

Placing the Cyprus Higher Education Landscape on the Doctoral Map of Europe

Loizos Symeou¹, Alexandros Heraclides²
European University Cyprus

Abstract

Despite the very recent history of university education in the Republic of Cyprus, an island nation with less than a million population, the country might be a unique case in the European higher education area in terms of the proportion of universities to its population and area. Similarly, as pointed out in this chapter, the proportionate number of doctoral programmes offered in the Republic of Cyprus is surprisingly high and cover most major disciplines, ranging from Business, Humanities and the Social Sciences, to Natural and Applied Sciences. The recently established Cyprus Agency of Quality Assurance and Accreditation in Higher Education (CY.Q.A.A.), responsible for ensuring and supporting the quality of higher education, set a series of common criteria on the structure and operation of doctoral studies, which apply for the accreditation and offering of any such programme of study in Cyprus. Despite these common criteria, this chapter depicts the existing variation in major characteristics of currently offered doctoral programmes as regards doctoral admission and completion requirements, structure, and other. This chapter claims that a higher level of homogeneity in the structure and qualitative characteristics of doctoral programmes, as well as a substantial increase in national doctoral funding schemes, would have several benefits for doctoral education in Cyprus, should the aim is for the country to become, the envisioned higher education and research hub in Europe and the Middle East.

Keywords

Cyprus, university education, doctoral studies, doctoral programmes, criteria, requirements.

¹ L.Symeou@euc.ac.cy

² A.Heraclides@euc.ac.cy

Introduction: University Education in the Republic of Cyprus

The Republic of Cyprus has a very short life becoming independent after the British colonial rule in 1960. The new independent state has two official languages, Greek and Turkish, becoming a full member of the European Union (EU) in May 2004.

With the constitution of the Republic of Cyprus, two separate communal educational systems, one for each constitutional communities of Cyprus, were established: the Greek-Cypriot and the Turkish-Cypriot educational systems. Thus, the two systems have been distinct since the establishment of the Republic in 1960. Since Turkey's invasion of the island in 1974, 37% of the country is occupied, leading to the division of the two Cypriot communities. This chapter refers to the Greek-Cypriot educational system under the jurisdiction of the Republic of Cyprus; no reference is made to the Turkish-Cypriot educational system, controlled by Turkey.

From its inception to date, the Greek-Cypriot educational system has been a highly centralized system, characterized by centralized structures of administration and policymaking. The first post-secondary/higher education institution (Cyprus College) was established a year after the country's independence in 1961. Despite this early development, highest/university education evolved rather slowly. Through a complex political and ideological rhetoric that lasted a few decades, the establishment of the first state university, the University of Cyprus, was established in 1989. The University of Cyprus received its first students in 1992. Another two state universities were then established (the Open University Cyprus in 2002, which received its first students in 2006; and the Cyprus University of Technology in 2004, which received its first students in 2007). Finally, after the formation of the "Private Universities (Establishment, Operation and Control) Law, 2005" for the approval of operation for private/non-state universities, the first three private universities were established receiving their first students in 2007, namely European University Cyprus, Frederick University, and University of Nicosia, followed more recently by others.

Currently, the higher education landscape in Cyprus consists of a total of 13 universities (3 state and 10 private universities), 2 private non-profit research and academic centres (The Cyprus Institute and The Cyprus Institute of Neurology & Genetics), as well as 37 private colleges and 5 public institutions of higher education. For a small country of less than a million inhabitants, this creates a unique case in the higher education area of Europe, in terms of the proportion of number of higher education

institutions to country population and space, with potential issues stemming from this phenomenon.

1. Doctoral Education in context of the European Higher Education Area and the European Qualifications Framework

The Bologna Process, a series of agreements between European countries, aims to increase coherence to higher education systems across Europe by enhancing comparability in the standards and quality of higher-education qualifications (European Commission, b.). The Bologna Process established the European Higher Education Area (EHEA) under the Lisbon Recognition Convention, with the scope to facilitate mobility for students, academics and researchers, making higher education more inclusive and accessible in its 48-member countries and achieving comparable and compatible higher education systems throughout Europe. The ultimate aim is to make higher education in Europe more attractive and competitive worldwide (European Commission, b.). All participating countries in the EHEA are expected to follow a three-cycle higher education system, comprising bachelor's (first cycle), master's (second cycle) and doctoral (third cycle) studies. Most importantly, EHEA countries have agreed on the mutual recognition of qualifications and learning periods completed at other universities in other EHEA participating countries and the implementation of quality assurance systems and processes, to strengthen the quality and relevance of teaching and learning in higher education.

The agreed common framework for quality assurance systems in the EHEA is the Standards and Guidelines for Quality Assurance (ESG). The ESGs were adopted by European government ministers in charge of higher education in their revised version in 2015. The European Quality Assurance Register for Higher Education (EQAR) is the EHEA's official register of QAAs, listing those that substantially comply with the ESGs. Members of the EHEA are currently working to develop a revised version of the ESGs by 2026, aiming at ensuring more flexible and responsive quality assurance, driving quality enhancement, building trust in institutions and quality assurance agencies, and protecting the interests of students. The Council of Europe Ad Hoc Working Group on Automatic Recognition has also been working since 2022 to assess existing diverse practices in the EHEA and looking into how the automatic recognition of qualifications can be better promoted, including by establishing a legal text on automatic recognition of qualifications.

The European Qualifications Framework (EQF) was adopted by the European Parliament and Council in 2008 (later revised in 2017), with the purpose of streamlining national qualifications, including those obtained from formal higher education, making them more comprehensible transparent, and comparable, across countries (European Commission, c.). The ultimate goal of EQF is to enhance mobility of learners and workers between EU countries and beyond, promoting thus lifelong learning and professional development across Europe.

The EQF covers all types and all levels of qualifications, in ascending order according to the level of proficiency, with level 1 as the lowest and level 8 as the highest. Level 8 (doctoral or equivalent level), covers higher education programmes designed primarily to lead to an advanced research qualification. Programmes at this level comprise advanced studies, involving original research and are typically offered only by research-oriented higher education institutions. EQF are compatible with the overarching framework of qualifications of EHEA. The descriptor for cycle 3 corresponds to the learning outcomes for EQF level 8.

The requirements for the use of specific learning outcomes under the EQF makes it clear what a person holding a specific degree is expected to know, understand, and is able to do in terms of skills and competences. According to the EQF, learners completing level 8 education are expected to have knowledge at the most advanced frontier of a field of work or study and at the interface between fields. They are also expected to have the most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice. Finally, they should demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research (European Commission, a).

EU Member States and 11 other countries have committed to implementing the EQF, under the National Qualifications Frameworks (NQF).

In a global context, and the growing internationalisation of higher education, Global Rankings and Quality Assurance have exponentially increased their prominence and value of Higher Education Institutions worldwide. Despite critics questioning the current extent to which global university rankings are serving as a means of assessing or assuring institutional quality and encourage improvements in the quality of higher education institutions, it seems that cross-border quality assurance is a powerful tool for

improving the reliability of global rankings, promoting the internationalisation of higher education, and driving up standards.

2. Aims and Methodology

This chapter aims at mapping the current doctoral education in the Republic of Cyprus and depicting major commonalities and variations of doctoral degrees in the country, as well as discussing how these comply with national top-down requirements and European and international standards. In discussing its findings, the chapter tries to take a position as to how a higher level of homogeneity between doctoral programmes and compliance with national regulations, as well as sufficient funding for doctoral research, could have benefits for the timely debate on the country's vision to become an education and research hub in Europe and the Middle East.

The mapping presented in the chapter is an outcome of a systematic search for information on doctoral programmes in the Republic of Cyprus, primarily from two sources: (a) The publicly available information provided on the website of the Cyprus Agency of Quality Assurance and Accreditation in Higher Education (CY.Q.A.A.) as list of 'Doctorate Degree Accredited Programmes' (available at <https://dipae.ac.cy/index.php/en/accreditation-en/accredited-programmes-doctorate-en>), and (b) The official websites of all academic institutions offering doctoral programmes in the Republic of Cyprus.

Furthermore, since this chapter also aims to discuss its findings regarding doctoral education in Cyprus in a European context, namely by comparing and contrasting relevant regulations, forms and structures of the Cypriot doctoral programmes to corresponding programmes from different European countries, information was also sought from the European University Association, and in particular the EUA Council for Doctoral Education (EUA-CDE), which aims to strengthen the doctoral research capacity of European universities. Additionally, for country-specific information not available in the abovementioned sources, official national sources (e.g. via Education Ministries/Departments) from different European countries were sought, as well as other relevant sources containing official data on doctoral education in a European context (e.g. www.prospects.ac.uk, www.research-in-germany.org, www.campusfrance.org, www.free-apply.com, and others).

3. Mapping Doctoral Education in Cyprus

Based on Cypriot law, doctoral programmes of study can only be offered by university institutions and non-profit research and academic centres. Currently, doctoral programmes of study are offered in 9 out of the 13 existing universities in the country and in two private non-profit research and academic centres. By law, colleges are not allowed to offer doctoral programmes. At the time of writing this chapter, 107 different doctoral programmes were offered in the Republic of Cyprus, with the vast majority of these leading to the degree of Doctor of Philosophy (Ph.D.). The following table presents the doctoral programmes of study offered in the Republic of Cyprus, by higher education institution.

Table 1: *Doctoral programmes offered in the Republic of Cyprus by higher education institution*

Name of Institution	Type of Institution	Number of doctoral programmes offered
University of Cyprus	Public University	38
University of Nicosia	Private University	19
European University Cyprus	Private University	14
Cyprus University of Technology	Public University	12
Frederick University	Private University	11
Neapolis University Paphos	Private University	6
Philips University	Private University	1
Cyprus School of Molecular Medicine	Private Non-profit Research and Academic Centre	3
The Cyprus Institute	Private Non-profit Research and Academic Centre	3
Total		107

In comparison to other European countries, it appears that the Republic of Cyprus offers by far the highest number of doctoral programmes per unit population. Table 2 below presents an estimate of the number of doctoral programmes offered in the largest European countries by population (including Germany, France, UK, Italy, Spain), in countries with moderate population size (including Sweden, the Czech Republic, Greece)

and in countries with smaller populations, similar to that of Cyprus (e.g. Estonia, Latvia), or even smaller (Iceland, Malta).

Table 2: Selected European countries by number of doctoral programmes offered

Country	Country population*	Total number of doctoral programmes offered**	Number of doctoral programmes offered by 100,000 population
Republic of Cyprus	925,000	107	11.6
Iceland	364,000	17	4.7
Latvia	1,801,000	46	2.6
Czech Republic	10,837,000	220	2.0
Estonia	1,194,000	22	1.8
Greece	10,461,000	190	1.8
France	68,375,000	1212	1.8
Spain	47,280,000	787	1.7
UK	68,459,000	1101	1.6
Sweden	10,590,000	122	1.2
Italy	60,965,000	575	0.9
Malta	470,000	3	0.6
Germany	84,119,000	437	0.5

*Country population estimates retrieved from CIA - The World Factbook (<https://www.cia.gov/the-world-factbook/field/population/country-comparison/>)

**Number estimates retrieved from www.free-apply.com

As demonstrated from the specific list of European countries, by far the highest number of doctoral programmes per unit population is offered in the Republic of Cyprus (11.7 per 100,000 inhabitants), followed by Iceland (4.7 per 100,000 inhabitants), and Latvia (2.6 per 100,000 inhabitants).

Doctoral programmes currently offered in the Republic of Cyprus, cover a wide range of academic fields, ranging from Business, Economics and related disciplines, to Humanities and the Social Sciences, to Natural and Applied Sciences. The following table

presents the number of doctoral programmes offered in the Republic of Cyprus, by major academic discipline and by language of study.

Table 3: *Doctoral programmes offered in the Republic of Cyprus, by academic discipline / general field*

Academic disciplines of doctoral programmes of study offered	Offered in Greek language (n)	Offered in English language (n)	Offered in both Greek and English (n)	Total (n)	Total (%)
Natural and Applied Sciences	10	23	14	47	44
Social Sciences	18	6	4	28	26
Humanities	6	5	7	18	17
Business, Economics, and Management	3	6	5	14	13
Total	37	40	30	107	

As demonstrated in Table 3, the majority of doctoral programmes (44% of total) are offered in the Natural and Applied Sciences field, in disciplines such as Medicine, Biomedical Sciences, Nutrition and Exercise Science, as well as Engineering and Computer Science. Social Sciences come second in popularity (26% of total programmes offered), in disciplines such as Psychology, Sociology, and Education Sciences. Humanities come third in the number of programmes offered (17% of total), in disciplines such as Law, Arts, Communication, Cultural Studies, and Language Studies, as well as History and Archaeology. Finally, a small number of doctoral programmes is offered in the Business, Economics, and Management field (13% of total).

Interestingly, doctoral programmes of study currently offered, appear to aim not only at Greek-speaking candidates from Cyprus and Greece but also international students. Out of the 107 different doctoral programmes offered in the academic year 2023-24, 28% were offered in both Greek and English, while 37% of programmes were offered only in English. A further 35% were offered solely in Greek. This highlights the active attempt of Cypriot higher education institutions to attract candidates from abroad, as well as to enable local candidates to pursue an international career.

4. Scope and Framework of Doctoral Education in Cyprus

4.1 The Cyprus Qualifications Framework

The National Qualifications Framework of the Republic of Cyprus, namely Cyprus Qualifications Framework (CyQF) was established in 2012 adopting the 8 levels of the European Qualifications Framework (EQF). The CyQF encompasses the development and implementation of procedures that relate to the quality assurance and the award of qualifications in the Republic of Cyprus. It also acts as a framework for the categorization of qualifications according to skills, knowledge and competencies, taking into account the traditionally and socially acceptable norms and frameworks of Cyprus, as well as the reservations regarding the validation of informal and non-formal learning.

4.2 The Cyprus Agency of Quality Assurance and Accreditation in Higher Education

The establishment of the Cyprus Agency of Quality Assurance and Accreditation in Higher Education (CY.Q.A.A.) in 2015, which is responsible for ensuring the quality of higher education in Cyprus and for the support of the processes provided by the relevant legislation, for the continuous improvement and upgrading of higher education institutions and their programmes of study, set a series of common criteria on the structure and operation of doctoral studies, which apply for the accreditation of any programme of study in the Republic of Cyprus.

In a thematic analysis report of 31 doctoral programmes from 5 different institutions in Cyprus between 2016 to 2020 (CY.Q.A.A., 2020), CY.Q.A.A. concluded that in general, the doctoral programmes of the Cypriot universities are operating in the same framework which consisted to the following: i. with the completion of all the programme requirements, a doctoral title is awarded; ii. the doctoral programmes are based on the European Credit Transfer System points (ECTS) with one (1) ECTS normally corresponding to a 25-30 hours' workload per semester and with students registering in maximum 30 ECTS per semester; iii. doctoral programmes have all a course part (with compulsory and elective courses), a comprehensive examination and a research part (which comprises of the preparation and presentation of the doctoral research proposal, the writing of the doctoral dissertation, its defence, etc); iv. the minimum period of study for a doctoral programme is six (6) semesters/three (3) years. The maximum period of study for a doctoral programme is sixteen (16) semesters/eight (8) years, with provisions for postponement and/or intermission of a doctoral student's studies not

included in the normal period of study; v. admission requirements are specified (e.g., whether candidates must hold a Master degree or a Bachelor degree, whether candidates must hold a degree accordingly in a subject related to their proposed field of study, the required knowledge of a foreign language, the professional experiences, etc.) and admission procedures (including submission of application, assessment and selection procedures) are clearly described (e.g. whether applicants are also required to have a personal interview or/and take a written examination).

The current regulations of CY.Q.A.A. aim to provide a framework of how doctoral programmes of studies should operate in the Republic of Cyprus. CY.Q.A.A. has a number of announcements aiming at providing supplementary or clarifying guidelines for doctoral level study programmes of study. For instance, during its 18th Meeting (CY.Q.A.A., May 15-16, 2017), CY.Q.A.A. informed the higher education institutions operating in the Republic, that for the accreditation procedure of a doctoral level degree the following information should accompany the accreditation documentation:

- Student Admission Criteria and Terms: Clearly defined specific admissions criteria and details on the selection procedures need to be communicated to doctoral candidates.
- Programme requirements: The requirements for completion of a given doctoral programme (including the stages of completion, the minimum and maximum time of completing the programme, the examinations, the procedures for supporting and accepting the student's doctoral proposal, the criteria for obtaining the doctorate degree), should be analysed and published by each institution.
- Guidelines for writing the doctoral dissertation: Specific and clear guidelines for the doctoral proposal and dissertation write-up (including detailed specifications regarding chapters, sub-chapters, bibliography, word limit, cover/introductory pages and the binding, as well as reference to the doctoral dissertation Evaluation Committee) need to be communicated to doctoral students.
- Information on plagiarism check: A plagiarism check system is mandatory, as well as the provision of information to students on the stages and check for plagiarism and the consequences in case of such misconduct, which all need to need to be communicated to doctoral students.

- Policy in reference to the Doctoral Advisory/Supervisory Committee for the support of the doctoral student's' research proposal and dissertation and the Doctoral Dissertation Evaluation Committee: The composition, procedures and criteria for the formation of the two committees should be clearly outlined and communicated to doctoral students.
- Supervision and evaluation: The minimum qualifications of all members of the Advisory/Supervisory Committee and the Doctoral Dissertation Evaluation Committee should be clearly displayed and communicated, as well as the duties of the Advisory/Supervisory Committee Chairperson and other members towards the student must be determined (including regular meetings, reports per semester and feedback from supervisors, support for writing articles and participating in conferences).
- Number of doctoral students per supervisor: The number of doctoral students that each supervisor is responsible for, must be clearly defined and regulated.
- Dissertation Repository: The process of submitting the dissertation to the university library must be clearly communicated.

In another announcement in 2021, CY.Q.A.A. (2021, May 13), reminded the institutions offering doctoral programmes of study that in order for doctorate programmes which are ranked at level 8 on the European Qualifications Framework (EQF) to meet the European specifications for their certification on the research skills and research work of both instructors and doctoral candidates, institutions have an obligation to establish mechanisms and procedures to support the research activity of students who are in doctoral level programmes of study. More specifically, CY.Q.A.A. stressed that based on the EQF, institutions must take special care in terms of specialized academic/scientific knowledge and development of the capacity of doctoral candidates for research activity which should be based on innovation, research autonomy, academic integrity and the doctoral student commitment to developing new ideas. Therefore, institutions should be able to present evidence of research of their doctoral candidates during their doctoral studies (e.g. publications at least in conference proceedings).

5. Towards a common set of criteria for the structure and operation of doctoral programmes in Cyprus - an overview

In order to provide a more thorough quantitative overview on the main characteristics of the different doctoral programmes offered in the Republic of Cyprus, as regards their structure, regulations, and overall operations, a systematic data retrieval and subsequent analysis was conducted for the purposes of this chapter. A secondary aim of this analysis was to reflect on how the national framework and guidelines are currently implemented in the 9 institutions offering doctoral studies based on the public information available on the CY.Q.A.A. website and each institution's website. The table below provides a quantitative overview of different characteristics pertaining to the structure, organisation and operation of doctoral programmes in the Republic of Cyprus, followed by a relevant analysis.

Table 4: *Characteristics of doctoral programmes offered in the Republic of Cyprus, as regards their structure, organisation and operation*

	Percentage (n)
Type of institution	
Public	47% (50)
Private (for profit)	48% (51)
Private (non-profit)	5% (6)
General field	
Natural and Applied Sciences	44% (47)
Social Sciences	26% (28)
Humanities	17% (18)
Business, Management, and Economics	13% (14)
Language of study	
Greek only	35% (37)
English only	37% (40)
Greek and English	28% (28)
Admissions criteria – level of prior degree	
Undergraduate	33% (35)
Undergraduate + Postgraduate	67% (72)
Admissions criteria – requirement for proposal	
No	17% (18)
Yes	68% (73)
Yes (only for non-holders of postgraduate degree)	10% (11)

missing	5% (5)
Admissions criteria – requirement for English proficiency	
No	4% (4)
Yes	91% (98)
missing	5% (5)
Admissions criteria – requirement for recommendation letters	
No	25% (27)
Yes	70% (75)
missing	5% (5)
Admissions criteria – requirement for interview	
No	42% (45)
Yes	21% (23)
Optional	32% (34)
missing	5% (5)
Minimum duration of studies	
3 years	79% (85)
4 years	21% (22)
Maximum duration of studies	
4 years	2% (2)
5 years	3% (3)
6 years	15% (16)
8 years	80% (86)
Total ECTS	
180±2	48% (52)
210	1% (1)
240±2	48% (51)
345	1% (1)
missing	2% (2)
Compulsory taught courses	
No	10% (11)
Yes	76% (81)
Yes (exempt for holders of postgraduate degree)	11% (12)
missing	3% (3)
Compulsory Research Methodology course	
No	31% (33)
Yes	63% (67)
missing	6% (7)
Comprehensive Qualifying Exam	
No	23% (25)
Yes	73% (78)
missing	4% (4)
Dissertation structure	

Traditional (chapter-based)	87% (93)
Traditional and/or compilation of research papers	13% (14)
Requirement for publication(s)	
No	63% (67)
Yes	27% (29)
missing	10% (11)
Doctoral scholarship availability	
No	23% (25)
Yes – full or partial tuition fee coverage	38% (41)
Yes – tuition fee coverage + stipend	36% (38)
Yes – tuition fee coverage + stipend + research allowance	3% (3)
Opportunity of work with reimbursement for doctoral candidates	
No	40% (43)
Yes – as teaching assistants	57% (61)
Yes – as teaching or research assistants	3% (3)

5.1 Admission requirements:

Each programme's admission requirements appear either on each programme's webpage or on a general website of the institution indicating the admission requirements for the university's doctoral studies admission requirements, or both. Two universities and the two private non-profit research and academic centres have uniform general admission requirements. As Table 4 clearly demonstrates, admission requirements do not seem to be uniform between the different institutions offering doctoral programmes in the Republic of Cyprus, despite the fact that the national regulation Agency (CY.Q.A.A.) has set uniform criteria regarding both the structure and the workload involved in doctoral programmes (i.e. in the form of ECTS).

A variety of admission requirements apply amongst the institutions, with the most fundamental difference being the prior academic level (i.e. highest degree achieved) at admission. In particular, 72 doctoral programmes (67%) require applicants to have acquired a postgraduate degree at the admission stage, with the majority of programmes requiring that the postgraduate specialisation is in a field closely related to that of the doctoral programme applied for. On the contrary, 35 programmes (33%) are accepting prospective students without a postgraduate degree (i.e. just undergraduate degree holders).

Surprisingly, even though the majority of the doctoral programmes (73 out of 107; 68%), strictly require the submission of a research proposal at the admissions stage, it

appears that 11 programmes (10%) declare that the submission of a research proposal is optional, and 18 (17%) have no such requirement. For 5 programmes, no information on whether they require the submission of a research proposal was available.

More homogeneity seems to appear regarding the required proof of English language proficiency at the admissions stage. The vast majority of doctoral programmes currently offered (91%) have this as a compulsory requirement and in only 4% of the programmes this is optional. As above, 5 programmes do not provide any relevant information on their website. Differences also exist as regards the required level of English proficiency based on the Common European Framework of Reference for Languages (CEFR). The high proportion of doctoral programmes requiring English language proficiency may highlight the emphasis of Cypriot higher education institutions to enhance the learning experience of students, by ensuring their access to the international literature on their research topic/area, without any language barriers, rendering them more capable at pursuing their research at the highest possible level.

Lastly, the majority (75%) of the programmes require recommendation letters from academic or other referees at the admissions stage, while a personal interview with the doctoral applicants seems to be obligatory only in 23 programmes (21%) and optional in 34 programmes (32%), while the majority of the doctoral programmes have no personal interview requirement (45%)

5.2. Duration of doctoral studies and ECTS workload

Despite announcements of the national agency (CY.Q.A.A.) for a universal regulation for doctoral studies' duration (from 3 to 8 years), only around two thirds of the doctoral programmes (66) currently offered comply with this guideline. In particular, 21% of offered doctoral programmes have a minimum duration of 4 rather than 3 years, while 20% of programmes have a maximum duration of 4-6 years, rather than the maximum recommended of 8 years. This discrepancy between programmes as regards to the maximum duration of studies is a major one, not only because it is regulated by the relevant agency (C.Y.Q.A.A.), but also because it is unequivocally linked to the expected student workload (translated into ECTS as presented below), which should be uniform for all doctoral programmes offered in the country.

As expected from the differences in study duration noted above, variations also exist as regards the total ECTS requirements for the completion of doctoral programmes. Nearly half of offered doctoral programmes (48%) have a total requirement of 180 ECTS,

which is the minimum required by C.Y.Q.A.A. Interestingly, there is a relatively large proportion of doctoral programmes (48%) requiring 240 ECTS for their completion. The majority of these programmes however, allow ECTS to be transferred from previous postgraduate studies, while 4 programmes among them do not provide the option of transferring any ECTS from previous postgraduate studies. It should be noted that, evidently, 180-ECTS programmes admit candidates only with prior postgraduate education, while 240-ECTS programmes, also admit candidates with only undergraduate degree, for whom they require 240 ECTS for completion.

There are also sporadic cases of programmes requiring different number of ECTS, e.g. one programme requires 182 ECTS, one 210 ECTS, one 241 ECTS, and one 345 ECTS. Particularly the last group of programmes involving a non-uniform number of ECTS seem to unreasonably deviate from the number of ECTS required for doctoral education, as indicated by C.Y.Q.A.A. As regards to the programmes involving 240 ECTS, this could be justified from the fact that the majority of these, have the policy of waiving ECTS (most often 60) for holders of a postgraduate degree. This makes these programmes identical, as far as workload is concerned, with those programmes involving only 180 ECTS, which interestingly enough, only admit students with postgraduate education (i.e. as an admission requirement).

5.3. Taught courses

The relevant regulating governmental Agency, in its 83rd Summit (CY.Q.A.A., 2022, July 2) noted that it does not accredit doctoral programmes that do not include basic and advanced quantitative and qualitative research courses. In reviewing all 107 doctoral programmes offered in the Republic of Cyprus, it appears that the majority (76%) have at least one compulsory taught course as part of their curriculum. Another 12 doctoral programmes (11%) have taught courses as part of the curriculum, from which however prospective doctoral students may be exempted if they have a relevant postgraduate degree, or have passed already relevant postgraduate courses. Surprisingly, 10% of doctoral programmes have no taught course elements at all.

An investigation of the content of the taught courses offered, revealed that 67 programmes (63%) offer at least one course in Advanced Research Methodology, thus complying with the clear regulation of C.Y.Q.A.A. An alarming 31%, however, do not fulfil this critical requirement. It seems that this phenomenon is discipline-specific, as the majority of doctoral programmes not offering Research Methodology courses are not

coming from the Natural, Applied, or Social Sciences, but rather from Business, Economics, Management, and the Humanities. Although this would be expected at some degree due to the nature of research in these fields (i.e. not following the traditional scientific method usually taught in Research Methodology courses), the regulating Agency does not distinguish between disciplines, as regards to the requirement for such courses. This is a distinction that should probably be revisited and addressed by the national regulating Agency.

5.4. Comprehensive Qualifying Exam

Unlike the requirement for Research Methodology courses, the regulating governmental Agency does not require the inclusion of a comprehensive exam before progression to the actual research fieldwork. Despite this, the majority (73%) of the doctoral programmes offered in the Republic of Cyprus (80 out of 107) have a compulsory Comprehensive Qualifying Exam requirement, before submitting a doctoral dissertation proposal or progressing to the doctoral fieldwork. Interestingly, this is not typical in the majority of other European countries and is further discussed in a subsequent section of the current chapter.

5.5. Dissertation structure and requirements for graduation

Some doctoral programmes seem to allow for an alternative structure for doctoral dissertations, that is a compilation of scientific papers, in addition to the traditional, extended, chapter-based structure. From our analysis, it seems that only one academic institution has swiftly adopted this structure as an option, comprising 13% of all doctoral programmes in the country.

Furthermore, about one in four (27%) of offered doctoral programmes, have the additional requirement of at least one (1) peer-reviewed publication, over and above the submission and successful defence of an extended, chapter-based, doctoral dissertation. This discrepancy in publication requirements, is observed both between and within academic institutions, i.e. different doctoral programmes in the same institution might have different publication requirements.

5.6. Doctoral scholarships and funding opportunities

Adequacy of financials are, in many occasions, a pre-existing concern for pursuing doctoral studies. A variety of financial supports are currently in place in the doctoral programmes offered in the Republic of Cyprus. Despite this, 25 doctoral programmes (23%) offer no financial support for successful doctoral applicants, while 41 programmes (38%) provide full or partial tuition fees coverage. Additional 38 programmes (36%) have the possibility for a full scholarship, involving coverage of tuition fees plus a stipend for living expenses. Finally, just three (3) programmes offer full tuition fees coverage plus stipend for living expenses and annual research allowance. Given that the final category (full tuition coverage plus research allowance plus stipend) is usually the norm, rather than the exception, in doctoral education in most European countries, the fact that such complete financial support is essentially lacking in Cyprus, is surely a point of concern.

Furthermore, 60% of the doctoral programmes currently offered provide the opportunity for teaching and/or research assistance with reimbursement. More specifically, 57% of programmes offer the opportunity to doctoral students to be employed as teaching assistants and another 3% offer the opportunity to be employed as either teaching or research assistant. The remaining 43 programmes (40%) do not offer such opportunities.

6. Discussion

This section explores further, analyses, and discusses the current challenges in doctoral education in the Republic of Cyprus, as identified in the descriptive analysis presented in the previous sections. Based on our analysis, it seems that attention should be given to the following: (a) the high number of doctoral programmes offered in the country, particularly in the context of proper employability of graduates; (b) the relative lack of homogeneity between doctoral programmes, particularly as regards their structure and progression requirements, as well as evident examples of deviation from national regulations pertaining doctoral education; and (c) the insufficient opportunities for research funding in the context of doctoral education.

6.1. Number of doctoral programmes offered in a context of need-supply-demand

Although the finding that more doctoral programmes are offered in the Republic of Cyprus per unit population than in any other European country, might seem like a positive attribute, this might create viability issues, mainly related to uncertain employability

prospects. This can be better understood by looking at doctoral education in a needs-demands-supply context.

In the case of Cyprus, there is apparently a demand for doctoral programmes within the student community, as well as the active workforce, which unsurprisingly is picked up by Cypriot academic institutions, as evident by the very high number of doctoral programmes offered relative to the country's population (i.e. the supply). An interesting dimension to this is that the majority of doctoral programmes are offered by private universities, rather than state universities, therefore this over-supply of doctoral programmes makes more sense, also in financial terms. The fact that a substantial proportion of doctoral programmes in Cyprus are offered by for-profit institutions, highlights the fact that indeed there is a demand for such programmes, as in the case of a negative demand-supply scenario, these programmes would not have been economically viable. What is however not clear, is whether there is a local need for such a large number of doctoral-level trained individuals (relative to the country's population), in the different disciplines in which doctoral programmes are offered. In other words, the capacity of the local labour market to absorb the high number of doctoral graduates, particularly in jobs that would actually utilise their newly acquired research-oriented skills and competences, is questionable. This may lead to the phenomenon of credential inflation in a context of a 'saturated' labour market.

Interestingly, although it was not possible to retrieve data on the country of origin of current doctoral candidates from all academic institutions offering doctoral programmes, it becomes apparent, through anecdotal evidence based on communication with academics and the administration from some institutions, that the vast majority of current doctoral students in the Republic of Cyprus, are local rather than international, maybe with the exception of candidates originating from Greece. This highlights again the uncertain employability of doctoral candidates in the country. More specifically, in the Republic of Cyprus, the most common employment sector for doctoral holders is academia, which, however, has very few positions available, on a regular and consistent basis. Although it is not possible to acquire data on employability from all academic institutions offering doctoral programmes, the data from a few universities indicate that the majority of doctoral graduates actually continue on the same job they had before acquiring a doctoral degree, while very few end up in academia and in research, as part of their job. This is not surprising, given the very limited number of research institutions (over and above universities). The same applies as regards employability in large

companies involving active research and development departments, which are again lacking in the country, probably with the exception of a couple of large pharmaceutical companies. This lack of employability of doctoral graduates in actual research-oriented posts is quite paradoxical, given that the main purpose of a doctoral programme, is to train candidates to be independent researchers, providing them with skills and competences to be able to devise and conduct research projects at the highest level in their field. This brings us again to the concept of credential inflation, mentioned above, particularly given that the Republic of Cyprus spends a tiny proportion of its GDP on research and development (as low as 0.8% of its GDP, compared to the 2.2% EU average) (Euranet Plus, 2024).

Conclusively, it seems that the element of ‘need’ (market or workforce need in this case) is not considered in the equation, when it comes to the number of different doctoral programmes currently offered (i.e. the supply) in several disciplines. In contrast, what seems to be the major factor determining supply, is the demand from ‘users’, namely potential doctoral candidates, who may want to pursue a doctoral degree for reasons other than engaging into research, such as personal and professional development, enhancement of promotional prospects, even professional and social prestige or status. This might seem rather counter-intuitive under the prism of the history and philosophy of doctoral education, that is to help advance knowledge and enhance science and innovation. This phenomenon might not only be observed in Cyprus, but it is alarming in that it seems widespread in a country with limited needs for such a research-oriented workforce.

6.2. Rules and requirements regarding structure of and progression in doctoral studies

As noted above, higher education at the doctoral level is centrally regulated in the Republic of Cyprus, through CY.Q.A.A. (see section 4.2). This ensures a common set of criteria between higher education institutions, as regards the main structure of doctoral programmes, such as minimum and maximum duration of studies, involved workload in the form of credits (e.g. ECTS), requirement for training (e.g. in research methodology) in doctoral curricula, and the requirements and processes for graduation (e.g. viva voce/defence).

This common set of criteria implemented in the different academic institutions offering doctoral programmes in the Republic of Cyprus, ensures a minimum degree of

homogeneity and consistency as regards doctoral education in the country. Despite this, our analysis identified three important aspects in which homogeneity is lacking, or at least could be improved. These are: (a) the requirement for formal training in research methodology, primarily through compulsory taught courses incorporated in the curricula of doctoral programmes; (b) the requirement for a progression assessment (e.g. through a comprehensive qualifying exam); and (c) the structure of a doctoral dissertation (traditional chapter format vs. compilation of published papers).

Starting from the first, the requirement for formal training in research methodology, in the form of compulsory taught courses, has the purpose of ensuring a high level of methodological skills and competences in advanced research. The rationale for not offering such courses in a compulsory basis, is that doctoral students should have acquired such research skills and competences, through their previous studies, particularly if these were at a postgraduate level (e.g., M.Sc., M.A., etc.). The purpose of this chapter is not to suggest which of the two approaches is the ideal, however, it should be stressed that in the lack of postgraduate studies in any form, prior to entry into a doctoral programme, it is unlikely that new doctoral candidates have acquired extensive research skills at an advanced level. This notion seems to be shared by the majority of institutions offering doctoral programmes in the Republic of Cyprus, which do offer such advanced research methodology courses, particularly in absence of prior postgraduate education. There is, however, a considerable number of programmes, which do not offer such research methodology courses, particularly programmes coming from non-science fields. This is not uncommon in an international context; for example, in the UK, no compulsory courses (including research methodology) are usually offered as part of doctoral studies. On the contrary, in many other European countries, such as Scandinavian countries, Germany, Austria, the Netherlands, Spain, and Italy, taught courses are compulsory. For Cyprus, inclusion of compulsory research methodology courses in the curriculum of doctoral programmes is actually required by the relevant regulating body (CY.Q.A.A.). In many other European countries (e.g. Germany, Austria, the Netherlands, and others), there is a distinction between structured and non-structured doctoral programmes, with the former providing a more structured educational experience, involving compulsory courses, assignments, exams, and progression evaluations, while the latter offering a more independent and flexible path, focusing primarily on the research project and a close contact between the doctoral candidate and the supervisory team. Even in the UK, which traditionally offers non-structured doctoral

studies, there is a small number of structured Doctoral Training Programmes/Partnerships (DTPs).

Along the same lines, another identified variation between doctoral programmes offered in the Republic of Cyprus, is the requirement for a comprehensive qualifying exam, usually taking place after the completion of the required coursework component (for those programmes that include one) as a progression assessment. What is currently observed, is that some Cypriot institutions include a compulsory major progression assessment, in the form of a comprehensive qualifying examination, in their doctoral programmes, while other do not. Interestingly, this form of a comprehensive qualifying exam is absent or at least very uncommon in other European countries, but very common in North America. A few exceptions observed in Europe is the requirement of an upgrade assessment (usually in the form of an oral presentation) in countries such as the UK and Sweden. This adherence of Cypriot doctoral programme structure to those of North America (primarily the US), is not surprising given that other US-derived systems, such as the Grade Point Average (GPA) scoring system have also been adopted in many Cypriot universities. This probably stems from that fact that some key people instrumental in establishing the foundations of Cypriot higher education, a few decades ago, were US-trained.

Finally, a third discrepancy that has only very recently emerged, concerns the structure of the doctoral dissertation. Traditionally, the structure of doctoral dissertations in Cypriot doctoral programmes followed the traditional extensive chapter-based structure (Introduction, Methods, Results chapters, Discussion/Conclusion). Recent trends in major disciplines suggest the adoption of article/publication-based dissertations (i.e. compilation of peer-reviewed research papers). At the time of writing this current chapter, only one university seems to have swiftly adopted this kind of structure as an option, giving rise again to discrepancy both between institutions but also within. This is not necessarily a negative development, as there are examples of other countries (e.g. Germany, Austria, Finland, Switzerland, Spain, and others) in which both formats of dissertation are in place.

Based on the above and given that some Cypriot academic institutions might opt not to provide compulsory research methodology courses or a comprehensive qualifying exam, we suggest that there should be a clear distinction between structured and non-structured doctoral programmes, as observed in other European countries, with the former requiring compulsory training in research methodology as part of the curriculum, as well

as a progression assessment (e.g. a comprehensive qualifying exam or upgrade presentation) and the latter not. The issue of the format of the doctoral dissertation might be less important than the other two noted issues, in terms of enhancing homogeneity, but still attention should be taken in order not to involve another element increasing heterogeneity between programmes and generally institutions, as regards doctoral education.

Finally, an alarming phenomenon identified, which is not (and probably cannot be) subject to regulation, concerns the scarcity of full doctoral funding, in the form of Doctoral Scholarships/Studentships, covering tuition fees, research allowance, and a stipend to cover living expenses. This is not ideal, as such funding opportunities are very common in most European countries (e.g. the UK, Germany, France, the Netherlands, and all Scandinavian countries, to name a few). The lack of funding could potentially compromise the quality level of the research work conducted, particularly in the case of lack of research funding for conducting the actual project. Such lack of funding might lead to small-scale, lower impact research projects and publications, therefore compromising the role of the country as an important player in the European research arena.

In addition, the lack of stipend for covering basic living expenses, particularly in the presence of tuition fees for doctoral education (common among Cypriot universities and rather uncommon in other European countries) might diminish the motivation of doctoral students and lead to a prolonged duration of studies and delayed completion, something that is not uncommon in the Republic of Cyprus.

7. Conclusions

Since the beginning of the Bologna Process in 1999, Quality Assurance (QA) has been key to establishing the EHEA. QA is essential for building trust and to reinforce the attractiveness of the EHEA's offerings, including the provision of cross-border education, as the Ministers responsible for Higher Education in the Bologna signatory countries stated. In 2003 the Ministers asked the European Association for Quality Assurance in Higher Education (ENQA) to develop, in cooperation with ESIB (nowadays ESU), EUA and EURASHE, "an agreed set of standards, procedures and guidelines" (Berlin Communiqué, 2003, 19 September; ENQA, 2011, September 9). Following this mandate, the "Standards and Guidelines for Quality Assurance in the

EHEA” (ESG) were presented to the ministers in Bergen in 2005 and the document was adopted by them. The European quality assurance landscape changed considerably since then. In this context, in Cyprus the CY.Q.A.A. has adopted the guidelines of ENQA and based on the ESGs has established its own framework and guidelines for each programme level, namely bachelor's, master's, and doctoral studies.

The mapping of doctoral education in the Republic of Cyprus presented in this chapter points out, in a first level analysis, the notable development that had taken place in the scale and nature of doctoral education in the country since the establishment of the first university in Cyprus in 1992 and even since the first thematic analysis report of 31 doctoral programmes from 5 different institutions in Cyprus between the periods 2016-2020, conducted by CY.Q.A.A. in 2020. Remarkably, within just two decades, the Republic of Cyprus came to be a unique case on the doctoral map of Europe, offering more doctoral programmes per unit population than any other European country.

This chapter, at another analysis level of a more reflective nature, creates a shared database to cast light on trends in doctoral education in the Republic of Cyprus, such as the widespread emergence of doctoral programmes and schools in its higher education area, and the growing recognition that doctoral education provides a preparation for multiple knowledge-based and leadership roles. The chapter also provides valuable insights on highlighted differences not only in a number of academic features of the doctoral programmes of study offered in the Republic of Cyprus but also emerged perspectives on trends relating to issues ranging from the core aspect of supervision, through to the high priority given to research ethics and integrity and the training needed to support students, as well as the adequacy of financial support of doctoral students.

More specifically, as the analysis presented in this chapter demonstrates, despite the common criteria set up by CY.Q.A.A., a relative lack of homogeneity is identified in the Republic of Cyprus as regards as the requirements and structure of currently offered doctoral programmes of study. For instance, fundamental differences exist in doctoral programmes admission criteria (requirement of undergraduate or postgraduate degree, mandatory personal interview, etc.), the doctoral program structure (compulsory specialisation courses including Advanced Research Methodology, structure of the suggested doctoral dissertation, programme duration, etc.), as well as the requirements for completion of the doctoral studies (compulsory comprehensive qualifying exam, number of completed ECTS, mandatory publications, etc.). In more detail:

- There is a major discrepancy as regards to the level of previous studies (postgraduate vs undergraduate) in the entry criteria requirements of doctoral programmes offered by different higher education institutions in the Republic of Cyprus. There is a considerable proportion (27%) of doctoral programmes, which do not require the submission/presentation of a doctoral research proposal, as an entry requirement. However, the vast majority of doctoral programmes (97%) state proof of English language proficiency as a strict entry criterion at the admissions stage. Finally, only a small proportion of programmes (23%) require a personal interview as a strict entry criterion at the admissions stage.
- In alignment with long-lasting national declarations for Cyprus becoming an international higher education hub, the majority of the doctoral programmes (65%) are or can be offered in English.
- The majority of doctoral programmes (65%) have a duration of 3-8 years and none exceeds 8 years.
- Only about half of the doctoral programmes (49%) have a clear ECTS breakdown summing to 180 credits, while another 43% of programmes comprise more ECTS (usually 240), with an opportunity to transfer a number of credits (usually 60) from previous postgraduate studies.
- For the majority of doctoral programmes (78%), taught courses are offered and are compulsory, but only 65% of programmes offer courses in Advanced Research Methodology.
- The majority of the doctoral programmes (75%) require the successful completion of a Comprehensive Qualifying Exam before progression to the doctoral research proposal phase and the fieldwork stage.
- Only a very small proportion (3%) of programmes offer doctoral scholarships covering the full tuition fees plus a stipend for living expenses and annual research allowance for doctoral students. A higher proportion (35%) seem to be offering partial (full tuition fees coverage) or full (tuition fees plus stipend for living expenses) and a further 38% offering only full or partial tuition fees coverage; 23% of doctoral programmes offer no opportunity for any kind of scholarship.

- The majority of doctoral programmes (65%) offer the opportunity of teaching with reimbursement for doctoral candidates, with only 3% of those employing doctoral candidates also as research assistants; 40% of doctoral programmes offer no opportunity for any kind of teaching/research assistantship.

Even though these differences between various doctoral programmes offered currently in Cyprus are somewhat expected, given that doctoral education provision is very recent, in contrast to the long tradition of many European countries, this observed heterogeneity in fundamental principles might compromise the effort to have a core set of criteria and regulations for doctoral education in the country. Even more important, is the deviation from the national regulation body C.Y.Q.A.A. announcements and decisions, and its objective to establish a common set of regulations regarding the structure and regulations of doctoral programmes in the country. Possible explanations for this discrepancy might be that the short duration of doctoral education experience in the Republic of Cyprus in conjunction with the extremely high number of doctoral programmes currently offered, has not provided enough time for higher education institutions to adjust to regulatory decisions and ESG's. Another possible interpretation is that there might be a gap in the post-accreditation evaluation and monitoring of doctoral programmes, as regards the actual implementation of the relevant regulations, under which these programmes have been accredited by CY.QA.A.

Whichever the case, a higher level of homogeneity would not only render doctoral programmes compatible with national regulations, but would also have several other benefits, such as providing a set of loose universal criteria and regulations regarding doctoral studies in the Republic of Cyprus, establishing this small island-country as a key player in the European doctoral arena. This would also make Cypriot doctoral programmes more appealing and accessible to an international audience of academics and students alike.

It is encouraging to see the overall success of Cypriot universities in implementing their vision of making Cyprus a regional hub of higher education at the highest level, as reflected in the very high number of doctoral programmes offered, relevant to the country's population. There are, however, still several steps that need to be taken to ensure the quality of these programmes and their compliance with national regulations stemming from the European Higher Education Area and the European Qualifications Framework. Additionally, schemes that allow for more generous doctoral Scholarships/Studentships

will serve towards the purpose of improving research quality, enhancing student motivation and performance, and attracting more international students. The funding issue is of particular importance, as there is an urgent need for doctoral education in Cyprus to be connected to local funding structures/bodies, as in the case for example of the UK Research and Innovation (UKRI) or the Swedish Institute (SI), which are prime examples of doctoral funding bodies.

By extending the scope to doctoral researchers, a more complete picture has been built on the status and needs of this important, but as it turns out challenging, part of the early career academic community. If doctoral education is not connected with funding schemes and an increase in government spending on research by share-increase in GDP (both basic and applied), doctoral education will not ultimately add its full potential in the country's long term sustainable growth.

The chapter closes with a wish that it provided a forward-looking vision for doctoral education in Cyprus, in light of the increased demand for highly skilled researchers not only in Europe, but also globally.

References:

- Berlin Communiqué (2003, 19 September). Realising the European Higher Education Area. Communiqué of the Conference of Ministers responsible for Higher Education. Available at <https://www.wg.aegee.org/ewg/berlincommuniqué.htm> [retrieved 07.06.2024].
- CY.Q.A.A. (2017, May 15-16). Guidelines for Doctoral Level Study Programs [Κατευθυντήριες Γραμμές για Προγράμματα Σπουδών Επιπέδου Διδακτορικού]. Decision during CY.Q.A.A. 18th Meeting. Available at <https://www.dipae.ac.cy/index.php/el/enimerosi/anakoinoseis/116-2017-05-22-katefthyntiries-grammes-programmata-spoudon-epipedou-didaktorikou> [retrieved 07.06.2024].
- CY.Q.A.A. (2020). Thematic analysis on PhD Program's Evaluation Report 5: 2016-2020. Available at https://www.dipae.ac.cy/archeia/thematic_analysis/R001_0005_2021_february_PhD_programs_evaluation.pdf [retrieved 07.06.2024].

CY.Q.A.A. (2021, May 13). Mechanisms and Procedures for Supporting Doctoral Candidates in Research [Μηχανισμοί και Διαδικασίες Στήριξης Υποψηφίων Διδασκτόρων στην Έρευνα]. Available at <https://www.dipae.ac.cy/index.php/el/nea-ekdiloseis/anakoinoseis-el/583-13-05-2021-michanismoi-kai-diadikasies-stirixis-ypopsifion-didaktoron-stin-erevna> [retrieved 07.06.2024].

CY.Q.A.A. (2022, July 2). Doctoral Dissertations [Διδακτορικές Διατριβές]. Available at <https://www.dipae.ac.cy/index.php/el/nea-ekdiloseis/anakoinoseis-el/661-4-07-2022-didaktorikes-diatrives> [retrieved 07.06.2024].

ENQA (2011, September 9). MAP-ESG PROJECT Final report of the project steering group. ENQA Board meeting, Item 4.1 – MAP-ESG project.

Euranet Plus. How much are the EU27 countries spending on R&D?. Available at <https://euranetplus-inside.eu/eu-maps-how-much-are-the-eu27-countries-spending-on-research/> [retrieved 31.10.2024].

European Commission (b). The Bologna Process and the European Higher Education Area. Available at <https://education.ec.europa.eu/education-levels/higher-education/inclusive-and-connected-higher-education/bologna-process> [retrieved 07.07.2024].

European Commission (c). The European Qualifications Framework. Available at <https://europass.europa.eu/en/europass-digital-tools/european-qualifications-framework> [retrieved 07.07.2024].

European Commission (a). Description of the eight EQF levels. Available at <https://europass.europa.eu/en/description-eight-efq-levels> [retrieved 07.07.2024].

Free Apply: Your direct access to university admissions. Available at <https://free-apply.com/en>. [retrieved 02.09.2024].

Hasgall, Alexander, Peneoasu Ana-Maria, Van Deynze Freek, Seeber Marco, Huisman Jeroen (2019). Doctoral education in Europe today: approaches and institutional structures. EUA Council for Doctoral Education (EUA-CDE). Available at <https://www.eua.eu/publications/reports/doctoral-education-in-europe-today-approaches-and-institutional-structures.html> [retrieved 07.06.2024].

Hasgall, Alexander & Peneoasu Ana-Maria (2022). Doctoral Education in Europe: Current Developments and Trends. EUA Council for Doctoral Education (EUA-CDE). Available at <https://www.eua.eu/publications/reports/doctoral-education-in-europe-current-developments-and-trends.html> [retrieved 07.06.2024].

The Cyprus Agency of Quality Assurance and Accreditation in Higher Education. Doctorate Degree Accredited Programmes. Available at <https://dipae.ac.cy/index.php/en/accreditation-en/accredited-programmes-doctorate-en> [retrieved 02.09.2024].