Exploring faculty learning needs towards their teaching development in two Greek universities

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Abstract

In this paper we present the results of the first study conducted in Greece aiming to identify faculty learning needs associated with the development of their teaching practices. Following the foundation of the Hellenic University Pedagogy Network, Teaching and Learning in Higher Education started to emerge as a new research field in Greece. Two peripheral Greek Universities, namely the Democritus University of Thrace and the University of Patras established Centres for Teaching and Learning, the very first structures in Greece for the promotion of teaching practices for faculty. The study presented hereafter was conducted in the universities at the beginning of the academic year 2020-2021 and was funded by European Union (National Strategic Reference Framework). The main elements of the study include the investigation of certain dimensions of the role of academics and the registration and analysis of their educational needs towards the amelioration of their teaching practices. More specifically, issues explored include teaching methods and techniques used by academics in their everyday practice, the degree of integration of new technologies in their teaching, the possible needs for differentiation of their practices and the degree of responding to their students' needs. In this paper, we will present the results and conclusions for some of the mentioned elements mainly those related to the preferred topics of training by the participants, their views about teaching and professional development and the elements they believe that constitute a "good" teaching.

Keywords: Higher Education, University Pedagogy, faculty professional development, teaching development, learning needs

1. Introduction

Academia consists of a highly demanding profession, due to fulfill multiple roles, such as researching, teaching and administrative roles. Nowadays they owe to respond to multiple challenges on higher education landscape, such as massification of higher education, increasingly diverse student body, students' mobility (European Commission, 2019),

knowledge society, marketization of higher education (King & Bunce, 2020), preparation for life as active citizens in a democratic society and personal development (Bergan, 2006), calls for holistic development of students (Quinlan, 2011), Information and Communication Technology (ICT) (Cameron & Woods, 2016) and recently the extended use of online teaching and distance learning due to COVID-19 pandemic (UNESCO, 2020). Therefore, faculty teaching development is a priority in individual and institutional level.

1.1 Faculty teaching development

Faculty development is essential to prepare faculty to become effective teachers to meet the challenges and is achieved through organized educational programs or through personal effort (Francis, 1975), such as participation in learning communities, reflection, self-directed development based on evidence-based practice (Kreber & Cranton, 2000; Trigwell & Prosser, 1996), etc., aiming to co-meet the needs of academics, students and universities. Faculty Development Programs have been shown to foster the teaching, assessing, research, leadership, and administrative skills (Guraya & Chen, 2019), with teaching development being their central focus (Sheets & Schwenk, 1990; Wilkerson & Irby, 1998; McLean, Cilliers & Van Wyk, 2008). According to Hoidn (2016) academics educational beliefs affect how they approach their teaching and therefore how students experience their learning. Faculty understand their teaching development as an increased comfort with teaching, expanded knowledge and skills, both for content and teaching strategies, and increased focus on students' learning and development (Åkerlind, 2007).

Purpose of faculty teaching development is to help create learning environments that enhance educational quality (Pleschová et al., 2012). Academia should turn from boring and monotonous lectures to "scientific teaching" (Handelsman et al., 2004) aiming to promote critical thinking and research ability, problem-solving skills and scientific documentation (Kedraka & Rotidi, 2017). Promoting critical thinking requires a learning environment where students are exposed to a variety of views and perspectives and have opportunities to discuss, while academics keep the role of facilitator in the process of coming to their own understanding of knowledge (Schendel et al., 2019). Faculty report lack of time, motivation and educational programs as barriers to their desirable pedagogical change (Brownell & Tanner, 2012). Lack of teaching development programs is considered as main cause of remaining old teaching approaches until nowadays and of not implementing student-centred and active learning to higher education (Pleschová et al., 2012; Gibbs and Coffey, 2004). Although progress has been made in the professional development of faculty, academics do not participate frequently in educational training (Fanghanel et al., 2015). Guraya and Chen's meta-analysis (2019) resulted that the educational framework of faculty development programs has to precisely address the faculty needs and expertise.

1.2 University Pedagogy in Greece

In Greece, University Pedagogy started emerging as a research field during the last decade, following the foundation of the Hellenic Network of University Pedagogy and the establishment of Centres for Teaching and Learning in two peripheral Greek universities, Democritus University of Thrace and University of Patras. In 2019 the Hellenic Network of University Pedagogy organized the 1st Panhellenic Conference of University Pedagogy: "Teaching and Learning in Higher Education", which took place in Alexandroupolis on April

12-13, 2019 (Kedraka, 2020). Continuous, internal and external, evaluation of Universities and academics in Greece is defined by law (Law 3374/2005), aiming to ensure quality of research and teaching, yet compulsory educational adequacy of academia is not provided.

2. Methods, materials, and participants

In the current study the quantitative part of a broader research project is presented. Cluster sampling was followed (Bryman, 2016). Empirical research took place between September and October 2020. Faculty from two regional universities, which treat similar scientific disciplines and present similar structure: the Democritus University of Thrace (DUTH) and the University of Patras (UoP) participated in the research. DUTH is located in the Geographical Department of Thrace and consists of eight Schools that include a total of twenty Departments and serve 533 faculty of which 388 men and 145 women. UoP is located in Western Greece, with a central campus near the city of Patras, has seven Schools and thirty-five Departments and serves 725 (541 men and 184 women) faculty. The survey was answered by 301 university faculty, however, the fully completed questionnaires are 260 out of a total of 1.258 faculty of the two institutions (20,67%), which finally consisted the sample of the survey (n=260). Participants were asked to answer a questionnaire that included closed-ended and open-ended questions (Bryman, 2016). The questionnaire was developed by the authors of this article and all questions were based on existing literature and the results of two focus groups with university professors of both the participating universities.

3. Results

Demographics of the sample are given in Tab. 1. From a total of 260 faculty who participated in study, 158 came from the DUTH and 102 from the UoP, while 170 were men and 90 women. Overall, male participants (65.4%) were almost twice as many as women, although the total number of male faculty is almost three times that of female faculty. The vast majority of the participants are over 45 years old (85.8%), while only one faculty was under 35 years old. Also, most of them are in the rank of Professor or Associate Professor (70.7%), while only 16.1% have less than 10 years of service.

Table 1: Sample's demographics

Demographic Data	Groups	N	(%)
Gender	Male	170	65.4
	Female	90	34.6
Age	<=34	1	0.4
	35-44	36	13.8
	45-54	117	45
	>=55	106	40.8
Rank	Lecturer	4	1.6
	Assistant Professor	72	27.7
	Associate Professor	96	36.9
	Professor	88	33.8
Years of service	1-5	11	4.2
	6-10	31	11.9
	11-15	50	19.2
	16-20	69	26.6
	>20	99	38.1

Participants were asked whether they consider their teaching role and work as important, with the vast majority (86.4%) considering it to be very important (see Tab.2). Regarding their willingness to change the way they teach in order to be more effective in their teaching, the vast majority (89.8%) appear willing to do so, while only two participants are completely negative (see Tab. 2). From the data presented in Table 2 it is observed that a large percentage (63.1%) of the faculty want more or less to attend an educational program, in order to improve their pedagogical and teaching skills.

Table 2: Faculty views on their teaching role and development

	Not at all	A little	Quite	Much	Total
Importance of teaching role and work	1 (0.4%)	1 (0.4%)	33 (12.8%)	223 (86.4%)	258
Are you willing to modify the way you teach to be more effective in your teaching?	2 (0.8%)	24 (9.4%)	138 (54.1%)	91 (35.7%)	255
Would you like to attend some training in order to improve your pedagogical and / or teaching skills?	21 (8.1%)	74 (28.8%)	103 (40.1%)	59 (23.0%)	257

They were then asked to rate several elements on which a "good" teaching is based on the literature and rated each of them on a scale of 1 to 10, depending on how important they considered each one of them. A total of 11 elements were scored and in Table 3 below, the mean and the standard deviation of each are presented.

Table 3: Elements on which a "good teaching" is based

Elements	Mean	SD
a. Training in methods of didactic methodology	7.60	2.091
b. Teaching experience	8.41	1.671
c. Excellent knowledge of the discipline	9.27	1.073
d. Collaboration with colleagues	6.53	2.281
e. Use of new technological means and applications	7.53	2.023
f. Good communication with students	9.16	1.097
g. In the gift of teachers	8.13	2.086
h. Proven, well-known methods, learned from your teachers	6.02	2.260
i. Adoption of 'good practices' that you encountered during your own educational journey	8.29	1.756
j. Knowledge that you acquired yourself about teaching methods	7.70	2.077
k. Good preparation of the teacher before each lecture / laboratory / clinic	9.43	1.051

From the results, it seems that the main elements on which a "good teaching" is based are the correct preparation of the teacher (M=9.43 SD=1.051) in combination with the excellent knowledge of the discipline (M=9.27 SD=1.073) and good communication with students (M=9.16 SD=1.097). It should also be noted that both the experience (M=8.41 SD=1.671) and the gift (M=8.13 SD=2.086) of the teacher are also considered important. Instead, less important seems to be the cooperation with colleagues (M=6.53 SD=2.281) and the methods they have learned from their teachers (M=6.02 SD=2.260).

Last question presented in this paper was asking academics to choose 3 of a list of 10 topics on which they would be interested in training as their 1st, 2nd and 3rd choice (see Tab.4).

Table 4: Preferences of topics for training.

Topic	1st Choice	2nd Choice	3rd Choice	Total

Theoretical approaches to learning and teaching	25	10	18	53
Utilization of new technologies	61	10	12	83
Pedagogical issues in distance education	31	29	19	79
Management of behavioral and communication problems	14	17	13	44
Modern e-learning software	27	39	15	81
Active learning techniques	26	39	13	78
Development of innovative and critical thinking skills in students	38	37	36	111
Techniques and ways of evaluation and feedback of students	5	21	32	58
Characteristics and learning needs of students	2	20	20	42
Movement, body language, orthophony	11	10	19	40
Total	**240**	**232**	**197**	

From the results, it seems that the main topics on which they would be interested in training are the development of innovative and critical thinking skills in students (Total=111, 1st choice=38), utilization of new technologies (Total=83, 1st choice=61), modern e-learning software (Total=81, 1st choice=27), pedagogical issues in distance education (Total=79, 1st choice=31), active learning techniques (Total=78, 1st choice=26), techniques and ways of evaluation and feedback of students (Total=58, 1st choice=5) and theoretical approaches to learning and teaching (Total=53, 1st choice=25).

4. Discussion

Under-representation of women in academia, a persistent international problem (Mifsud 2019; European Commission 2016; UNESCO 2012), is reflected at the sample of this study. Participants age distribution follows a normal distribution curve. Analyzing participants' demographics reveals two interesting findings: older faculty and those of higher levels (184 Professors and Associate Professors while the Assistant Professors and Lecturers were 76) participated to a greater extend in this study, despite their limited time until retirement and their long teaching experience in universities (168 of them with over 15 years).

Almost all the participants (except two persons who answered Not at all and A little, respectively) consider their teaching work at the university important, giving the answer "Much" on the four-level scale at 86.4% of the answers. Kreber (2006, 2007) argues that teachers' perceptions of teaching and learning, as well as their self-perception and self-efficacy influence their teaching work and furthermore, their teaching identity formation. However, it is very interesting that the majority of participants in the present study (specifically 229 out of 260) are open and willing to modify the way they teach, in order to achieve better results with their teaching. In fact, they clearly state that they would be willing to participate in a type of education in order to achieve it (162 out of 260), despite the barriers mentioned previously in the literature review (Brownell & Tanner, 2012). Participation in educational development programs is related to improvement of teaching skills and students' learning outcomes (Gibbs & Coffey, 2004).

Good preparation, knowledge of the discipline and communication with students are considered important elements of a "good teaching". Deep knowledge of the discipline is self-evidently very important, especially today when the fastest developments in all scientific fields are very fast and require constant updating of knowledge and methods, while preparation in the planning

of any educational action is considered a cornerstone of any teaching (Hofstetter & Schneuwly, 2005). Communication with students is evaluated as an important element of quality teaching in studies (Pleschová et al., 2012) and the Teaching Criteria and Standards in Australia (Chalmers et al., 2014).

As a second group of elements they declare the experience, the good practices but also the charisma of teaching, while the training in methods of teaching methodology and the collaboration with colleagues, do not seem to convince the faculty that they can lead to a good teaching result. However, the ability of the modern university teacher cannot be based only on his 'innate' talent but on training, in the context of a university culture that, once developed, incorporates pedagogical and didactic learning approaches suitable for students and based on active learning (Kedraka, 2016).

An unexpected finding, given that the survey was conducted in September 2020, where the Covid-19 pandemic had forced universities to teach online, is that faculty do not seem to attach much importance to good knowledge of technological means. The upgraded role of the trainer is an important parameter for the success of distance learning courses, while technology plays a catalytic role in the educational process during online training. Online education demands for a new role for the tutor -a distinct one from the well-known one of conventional education. A variety of skills is needed not only on the technical level (e.g., tools, platforms, software) but also on the pedagogical, communicative, counselling, and inspirational aspect of teaching. Therefore, academics, must reconsider their ability to successfully run their courses, taking into account the multiple dimensions of their performance as tutors in distance learning of nowadays (Siemens, Gasevic & Dawson, 2015).

Participants' major interest in training seems to be on the topics of utilization of new technologies, modern e-learning software and pedagogical issues in distance education. This finding is in contrary with the poor importance they attached to good knowledge of technological means in previous question (M=7.53 SD=2.023) and this difference could be understood through a social and health perspective. Although recent decades show steady growth in online courses and programs providing by institutions (Brinkley-Etzkorn, 2018), academics often resisted to enroll on that, due to their fears of the unknown, loss, and failure (Mitchell et al., 2015, as cited in Cutri & Mena, 2020).The Covid-19 pandemic thrust academia into online teaching within a matter of weeks (Arum & Stevens 2020; Gólbahar & Adnan 2020, as cited in Cutri, Mena & Whiting, 2020), consisting a natural opportunity for them to self-identify weaknesses in skills important to online teaching (Rhode, Richter & Miller, 2017) and assessing their own learning needs, a requirement for planning effective development programs (Mohr & Shelton, 2017). It is also remarkable that between those three choices, training in distance education pedagogy noted the lowest score. Whilst professional development opportunities for online education often emphasized on technological training (Moskal, Thompson & Futch, 2015, as cited in Pierce-Friedman & Wellner, 2020), the new reality reveals the necessity to train also on effective online pedagogical practices and their application in the online environment.

Their willing to be trained according to achieve difficult teaching goals, such as the development of innovative and critical thinking skills in students is very promising. Critical thinking is considered crucial for participation in the global 'knowledge economy' as reflexive and active citizens and is frequently cited as one of the most important outcomes of a university education worldwide. Yet, employers often decry a marked lack of critical thinking skills in

university graduates(Schendel et al.,2019), while studies suggest that most undergraduates make only minimal gains in critical thinking and analytical skills during their time in college (Arum & Roksa, 2011; Pascarella et al., 2011, as cited in Styers, Van Zandt & Hayden, 2018). Fostering critical thinking has been a universal goal of faculty as there is a well-defined association between critical thinking and academic success (Reale, et al., 2018). Furthermore, faculty can provide critical thinking skills by encouraging students to express their own ideas using logical argument to convince others (Hoodbhoy, 2009; Paul & Binker, 1990, as cited in Nauman, 2017). Therefore, communication is also a crucial element on providing students' critical thinking. Yet, interest in training on communication seems to be limited (Total=44, 1st choice=14) if compared to its identification as important element for "good" teaching from participants in previous question (M=9.16 SD=1.097).

Frequent and effective communication is also required in the application of active learning techniques, which are crucial tools for the successful transition to the student-centered model. Their willing to be trained in their application not only expresses the belief that it is of great pedagogical importance, but also testifies to the lack of relevant experiences by themselves as students. Another key element is the characteristics and educational needs of students, yet majority do not choose to be trained in. These two components are in fact key elements for faculty good preparation, which was previously rated as the most important element of good teaching. In a Greek case study of academics from the Ionian University (Rotidi, Kedraka, Frementiti & Kaltsidis, 2020) the majority of the sample also recognized the need to provide teaching training at faculty and suggested that their teaching development should include training in the development of communication skills and the utilization of new technologies.

5. Conclusions

In this paper, results of the first large-scale research to investigate faculty views on their teaching role and their educational needs are presented. Even though the research was conducted on a sample of faculty of only 2 universities out of 25 in the country, findings are reasonably expected to reflect the situation in all Greek universities, since they all present similar structural and functional characteristics. Given that higher education systems internationally have contextual characteristics, which arise from the way they develop, but also from the socioeconomic environment of each country, we consider the results of this research to be useful as they reflect the situation in Greek universities.

We consider very important the finding that less than 1% of academics attach little importance to the teaching work, therefore for academics in Greek universities the teaching part of their work is a key element of their role. However, as it appears from the consideration of the other findings, for faculty in Greek universities, as is also the case internationally, the margins for upgrading their teaching practices are rather large. As we can conclude from the findings presented and analyzed, "good teaching" is considered a matter of excellent knowledge and preparation yet training in teaching methods lags even behind the gift of teachers, as an element that will determine a good teaching. This is expected, since today's academics educational experiences, which strongly affect their teaching practices, followed mainly the dominant teacher-centered model. However, the fact that the participants in the research attach great importance to their teaching work, we believe that it is reflected in their predisposition to possible changes in their teaching practices. Participants are very willing, 9 out of 10, to modify

and upgrade the way they teach, while 6 out of 10 are willing to attend training to do so. Faculty learning needs reflect not only their personal needs but also their willing and readiness to adapt to social changes, such as an emergency as Covid-19 or a contemporary pedagogical shift, aiming to provide qualitative learning and holistic growth of students.

We consider that the present research highlighted the particularly positive predispositions of faculty to upgrade their teaching practices and therefore the need for the operation of structures, the development of initiatives based on faculty specific needs and the provision of programs for the enhancement of teaching in the Greek Higher Education system.

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