Webinars and Social Network in Distance Learning: Students' Views

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Authors' contributions

Author JP planned the research; both authors applied the research, performed the statistical analysis and wrote the first draft of the manuscript. Both authors read and approved the final manuscript.

Original Research Article

ABSTRACT

Aims: The aim of this study is to present students' views concerning the attendance of conference and/or seminars via Internet (webinars) and also how online social network are used in distance learning.
Study Design: Descriptive quantitative research. Especially, a survey using questionnaires and interviews for data collection.
Place and Duration of Study: University of Ioannina, one academic year, 2012-2013.
Methodology: A questionnaire was firstly addressed to a small self selected group of undergraduate students at the beginning of the academic year (mid–November) as pre-test. Then the questionnaire was revised and the final version of the questionnaire was addressed to all undergraduate 210 students attending the 3rd year of their undergraduate studies. This questionnaire was delivered at the beginning of spring term. Interviews were taken in spring semester (mid–April) for evaluation of the answers in the questionnaire. Moreover, a revised questionnaire for a postgraduate group students (20 self selected students) from the School of Education was given in mid spring semester.
Results: 18.29% of undergraduates use webinars. 84.28% of them believe that attending seminars via Internet (webinars) may contribute to the enrichment of the educational process and facilitates distance learning. 56.89% of undergraduates prefer to attend conferences and/or seminars with physical presence, since interaction amongst

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participants is greater. 89.56% of undergraduate and 93.47% of postgraduate students use social network for communication and information on learning material and on other educational issues.

Conclusions: Both undergraduate and postgraduate students recognize the advantages of webinars as part of open distance learning and they favor their application to a greater extent in education. The overall use of social network in distance learning, promotes communication and interaction amongst learners. In conclusion, this study revealed, that students use webinars and social network for learning, communication and information exchange for their studies.

1. INTRODUCTION

Nowadays in education, a transition occurs from teacher-centered to student-centered ones [1-4]. The use of new teaching technologies, the Internet and social network has diversified the way of work, communication and learning [5,6].

The constant development of information and communication technologies (ICT) in combination with modern and changing educational needs, is leading to a new era of education and learning [7-10]. Students are properly prepared during their undergraduate studies to respond to current educational challenges [1]. The application of ICT in education takes place at all levels as well as in open distance learning (ODL). Open Distance Learning is defined as the educational process where the student is not in physical proximity to the teacher and the physical educational vector [11,12]. It is an ongoing educational process, which eliminates the disadvantages of conventional teaching and through innovative services covers more and more educational needs. The most important factor that makes it so unique is that it allows learning to be a personal affair. Distance learning is used as an educational procedure as it is flexible in time and space for the learner [13]. Educational institutions offer ODL courses, as they minimize the cost of courses [14,15]. Furthermore, according to [16], distance learning can expand access to education and training for both general populace and businesses since its flexible scheduling structure lessens the effects of the many time-constraints imposed by personal responsibilities and commitments. Additionally, distance learning offers also access to experts in the field and to students from diverse geographical, social, cultural, economic, and experiential backgrounds [17]. Within the ODL classroom, students are able to learn in ways that traditional classrooms would not be able to provide. ODL is able to promote good learning experiences and therefore, allows students to obtain higher satisfaction with their online or offline learning material [18].

Results of research concerning the effectiveness of online learning [19,20] show that students in online learning conditions perform similarly or modestly better than those in conventional or traditional learning environments [21-23]. When distance learning is combined with a physical presence (blended learning), then it optimizes the effectiveness of the educational process [24,25,21].

E-learning as part of ODL improves the quality of learning and facilitates access to information and online services [26,10]. An application of e-learning could be the attendance of conferences and/or seminars via the Internet, (webinars, Web-based seminars). Continuous improvement in the speed of data transmission network and video and audio

transmission facilitates participation in seminars / conferences from distance. Participation in these seminars / conferences can be either in real time with on-line interaction between participants or recorder and used by students anytime they like. In the second case the user can access the material from any place, any time. Webinar creates opportunities for both educators and learners to experience different levels of interaction online and these opportunities are essentially different from other communication approaches such as discussion-board postings and e-mails [27]. Webinars are widely used nowadays in distance learning since they facilitate the communication between instructor and learners. The main advantages of webinars are: (1) Webinars are affordable [28] as user needs only a device with broadband connection (PC/laptop/tablet/smartphone/etc.). (2) Webinars facilitate real-time multimedia demonstrations. (3) Webinars facilitate interaction in all communication levels. Instructors in webinars can lecture, present, interact with the audience and facilitate participant group collaboration in a real-time providing immediate feedback to learners. Finally, (4) webinars provide an environment in which participants can archive seminar content for personal use. These features lead to the increasing use of webinars in the process of distance learning at all educational levels.

For the successful implementation of webinars the course material offered must be attractive to learners (using video, pictures), the duration of the seminars must be not tiring and finally provide incentives for attending seminars. Furthermore, webinars should be offered for use in all available software platforms [29].

According to recent studies [30] a webinar system (Anicam-Live) was implemented at the Cyber University in Taiwan in order to facilitate synchronous communication between the instructor and the students. The results revealed that students are satisfied with the interactions among the instructor and participating students.

With all these tools and programs that technological advancements have offered, communication appears to increase in distance education amongst students and their professors, as well as between students and their classmates [5].Teamwork and cooperation within groups promotes learning, as team members identify and propose solutions to solve problems [31,32]. Learners that have wide social network have good academic performance [33].

Online social network are used by millions of users, which imposed network as part of their lives [34]. Online social network are communication tools for creative learning based on social interaction, discussion, collaboration and shared work. The goal is not necessarily the collaboration, but also the increase of awareness and information on the activities of other group members, through social network [35]. Communication mechanisms are required in collaborative learning activities and the interactions on these activities are important for the learning process [34]. Additionally, other studies [36] indicate that the characteristics of social networking sites can be used for cooperative learning and the construction of student knowledge. The nature of collaborative learning is changing when social network are used in education, according to other references [37]. Social network are web pages that provide users with services to create a public or semi-public profile and network relationships, with existence of a list of other users with common connections where they can navigate to other user connections who are members of the network [38]. Furthermore, was considered that social network is widely used as a communication tool to support knowledge sharing, multiple ideas of students [39]. The internet is playing an increasingly important role not only in students' social life, but also in academic social life [40]. Researchers stated that social network provide a learning context where students could exchange learning information,

cooperative learning activity and discussion with peer in their spare time. The social support gained through social networking use allowed new students to successfully adjust to their academic study [41]. In addition to this finding was found [42] that Twitter use when it was encouraged for academic discussion, had a positive effect on students' grades, engagement and motivation. Other studies [43] found that scholars use the network to (1) share information, resources and media relating to their professional practice, (2) share information about their classroom and their students, (3) request assistance from and offer suggestions to other scholars, (4) engage in social commentary, (5) engage in digital identity and impression management and (6) make connections with others. Facebook can be used as an educational environment [44] with its features of active participation and cooperativeness. Although Facebook is regarded that can be used in the educational process in many ways, there is a strong debate on the use of this network [45,46]. Edmodo (edmodo.com), an educational online social network, helped students in communication and collaboration making it a useful tool for distance learning, according to the opinions of the participants in reference [47]. On the other hand, concerns arise about the adoption of social network and other tools in school community. Privacy issues have recently come up, as Facebook is considered to use collected data to support business interests [48].

This study aims to present the views of university students, in Educational Departments, who are users of social media and ODL about their participation, use and attendance of conferences/ seminars by electronic means (webinars). Moreover this study aims to present the views of undergraduate and postgraduate students concerning the use of online social network in their studies.

2. MATERIALS AND METHODS

In this descriptive research, two groups of students were examined, undergraduates and postgraduates. A group of 194 undergraduate students and another group of 20 postgraduate students, from the School of Education in the University of Ioannina were studied. This research was conducted during the academic year 2012-2013. For the analysis of the data, descriptive statistical analysis was applied, were appropriate. The following list of questions was addressed to students:

1. To what extent they attend conferences/seminars via Internet?
2. How are they informed about webinars?
3. Do they find webinars helpful within educational process in distance learning?
4. Do they use online social network for their studies to facilitate distance learning?

2.1 Data Collection and Analysis

This study took place during the academic year 2012-2013. For data collection, a questionnaire with closed and open questions was used. The questionnaire was tested in mid-November, on a small group of selected undergraduates and postgraduates and some adjustments to questions were made. The questionnaire consisted of two parts one referred to demographic characteristics of the participants and the second part consisted of questions concerning attendance of webinars, online learning (e-learning), different ways of students' briefing about the webinars, the impact of webinars in educational process and the use of online social network.

All participants had formed an opinion on e-learning, asynchronous distance learning platform (Moodle) and potential of synchronous e-learning and webinars during fall semester.

Data collected exported and analyzed using the free statistic software R.

2.2 Sampling and Procedures

The study group was the third year students, within the Department of Early Childhood Education. A pretest on a random sample of 10 undergraduate students was conducted in fall semester and revealed that 90% of students use social network (Facebook). A self-selected group of 20 postgraduate students and 210 undergraduate students, attending the module "Information technology and education" participated in this study.

The questionnaire was fully completed by 194 undergraduate students. The response rate was 92.3%.

Subsequently, 50 undergraduates randomly selected were interviewed. This method of data collection is used in order the students to state their experiences explicitly, without unnecessary interpretation (or categorization) or intervention of the researcher.

Field notes taken after conducting each interview also served as a data source for analysis.

2.3 Validity

For the internal validity of the study, we excluded students who participated in the pretest for elimination of the regression effect. Maturation, history of the participants in the study was controlled. Means, tabulations and z test were used as needed. This study lacks of generalizability as it was applied in a specific group of students, at a given time and place. To strengthen the validity of this study, data was triangulated by using mixed methodologies (questionnaire, interviews) and peer examination on data. However, our intention is to repeat this study to other group of undergraduate students in different Universities.

3. RESULTS AND DISCUSSION

The mean age of undergraduates was 21.45±0.93. The age distribution of undergraduate students showed that most of them (74.72%) belonged to the age group 20-21 years who are technology natives, 22.16% from 22 to 23 years and finally 4.12% 24-26. In this sample, most of them (88.66%) were women and 11.34% were men. So, this study refers mostly to views of females, because in the Educational Departments in Greece, the population that attends consists mainly of females.

Almost all (97.15% of both undergraduate and postgraduate students) said that they had a computer and Internet access at home, due to the fact that PCs and broadband connections are sold in affordable prices. More than half (61.01%), of undergraduate and postgraduate students, made systematic use of the potential offered by ICT in the educational process and they were very familiar with e-learning, as they used the e-learning platform offered by School of Education.

The undergraduate students define as e-learning the procedure performed with the use of ICT (38.57%) the interaction between learners and instructors as in a traditional classroom (0.29%), the asynchronous, or synchronous educational activity under standard, non -formal or informal education (3.19%), the electronic seminars in virtual classroom (2.87%), all of the above (52.95%) and finally none of the above, it is the self-regulatory online learning (2.13%) (Table 1).

Table 1. Opinions of undergraduate students about e-learning definitions

Definition	Percentage
Learning procedure performed with the use of ICT	38.57
The interaction between learners and instructors as in a traditional classroom	0.29
Asynchronous, or synchronous educational activity under standard, non -formal or informal education	3.19
The electronic seminars in virtual classroom	2.87
All of the above	52.95
None of the above. It is the self-regulatory online learning	2.13

Postgraduate students define as e-learning the procedure performed with the use of ICT (49.72%) the interaction between learners and instructors as in a traditional classroom (0.11%), the asynchronous, or synchronous educational activity under standard, non -formal or informal education (2.98%), the electronic seminars in virtual classroom (1.69%), all of the above (43.56%) and finally none of the above, it is the self-regulatory online learning (1.94%) (Table 2).

Table 2. Opinions of postgraduate students about E-learning definitions

Definition	Percentage
Learning procedure performed with the use of ICT	49.72
The interaction between learners and instructors as in a traditional classroom	0.11
Asynchronous, or synchronous educational activity under standard, non -formal or informal education	2.98
The electronic seminars in virtual classroom	1.69
All of the above	43.56
None of the above. It is the self-regulatory online learning	1.94

There is no statistically significant difference in e-learning definition "Learning procedure performed with the use of ICT" between undergraduate and postgraduate students (Z test score 0.93).

Regarding the use of the Internet for attending seminars 18.29% of the undergraduate students said that they were using this feature. Almost all (95.1%) of postgraduate students used this feature. There is statistically significant difference in attending webinars between undergraduate and postgraduate students (Z test score 13.52).

The place where undergraduates attended webinars where the University facilities (32%), home (60%) and other (8%) (Fig. 1).
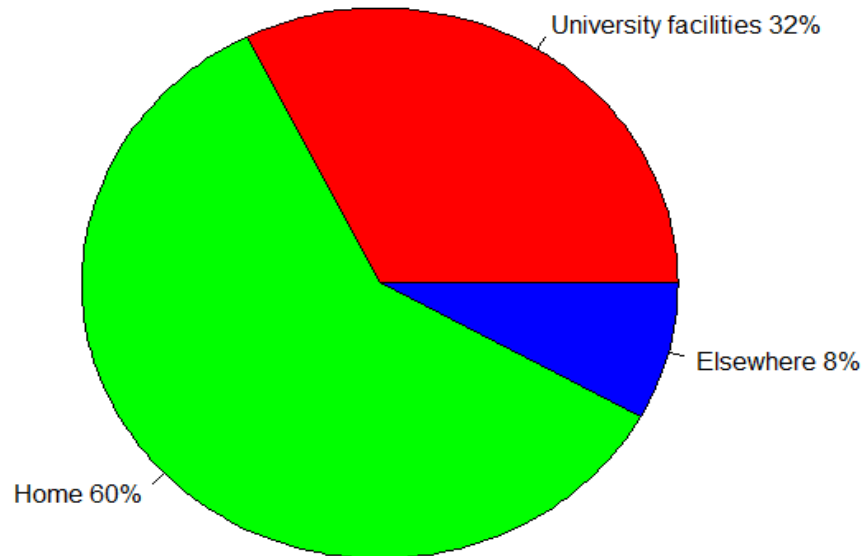
Fig. 1. The place where undergraduate students attend webinars

Most undergraduate and all postgraduate students attend webinars at home. If university labs were well equipped 83.12% of undergraduate students stated that they would prefer to attend webinars in university facilities and not at home. Attending webinars through Internet any time may contribute to the enrichment of the educational process was stated by 84.33% of undergraduates. Many undergraduate students (71.06 %) stated that want to attend webinars in the future but half of them (56.89%) preferred to attend seminars with physical presence, while interaction amongst participants exists. Almost all (89.56%) of the undergraduates said that they used social network for communication and information gathering on educational issues, while 63% said that they were informed for educational issues by email from the providers of the online events. Facebook was the most popular, social networking platform for undergraduate students (96.39% of the respondents had a Facebook account). Other most popular social networking platform was YouTube (88.14%) followed by Twitter (32.47%) LinkdIn (21.13%), Google Plus (14.94%), Tumblr (7.73%), Edmodo (5.67%) and MySpace (5.67%) (Table 3).

The reasons for preferring these social networking platforms were the popularity amongst classmates and the ease of their use. Facebook was statistically significantly more favorable amongst all other social network (Z-test scores are presented in Table 4).

Most undergraduate students (93.02%) were informed about the offered webinars, via social network, while 6.98% were informed through email from the providers of the webinars. Almost all (95%) postgraduate students were informed about webinars via social network. 82.33% of undergraduate students said that they prefer social network for their work because they provide communication and commentary in real time among learners. Respectively 90% of postgraduate students preferred social network for their work.

Table 3. Numbers of undergraduate respondents with accounts in social network platforms

Social Network	Percentage of users
Facebook	96.39
YouTube	88.14
Twitter	32.47
LinkedIn	21.13
Google Plus+	14.94
Tumblr	7.73
Edmodo	5.67
MySpace	5.67

Table 4. Z-test results for most used social network

Social Network	Z-Score	*P*
Facebook – YouTube	3.04	.002
Facebook – Twitter	13.15	.00
Facebook – LinkedIn	15.05	.00
YouTube – Twitter	11.20	.00

Finally, 89% of undergraduates and 95% of postgraduates said that they wanted the Educational departments to join the social network because social network offer access ability from all electronic devices (pc, laptops, tablets, smartphones, mobile phones). All students use frequently all these devices to access social network. The devices used by undergraduate students to access social network are shown on Table 5.

Table 5. Devices used by undergraduate students to access social network

Device	Percentage of use to access social network
PC	98.96
Laptop	58.24
Smartphone	45.87
Mobile phone	44.84
Tablet	27.31
Other	2.06

Comparing pc use and laptop use to access social network pc is more preferable (Z-test score 10.11), comparing pc and smartphone, pc is more preferable (Z-test score 11.99), comparing laptop and smartphone, laptop is more preferable (Z-test score 2.43), comparing laptop and mobile phone, laptop is more preferable (Z-test score 2.64) and finally comparing smartphone and tablet, smartphone is more preferable (Z-test score 3.79).

This result was excepted as very few undergraduates and postgraduates have laptops or mobile devices with broadband access.

One third of postgraduate and half of the undergraduate students prefer face- to- face teaching and attending conferences / seminars with physical presence. Postgraduate students intend to use webinars in greater degree as they work mainly remotely and

webinars facilitate the educational process in open distance learning. More than six out of ten undergraduate students say that they intend to use Internet monitoring techniques for educational materials.

The extended provision of webinars from educational institutions will lead to the increased usage by the postgraduate and undergraduate students. More and more students in the near future will request to have access to the educational material via webinars. Regarding social network, the use of the tools offered by the Internet and especially through online social network is developing communication and cooperation between students and instructors. Moreover the appropriate use of social network within the academic community may lead to greater student awareness and participation in educational process.

4. CONCLUSION

All students (undergraduates and postgraduates) realize the potential of webinars. In conclusion, postgraduate students use webinars and social network in greater extend than undergraduate ones. Taking this into account, postgraduate students can form groups with undergraduate students, in order to instruct them and help them put into practice the use of webinars and social network in educational process.

As it was found in this study, social network were used to increase students' awareness, communication and information on the actions of other class members. Moreover, postgraduate students use mainly the social network for communication and information for their studies. Correspondingly, in a study conducted in Greece, postgraduate students used the social network Edmodo during their research and stated that social network facilitated communication and information sharing [47]. On the other hand, undergraduate students used social network for communication with classmates. A study that took place in Australia revealed that the common reasons for students to use social network were the social activities (chatting with classmates, keeping up with friends' activities) [49]. The use of social network for educational purpose may assist engage students and mobilize faculty into a more active and participatory role. Social network Twitter was used as an educational tool with similar results [42]. In another study, conducted in USA, students used the social networking website that was created for the specific study, provided evidence for their social presence and consequently they increased their motivation. They stated that they were more engaged in the discussions, and more comfortable interacting with each other on the social network [50], even though students had to use the specific social network and not their favorite one. Social network Facebook helped students to keep in touch with their classmates, but social networking sites are rarely used for academic purposes, as was found in a study conducted in USA [51]. The use of social network in academic environment may become a powerful cognitive tool and likewise social networking applications if adapted for academic pursuits and career goals could be really useful.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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