanam, 2004; Dondi, Moretti, 2007; Stănescu, Muşat, Stoicescu, 2014). Obviously, there are also supporters of a middle solution who believe that the quality criteria used in the two systems should be combined, and the specific e-learning ones should be related to asynchronous interactions, , open access to vast resources and distributed learning (Jung, 2008).

Finding answers to questions related to quality in e-learning is one of the major concerns of theory and practice in this field. The most difficult problem seems to be the conceptualization of such a complex system. Ehlers (2002, 2003) conducted an analysis on several dimensions, such as quality meanings, perspectives on the quality and levels of the educational process where quality assessment can be applied. The so-called subjective quality model is organized on three levels, 30 dimensions (Principal Component Analysis), which allowed the author to identify 153 specific factors of quality, having different relevance from one student to another, depending on the needs and interests of their training.

The factors that may underlie the quality analysis included the student-focusing; skills, knowledge and information to be proven at the end of the course; granularity; motivating content; interactivity; customization possibilities in terms of educational route (Ehlers at al., 2005; Sajia 2008; Jung, 2010). The following criteria also emerged from the literature review: tutor support, cooperation and communication in the course; technology; costs; transparency of information; course structure; training methodology. Experienced e-learners are often very precise in their requirements concerning the didactical setting of an e-learning course.

Along with various researchers, important organizations in the field of quality assurance (Quality Assurance Agency - QAA), European Association of Distance Learning (EADL), European Foundation for Quality in ELearning (EFQUEL) formulated a set of rules on the quality and academic standards of higher education programmes of study provided through distance learning: system design; program design, approval and review; the management of program delivery; student development and support; student communication and representation; student assessment; pre-enrolment practices; counselling practices (other than direct lesson tutorials); examinations; face-to-face teaching rate; enrolment and contract practices; product management practices; tutorial practices; technology-based learning; other practices.

2. Paper aim

Institutions promoting adult education, as well as higher education institutions, increasingly resort to these technologies for delivering courses, allowing their beneficiaries' professional integration by harnessing the potential of these training systems. The purpose of this paper is to provide a model for analyzing the quality of training courses offered in blended-learning system, by investigating the opinions of the beneficiaries of these programs, namely the students. The decision to assess the opinions of the students was taken because those who use this system for the first time it is very important to have courses designed according to the student needs, and to prevent dropouts. Thus, this paper provides useful information to the training providers who are interested in creating programs able to exploit the system for future sports professionals.

3. Research methodology

3.1. Subjects

To achieve this goal, we applied the inquiry method and we analyzed the answers of 242 participants in 8 courses: sports adviser (22), manager of sports companies (28), organizer of sport events (41) sports steward (40) football referee (29), diet and nutrition (39), sports journalism (25) and personal branding (18). Students were aged between 22 and 43 years and had college degrees in sports or other fields such as economics or legal science. All students were employed, their participation in these courses was freely consented and were for the first time registered in a blended-learning course system.

3.2. Courses design

The 8 courses had an average duration of 67 hours e-learning (organized in seven modules) and 36 hours in class (divided into 3 sessions, at the beginning, middle and at the end of the course). The training activities were conducted in May 2012 - February 2013. The methodology used in the development of the courses took into account the observance of adult learning principles, and the principles underlying meaningful distance learning configuration (collaborative learning, student-centered learning, equal opportunities, principle of interaction, and principle of flexibility).

3.3. Research methods

To assess the quality of the courses offered in the blended-learning system a questionnaire has been applied to the students, which included a number of items resulting from the literature review. The questionnaire had 21 questions. Students were asked to rate, on a scale of 1-5, the following: technical issues (3 items), issues concerning the course content (3 items), issues on the organization and unfolding of the course (7 items), issues regarding the trainer activity (3 items) and issues related to self-assessment (5 items). Compared with other models of analysis related to the quality of the courses, this model abandoned the cost issues (they were supported by the project), and introduced the self-evaluative aspect, considered particularly important from the perspective of adult education. The responses to the questionnaire were analyzed for each course. For each category of items were calculated the average of the responses, which was correlated with the participation rate of students / course (obtained as the ratio between posts, collaborative activities / total visualizations), and the course graduation rate (the ratio between enrolled students and those who have completed the course). For statistical calculations we used SPSS 17.0.

3.4. Results and discussions

The analysis of responses to the questionnaire was preceded by an analysis of objective information provided by the courses, namely the learners' activism on the platform, and the graduation rate. From Table 1, it is clear that the best participation rate was recorded in the participants of the Sports Steward program (0.21) and Sports Journalism (0.21), while the lowest participation rate was recorded in the courses of Personal Branding and Sports Company

Management (0.09). On the other hand, it is observed that the average graduation rate is 55.5%, a percentage that falls within the values listed in the literature. (Table 1). Applying the Pearson correlation coefficient between participation rates and graduation rates, indicates that at p = 0.05, the correlation is not significant, which proves that the participation of students in e-learning modules did not have a significant share in the course requirements and did not compel them to an increased activism. From this perspective, we consider that current training programs should be revised to allow the transformation of students from individual e-learners into social e-learners. In accordance with Hrastinski (2008), the program developers should introduce new ways of collaborating in online education, as synchron and asynchron instruments.

Table 1. Characteristics of training courses from the perspective of students' activism

Course	Visualisations	Task solving	Participation rate	Graduation rate (%)
Sports counselling	15337	1521	0,10	45
Management of sports companies	19986	1822	0,09	94
Organization of sports events	20895	2330	0,11	49
Sport steward	10354	2188	0,21	55
Football referee	12600	1627	0,13	50
Diet and nutrition	11682	1766	0,15	28
Sports Journalism	24652	4838	0,20	68
Personal Branding	18645	1677	0,09	55

Based on this finding, which we assume as a limit of the manner of designing the system of requirements for graduation, we wanted to identify the participants' level of satisfaction, according to the components of the quality assessment model illustrated by the questionnaire. From Table 2, it appears that participants appreciate (giving the highest scores) the activity of the trainer, the media / courses is rated at 4.59, while the lowest scores are recorded for self-evaluation (3.74).

Table 2. Satisfaction level of the students participating in training programs

Course	Technical Issues ($\bar{x}$)	Course content ($\bar{x}$)	Course Organization and unfolding ($\bar{x}$)	Trainer's Activity ($\bar{x}$)	Self-evaluation ($\bar{x}$)
Sports counselling	4,8	4,8	4,8	4,76	4,6
Management of sports companies	4,6	4,6	4,5	4,66	3,56
Organization of sports events	4,33	4,30	4,17	4,56	3,60
Sport steward	3,93	4	3,60	3,80	2,64
Football referee	4,63	4,73	4,57	4,76	4,46
Diet and nutrition	4,56	3,8	3,55	4,78	3,72
Sports Journalism	4,36	4,40	4,55	4,76	3,80
Personal Branding	4,6	4,6	4,5	4,66	3,56
Mean	*4,47*	*4,30*	*4,28*	*4,40375285925*	*3,74*

From the correlation analysis of the results of the questionnaire, it appears that the only things that the only issues that correlate significantly, at p = 0.05, are those relating to the activity of the tutor and self-evaluation. The weaker the students' participation in the activities of the platform, the higher is the appreciation for the support of the tutor (table 3). This result answers the warnings in the literature that highlight the issues that may arise as a result

of poor communication with the trainer and with the other students. (Borstorff, Lowe, 2007). Hence, it seems that the activity of the trainers was in accordance with the needs of the students. (Fig. 1)

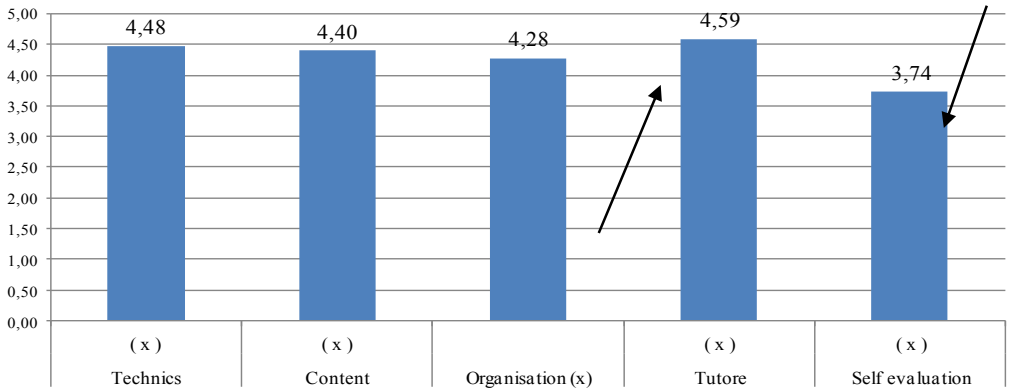

Fig. 1. Mean of the score for the satisfactory level of courses participants

Another significant correlation at p = 0.05 was obtained from the activism of the subjects and the grades offered for the platform functionality. According to the results, although high marks appreciate its operation, the activism of the students is reduced. (table 3)

Table 3. Correlations between the subjects satisfaction and activism during the courses

		Tehnics	Content	Organisation	Tutor	Selfevaluation	Activism
Tehnics	Pearson Correlation	1	,623	,643	,863**	,847**	**-,748***
	Sig. (2-tailed)		,099	,085	,006	,008	,033
	N	8	8	8	8	8	8
Content	Pearson Correlation	,623	1	,959**	,438	,651	-,592
	Sig. (2-tailed)	,099		,000	,278	,080	,122
	N	8	8	8	8	8	8
Organisation	Pearson Correlation	,643	,959**	1	,572	,693	-,518
	Sig. (2-tailed)	,085	,000		,138	,057	,188
	N	8	8	8	8	8	8
Tutor	Pearson Correlation	,863**	,438	,572	1	**,807***	-,524
	Sig. (2-tailed)	,006	,278	,138		,015	,182
	N	8	8	8	8	8	8
Self-evaluation	Pearson Correlation	,847**	,651	,693	**,807***	1	-,459
	Sig. (2-tailed)	,008	,080	,057	,015		,252
	N	8	8	8	8	8	8
Activism	Pearson Correlation	**-,748***	-,592	-,518	-,524	-,459	1
	Sig. (2-tailed)	,033	,122	,188	,182	,252	
	N	8	8	8	8	8	8

Also, we find that although high marks appreciate the course design, organizing and conducting, these indicators do not correlate significantly at p = 0.05 with issues related to activism and graduation rate. This correlation indicates that technical issues, those related to the course design or the training methodology were not those which led to the decrease of activism on the platform, and that any causes that lead to this outcome should be sought in the peculiarities of the subjects. The average course graduation rates are an important indicator regarding the quality of training. Therefore, in e-learning systems, great emphasis is placed on identifying success factors and their harnessing. In the context of our research, due to the fact that the training services were supported by the project mentioned above, and as at that time the courses were not authorized, we believe that two important elements

impacting the maintenance of the motivation for learning were cancelled. To this was added the exigency imposed by the trainers to comply with the requirements of each course separately.

4. Conclusions

This research allowed us to observe that although innovative approaches in training were developed for sport occupations, the analyzed training programs were designed in accordance with the needs of the students, thus proving the appropriate level of quality required today by the e-learning system. The underlying technology of the system implementation didn't generate integration difficulties in the training process. This was favored by the requirements that are necessary for participants in such courses, regarding the minimum level of computer use. We believe that the main difficulties are encountered by students in the organization of professional and personal activities, personal training and integration of the training activities in the sides of their lives. Due to the fact that data were provided by participants in a project that fully funded the training approaches, we identified some limitations of our study, among which the most important is related to impaired learners motivation for training. However, we can state that the students who use the e-learning system for the first time the largest share in the evaluation should be held by the e-learning platform activity, to encourage work in the virtual system training. Students may tend to overvalue the courses attended, due to the novelty of the instrument of training, and therefore, the tools used to investigate the students' opinion should be supplemented with objective data provided by the platform. The analysis model of the quality of the training programs presented in this paper highlight the approach focused on the students' needs, and leads to a rapid and meaningful feedback aimed at the improvement of future steps .

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