

Teaching in Tertiary Education - A reflective and experiential approach to University Pedagogy

Petros Gougoulakis¹, Katerina Kedraka², Andreas Oikonomou³, Panagiotis
Anastasiades⁴

University of Stockholm, University of Thrace, ASPAITE, University of Crete

Abstract

This paper presents the round-table discussions on the theme of “University Pedagogy: Thoughts, Proposals, Reflections,” at the 2nd International Experiential Conference on Applied Teaching: “Teaching Trends and Challenges in Contemporary Learning Environments”. In order to achieve the active and experiential engagement of all participants, a process inspired by the Science Café movement has been applied. Participants were invited to send in short comments and questions regarding the issue of University Pedagogy/Teaching and learning in Higher Education. These comments were collected, categorized and discussed immediately after the predetermined speeches, which are presented extensively herein with the following titles: “University Pedagogy: Trends and perspectives in Greece and internationally”, “University Pedagogy in Practice: An Epistemological and Didactical Approach” and “University Pedagogy in Greece: findings of empirical research”. The participants then participated in an open discussion based on the questions they had asked before and also after the prepared lectures. The review of all the contributions during the discussion, and of the proposals submitted, concludes that University Pedagogy can be a powerful means of enhancing the quality of Greek Higher Education, provided that: a) university institutions invest in the continuous improvement of the teaching skills of their teaching staff, and b) university professors have incentives and the readiness to engage in teaching and learning based on scientific and well-tried methods.

Keywords

University Pedagogy/Teaching and Learning in Higher Education, active learning, reflection, experimental learning.

¹ University of Stockholm, petros.gougoulakis@edu.su.se.

² Democritus University of Thrace, kkedraka@mbg.duth.gr.

³ School of Pedagogical and Technological Education (ASPETE), anoiko@gmail.com.

⁴ University of Crete, panas@edc.uoc.gr.

Introduction

He has been informed by the Secretariat that, according to the law, students from this lesson would construct and express their opinion about his teaching ability. He considered it a pleasant challenge. During his time abroad he had taught a bit, some scattered lectures here and there without continuity; he tried his best to be clear and funny (..)

The Head of the department, embarrassed, whispered to the students that they may not have been informed in due time about the lecture. In addition, how had they been informed since the university had been closed by occupation for the last fifteen days? Nobody had said that. And even if he had said it, it would have been a half-truth. The other half was that students rarely came to these lectures by their candidate teachers. (...)

You are young, Professor, and you have probably not realized some things. Education in Greece is free of charge, okay, (...) Basically, there is one book which you are obliged to teach, okay, and we are obliged to participate in examinations. Free education was achieved by the struggles of the students' movement, which will not take any step backward. Books are free of charge, okay, everything else is suspicious, reactive efforts.⁵

Teaching, like all other work in Greek higher education institutions, is subject, according to Law 3374/2005, to continuous evaluation - internal and external - so that the quality of teaching and research can be assured and improved. Especially for the evaluation and teaching results, some recognized criteria are used which are related to the goals of the national system of higher education and are in accordance with international standards, experiences and practices. The criteria related to the quality of teaching work, formulated with specific quantitative and qualitative benchmarks, are the following:

- a) efficiency of the teaching staff,
- b) quality of the teaching process,

⁵ Extracts from the novel “τη νύχτα που αγκάλιασε το *Ginkgo biloba*” [“The night he embraced *Ginkgo biloba*”] by Giannis Manetas (Μανέτας, 2017).

- c) organization and implementation of the teaching work,
- d) educational assisting material, means and infrastructure,
- e) application of new technologies,
- f) ratio and cooperation between teachers and students,
- g) the level and updating of provided knowledge,
- h) the connection of research with teaching, and
- i) the mobility of teachers and students. (Law 3374/2005, article 3, §1a)

The above-mentioned criteria and evaluation benchmarks are further completed and specified in accordance with the directions and examples issued by the Hellenic Quality Assurance & Accreditation Agency (ADIP, www.adip.gr). The application and evaluation of the criteria and benchmarks are implemented mainly with the help of questionnaires, which are completed anonymously and voluntarily by the students, without previous information, within the framework of their obligatory lessons under the observation of the Internal Evaluation Group (OMEA) in collaboration with their teachers (Law 3374/2005, article 5).

It is ascertained that, in accordance with the provisions of the legal framework for quality assurance in Higher Education, the continuous evaluation of the teaching and research work of university staff constitutes a requirement for quality improvement. We do not know, however, if, and to what level and by which processes, the legal directions and recommendations (Law 3374/2005, Article 3, §1a) are implemented in Greek Universities with reference to teaching work, and consequently to the pedagogical training of the teaching and research staff. We maintain that there is a lack of significant empirical research on this issue, probably because of a widespread, but not scientifically proven, attitude in the Greek academic community that teaching ability is an afterthought, while the theoretical and research training of the academic staff are prioritized. As a result, the pedagogical training of the teaching and research staff does not yet constitute a field of serious consideration and opportunities (and supporting infrastructures) for continuous professional improvement by the universities (Gougoulakis & Oikonomou, 2014).

In recent years, we have presented several publications concerning teaching in Higher Education in the form of announcements at conferences and in publications in local scientific journals (Gougoulakis, 2017a; Kedraka & Rotidi, 2017; Oikonomou & Gougoulakis, 2016; Kedraka & Dimasi, 2016; Kedraka, 2016; Gougoulakis &

Oikonomou, 2014; Anastasiades & Karvounis, 2010). At the initiative of selected colleagues from several institutions, in September 2016, a Net of University Pedagogy was established in Greece. Its creation was a natural outcome of the Symposium “University Pedagogy: education and teaching in higher education, a terra incognita?” (see Kedraka, ed., 2016), organized by the Democritus University of Thrace. Without exaggeration, this Symposium is a landmark in the field of Greek Higher Education, offering university teachers the opportunity to focus on the scientific discussion of the present and future of University Pedagogy in the Greek Higher Education Institutions.

The present text is based on the authors' proposals during the Round Table of the 2nd International Experimental Conference of Applied Teaching “Teaching Trends and Challenges in Contemporary Learning Environments”, and on the discussions which took place during the three hours of its duration, based on the questions and opinions of the conference participants.

The methodology followed during the Round Table is characterized as *energetic-experimental* and has the form of a Scientific Cafe (Navid & Einsiedel, 2015). In its typical form, one or more experts refer to a subject of their area of expertise; questions are posed by the public, answers are given by an expert (or experts), followed by a discussion with the audience in a relaxed manner and in a comfortable milieu. In its informal configuration (Inverse Scientific Cafe), the experts pose questions to the public and the answers are collected and commented on by the experts (Sparksproject, 2018). The participants had previously registered their participation in the Round Table, sending comments, questions and short viewpoints on the issue of University Pedagogy several days in advance. Comments and questions were collected by the authors of this paper, categorized and discussed at the plenary sessions.

The current article focuses on some central questions, which are part of the upcoming discussions that have commenced in recent years internationally, also in Greece, and are under consideration (or should be considered) by the teaching staff of Greek Universities:

- What is the meaning of learning and which theories can offer a solid ground for active and transformative learning in Higher Education?
- What kind of knowledge, skills and competences does a university teacher need in order to teach at university level so that they can facilitate the students' learning?
- How is this issue treated by the international academic community and policy makers.
- What is going on in Greece?

- What is the (Hellenic) Net of University Pedagogy?

Outlined in Chapter 2 are some theoretical approaches regarding teaching and learning in Higher Education, with outlooks and accounts on the subject from Greece and abroad. Chapter 3 approaches University Pedagogy from an epistemological and didactical perspective, together with a draft in combined form of the input of three of the authors at the Round Table. Results from empirical research, along with a detailed presentation of the questions and viewpoints of the “(round-)table mates”, are presented in Chapter 4. The article concludes with reflective commentary and some tentative proposals for further investigation of the teaching process in Greek Higher Education.

1. University Pedagogy: tracing teaching in Higher Education

1.1. Theoretical approaches about learning in Higher Education

The theory of Transformative Learning, suggested by the American thinker Jack Mezirow, is one of the most popular within the framework of university studies and adult education programmes. This theory presents for consideration three different kinds of knowledge:

- 1) Instrumental knowledge, which refers to knowledge necessary for the production of tools for interacting with, consuming and controlling our environment, including other people.
- 2) Communicative knowledge, which refers to understanding the complexity of relations and communicative interactions among the individual and the surrounding world. It is about understanding others and being able to understand oneself.
- 3) Transformative or emancipatory knowledge, which is a product of critical thinking, leading to self-awareness and the correct use of scientific knowledge and general knowledge by every individual: “*Emancipatory knowledge is knowledge gained through critical self-reflection, as distinct from the knowledge gained from our ‘technical’ interest in the objective world or our “practical” interest in social relationships*” (Mezirow, 1991: 87)

For Mezirow, the very essence of learning is the critical re-examination of beliefs, values and assumptions of learners, so that they can formulate a more

sustainable view of the world and their position within it (Kokkos, 2011). The process through which the questioning of long-held beliefs and assumptions happens is critical reflection, which can help adults to critically re-examine the logic their explanations are based upon and create a new, reconsidered interpretation of their experiences as a guide for empathy and action (Mezirow, 1991).

Nevertheless, the original definition by Mezirow (1985) of transformative learning as a change of assumptions, perspectives, meaning perspectives, frames of reference and individual mental habits was considered to be very focused on cognitive development. Later on, Mezirow pointed out that emotional and social conditions are also very important because transformative learning, in contrast to instrumental learning, leads to new “*structures of thoughts*”, “*habits of mind*” and “*meaning perspectives*”, through restructuring dysfunctional frames of reference, which enable learners to examine their experiences critically, approach them thoughtfully and become more open and emotionally responsive to change (Mezirow, 2009).

Learning which leads to transformation is the process during which we doubt our habits of mind in order to make them more comprehensive, clearer, open and reflective, so that we can guide our activities accordingly (Keegan, 2011). As stated by Taylor and Cranton (2012), a person’s self-image and view of the world is a result of one’s perception and experiences. Transformative learning occurs when the individual examines critically and in depth, reflects on these perceptions and makes changes in practice, based on new perspectives arising from the construction of a new meaning, which can come from their actual personal, educational, professional experiences. Changes brought about by learning experiences become apparent in the learners’ actions: in active change, in a new perspective leading to new habits of mind (Mezirow, 2009), since people are usually trapped in a system of habits of mind (Kokkos, 2010). According to Clark (1993), transformative learning shapes human beings, making them different, in a way that they themselves and others can recognize.

As an evolution of transformative learning, Knud Illeris suggested an approach of integrated learning – appropriate for schools as well as higher education. According to Illeris (2016), the following three connected dimensions constitute learning:

- *The content of learning*: This includes knowledge and skills, as well as attitudes, behaviors and values acquired by the learning process. It also includes the learning methods and teaching practices that are used, as well as the searches concerning critical re-evaluation of dysfunctional stereotypical assumptions and

beliefs, thus emphasizing *transformative learning*.

- *The motivation and teacher–learner relationship*: The dimension of this learning concerns the emotional involvement of learners during the learning process and especially their relations with the teachers, and also the elements of motivation and incentive, the development of their interest, their attitude and commitment to learning.
- *The environment*: This concerns the framework in which learning takes place. It includes the immediate context, i.e. the educational organization, as well as the wider social context (Kokkos, 2016, Gougoulakis, 2016).

Essentially, holistic learning, according to Illeris, occurs when every dimension functions well, interacts organically with the other dimensions and is planned by the educator, based on their personal teaching theory and co-articulation of their knowledge, initiatives, innovations and creatively applicable ideas.

Illeris (2014) also suggests that the meaning of transformative learning should incorporate the determination of “*identity*”, as today living conditions are rapidly changing and we are continuously obliged to reshape our identity; however, these changes succeed only through transformative learning processes. Illeris finds identity to be an appropriate term to cover and include all the learning dimensions as a coherent whole: “When transformative learning is defined in relation to identity, it becomes possible to establish a direct connection to the current conditions and frames of society that create both the growing need for and the conditions of the transforming processes” (a.a., p. 153). Thus he determines transformative learning as the learning which leads to the change of a learner’s identity and asserts that this description includes not only the cognitive dimension, i.e a person’s meaning perspectives, frames of reference, and habits of mind, but also the emotional and social dimensions, as well as the environmental and societal situatedness of learning processes (a.a.).

So it becomes clear that contemporary learning theories focus their interest not only on the traditional character of instrumental learning, (which mainly refers to knowledge acquisition), but to transformative learning as well; that is, to the essential process of critical approach, composition and application of the acquired knowledge, so as to develop critical thinking and skills for evaluation of the knowledge and information people acquire in their studies. When an educator uses these contemporary theories as a learning framework, the intention is to lead the students to learn how to

examine a scientific theme, to gather evidence and information which later on are transformed into arguments, to work in teams, to share duties, and to present and defend their opinions.

1.2. How can University teachers create learning experiences that lead their students to critical thinking?

Teaching critical thinking and the acquisition of horizontal skills such as (critical thinking,) problem-solving, communication, skills of oral presentations and team-working are considered a central function of higher education (Roy & Macchiette, 2005). According to Stanovich and Stanovich (2010), the characteristics connected with critical thinking are “*open mind*”, willingness to learn, disposition for self-knowledge and change, analytical and compositional thinking, creativity, originality, imagination, ability for group work and stamina. So, learning – especially when it is addressed to students – should aim (apart from knowledge accumulation) at critical thinking, which, together with the ability for critical reflection, should be activated in university education (McGonigal, 2007). However, Bissel and Lemons (2006) argue that studies in higher education do not always encourage the students to think critically.

Vogelsang (1993) describes the way in which educational activities promote experiences of transformation of student’s perspectives in higher education. Illeris (2015) points out that transformative learning - when applied in the form of projects - offers rich learning experiences. MacKinnon (2017), when presenting ‘*The curiosity project*’ which he implemented with his students, emphasizes that the success of modern societies depends on innovation, creativity, problem-solving, lifelong learning for all, in an environment where students can learn to doubt, to explore possible answers, to see the ‘big picture’ and to try, without being afraid all the time of making a “mistake” (Adams, 2004). Finally, the success of this specific project, and other similar projects, depends on the transformation of the way students think and take responsibility for their own learning. All this experience is very powerful and decisive for their identity and professional development (MacKinnon, 2017).

In her research Milenkowa (2015) highlights the importance of cultivating research skills for the learners through projects, which must further encourage creativity and a personal learning style approach based on active and experiential learning. Project-based learners acquire meta-cognitive skills and develop the core competence of “*learning how to learn*” that is considered a very important ability for their life –

compared to learning by heart or acquiring knowledge through lectures in the amphitheaters. Learning of this type is a prerequisite for the building of the future professional identity of the students. Schön (1983, 1987) pays particular attention to the role of stochastic capability in the configuration of the integrated professional through continuous action and reflection, as explained by the concepts “knowing-in-action” and “knowing-in-practice”.

1.3 Teaching and learning in Higher Education, internationally and in Greece

The European Commission paid attention to the forms and quality of teaching and learning in higher education, putting them at the centre of academia’s discussions on the professional training of university teachers. The examination of ways to enhance the quality of teaching and learning, with a focus on curricula “that deliver relevant, up-to-date-knowledge and skills, knowledge which is globally connected, which is useable in the labour market, and which forms a basis for graduates’ on-going learning”, was also the assignment appointed to a High Level Group (HLG) on the Modernisation of Higher Education by the European Commission (European Commission, 2013). In its report “Improving the quality of teaching and learning in Europe’s higher education institutions” the HLG concentrated on what it regarded as the most promising avenues for promoting and producing the best quality teaching and learning. Guiding principles for the HLG’s work were:

- *teaching and learning are fundamental core missions of our universities and colleges;*
- *active student involvement is essential in governance, curricular design, development and review, quality assurance and review procedures;*
- *the preference of research over teaching in defining academic merit needs rebalancing;*
- *academic staff are employed not just to teach, but to teach well, to a high professional standard;*
- *it is a key responsibility of institutions to ensure their academic staff are well trained and qualified as professional teachers and not just qualified in a particular academic subject;*
- *this responsibility extends to ensuring new staff have a teaching*

qualification or equivalent on entry or have access to credible teacher training courses in the early years of their career;

- *this responsibility extends to providing opportunities for continuous professional career development as a professional teacher and not just as a subject/discipline specific academic;*
- *it is a key responsibility of academic staff to ensure they are qualified to teach and able to teach well; and*
- *this responsibility extends over their entire career from start to finish so that they remain up-to-date and proficient in the very best pedagogical practices and all that excellence in teaching requires. (a.a., p. 15)*

For the HLG, teaching is a core mission of higher education institutions and therefore a core responsibility. Quality teaching is a *sine qua non* of a quality-learning culture in universities and colleges and a determiner of how effectively they fulfil their task and obligation towards their students. As stated in the report, good teaching at universities always derives from the latest research, and good teachers and graduates thrive when they are active learners, questioners and critical thinkers. Achieving these goals requires improved awareness by the academic community, strong governance and pedagogical leadership in the universities and colleges.

University teachers' educational strategies and approaches as well as teaching techniques play a key role in higher education. Some examples of initiatives and practices in Europe related to didactical and pedagogical development of university teachers will be presented below.

In Sweden, academics have agreed that all teaching staff should have special pedagogical education - even postgraduate students undertaking tutoring tasks. Since the beginning of 2000, in-service training structures for faculty members on University Pedagogy have been created at every Higher Education Institute (HEI). For the recruitment or academic development of a faculty member at all levels (including teachers of Fine Arts), successful attendance at seminars or workshops or courses of approximately 10 weeks is mandatory (Gougoulakis & Oikonomou, 2014; Gougoulakis, 2016). The Swedish Higher Education Act does not require completed courses in University Pedagogy, but leaves the responsibility to the HEIs themselves to set the criteria for the pedagogical and didactical skills of their faculty members. The Higher

Education Act states:

It is a prerequisite to appoint a Professor in a subject area, except for the field of Fine Arts, if they have demonstrated both scientific / research and pedagogical skills. (...)

The evaluation of pedagogical competence must be done with the same degree of care as the evaluation of scientific or artistic competence. For the rest, each institution sets its own evaluation criteria that it considers to be applicable to the appointment of a professor. (Högskoleförordning 1993: 100, Cap 4, § 3)

Similar prerequisites for teaching apply for recruiting a Lecturer. Following the provisions of the Law, the Swedish Rectors' Assembly made recommendations concerning the content of the courses (seminars/workshops) that a University Professor should have attended in order to meet the criterion of adequate teaching ability. It is noteworthy that the Assembly monitors whether and how its recommendations are implemented in the various Higher Education Institutions. For example, for the post of or promotion to Lecturer or Professor at the University of Stockholm, a specific evaluation criterion is "equal emphasis on the candidate's teaching and academic skills" in the subject in question. A candidate is considered qualified if they have attended at least 7.5 ECTS (for the position as Professor at least 15 ECTS are required, as well as completed seminars on the supervision of postgraduate students) or equivalent knowledge acquired otherwise. Specifically, for the position of Lecturer, Stockholm University Internal Rules of Procedure delineate that it is possible to recruit candidates who lack education in University Pedagogy but, in this case, the employer (i.e. the Department or Faculty where the recruitment takes place) is obliged to enable the recruited Lecturer to attend University Pedagogy courses during the first two years of their employment.

Stockholm University operates a Centre for the Advancement of University Teaching (CeUL), aiming to stimulate engagement in high-quality teaching at all levels at Stockholm University. CeUL supports staff and Departments to develop teaching, and to create learning environments that facilitate and support learning. Among other things, it provides professional development courses in Higher Education Pedagogy for university teachers and educational leaders, organizes a variety of competence-raising activities, such as conferences and workshops, promotes research in both general and subject-specific Pedagogy for higher education, and administers the university's

prestigious prize The Award for Good Teaching.

CeUL should be perceived as a network of nodes coordinated from a Board with an administrative office located in the Department of Education. Educational developers and researchers from different Departments and Schools are included in the network. About 15 members of staff are engaged in teaching and administrative duties in CeUL - along with ‘educational ambassadors’ who are teachers working at various Departments.⁶ Similar centres for the enhancement of teaching and learning have been established in most Swedish and other European countries’ HEIs, although they apply different pedagogical support approaches to their teaching staff.⁷ We find the same pattern of supporting structures for enhancement of student learning and faculty development.⁸

In its report “Trends 2018 – Learning and teaching in the European Higher Education Area” (EUA, 2018)⁹ the European University Association also points out learning and teaching as a core mission in Europe’s universities. Learning and teaching have become a central topic of discussion when looking towards the future of the European Higher Education Area, entailing dedicated strategies and structures such as centres for the advancement of university teaching. This also marks a shift from the first rounds of the Bologna Process, which focused on structural reforms, increasing mobility, collaboration and enhancing international visibility, to a strong current emphasis on learning and teaching.

In Greece, initiatives have been undertaken to improve the educators’ scientific

⁶ Centre for the Advancement of University Teaching (CeUL), Stockholm University, www.su.se/ceul/english/

⁷ See for example:

- a) “Developing pedagogic competence”, Uppsala University, www.uu.se/en/about-uu/quality/learning/educational-development/developing-pedagogic-competence/
- b) “Division for Higher Education Development”, Lund University, www.ahu.lu.se/en/
- c) “Centre for Teaching and Learning”, University of Oxford, <https://www.ctl.ox.ac.uk/about-us>
- d) “Center for Teaching & Learning”, Humboldt State University, <http://ctl.humboldt.edu/>
- e) “Center for Teaching and Learning”, Central European University, <https://ctl.ceu.edu/about>
- f) “Centre for University Teaching and Learning Hype”, University of Helsinki, <https://www.helsinki.fi/en/centre-for-university-teaching-and-learning-hype>

⁸ See for example:

- a) “Center for Teaching and Learning”, University of Washington, <https://www.washington.edu/teaching/about-the-ctl/>
- b) “Center for Teaching and Learning”, Columbia University in the City of New York, <https://ctl.columbia.edu/about/>
- c) “Centre for Teaching Support & Innovation”, University of Toronto, <https://teaching.utoronto.ca/>

⁹ <https://eua.eu/downloads/publications/trends-2018-learning-and-teaching-in-the-european-higher-education-area.pdf>

basis of the subject and its teaching, as well as subject-didactic competence related to both non-formal education (mainly for the certification of adult educators) and the first two stages of school education, but they have not yet touched teachers in higher education. Nevertheless, there is nowadays a recognition of the need for development of the teaching capacity of faculty members with emphasis on primarily qualitative indicators, with regard to 'what' (goals, perceptions, teaching practices) and 'how' (checking the effectiveness of the above) (Kedraka & Dimasi, 2016). We could also add the 'why'; that is, the critical reflection of the assumptions behind the learning objectives, the teachers' perceptions of teaching and learning in HEI and, ultimately, the activities through which goals and perceptions are implemented.

Related studies find that pedagogical and didactic issues are treated as being of secondary importance and that quality assessment in higher education is mainly based on the quantity of research and not on the quality of teaching! Consequently, as reflected in career development in the academic community, the competency and evaluation of HEI staff is not focused on teaching but on research, where research productivity and publications in scientific journals bring prestige, titles and funds, while teaching and its quality is often regarded as a "necessary evil". Thus lecturing (in the amphitheatres) is almost the only teaching technique used. Most faculty members are not informed of new alternative teaching strategies and methods, perhaps because they lack the appropriate motivation and incentives, while they are extremely active in their career development linked to research fund raising. The initiatives taken by the Ministry of Education (Law 3848/2010; 4547/2018) for pedagogical and didactic competence development, concern secondary education, while EOPEPP (National Organisation for the Certification of Qualifications & Vocational Guidance) has also applied its own certification system intended for adult educators. Thus, processes for the training and/or certification of university teachers' pedagogical and didactical competence and capability are not yet existent.

1.4 The University Pedagogical Network

The current state of teaching and learning in Greece's HEIs was communicated through articles and publications, but also in discussions and meetings among university professors. Surprisingly, academia agreed: there were apparent "signs" of poor teaching methods and a strong need for improvement in teaching approaches. Apparently, the ability to be a university teacher is not a matter of exclusively innate abilities and

talents, but of focused training by which they acquire and adopt pedagogical knowledge, skills and attitudes. All agree that a professionally equipped university teacher should work not only to offer knowledge to the students but also to focus on improving the quality of teaching and their didactical competence.

Thanks to the enthusiastic commitment of some university colleagues, the (Hellenic) University Pedagogical Network was established with the aim to initiate a dialogue and a problematization of teaching and learning in HEIs. Among the objectives of the network are the

- Upgrading of the pedagogical dimension of the role of the university teachers,
- Competence development of staff in teaching and learning issues,
- Pedagogical relation, communication and interaction between students and teachers,
- Student participation in all phases of the learning process,
- Development of a university culture, which can see learning as a process pedagogically appropriate and based on active learning.

In September 2016, the Laboratory on Teaching and Professional Development of Biosciences of the Department of Molecular Biology and Genetics of the Democritus University of Thrace organized the 1st Symposium of the Network in Alexandroupolis, titled: “*University Pedagogy: Education and Teaching in Higher Education, a terra incognita?*”. Among other results, published in the Symposium’s Minutes¹⁰, the following was also agreed:

- The monitoring of international experience and research in the field of University Pedagogy,
- The initiation of research projects,
- The development of a pedagogical theoretical framework for teaching and learning in Higher Education,
- The publication of a Newsletter,
- The organization of a Conference in 2019.

2. University Pedagogy in Practice: An Epistemological and Didactical Approach

Teaching, as a basic mission of higher education, is supposed to be based on scientific

¹⁰ See: <http://panepistimiaki-paidagogiki.gr/praktika/praktika2016.pdf>

knowledge and proven/reflected experience and to be provided “to the higher level of quality in accordance with internationally recognized criteria” (Law 4485/2017, Article 4, §1ab). Moreover, this is the reason why university teachers are given the opportunity to conduct research in order to ensure the scientific background of teaching. However, many university teachers consider research in their subject - in their “science” - as their main duty and they seldom pay attention to how they teach it. This is probably because research results in their specialization area acquire particular importance in evaluations for appointments or promotions. Paradoxically, while training high-quality researchers requires quality teaching, pedagogical and teaching skills are not treated equally in the evaluation of tenure-track faculty. It is therefore reasonable to assume that ensuring quality of education requires certain “tools” necessary for the development and improvement of teaching, which are offered preferably through courses and seminars in University Pedagogy.

One matter regulated in the Internal Rules of Procedures of each university (Law 4485/17, article 8), is the “in-service and further training of the university staff”. There, it is left to the discretion of each higher education institution to plan and implement its own program of professional development and improvement of the faculties’ teaching skills. A further reason, which obliges universities to look at the quality of teaching, is the transformation of elite institutions into mass-education establishments.¹¹ During the past decade (2008-2018), Greece has experienced an increase in tertiary education attainment and in 2018 had the fourth highest tertiary enrolment rate among OECD countries. Among 19-24-year-olds, the country had the highest enrolment rates in Bachelor’s programs of all the OECD countries, and the second highest rates among 25-28-year-olds.¹²

Apart from the reasons that led to the massive demand for higher education, of particular interest are the implications and questions that arise about the quality of studies, as well as the conditions provided for university teachers to fulfill their teaching tasks. From time to time, in the public debate, there are several opinions expressed which in fact diminish the autonomy of higher education institutions to respond to their academic and professional duties. Among them are, for example, the massive enrollment of students in higher education and their equally expected graduation, due to

¹¹ Higher Education in Greece includes a) University Institutions, b) Higher Technological Institutions and c) The School of Pedagogical and Technological Education and d) Ecclesiastic Education Schools

¹² https://www.oecd.org/education/education-at-a-glance/EAG2019_CN_GRC.pdf

lower requirements for selection and enrollment in HEIs.

The same discussion, more or less, is taking place in other European countries. For instance, in Sweden, in parallel with the discussion about the evolution towards massive universities, there is a dialogue on the quality of Swedish higher education. A report of the Swedish Higher Education Authority (Högskoleverket, 2012) noted that 21 of 56 evaluated university subjects do not fulfill the requirements contained in the Higher Education Act. According to the evaluators, in most cases their criticism was about the insufficient scientific basis of teaching (Brommesson et.al, 2016, p. 3). In another report of the Swedish Higher Education Authority, it is apparent that from the evaluation of 189 study programs, almost one out of five was negatively evaluated. In conclusion, the above-mentioned reports end by drawing attention to the likelihood that teachers may have not adapted their pedagogy, on the one hand to the constantly increasing groups of students of a greater heterogeneity spectrum than before and, on the other hand, to the constantly decreasing teaching time and interaction teachers have with their students.

Research that documented freshman students' attitudes about the difference between university studies and upper secondary school, showed that university studies require more autonomy and responsibility on the students' part for their learning. The same view was shared by university teachers about the nature of academic studies and about autonomy as a goal and means of education. Evidently, this did not mean that university studies are not aiming to cultivate the students' autonomous thinking so that they will be able to solve problems in their scientific area of specialization without guidance by others. However, because the achievement of this goal requires a great degree of autonomy, this autonomy should be exercised during the studies, influencing accordingly the pedagogy implemented. In other words, it is a matter of learning (Lindberg, 1994).

From a purely pedagogical point of view, as from a broader social point of view, the question arises whether students learn what they should have learned after completing their studies. Do universities provide society and the labor market with a properly qualified workforce? How is the quality of education assured when the learning gap among students is widening due to differing conditions? What do the teaching staff take for granted in the framework of their teaching planning and in their communication with the students? Maybe students are not prepared enough by upper secondary school and therefore not "mature" enough for studies at university level?

What are the implications, if this is the case, for University Pedagogy in dealing with “*more students with less previous knowledge, who study less and less for more and more years*”? (Sonnerby, 2012).

In the following pages, we will try to present some thoughts concerning the content of possible seminars in University Pedagogy, and generally how the HEIs as well as the State should act in order to help university teachers become better educators. However, before we proceed to the content of the seminars, we must first look at the pedagogical philosophy and approach that should be promoted and cultivated by the academics.

2.1. Pedagogical perception, didactic approach and learning

A fairly strong attitude among University Pedagogy researchers is that the basic perceptions which the teacher embodies about teaching and learning influence the way students approach their learning (Gibbs & Coffey 2004; Trigwell et al., 199). We will focus our presentation on two such distinct pedagogical perceptions, which function as models that influence the general teaching planning of educational programs and the character of communication between teachers and students: the *teacher-centered* and the *student-centered* models of teaching approach.

The teacher-centered approach refers to a code of teaching perception and behavior that places the teacher at the center of teaching. Communication in the classroom is an act of delivering information provided by the teacher, based on the lectures by which the content of the lessons is transferred, and which is often identical with the content of the handbook. There is always a risk that the teacher, following a teacher-centered approach, addresses the students as though they all have the same characteristics, and repeats the same lectures every term.

Why did some teachers seem so boring? Why were we so incredibly tired from their lessons, coming out like psychological rags? (...) I remember Professor Stratos who considered his contribution to teaching was just reading his book aloud, word for word. He started his first lesson on the first Monday of October at 10 a.m. reading the first paragraph of the introduction, and finished by reading the final paragraph of his last chapter on the last Friday of May at 11.00 a.m. exactly. An important achievement of coordination; however, this achievement was somehow blunted by the fact that he had long experience of doing the same repetitive thing continually

for the past ten years. It was obvious that he was cheating us. [Our translation] (Μαρέτας, 2017: 166f).

The other approach puts the student and the learning outcomes at the center and only secondly focuses on the transfer of information by the teacher to the students. The focus on students' learning, and not exclusively on the transfer of information, requires an interactive approach, whereby the teacher ensures that students understand basic concepts and theories, so that they will be able to apply them in new situations. Furthermore, by adopting the student-centered model of teaching, the university teacher diagnoses the students' different needs, their motivations and previous knowledge and they try to bear in mind this heterogeneity when planning their courses. In doing so, the teacher demonstrates flexibility in the use of the applied teaching techniques, being adaptable to the composition of the audience, and contributes to practising and improving the students' abilities to become autonomous learners (Postareff et al., 2008).

Today, it is common sense that different individuals learn in different ways or show preference for one or another style of learning. For this reason, teachers need to use a variety of teaching methods to give all students the opportunity to learn in the way that suits them best. Apart from the specifications of learning varieties of the student population which a teacher has to deal with, in many cases they have to deal with the challenge of their underdeveloped academic skills from their upper secondary education, including the lack of critical thinking and ability to solve problems using effective learning strategies. Therefore, successfully addressing all the above-mentioned pedagogical challenges calls for adopting a student-centered teaching approach, orientated to the development of active learning strategies and, of course, the students' participation in the learning process. From a pedagogical point of view, this kind of approach has greater advantages, because it shapes autonomous and creative academic citizens with the ability to take responsibility for their own learning (Brommesson et al., 2016).

Undoubtedly the student-centered approach is being promoted worldwide as the dominant pedagogical model in Higher Education. Already the introduction of the UNESCO Global Declaration for Higher Education in the 21st Century (UNESCO 1998) emphasizes the increasing demand for the diversification of Higher Education, due to the awareness of its contribution to socio-cultural and financial developments, as well as to the building of the future, regarding which young people should acquire new skills, knowledge and ideals. Higher Education Institutions should, among other things,

train their students to become well-informed and active citizens, equipping them with critical thinking skills and with the ability to analyze societal problems, as well as to look for solutions to social problems with a sense of social responsibility (ibid, article 9b). The Declaration asserts that:

To achieve these goals, it may be necessary to recast curricula, using new and appropriate methods, so as to go beyond cognitive mastery of disciplines. New pedagogical and didactical approaches should be accessible and promoted in order to facilitate the acquisition of skills, competences and abilities for communication, creative and critical analysis, independent thinking and team work in multicultural contexts, where creativity also involves combining traditional or local knowledge and know-how with advanced science and technology. These recast curricula should take into account the gender dimension and the specific cultural, historic and economic context of each country. The teaching of human rights standards and education on the needs of communities in all parts of the world should be reflected in the curricula of all disciplines, particularly those preparing for entrepreneurship. Academic personnel should play a significant role in determining the curriculum (ibid, article 9c).

Thus it seems that everything converges on a possible scenario of education in the future, where the teaching priority will be not so much the content of handbooks but the cultivation and acquisition of life skills, such as the skill of creative thinking and collaboration (Kanellopoulou, 2013). Especially concerning “creative thinking”, we consider it necessary to comment that its development is facilitated by equally creative learning, which is not only an important factor in tackling complex problems which occur due to accelerating social change, but acts as a catalyst for facing the challenges of the fast-growing, global-knowledge society. It is reasonable to assume that employers in the future will care not only about what graduates know but also how creative they are in applying what they know (Blessinger, 2017).

From the above-mentioned, one might get the impression that the reflections on the pedagogical approach that have been put forward are more appropriate to certain scientific disciplines only and may ignore the specifics among them. We refer here to the taxonomy proposed by Biglan (1973) between hard and soft scientific fields and their differences with reference to their educational goals. The related research (Roditi, Collins, Karalis & Lavidas, 2017) shows that hard fields emphasize students’

professional preparation and development as well as cognitive objectives such as learning concepts and models. In contrast, soft fields, emphasize personality development, cultivation of values, creativity, critical thinking, reflection, communication and the like. In their study, Roditi, Collins, Karalis and Lavidas (ibid) analyze thoroughly the issue of different didactic approaches according to scientific field, without denying the basic position supported by the student-centered model of education, namely that learning is best achieved when the student acquires 'ownership' of the learning process.

2.2. Teaching approaches and learning strategies

It is known that strategies of teaching approaches applied by professors are related to the students' different approaches to learning. Thus, student-centered approaches, as evidenced by studies (Asonitou et al., 2009; Attard et al., 2010), are related to strategies of deep learning, where learners try to understand what they study and do not just stack it up for the exams. In contrast, students facing professors attached to a traditional teacher-centered teaching approach use a superficial learning strategy (surface learning). They focus mainly on memorizing the content, as presented in the lectures and literature, with the aim of passing the exams. Whether or not they have understood the course content is a purely empirical issue.

The first to identify the different approaches to learning, the deep and the surface, were the Swedish researchers Ference Marton and Roger Säljö (1976a; 1976b), whose research has since prompted further exploration of the teaching and learning processes, not only in Higher Education (Asonitou et al., 2009). Given that deep learning results in better quality and is more pleasant (Ramsden, 1992), it is desirable for teachers to try to influence the way their students employ deep learning, creating a learning environment compatible with that intention. Furthermore, based on research findings which note a correlation between teaching approach and learning, we can draw some indicative conclusions about the content and character of the necessary pedagogical and didactic training of university teachers.

A study by Gibbs and Coffey (2004) on whether teachers attending university pedagogy seminars become more student-centered in their teaching approach, and their students less surface learners, revealed that the group of students whose professors

attended lessons of University Pedagogy showed an important change in their way of studying and started using less surface-learning strategies. As a result, Gibbs and Goffey's study (*ibid*) strengthens the argument that training the university teaching staff in teaching and learning issues should concentrate on changing their attitudes in a more student-centered direction.

Ultimately, the pedagogical development of university teaching staff should be aiming at the continuous improvement of students' learning. Existing research confirms that student-centered teacher attitudes contribute to better learning outcomes. It is also a matter of the teacher's professional development to pass from the phase in which everything is centered on their personality, the lectures and the imposition of their academic authority, to the phase where the content of the subject studied empowers their academic existence. However, this phase is not enough for a contemporary and experienced teacher if the planning of teaching and the learning process do not take into consideration the particularities and learning needs of the students; this is what, according to Kugel (1993), constitutes the third phase of university teachers' professional integration.

In concluding the presentation of the research points that underline the necessity of planning and organizing the continuous pedagogical training of university teaching staff, we briefly list below the three main objectives of University Pedagogy:

- To urge university teachers to identify established and / or stereotyped perceptions about university teaching and the role of the "professor" and help them reconsider their frame of reference, transforming the ways which give meaning to their pedagogical behavior.
- To consolidate among university teachers the importance of reflection, individual and collective, as a means and process of professional improvement, enabling them to acquire and apply a common conceptual background to the theoretical and practical issues of effective teaching.
- To contribute to the development of university teachers' teaching skills so that they will be able to plan their teaching, making choices based on scientific data and acclaimed educational experience (their own and that of others), and also using modern information and communication tools to support learning in Higher Education.

3. University Pedagogy in Greece: findings of empirical research

Given that University Pedagogy in Greece is still in its first stages, there is not enough research examining the Greek reality. This, however, is one of the issues on which our Network is committed to focus from now on. In the following part of this paper, we refer indicatively to the results of three complementary ongoing surveys.

3.1. What do the graduates say?

During the academic year 2017-2018 an empirical research study was conducted by Andreas Oikonomou, Georgios Menexes, and Elpida Stergiou (unpublished), examining the attitudes of graduates in Technological Institutions towards the teaching of their academic teachers. The questionnaire conducted by Stergiou (2017) in her assignment project for a graduate diploma in ASPAITE (School of Pedagogical & Technological Education) asked 191 graduates to answer 20 questions related to the quality of teaching offered by their university teaching staff during their years of studies. Their opinions are presented in Table 1 (1=No, 5=Yes, to a great degree) as below:

Table 1: Evaluation of academic teaching staff by their students: median numbers of their answers

	The teaching staff of the university where you studied:	1-5
1	They had good knowledge of the content of their teaching subject.	4
2	They were punctual in their classes (keeping the time and sufficiently prepared).	4
3	They followed and answered with clarity questions posed by the students during classes.	4
4	They provided scientific information aiming at the better understanding of the subjects they taught.	3
5	They presented the contents of lessons following a clear and logical framework, noting the important aspects every time.	3
6	They encouraged the students' research and critical thinking.	3
7	They allowed and encouraged the students' participation in classes.	3
8	They applied the evaluation criteria of their activities as determined by the	3

	study program.	
9	They applied the established program of study with a certain flexibility for a better dynamic in the classroom.	3
10	They were easily approachable (in person, e-mails, etc.)	3
11	They informed students about their expected skills and knowledge.	3
12	They presented the content of their subject properly adapted.	3
13	They promoted individual work.	3
14	They promoted group work.	3
15	They planned and correlated the content of the presented theory in the class with the laboratory assignment (if there was one).	3
16	They interacted with the students sufficiently.	3
17	They treated the students with respect and subjectivity.	3
18	They facilitated interaction among the students and between students and teachers.	3
19	They used ICT effectively.	3
20	They used material tools (e.g. worksheets, presentation material).	2
21	They related the content of their subject to that of other subjects.	2
22	They provided initial and final briefings (introduction and conclusion) of their teaching in class.	2
23	They organized activities aimed at the active participation of students.	2
24	They encouraged the students' interest and gave motives for learning.	2
25	They provided clear information about the objectives of their lessons, the content, the bibliography and the evaluation methods.	2
26	They planned the content and developed the lesson in a way which promoted the acquisition of professional skills.	2
27	They connected their teaching with the professional environment (labor market).	2

The main conclusion of this study is that the strongest features of the faculty are found in 3 of the 27 questions/criteria posed, and that there are 8 features in which they are evaluated below average. The teachers' strengths are only associated with good subject knowledge, while their weak points are associated with their psycho-educational and teaching background. Another two focus on the inability of university teachers to

link the content of their teaching with required professional skills and familiarity with professional environments.

3.2. What do academics say?

During the academic year 2017-2018 an empirical research was conducted by Belesiotou & Oikonomou (2019) on the education provided by universities and, more specifically, the role higher education plays in the education of its adult students. Five university professors were asked to position themselves on (a) the problems they face in their educational tasks, (b) on their psycho-educational and didactic training, and (c) on University Pedagogy. The following are the questions:

Related to problems

- Did you encounter any problems/obstacles when starting your teaching process? If so, how did you deal with them?
- Which teaching methods do you use? Are they effective?
- Are you familiar with concepts such as experiential learning, interrogative teaching, interaction, and feedback?
- Do you consider that in universities, and especially in the Sciences, sufficient conditions exist for theory to coexist with action (experiential learning)?
- Are you satisfied with the rate of students' participation in your classes?
- Do you think that the decline in government funding due to the financial crisis, which can reduce the practical courses provided, can also decrease student attainment?
- Which of your merits do you consider more important in attracting students to your classes?

Related to training

- Did you attend any courses in Pedagogy during your undergraduate studies? If yes, how many? Furthermore, were these courses obligatory in order to get your degree?
- Have you ever attended courses in Pedagogy at some stage of your life? (ASPAITE, seminars, adult education, graduate program, etc.).

- When and where did you teach for the first time?
- Do you feel that you have the background to handle the teaching process?
- Does the university provide possibilities for training/further education / specialization in Pedagogy/Didactics?
- Do you think that training in Pedagogy for university teaching staff is necessary? Would it be useful? Would it have any positive results?

Related to University Pedagogy

- Which duty do you consider most important for university teaching staff, teaching or research?
- In many foreign countries, there is already a discussion and implementation of training in pedagogy for all university teaching staff. How do you see the introduction of University Pedagogy in Greek universities?
- Would there really be an advantage for the students with the provision of University Pedagogy, or does it not matter?
- Hypothetically, what do you think you would gain by attending a University Pedagogy training program?

University teachers agree about the following: a) there is no provision for University Pedagogy at Greek Universities, and b) their training in Pedagogy is insufficient. Finally, they all welcome the introduction of University Pedagogy. The researchers suggest a systematic investigation of the pedagogical/didactical needs of university teachers in order to develop tailor-made education and training programs in University Pedagogy.

3.3. What do the conference delegates say?

Aiming to secure the active participation of the conference audience in our workshop, before its commencement we delivered to the prospective participants a questionnaire with open questions about the term “University Pedagogy”, which was structured along the following four axes:

- 1) “University Pedagogy”: setting boundaries (How do you understand the discipline?)
- 2) “University Pedagogy”: research (What are your queries regarding this?)

- 3) “University Pedagogy”: Necessity (Is there a need for training in University Pedagogy for university teachers?)
- 4) “University Pedagogy”: Suggestions for implementation (What proposals and ideas would you like to submit?).

The questionnaire was completed by 12 participants, (2 teachers of primary education, 6 teachers of secondary education, 3 university teachers and 1 PhD student).

The summary of the main answers by axis is the following:

- 1) “University Pedagogy”: setting boundaries (How do you understand the discipline?)

The participants consider that the term “University Pedagogy” concerns the enhancement and improvement of the teaching work of university teaching staff and is directly relevant to their professional improvement. Furthermore, based on the participants’ answers, there is a distinction between their scientific efficiency and the required pedagogical efficiency.

- 2) “University Pedagogy”: investigation (What are your relevant questions?)

The basic questions posed in the discussion were relevant to:

- a) the characteristics of the institutional framework of University Pedagogy (Should a certification of pedagogical efficiency be a necessary requirement for employment at a HEI?),
 - b) the good practices from international examples,
 - c) the connection of University Pedagogy development with the results from evaluation processes, internal as well as external,
 - d) the continuous participation in seminars, workshops and courses in teaching and learning in HE,
 - e) the use of the term “University Pedagogy”, and
 - f) the support of ordinary teaching staff by auxiliary teachers due to the high number of students per class.
- 3) “University Pedagogy”: Necessity (Is there a need for University Pedagogy training for the university teaching staff?)
- All participants consider University Pedagogy necessary for the university teaching staff.
- 4) “University Pedagogy”: Suggestions for implementation (What proposals and ideas would you like to submit?).

The conference participants agree that the need to introduce University

Pedagogy is obvious. They question, however, whether this is possible considering the current, rather skeptical attitude of many university teachers. Are there any incentives to motivate them? In which way is it to be organized? Centrally, by each University, or in a mixed way? What is the framework of skills for pedagogical efficiency going to be? Finally, they noted the necessity for surveying and mapping the training needs of university teachers' professional development; nonetheless, they consider it of great importance to link University Pedagogy with Lifelong Learning and the philosophy of adult education.

Conclusions

The evidence of the aforementioned empirical research supports the opinion that the strength of university teachers is their good knowledge of science, while their weaknesses are mainly the lack of appropriate pedagogical and didactical training, as well as an inability to connect the subject they teach with the acquisition of professional skills and familiarity with professional environments. All the graduates and professors participating in the Round Table agreed with the above. They also agreed with the proposal to introduce University Pedagogy in Greece, as they considered it a prerequisite for the advancement of the quality of teaching and learning in Higher Education. However, there are reservations about the acceptance of such a venture by a significant part of the academic community due to the prevailing attitude towards this matter. For this reason, there were questions posed regarding the character of the whole process (voluntary or obligatory?) and proposals related to the necessity to explore the training needs of university teaching staff, as well as the adoption of incentives for their participation in pedagogical training. They all agreed that the institutional framework of University Pedagogy is highly important, as it concerns the way of organizing the process (central/regional/mixed) and its accreditation (certificate of pedagogical efficiency/skills framework). Finally, there were opinions expressed regarding the necessity of connecting University Pedagogy with the philosophy of Lifelong Learning and evaluation results (internal by the Quality Assurance Unit/MODIP/, by the External Evaluation and, of course, by the students).

Epilogue: University Pedagogy as a means for the advancement of Higher Education in the knowledge society

Universities are facing the challenges created by the intensive international competition

in the production of goods, services and knowledge, and the sustainable development of society. The connection of university education with research towards this goal is a one-way road so that university graduates acquire updated knowledge transpired by scientific ethos, and obtain the skills and ability to implement the acquired knowledge in the labor market (Arrius & Ericson, 2018).

All this, of course, and given that the content of knowledge has increased in everything around us, requires social awareness and the processing of a robust aid plan for higher education - a dynamic knowledge policy. The main basis of this policy should be scientific research, namely knowledge production and its efficient transfer, so that students will be provided with all the tools necessary for the modernization and development of society.

At the same time, successfully addressing the challenges depends on the degree of awareness, safeguard and proactive action of the HEIs. If they are to be counted as vital levers of social and cultural development, they should at least take care of the training of their teaching staff. The willingness of teaching staff to contribute to their professional development and advancement by improving their teaching quality is not to be taken for granted without encouragement by the academic community. Such a motivation, deemed of great symbolic importance, could be the evaluation of their teaching skills – beyond their research work – in the course of their academic career. Above all, however, universities should give their teachers reasonable working conditions in order to respond to their duties with dignity, ensuring a satisfactory balance between research and teaching for all teaching staff within the framework of their service.

The above underlines the need for reflection and reexamination of the skills of those who wish to follow an academic career. Historically, it seems that the basic reason for a person to pursue an academic career was not so much the acquisition of teaching skills as the desire to conduct research. Writing and defending a dissertation is the passport for privileged access to the university labor market. It was - and still is - almost impossible for persons with a passion for teaching to survive in the academic world without research and publications. This may be explained by the dominant attitude that a specialized researcher is also a good teacher, a correlation automatically set, though lacking in strong empirical support.

In any case, the teaching ability of good researchers is not ignored, especially

when it is focused on their own research. However, due to heavy academic, and especially teaching duties, junior university teachers usually have to teach several courses, (and not only those in their strict areas of specialization), while the “Humboltian ideal” proposes that teaching must be based on research and proven experience. The massive university is, of course, already here, giving further reason not only for the reconsideration of standard views about the relevance between research and teaching, but also for the redefinition of the skills framework of the teaching staff and their continuous pedagogical training.

Bearing in mind the evolutions in University Pedagogy worldwide, we observe that facing the challenge of massive universities means sharpening the demands for participation in seminars about teaching and learning in HE, as well as documenting pedagogical efficiency in the form of educational/teaching portfolios. The teaching portfolio includes references and evidence indicating the total range and quality of the holder's teaching and pedagogical ability. It records the pedagogical-teaching philosophy and the way teaching is perceived and approached, as well as their overall professional development. Essentially, the *teaching portfolio* is a documentation of teaching ability, exactly as the publications in scientific journals form a documentation of research work when it comes to job promotions (Gougoulakis, 2017b). However, whether there are requirements for obligatory or voluntary participation in University Pedagogy education or for the submission of a teaching portfolio, both should be evaluated as documentations of teaching skills and pedagogic efficiency by experts in pedagogic evaluation. How, actually, is the evaluation of teaching efficiency and teaching skills quality assured today in the composition of the review committees? The timeless matter in university education – as in every education - is without a doubt the proper training of the teaching staff. In other words, the questions posed, which should be subject to continuous reflection in all university communities and motivation for collective learning, are: How do HEIs ensure their teachers' pedagogical and didactical excellence? And with what content, what incentives and under what working conditions?

References

- Adams, M. G. (2004). *Change your question, change your life*. San Francisco: Koehler Publishing.
- Anastasiades, P., & Karvounis, L. (2010). Students' opinions in the postgraduate module EKP 65 "Open and Distance Education" for the role and the mission of the Tutor Counsellor in Hellenic Open University. EAP [Greek title: Απόψεις των μεταπτυχιακών φοιτητών της Θεματικής Ενότητας ΕΚΠ 65 «Ανοικτή και εξ Αποστάσεως Εκπαίδευση» για το ρόλο και την αποστολή του Καθηγητή Συμβούλου στο ΕΑΠ.] *Open Education - The Journal for Open and Distance Education and Educational Technology*, 6(1&2), 80-92. Available at <https://doi.org/10.12681/jode.9752>, (13-03-2020).
- Apte, J. (2009). Facilitating transformative learning: a framework for practice. *Australian Journal of Adult Learning*, 49(1), 169-189
- Arrius, G. & Ericson, M. (2018, 18 Ιουνίου). Här är framtidsreceptet för ett kunskapssamhälle i världsklass. *Curie, Debatt*. Available at <https://goo.gl/ZYcyj7>, (05.07.2018).
- Asonitou, S., Tourna, E., & Koucouletsos, K. (2009). Approaches to learning of Greek Business students. In Christos C. Frangos (Ed.). *Proceedings of the 2nd International Conference "Quantitative and Qualitative Methodologies in the Economic and Administrative Sciences"* (σσ. 19-29). Athens: Technological Educational Institute of Athens: Department of Business Administration.
- Attard, A., Di Ioio, E., Geven, K., & Santa, R. (2010). *Student Centered Learning. An Insight into Theory and Practice*. Bucharest: Partos Timisoara.
- Beletsioti, G., & Oikonomou, A. (2019). University Pedagogy in Greece, a qualitative approach. [Greek title: Πανεπιστημιακή Παιδαγωγική στην Ελλάδα, μια ποιοτική προσέγγιση]. *Educ@tional Circle*, 7(2), 9-21. Available at http://www.journal.educircle.gr/images/teuxos/2019/teuxos2/teyxos_7_2_1.pdf, (08-03-2020)
- Biglan, A. (1973). Characteristics of Subject Matter in Different Academic Fields. *Journal of Applied Psychology* 57(3), 195-203.
- Bissell, N.A., & Lemons, P.P. (2006). A New Method for Assessing Critical Thinking in the Classroom. *BioScience*, 56(1), 66-72.

- Blessinger, P. (2017). Transforming higher education's creative capacity. *University World News*. Διαθέσιμο στο <https://goo.gl/xG4haa>, τελευταία πρόσβαση 13/07/2018.
- Borregim N., Froyd, J. E., & Hall, T. S. (2010). Diffusion of engineering education innovations: A survey of awareness and adoption rates in U. S. engineering departments. *Journal of Engineering Education*, 99(3), 185-207.
- Brommesson, D., Erlingsson, G., Karlsson Schaffer, J., Ödalen, J., & Fogelgren, M. (2016). *Att möta den högre utbildningens utmaningar*. Institutet för arbetsmarknads- och utbildningspolitisk utvärdering (IFAU): RAPPORT 2016:4.
- Clark, M. C. (1993). Transformational Learning. In S. B. Merriam (Ed.), *An update on adult learning theory* (pp. 47-56). New Directions for Adult and Continuing Education, no. 57, spring 1993 8. San Francisco: Jossey-Bass Publishers.
- Coaldrake, P., & Stedman, L. (1999). *Academic work in the twenty-first century: Changing roles and policies*. Canberra: Australian Higher Education Division, Dpt. of Education, Training and Youth Affairs.
- Coaldrake, P., & Stedman, L. (1999). *Academic work in the twenty-first century: Changing roles and policies*. Canberra: Australian Higher Education Division, Dpt. of Education, Training and Youth Affairs.
- Court, S. (2014). *An Analysis of Student-Staff Ratios and Academics' Use of Time and Potential Links with Student Satisfaction*. Higher Education Statistics Agency Transparent Approach to Costing survey 2009-10. Available at <https://goo.gl/EdYbDK>, (05.07.2018).
- European Commission, Directorate General for Research & Innovation, Directorate B - European Research Area Skills, (2011). Available at <https://goo.gl/7aaBfg>, (05.07.2018).
- Gibbs, G., & Coffey, M. (2004). The impact of training of university teachers on their teaching skills, their approach to teaching and the approach to learning of their students. *Active Learning in Higher Education*, 5, 87-100.
- Goffe, W. L., & Kauper, D. (2014). A survey of principles instructors: Why lecture prevails? *Journal of Economic Education*, 45(4), 360-375.
- Gougoulakis, P. & Oikonomou, A. (2014). 'University Pedagogy' [Greek title: Πανεπιστημιακή Παιδαγωγική]. *Educ@tional Circle*, 2(1), 9-48. Available at <https://goo.gl/L4WWNB> (08.03.2020).
- Gougoulakis, P. (2016). "University Pedagogy in practice. Organization, support and development of didactic training of University teachers" [Greek title: «H

- Πανεπιστημιακή Παιδαγωγική στην πράξη. Οργάνωση, στήριξη και ανάπτυξη της διδακτικής κατάρτισης των Πανεπιστημιακών δασκάλων». In: K. Kedraka, (ed.). *University Pedagogy: Education and teaching in Higher Education, a terra incognita?* Alexandroupolis: Department of Molecular Biology & Genetics, Democritus University of Thrace, Proceedings, p. 55-73, Available at <https://goo.gl/PvnNme>, 05.07.2018.
- Gougoulakis, P. (2017a). 'Educating Scientists: Philosophy and Practice of University Pedagogy'. *Academia – A publication of the Higher education Policy network*, No 8 (2017), pp. 35-75 <http://academia.lis.upatras.gr/index.php/academia/article/view/2794>
- Gougoulakis, P. (2017b). "What is 'higher' in Higher Education? Documentation of university teachers' pedagogical competence (professional teaching portfolio). [Greek title: "Τι είναι «ανώτερο» στην Ανώτατη Εκπαίδευση; Τεκμηρίωση της παιδαγωγικής επάρκειας του πανεπιστημιακού δασκάλου (professional teaching portfolio)]. *GOOD EDUCATIONAL PRACTICES: Critical thinking and Creativity*. Proceedings. Athens: Hellenic Adult Education Association, pp. 828-841.
- Henderson, C., Dancy, M., & Niewiadomska-Bugaj, M. (2012). Use of research-based instructional strategies in introductory physics: Where do faculty leave the innovation-decision process? *Physical Review Special Topics - Physics Education Research*, 8, 1-15.
- High Level Group on the Modernisation of Higher Education, (2013). *REPORT TO THE EUROPEAN COMMISSION ON Improving the quality of teaching and learning in Europe's higher education institutions*, June 2013. Available at <https://goo.gl/4d5bFc>, (05.07.2018).
- Hung, W., Jonassen, D. H., & Liu, R. (2008). Problem-based learning. *Handbook of research on educational communications and technology*, 3, 485-506.
- Illeris, K. (2014). Transformative learning and identity. *Journal of Transformative Education*, 12(2), 148-163.
- Illeris, K. (2015). Transformative learning in higher education. *Journal of Transformative Learning*, 3(1), 46-51.
- Illeris, K. (2016). *How we learn. Learning and non learning in school and beyond*. [Greek title: *Ο τρόπος που μαθαίνουμε. Οι πολλαπλές διαστάσεις της μάθησης στην τυπική και άτυπη εκπαίδευση*]. Αθήνα: Μεταίχμιο.
- Kanellopoulou, Ch. (2013). *Constructive Learning Environments with emphasis on Activity Theory and Learning Management Systems*. [Greek title: *Εποικοδομητικά*

- Περιβάλλοντα Μάθησης με έμφαση στη Θεωρία της Δραστηριότητας και Συστήματα Διαχείρισης Μάθησης]. (Postgraduate Thesis in Technology Didactics and Digital Systems). Piraeus: University of Piraeus.
- Kedraka, K. (2016). University Pedagogy: Past, Present and Future. [Greek title: Πανεπιστημιακή Παιδαγωγική: Παρελθόν, Παρόν και Μέλλον.] In K. Kedraka (ed), *Proceedings of the Symposium: "University Pedagogy: Education and Teaching in Tertiary Education, a Terra Incognita?"*, pp. 21-39. Alexandroupoli: Democritus University of Thrace. Available at <http://panepistimiaki-paidagogiki.gr/praktika/praktika2016.pdf>, (15.07.2018).
- Kedraka, K., & Dimasi, M. (2016). "Teaching in Higher Education: Obligation, burden or privilege?" [Greek title: Διδάσκοντας στην Τριτοβάθμια Εκπαίδευση: Υποχρέωση, αγγαρεία ή προνόμιο]. Paper presented in the Proceedings of the 1st International Congress of Applied Experiential Teaching, Drama, 27-29 November 2015, pp. 172-179. Available at <https://goo.gl/YDD1Wm>, (05.07.2018).
- Kedraka, K., & Rotidi, G. (2017). "University Pedagogy: A New Culture is Emerging in Greek Higher Education." *International Journal of Higher Education*, 6(3), 147 - 153. Available at <https://doi.org/10.5430/ijhe.v6n3p147>, (15.07.2018).
- Keegan, P. (2011). Transformative e-Learning and Teaching in Mandatory Tertiary Education. *Asian Social Science*, 7(11), 66-74.
- Kokkos, A. (2010). Critical Reflection: A Critical Issue. [Greek title: Κριτικός Στοχασμός: Ένα κρίσιμο ζήτημα]. In D. Vergidis and A. Kokkos (Ed.), *Adult Education: International Approaches and Greek Routes* [Greek title: Εκπαίδευση Ενηλίκων: Διεθνείς Προσεγγίσεις και Ελληνικές Διαδρομές], pp. 65-93. Athens: Metehmio.
- Kokkos, A. (2011). "Transformational Learning in Europe: A Bibliographic Overview of Theoretical Approaches." [Greek title: Η Μετασχηματίζουσα Μάθηση στην Ευρώπη: Βιβλιογραφική Επισκόπηση των Θεωρητικών Προσεγγίσεων]. *Adult Education*, 22, 5-12.
- Kokkos, K. (2016). Towards a Multidimensional Way of Learning in Higher Education. [Greek title: Προς έναν πολυδιάστατο τρόπο μάθησης στην Τριτοβάθμια Εκπαίδευση]. In K. Kedraka (ed), *Proceedings of the Symposium: "University Pedagogy: Education and Teaching in Tertiary Education, a Terra Incognita?"*, pp. 40-54. Alexandroupoli: Democritus University of Thrace. Available at <http://panepistimiaki-paidagogiki.gr/praktika/praktika2016.pdf>, (15.07.2018).

- Kugel, P. (1993). How professors develop as teachers. *Studies in Higher Education* 18, 315-328.
- Law 3374/2005: ΦΕΚ-Α-189, 2 Αυγούστου 2005, Νόμος 3374/2005. *Διασφάλιση της ποιότητας στην ανώτατη εκπαίδευση. Σύστημα μεταφοράς και συσσώρευσης πιστωτικών μονάδων - Παράρτημα διπλώματος.*
- Law 4485/2017: ΦΕΚ-Α-114, 4 Αυγούστου 2017, Νόμος 4485/2017. *Οργάνωση και λειτουργία της ανώτατης εκπαίδευσης, ρυθμίσεις για την έρευνα και άλλες διατάξεις.*
- Lee, A. (2016). From teaching to learning - Leading change at a large research-intensive university: A personal reflection. *Asian Journal of the Scholarship of Teaching and Learning*, 6(2), 129-142.
- Lindberg, L. (1994). Akademiska studier och akademisk undervisning - k nnetecknande drag. In S. Franke-Wikberg et al. (Eds.) *Vetandets v gar - Perspektiv p  universitet, vetenskap och utbildning* (pp. 58-78). [Routes of knowing - Perspectives on universities, science and education]. Lund: Studentlitteratur.
- Macdonald, R. H., Manduca, C. A., Mogk, D.W., & Tewksbury, B. J. (2005). Teaching methods in undergraduate geoscience courses: Results of the 2004 On the Cutting-Edge Survey of U.S. faculty. *Journal of Geoscience Education*, 53(3), 237-252.
- MacKinnon, S. L. (2017). "The curiosity project": Re-igniting the desire to inquire through intrinsically-motivated learning and mentorship. *Journal of Transformative Learning*, (4)1, 4-21.
- Marton, F. Saljo, R. (1976b). On qualitative differences in learning (II). Outcome as a function of the learner's conception of the task. *British Journal of Educational Psychology* 46, 115-127.
- Marton, F., & Saljo, R. (1976a). On qualitative differences in learning (I). Outcomes and processes. *British Journal of Educational Psychology* 46, 4-11.
- McGonigal, K. (2007). "Teaching for Transformation: From Learning Theory to Teaching Strategies." [Greek title: Διδασκαλία για το μετασχηματισμό: από τη μαθησιακή θεωρία στις διδακτικές στρατηγικές]. *Adult Education*, 12, 12-15.
- Mezirow, J. (1991). *Transformative Directions of Adult Learning*. San Francisco: Jossey-Bass.
- Mezirow, J. (1998). On Critical Reflexion. *Adult Education Quarterly*, 48(3), 185-198.
- Mezirow, J. (2009). An Overview on Transformative Learning. In K. Illeris (Ed.), *Contemporary Theories of Learning* (pp. 90-105). London and New York: Routledge.

- Navid, E. L., & Einsiedel, E. F. (2015). Synthetic biology in the Science Café: what have we learned about public engagement? *Journal of Science Communication* 11(4), 1-9. Διαθέσιμο στην ιστοσελίδα: <https://goo.gl/N65f5i>, τελευταία πρόσβαση 05.07.2018.
- Oikonomou, A. & Gougoulakis, P. (2016). "Pedagogical and didactic training of University teachers." [Greek title: Παιδαγωγική και διδακτική κατάρτιση των εκπαιδευτικών του Πανεπιστημίου]. *Νέος Παιδαγωγός* [Neos Pedagogos], 7, 74-90. Available at <http://neospaidagogos.gr/periodiko> (05.07.2018).
- Oikonomou, A., Menexes, G. & Stergiou, E. (unpublished study). *University Pedagogy in Greece, Investigation of the Views of Graduates of Greek Higher Education Institutions*. [Greek title: Πανεπιστημιακή Παιδαγωγική στην Ελλάδα, διερεύνηση των απόψεων αποφοίτων Ελληνικών Τριτοβάθμιων Ιδρυμάτων].
- Pandano-Rokou, M.F. & Sakellaridis, O. (2001). Teaching models for use in distance learning in a customized extracurricular environment. [Greek title: Διδακτικά μοντέλα για χρήση στην Πανεπιστημιακή διδασκαλία από απόσταση σε προσαρμοσμένο υπερμεσικό περιβάλλον]. Paper presented at the *1st Panhellenic Conference on Open and Distance Education*, Patra: Hellenic Open University.
- Postareff, L., Lindblom-Ylänne, S., & Nevgi, A. (2008). A follow-up study of the effect of pedagogical training on teaching in higher education. *Higher Education* 56, 29-43.
- Ramsden, P. (1992). *Learning to Teach in Higher Education*. London and New York: Routledge.
- Rotidi, G. (2016). Critical Transformations regarding Teaching Processes in Higher Education: Presentation of Two Research Tools. [Greek title: Κριτικά στοχαστικές διεργασίες διδασκόντων στην Τριτοβάθμια Εκπαίδευση: Παρουσίαση δύο ερευνητικών εργαλείων]. In K. Kedraka (ed), *Proceedings of the Symposium: "University Pedagogy: Education and Teaching in Tertiary Education, a Terra Incognita?"*, pp. 130-143. Alexandroupoli: Democritus University of Thrace. Available at <http://panepistimiaki-paidagogiki.gr/praktika/praktika2016.pdf>, (15.07.2018).
- Rotidi, G., Collins, J.B., Karalis, T. & Lavidas, K. (2017). Using the Teaching Perspectives Inventory (TPI) to examine the relationship between teaching perspectives and disciplines in higher education. *Journal of Further and Higher Education*, 41(5), 611-624.

- Roy, A., & Macchiette, B. (2005). Debating the Issues: A Tool for Augmenting Critical Thinking Skills of Marketing Students. *Journal of Marketing Education*, 27(3), 264-276.
- Schön, A. D. (1983). *The reflective practitioner: How professionals think in action*. USA: Basic Books.
- Schön, A. D. (1987). *Educating the reflective practitioner*. San Francisco: Jossey-Bass.
- Schuman, R. (2015). *Professors shouldn't teach to younger versions of themselves*. Available at <https://goo.gl/MnCMXT>, (05.07.2018).
- Smith, D. J., & Valentine, T. (2012). The use and perceived effectiveness of instructional practices in two -year technical colleges. *Journal on Excellence in College Teaching*, 23(1), 133-161.
- Sonnerby, P (2012, 8 Οκτωβρίου). Tre års högskolestudier borde räcka för de flesta. *Dagens Nyheter. DN-debatt*. Available at <https://www.dn.se/debatt/tre-ars-hogskolestudier-borde-racka-for-de-flesta/>, (06-07-2018).
- Sparks project (2018). *THE REVERSED SCIENCE CAFÉ, BRUSSELS JANUARY 23, 2018. Summary for participants, MARCH 2018*. Brussels: Sparks project, Grant Agreement No. 665825. Available at <https://goo.gl/Xezbxc>, (05.07.2018).
- Stanovich, K. E., & Stanovich, P. J. (2010). A framework for critical thinking, rational thinking, and intelligence. In D. Preiss & R. J. Sternberg (Eds.), *Innovations in educational psychology: Perspectives on learning, teaching and human development*, pp. 195-237. New York: Springer.
- Stanovich, K. E., & Stanovich, P. J. (2010). A framework for critical thinking, rational thinking, and intelligence. In D. Preiss & R. J. Sternberg (Eds.), *Innovations in educational psychology: Perspectives on learning, teaching and human development*, 195-237. New York: Springer.
- Taylor, E. W., & Cranton, P. (2012). *The handbook of transformative learning: theory, research, and practice* (1st ed.). San Francisco, CA: Jossey-Bass.
- Trigwell, K., Prosser, M., & Waterhouse, F. (1999). Relations between teachers' approaches to teaching and students' approaches to learning. *Higher Education* 37, 57-70.
- UNESCO (1998). *World Declaration on Higher Education for the Twenty-First Century: Vision and Action*. Available at <https://goo.gl/sjt2ZF> (13/07/2018).

Vogelsang, M. R. (1993). *Transformative experiences of female adult students*. (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (AAT 9306702).

Zull, J. E. (2006). Key Aspects of How the Brain Learns. *New Directions for Adult and Continuing Education*, 110, 3-9.

Μανέτας, Γ. (2017). *Τη νύχτα που αγκάλιασε το Ginkgo biloba*. [“The night he embraced Ginkgo biloba”]. Αθήνα: Αιώρα.

Stergiou, E. (2017). *University Pedagogy: Investigating the Views of Greek University Graduates. Graduate Thesis within the framework of ASPETE’s Annual Pedagogical Training Program*. [Greek title: Πανεπιστημιακή Παιδαγωγική: διερεύνηση των απόψεων πτυχιούχων Ελληνικών Α.Ε.Ι. Πτυχιακή Εργασία στο πλαίσιο του Ετήσιου Προγράμματος Παιδαγωγικής Κατάρτισης της ΑΣΠΑΙΤΕ]. Thessaloniki: ASPETE.