EMPOWERING THE EDUCATIONAL PROCEDURE THROUGH INTERACTIVE EDUCATIONAL ACTIVITIES IN DISTANCE HIGHER EDUCATION

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Abstract

As the sole University in Greece that provides exclusively distance education in both undergraduate and postgraduate level, the Hellenic Open University (HOU) has set out a new strategy in the formation of its postgraduate programs, launching six new programs in the autumn of 2016, aiming to improve distance education in Greece. The main goal was to introduce a series of innovations in its curriculums, starting with these six programs, in order to improve the courses' quality and the students' distance learning experience. Towards this, an upgraded educational platform was used which consists a community of knowledge where students can interact and engage with the educational material. Based on this, in each of the six curriculums various digital and interactive educational activities were designed for the students, either close-ended or open-ended, which they can complete exclusively through the digital platform. The aim is to facilitate students to assimilate the educational material, develop their creative and critical thinking, exchange their views and experiences, in order to avoid the feeling of social isolation as usually observed in distance learning [1], and receive tutor's feedback about their responses helping them to engage deeper with the educational material [2]. In our research we explore students' views about their experience of dealing with these interactive educational activities and how the activities affected their engagement with the educational material. Therefore, a questionnaire was provided to the students of the six new programs where they could describe their experience and note their views about the improvements should be done. In this paper, the qualitative data of the participants' (N=1026) answers are presented, from the first semester of the six new programs. The results describe students' views as well as their suggestions for future improvements and highlight the positive effect that the interactive educational activities had to students' learning experience.

Keywords: distance education, interactive educational activities, students' learning experience, higher education.

1 INTRODUCTION

The Hellenic Open University (HOU) is one of the greatest Universities in Greece and the sole university that provides exclusively distance education in undergraduate and postgraduate level. Aiming to respond to the contemporary socio-economic circumstances, the HOU implements a strategy of upgrading its programs and of launching new programs [3]. The vision is to combine its technical infrastructure and its experience in distance education, providing programs of contemporary scientific fields, through which students will develop strong communities of knowledge and exchanging ideas and experiences [4]. This effort began in the autumn of 2016, launching six new programs, where innovative ways of student-educational material, student-tutor and student-student interaction introduced. These programs include a series of digital and interactive educational activities, which facilitate students to assimilate the educational material and to participate in a learning community with their peers, replacing the traditional educational activities that are included in printed educational material of distance learning. The digital and interactive educational activities consist of close-ended and open-ended online tasks, which demand the use of forums and the usage of online tools of the learning platform, activities with audiovisual educational material and wikis, while in all activities tutor guides and gives feedback to students. The digital interactive educational activities are provided by the Moodle-based platform of HOU.

The next sections of the paper presents the theoretical background of this study, the method followed for the analysis of the data collected and the sample of the research, the findings and the discussion about the results.

2   BACKGROUND

In a distance education program, during the academic semester students have the opportunity to interact with the educational material, less with their tutor and even less with their peers. Therefore, a common feeling observed is the sense of isolation due to the absence of face-to-face communication and the traditional structure of a classroom [5]. A good practice of reversing this sense is to design an environment of communication between all stakeholders, providing better academic support to students [6]. In such an environment, students can interact with their peers and their tutors, feeling that they belong to a learning community, where they are allowed to express their views freely. Towards this, a well-designed collaborative community can enhance students to achieve learning outcomes more effectively [7]. Alongside, the students in distance education need support in all learning activities they do. Students expect immediate feedback [8], feeling that they get support during their study, and a guidance from the tutor through learning activities [9].

Towards this direction, the HOU launched six new programs, where the students have to complete a series of digital interactive learning activities, instead of the traditional learning activities in printed educational material of distance learning. These activities can be accomplished exclusively through the learning platform, where the students are guided to use the online collaborative tools, providing them the opportunity to interact with their peers [10]. In addition, multiple digital interactive learning activities have been designed for students' individual study, in which they get the appropriate feedback from the platform or the tutor, offering a flexible learning environment, which appeals to diverse learning styles depending on each student needs [10].

Since this is the first time of this endeavor for the HOU, it is crucial to identify student's views about their experience of dealing with these activities and their proposals in order to improve their structure.

3   METHODOLOGY

3.1   Research Design

For this study purposes, students who attended modules of the first semester of their studies were asked to optionally answer a questionnaire of close-ended and open-ended questions and express their views about their experience. For identifying the outcomes of this procedure, the method of thematic analysis was used, as the most usual and useful method in capturing complex concepts which derived from textual data [11]. This method systematically contributes to identify and organize "themes" emerged from a dataset and to highlight the meaning of reported collective experiences [12]. Applying this method, the following six steps [12] followed. The first step of the method is the familiarity of data, examining separately each question. Subsequently, examining each noted comment one-by-one, comments were coded using the software Nvivo (version 10). For the next step, for each question common themes and their categories were developed, based on the students' comments. Then, the themes and categories were reviewed in order to conclude to their final form and names were given to each theme and category. Finally, the report of presenting the results was developed. During the analysis, the members of the research team made a cross check of the themes and categories in the thirty percent of the data.

3.2   Sample

The sample of the research consists of students (N=1026) from the six new programs of HOU, who attended the first semester of their studies for the academic year 2016-17. These programs belong to Humanities and Social Sciences Schools of HOU. The percentage of 83.04% consists of women and the rest 16.96% of men. In addition, most of the students answered (45.13%) was at the age group of 23-29, the 26.90% of them was at the age group of 30-39, the 20.08% at the age group of 40-49 and the rest 7.89% at the age group of 50+. Finally, the 71.15% of the students answered stated that they did not have any experience in attending a distance learning program.

4   RESULTS

Answering the questionnaire given, students could state their views about their experience of dealing with digital interactive educational activities and refer to potential improvements that they propose.

4.1 Students' experience

Initially, referring to students' experience, five themes were emerged from the coding of their comments. The Table 1 presents the total number of references coded, as they were categorized in the five themes. The results present the students' references about the positive contribution of activities to the learning procedure, dominated. More analytically, the references for each theme are showed below. Note that educational activities are showed as "EA".

Table 1. *Emerging themes and number of references.*

Themes	No of references	Percentage
Level of satisfaction for EA	591	29,83%
Difficulty level of EA	162	8,18%
Organization of EA	332	16,76%
Contribution of EA	799	40,33%
Specific EA	97	4,90%
Total	1981	100%

In the theme *Level of satisfaction for EA*, it is observed that to positive and negative comments take the same percentage of references, as Table 2 shows. The category *positive*, mainly consists of comments from students who find interesting their experience of dealing with digital interactive educational activities for their study ("*Very good and interesting experience*"), and some of them noted that it was an unprecedented experience. The category *negative*, mainly consists of comments from students who noted that there were too many activities ("*I believe that they are too many in a weekly basis*"), that the activities demanded too much time for their completion or that the activities were generally demanding in terms of workload. In many cases, students refer to the limited time they have for their study, due to professional obligations. Finally, there were just two comments expressing a neutral experience.

Table 2. *References for theme Level of satisfaction for EA.*

Categories	No of references	Percentage
Positive	282	47.72%
Negative	307	51.95%
Neutral	2	0.34%
Total	591	100%

In the theme *Difficulty level of EA*, Table 3 presents that most of the references state that students faced difficulties during the completion of the educational activities. In the category *difficult*, most of the references refer to difficulties due to psychological factors, such as pressure, exhaustion and anxiety ("*Sometimes it was a stressful process in conjunction with the everyday life's obligation*"), while many references refer to general difficulties. Additionally, the category *easy* consists of comments about no demanding or very simple activities and the category *neutral* includes references about classified or partial difficulty.

Table 3. *References for theme Difficulty level of EA.*

Categories	No of references	Percentage
Neutral	20	12.35%
Easy	28	17.28%
Difficult	114	70.37%
Total	162	100%

Regarding the theme *Organization of EA*, Table 4 below shows that the percentage of negative comments is a little greater than the positive comments. Negative references highlight mainly the inappropriate deadlines set ("*The deadlines were not so flexible*"), the unclear descriptions of the activities, the inadequate guidance for completing the activities and individual negative comments about specific activities. On the other hand, in category *positive*, students mainly highlight the diversity of activities as very positive practice ("*It was important for me to deal with different type of activities*"), the good structure of the activities, their clear description, the useful feedback and the built of a digital learning community.

Table 4. *References for theme Organization of EA.*

Categories	No of references	Percentage
Positive	127	38.25%
Negative	205	61.75%
Total	332	100%

Most of the references coded about the students' experience of dealing with digital interactive educational activities refer to the theme *Contribution of EA*, highlighting the contribution of the educational activities to the learning procedure. As Table 5 presents, the overwhelming majority of the references noted that the activities had a positive impact. Positive comments mainly highlight that the activities enhance the assimilation of educational material ("*Activities helped me to understand better the educational material*"), they are useful and beneficial, they contribute to the development of skills and that they help students to organize their study. Fewer comments stated that activities are associated with the educational material analyzing it deeper, they broaden existing knowledge, they motivate students to study and they offer practice. Finally, the few negative comments refer that activities are wrongly linked with the educational material and they are unhelpful.

Table 5. *References for theme Contribution of EA.*

Categories	No of references	Percentage
Positive	776	97.12%
Negative	23	2.88%
Total	799	100%

In the last emerged theme *Specific EA*, students referred to individual kind of educational activities they deal with during the semester. Table 6 below shows the number and the percentage of positive and negative references about each different kind of activities. The results show that students had a positive experience with the majority of activities, while in some of them they located some negative issues. This emerges from their proposals for clearer descriptions, as the next section presents.

Table 6. *References for theme Specific EA.*

Categories	No of references (N=97) and percentage			
	Positive	Percentage	Negative	Percentage
Presentation	4	80.00%	1	20.00%
Audiovisual material	6	100.00%	0	0%
Forums	7	53.85%	6	46.15%
Closed-ended	25	75.76%	8	24.24%
Open-ended	15	65.22%	8	34.78%
Semester assignment	7	41.18%	10	58.82%

4.2 Students' proposals

Referring to students' proposals about the improvement of the digital interactive educational activities, the references coded divided into six themes that they emerged, as Table 7 below presents. Most of the references propose an improvement to the organization of the activities. This theme mainly includes the proposals for activities' description improvement ("*Clear description of what the activity demands*"), better guidance for completing the activities and more appropriate provision of feedback and indicative answers. Fewer references propose a review about the demanded workload of the activities and propose to avoid the simultaneous coexistence of many activities. In the theme *Number of EA*, almost all the references propose the decrease of the number of activities. The theme *Preferred EA*, consists of references which note that the activities of assimilation could be fewer, but on the other hand, the close-ended and the creative activities have to be more. In addition, enough references propose the increase of activities that include audiovisual educational material, activities that cultivate critical thinking and collaborative activities. In the theme of *Deadlines of EA*, students noted that deadlines have to be more flexible ("*It would be better if activities had more flexible deadlines until the final submission*") or that would be better if there were not deadlines at all. The theme of *Feedback in EA* presents that the most of the comments propose the provision of feedback to the whole of activities including the optional activities ("*Feedback in every educational activity*"), the enrichment of feedback and more immediate comments from the tutor. Finally, in the theme of *Grade of EA*, very few students propose a greater percentage of the activities grade in the final grade of the module they attend.

Table 7. *References for Proposed improvements in EA.*

Themes	No of references	Percentage
Number of EA	221	25.70%
Preferred EA	170	19.77%
Feedback in EA	28	3.26%
Organization of EA	354	41.16%
Grade of EA	14	1.63%
Deadlines of EA	73	8.49%
Total	860	100%

5 CONCLUSIONS

Identifying the views of the students who attended the first semester of HOU's new six programs about their engagement in digital interactive educational activities, the study highlights the positive influence that the activities had to students. Most of the comments of the students refer to the crucial contribution of the activities to the learning procedure. Students state that the digital interactive educational activities help them to develop their skills, such as critical thinking, to interact with their peers and exchange ideas, but on the other hand, they propose to review the workload and the number of the activities. An issue that emerges from the results of the research is also that the set of deadlines could be more flexible, allowing the students to work more in an activity. In addition, students highlight that the feedback they have, either by the tutor or by the automated answers of the learning platform, plays a significant role in their study. Furthermore, a crucial part of the activities, as emerged from the results of the study, is their description. Students noted that the activities have to include well-described demands and clear direction about the demanding answers. Towards this, they highlight that indicative answers and paradigms are a good practice. Finally, it is observed that students are positive about the diversity of digital interactive educational activities. They state their preference for short activities with immediate feedback, while they pointed out that they prefer open-ended creative activities which contribute to the development of skills, particularly activities which demand collaboration with their peers.

The goal of this study was to identify the effectiveness of the digital interactive educational activities to the students' study, based on their views about the experience they had. The results emerged constitute a crucial feedback for the endeavour that take place in the new programs of HOU and the more appropriate guide for improving their structure. Based on students' comments, the HOU will continue to improve its programs aiming to respond to the contemporary student's learning demands.

REFERENCES

[1]   D. P. Diaz, and R. B. Cartnal, "Students' learning styles in two classes: Online distance learning and equivalent on-campus" *College teaching*, vol. 47, no. 4, pp. 130-135, 1999.

[2]   R. Higgins, P. Hartley and A. Skelton, "The conscientious consumer: Reconsidering the role of assessment feedback in student learning" *Studies in higher education*, vol. 27, no. 1, pp. 53-64, 2002.

[3]   R. Kalantzi, D. Sideris, N. Spyropoulou, and G. Androulakis "Changing the Gear: Adopting Inter-institutional Collaborative Course Development as the Policy for Distance Higher Education in Greece". In Proc. of the Online, Open and Flexible Higher Education Conference, EADTU, 61–68, 2016.

[4]   N. Spyropoulou, R. Kalantzi, D. Sideris, and G. Androulakis, "Newcomer Students' Perspectives on Online Tutor-Student Sessions in Distance Higher Education". In Proc. The Future of Education. libreriauniversitaria. it Edizioni, pp. 163 - 168, 2017.

[5]   Z. L. Berge, and L. Muilenburg, "Obstacles faced at various stages of capability regarding distance education in institutions of higher education" *TechTrends*, vol. 45, no. 4, pp. 40-45, 2001.

[6]   A. P. Rovai, "Building sense of community at a distance. International Review of Research" *Open and Distributed Learning*, vol. 3, no. 1, pp. 1-9, 2002.

[7]   O. T. Lenning, and L. H. Ebbers, "The Powerful Potential of Learning Communities: Improving Education for the Future" *ASHE-ERIC Higher Education Report*, vol. 26, no. 6, 1999.

[8]   M. G.Moore, and G. Kearsley, *Distance education: A systems view of online learning*. Wadsworth: Cengage Learning, 2011.

[9]   R. Kop, "Web 2.0 technologies: Disruptive or liberating for adult education?" *Gateway to the Future of Learning*, vol. 37, pp. 222-227, 2008.

[10]   M. P. Menchaca, and T. A. Bekele, "Learner and instructor identified success factors in distance education" *Distance education*, vol. 29, no. 3, 231-252, 2008.

[11]   Corbin, J. and Strauss A, *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage: Thousand Oaks, 2008.

[12]   V.Braun, and V. Clarke, "Using thematic analysis in psychology" *Qualitative research in psychology*, vol. 3, no. 2, pp. 77-101, 2006.