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A quality framework for Open and Distance Higher Education

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Abstract

In view of the absence of a regulatory and normative framework in Portugal, in the context of Open and Distance Education (ODE) in Higher Education (HE), and in view of the emphasis that international guidelines have placed on this domain, it was considered important to create a quality reference framework that supports the Higher Education Institutions (HEI) and all those involved in the creation and monitoring of open and distance courses in HE. The purpose of this paper is to describe the process of creating a quality reference for ODE, carried out within the scope of the PhD in Education at the Open University of Portugal. Here are described the process of identifying and analysing 40 international quality models in the area of ODE, which led to the preliminary version of the framework; and the Delphi study that was carried out with a panel of ODE specialists, in order to validate the preliminary version. The results of the first Round of the Delphi Study are presented and some considerations for the next steps of the research are outlined.

Keywords: Open and Distance Education, Quality Assurance, Higher Education, Formal Education, Non-formal Education.

Resumo

Face à ausência de um enquadramento regulamentar e normativo em Portugal, no contexto da Educação Aberta e a Distância (EAD) no Ensino Superior (ES), e atendendo à ênfase que as diretrizes internacionais têm colocado neste domínio, considerou-se importante a criação de um referencial de qualidade que suporte as Instituições de Ensino Superior (IES) e todos os envolvidos na criação e monitorização de cursos abertos e a distância no ES. Neste sentido, o presente artigo descreve o processo de criação de um referencial de qualidade para a EAD, realizado no âmbito do doutoramento em Educação na Universidade Aberta. São descritos o processo de identificação e análise de 40 modelos internacionais de qualidade na área da EAD, que conduziu à versão preliminar do referencial; e o estudo Delphi que foi realizado com um painel de especialistas em EAD, por forma a validar a versão

preliminar do referencial. São apresentados os resultados da primeira Ronda do Estudo Delphi e delineadas algumas considerações para os próximos passos da investigação.

Palavras-chave: Educação Aberta e a Distância, Garantia da Qualidade, Ensino Superior, Educação Formal, Educação Não-formal.

INTRODUCTION

In Portugal there is no regulatory and normative framework in the context of Open and Distance Education (ODE) in Higher Education (HE), making it difficult for Higher Education Institutions (HEI) to monitor the quality of ODE practices. In light of this, the HEI need an instrument in order to evaluate and monitor the quality assurance of ODE courses, involving them actively in the development of a continuous improvement strategy. This paper describes the process of creation of the reference framework, based on the ongoing research entitled "Quality assurance of Open and Distance Higher Education: creating an evaluation framework". The research is divided into three steps: the Step 1 is related to the process of selection and analysis of international quality models in the ODE area in order to create the preliminary version of the framework. The Step 2 is a Delphi Study toward the validation of the framework and the Step 3 is the process of translation of the framework from Portuguese to English.

This paper addresses some literature reviews where the state of art in the ODE area and some definitions of main concepts, such as Formal and Non-Formal Education, Open and Distance Education, Open Educational Resources, Massive Open Online Courses and Quality Assurance are presented and discussed.

Subsequently, the research problem is explained in detail, some methodological procedures related to the Step 1 and 2 are presented and some results related to the first Round of the Delphi study are discussed.

BACKGROUND

According to some national and international guidance documents, the web-based technologies have been gaining great prominence in HE context, fostering new forms of communication and interaction between teachers, students and institutions (Ramos & Moreira, 2014; Ministério da Educação e Ciência, 2014). The openness to the world is now a strategic option for HEI, arising from the need to go beyond borders to attract new audiences and to become more international. Faced with this reality, HEI should increase focus on the development of ODE, both formal and non-formal.

There are fewer and fewer students who do not seek open-access online training, whether formal or non-formal, to complement their studies or just for simple curiosity or driven by

the will to learn freely. On the other hand, teachers seek to adapt to the new trends of online learning; and even HEI are taking significant steps towards developing appropriate policies for online learning. It is, therefore, a global phenomenon (Butcher & Wilson-Strydom, 2013).

Formal and non-formal education

Formal Education takes place in an organized and structured context (like an educational institution or in the workplace), referred as learning, where objectives, duration and resources are clearly defined. Formal education culminates, in general, in validation and certification (Cedefop 2012; Eurydice, 2011).

Non-formal education can take place inside and outside educational institutions where people of any age are welcome. Non-formal learning is planned but adaptable within institutions / organizations. Non-formal education shares much of the principles of formal education, although the motivation to learn is intrinsic to the student. Another aspect to consider in the definition of non-formal education relates to the intentionality of knowledge sharing among the participants, and may or may not exist specialized content in the subject under study (Cedefop, 2012; Eshach, 2007; Schwier & Seaton, 2013). This research follows this approach and the researchers argue that within the non-formal open and distance education are included the Massive Open Online Courses (MOOC) and the Open Educational Resources (OER), created or offered by HEI.

Open and Distance Education (ODE)

ODE is defined by the Open Education Consortium (2018) as a combination of the traditions of knowledge sharing and the 21st century technology, in order to create a vast pool of openly shared educational resources, while harnessing today's collaborative spirit to develop educational approaches that are more responsive to learner's needs. According to the Consortium, ODE

> *(...) encompasses resources, tools and practices that employ a framework of open sharing to improve educational access and effectiveness worldwide (...); and "(...) seeks to scale educational opportunities by taking advantage of the power of the internet, allowing rapid and essentially free dissemination, and enabling people around the world to access knowledge, connect and collaborate".*

Starting from this definition and complementing with a definition presented by Ossiannilsson, Altinay & Altinay (2016), also based on the Open Education Consortium, in this research the ODE is seen as *"(...) a mode of realizing education enabled by digital technologies that are accessible to as many people as possible. It offers multiple ways of learning and sharing knowledge and a variety of access routes to both formal and non-formal education"* (p.162). The ODE can be a bridge to the gap between formal and non-formal education, reducing barriers to increase access to HE and create many opportunities to HEI, practitioners and students.

It is really important to encourage the HEI to establish ODE strategies and policies to support students, attract new audiences and collaborate with other institutions in order to achieve the lifelong learning framework, where the learning process is learner-centred and not teacher-centred. At this point, Stagg & Bossu (2016, p.128) defend that ODE, at an institutional level, has the potential to:

- Increase institutional reputation through showcasing of educational content and learning and teaching innovations;
- Create opportunities for national and international collaboration with other institutions;
- Increase access to education by assisting the alignment of an institution's agenda for social inclusion and widening participation;
- Create economies of scale by developing more effective ways to create, use, re-use and remix open content;
- Promote innovations and quality in teaching and learning.

Related to the students' opportunities, the adoption of ODE could contribute to:

- Enhance learning through networked and collaborative learning;
- Promote richer learning experiences through access to learning resources available outside institutional boundaries;
- Meet students' different needs and learning styles;
- Promote and enhance lifelong learning.

The ODE has an important role in lowering the costs of education and increasing the access, equity and adequacy to learners, allowing the access to resources anytime and anywhere. Moreover, provides opportunities to improve the quality of learning and teaching and to establish an equitable and sustainable education system (Ossianilson et al., 2016; Stagg et al., 2016). Conole & Alevizou (2010) argue that openness is a trend, in terms of the production and sharing of educational materials, making them freely available.

Open Educational Resources (OER) and Massive Open Online Courses (MOOC)

Associated to the scalability of ODE, some concepts have emerged, such as OER and MOOC, sharing a common characteristic - open access – making education accessible to all (Corrall & Pinfield, 2014, Ossianilson et al., 2016). The OER are

> *(...) learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions (UNESCO, 2012, p.1).*

They include textbooks, lecture notes, assignments, tests, projects, audio, video and animation (UNESCO, 2018).

In its turn, MOOC

> *(…) are courses designed for large numbers of participants, that can be accessed by anyone anywhere as long as they have an internet connection, are open to everyone without entry qualifications, and offer a full/complete course experience online for free (OpenupEd, 2015, p.1).*
>
> *They are led by subject matter experts from higher education or industry and hosted by learning management systems or dedicated MOOC platforms (Witthaus, Inamorato dos Santos, Childs, Tannhäuser, Conole, Nkuyubwatsi & Punie, 2016, p.10).*

Quality Assurance in Portuguese Open and Distance Higher Education

Despite criticism by some people and some tensions between the two main roles of quality assurance - the means of accountability and the route to quality improvement (Butcher & Wilson-Strydom, 2013) - there are two common denominators in the definition of the concept of quality. According to Gaskells & Mills (2014) these two denominators are always related to (i) the quality of teaching and learning; and (ii) the quality of qualification.

The concern with quality assurance, whether it is teaching, learning or qualification, is increasingly present in HEI, due to, among other factors, the growing massification, to the increase of educational offer and to the loss of confidence in HEI. Therefore, it is essential to ensure the improvement of HEI quality through a systematic, critical and continuous analysis in order to gain the confidence of students, stakeholders and society.

Currently a large number of countries have a national system, body and / or agency that monitors and guarantees the quality of HE. In Portugal, it is the Agency of Evaluation and Accreditation of Higher Education (A3ES) that assumes this responsibility. The A3ES was established by the Portuguese State in 2007, and the institution is competent to evaluate and accredit HEI and their programmes/courses. This Agency is an independent institution and aims to promote and ensure quality in HE (DGES, 2018). The A3ES assumes as functions (A3ES, 2018):

- The definition and guarantee of the quality standards of the system;
- The evaluation and accreditation of programmes/courses and HEI;
- The public disclosure of evaluation and accreditation results;
- The promotion of the internationalization of the Portuguese HE system;
- The advice on quality assurance in HE;
- The carrying out of studies and opinions, either on its own initiative or at the request of the State;
- Participation in the European system of quality assurance in HE (EQAR);
- The coordination of evaluation and accreditation activities in Portugal with international evaluation institutions and mechanisms.

In order to evaluate the quality of an educational system or program it matters to clarify what is meant by quality in HE, some definitions that help to better understand the concept and to frame the research problem that follows.

According to the A3ES quality assurance is:

> *A multidimensional, multilevel and dynamic concept that relates to the context of an educational model, with the institutional mission and objectives, as well as with the norms and specific terms of reference of a particular system, institution, course, program or disciplinary unit. The quality can thus take on different meanings, sometimes conflicting, depending on: (i) the perspective of different stakeholders in higher education (e.g. students, teachers, disciplinary areas, labor market, society, government); (ii) their references (inputs, processes, outputs, missions, objectives, etc.); (iii) attributes or characteristics of the academic world to be evaluated; and (iv) the historical period in the development of higher education "(A3ES, s.d., p.12).*

In another complementary perspective, the European Association for Quality Assurance in Higher Education (ENQA) combines the concept of quality with excellence:

> *Excellence can be defined fundamentally as exhibiting characteristics that are exceptional. In the explanatory context, excellence enshrines one aspect of quality, and, according to the traditional view, it links quality with the exceptional. From this point of view, quality is a measure of something special that is not always achieved. Quality refers to something distinctive and, in educational terms, it is linked to notions of excellence, of the standard is high, it is rarely attained; it represents something to which most institutions or scholars can aspire (Brussoni, Damian, Sauri, Jackson, Kömürcügil, Malmedy, Matveeva, Motova, Pisarz, Pol, Rostlund, Soboleva, Tavares & Zobel, 2014, pp. 21-22).*

ISSUES, CONTROVERSIES, PROBLEMS

The research carried out in recent years on quality in ODE in HE in Portugal has focused on very specific contexts, institutions or courses, not allowing the construction of a more comprehensive vision of the national reality (Casanova, 2014, Dias, 2006, Ubachs, 2012). On the other hand, the regulatory framework in the national context in this area is quite rare, making it difficult for HEI to monitor ODE practices. Among the existing regulations in the ODE area, although not exclusively dedicated to HE, it is important to mention the Order No. 17035/2001, which establishes the distance education in the training sector (Dias, Rocha, Correia, Neves, & Feliciano, 2014); the Standard NP 4512/2012, integrated in the Portuguese Quality Institute (IPQ), which refers to quality for the management of vocational training, including learning enriched by technology (Dias, et al., 2014); and the first Portuguese Standard for the certification of modules and courses with a strong component in e-Learning - the NP4545. This Standard is also integrated in the IPQ and comes from an

adaptation of the ECBCheck model, used until 2014 by the European Foundation for Quality in e-learning (EFQUEL) and currently managed by GIZ and United Nation University. There is yet another document that needs to be explored, as it was an important contribute for the creation of the reference framework: the report Reforming Distance Learning Higher Education in Portugal. In 2009 the Ministry of Science, Technology and Higher Education of Portugal set up a working group composed of international experts in the field of ODE and specialists from several Portuguese HEI, including the Open University. The purpose of this working group was to discuss and align a proposed legislation for the ODE in HE, and for the first time was demonstrated a concern of the governmental entities with the problem of ODE in HE (Monteiro, 2016). According to the report, Portugal was a country where traditional classroom teaching predominated, presenting a considerable delay in the adoption of ODE practices when compared to other European countries. The ODE in HE in Portugal had a low enrolment rate, compared to the total enrolment in the HE (less than 3%), with approximately 90% of these registrations corresponding to the Open University, the only public HEI in Portugal with full distance education offer. At the same time other HEI had already begun the process of adopting the ODE, but this adoption was based on a more technological character rather than pedagogical, constituting a way of complementing face-to-face activities through content repositories and pedagogical materials (Magano, Castro, & Carvalho, 2008).

Nowadays, the reality is somehow different, and there has been an increase in the number of online courses, although this increase is insignificant in terms of graduate and postgraduate courses (Monteiro, 2016). In recent years, HEI has also been investing in the creation and offering of MOOC, and there are currently 25 courses (MOOC List, 2018).

According to Monteiro (2016) it is evident the slow evolution of the ODE in HE, not having seen significant changes from 2009 until the present day. Thus, as a way of boosting ODE in Portugal, the author recommends, among other things, an international and national promotion of ODE in a way to increase the number of students in this type of teaching and learning and the implementation of a formal accreditation mechanism for ODE courses.

SOLUTIONS AND RECOMMENDATIONS

The quality management and assurance system is a fundamental tool in supporting HEI as it ensures the correspondence between the students' qualifications and its missions, promoting trust and transparency between them, their stakeholders and society. Quality assurance helps institutions responding to changes and challenges by ensuring that the qualifications obtained by students and their learning experiences remain in the vanguard of institutional missions (Ministério da Educação e Ciência, 2014; ESG, 2015). The quality management and assurance should be interpreted as a process established in the

organizational culture that involves the entire educational organization and not only certain areas (McGhee, 2003).

Considering the issues, controversies and problems presented previously, there was a need to define research questions and objectives:

Table 1: Research questions, general goals and specific goals

Research questions	**General Goals**	**Specific Goals**
1. What dimensions, criteria and quality indicators are included in the models and international frameworks?	1.1 Develop the preliminary version of the quality framework for ODL in HE in Portugal	1.1.1 Select international models and frameworks. 1.1.2. Analyse the previously selected international models and frameworks. 1.1.3. Identify the dimensions, criteria and quality indicators contained in international models and frameworks. 1.1.4. Create the preliminary version of the quality framework for ODE in HE in Portugal, based on the analysis made to international models and frameworks.
2. What is the point of view of national and international experts in the area of ODE in HE regarding the dimensions, criteria and indicators established?	2.1 Develop the final version of the quality framework for ODE in HE in Portugal.	2.1.1 Collect views on quality dimensions, criteria and indicators established, by inquiry to a panel of experts from the various Portuguese HEI. 2.1.2 Introduce improvements in the framework, based on feedback from national experts until an acceptable consensus is reached. 2.1.3 Translate the framework to English and validate it with international experts. 2.1.4 Provide the final version of the framework in an online format.

It should be noted that the research is divided into three steps:

- Step 1 – analysis of international models and frameworks in order to create the first version of the framework, based on quality dimensions, criteria and indicators identified.
- Step 2 - creation of a panel of national experts in ODE area and subsequent analysis of the framework established in Step 1.
- Step 3 - translation of the framework to English language, final validation by international experts and release on the web.

In the Figure 1 is demonstrated the workflow of the investigation with indication of the 3 steps previously descripted.

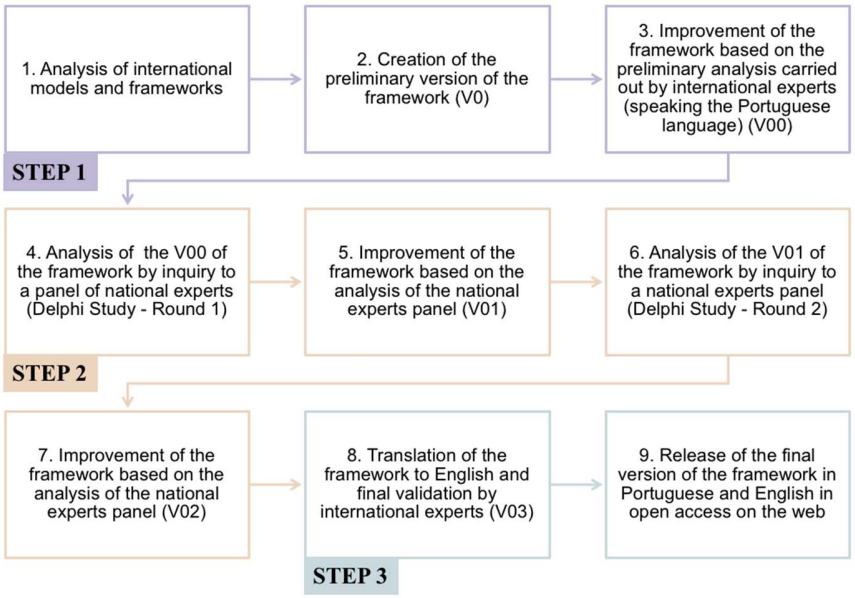

Figure 1. Workflow of the research

Firstly, two documents were analysed in order to help to define the areas of reference: the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ENQA, 2015) and the Standards for Internal Quality Assurance Systems in Portuguese HEI (A3ES, 2016). The Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) has a main goal of

> *"(...) contribute to the common understanding of quality assurance for learning and teaching across borders and among all stakeholders. They have played and will continue to play an important role in the development of national and institutional quality assurance systems across the European Higher Education Area (EHEA) and cross-border cooperation. Engagement with quality assurance processes, particularly the external ones, allows European higher education systems to demonstrate quality and increase transparency, thus helping to build mutual trust and better recognition of their qualifications, programs and other provision" (p.4).*

The Standards for Internal Quality Assurance Systems in Portuguese HEI (RSIGQ) are an adaptation of the ESG (2015) and aim to provide a framework that can support HEI in the design and implementation of their quality systems, as well as serve as a benchmark in the application of audit criteria for the certification of internal quality assurance systems of institutions. After a careful analysis of ESG and RSIGQ and based on a review of the literature up to the ODE area, the following areas of the framework were established:

- Area 1: Policy for quality assurance
- Area 2: Design, development, and approval of courses
- Area 3: Student-centred learning, teaching and assessment

- Area 4: Student admission, recognition, and certification
- Area 5: Staff (teacher and non-teacher)
- Area 6: Student support
- Area 7: Information management
- Area 8: Public information
- Area 9: On-going monitoring and continuous improvement
- Area 10: External quality assurance

Subsequently, were identified 40 documents in the ODE area, through a web-based search. The search focused on ODE entities and bodies around the world, identifying a set of entities / bodies that had developed ODE quality models:

- African Virtual University
- American Distance Education Consortium
- Asian Association of Open Universities
- Australasian Council on Open, Distance and e-Learning
- Benchmarking of virtual campuses
- British Accreditation Council for Independent Further and Higher Education
- California County Superintendents Educational Services Association
- Commonwealth of Learning
- Council for Higher Education Accreditation
- Deutsche Gesellschaft fur Internationale Zusammenarbeit GmbH
- Distance Education Accrediting Commission
- eduQua
- European Association of Distance Teaching Universities
- European Foundation for Management Development
- Flexible Education Norway
- Instituto Latinoamericano y del Caribe de Calidad en Educación Superior a Distancia
- Instituto Nacional de Educação à Distância
- International Organization for Standardization
- Learning Agency Network
- Matic Media Lda.
- MENON Network
- Ministry of Education, Brazil
- National Centre for Tertiary Teaching Excellence
- National Education Association (NEA), Institute for Higher Education Policy (IHEP) & Blackboard.
- National University Commission Nigeria
- Online Learning Consortium
- Open & Distance Learning Quality Council
- Open Education Europa

- QualitE-learning Assurance Inc.
- Quality Matters
- Supporting Excellence in E-Learning
- Te Toi Tupu / Ministry of Education of New Zealand
- The National Association of Distance Education and Open Learning in South Africa

Three models were also identified that were not directly linked to any organism / entity:

- Eight Dimensional E-Learning Framework by Khan
- CHIRON
- eMM - e-Learning Maturity Model

In order to reduce the corpus of analysis, a selection of the identified documents was carried out, based on three exclusion criteria, reaching a selection of 23 final documents, as shown in the Table 2:

- C1 – Is the model active?
- C2 – Is the model applicable in HE context?
- C3 – is the model exclusively dedicated to Open Education (including Open Learning) or Distance Education (including Distance Learning and/or Online Education)?

Table 2. Selected models

ID	Model	Exclusion criteria			Is it included in the research?
		C1	C2	C3	
1	Quality Assurance Framework	Yes	Yes	Yes	Yes
2	Guidelines for open and distance learning in Nigerian Universities	Yes	Yes	Yes	Yes
3	Five Best Practices for Developing Online Courses	Yes	Yes	Yes	Yes
4	Tarjeta de pontuación (SCCQAP)	-	-	-	No[1]
5	Guía de autoevaluación para programas de pregrado a distancia	-	-	-	No[1]
6	Accreditation and Assuring Quality in Distance Learning	Yes	Yes	Yes	Yes
7	Quality Assurance Toolkit	Yes	Yes	Yes	Yes
8	Guidelines for Quality Assurance and Accreditation of MOOCs	Yes	Yes	Yes	Yes
9	Open Educational Resources: TIPS	Yes	Yes	Yes	Yes

[1] These documents could not be accessed. After several attempts of contact there was no response from the authors/entities and therefore were excluded from the research.

10	Quality Assurance Toolkit for Open and Distance Non-formal Education	Yes	No	-	No
11	OLC Quality Scorecard	Yes	Yes	Yes	Yes
12	Quality Matters Standards for HE	Yes	Yes	Yes	Yes
13	eQcheck	Yes	No	-	No
14	MEC	Yes	Yes	Yes	Yes
15	BAC - Online, Distance and blended learning scheme document	Yes	Yes	Yes	Yes
16	California eLearning Framework	Yes	No	-	No
17	QUALITY ON the LINE	No	-	-	No
18	Eight Dimensional E-Learning Framework by Khan	Yes	Yes	Yes	Yes
19	E-xcellence	Yes	Yes	Yes	Yes
20	OpenupEd Framework	Yes	Yes	Yes	Yes
21	Quality Standards for Online Education	Yes	Yes	Yes	Yes
22	Benvic Benchmarking Indicators	Yes	No	-	No
23	Open ECBCheck	Yes	Yes	Yes	Yes
24	eduQua Label	No	-	-	No
25	UNIQUe Framework	No	-	-	No
26	SEEQUEL	No	-	-	No
27	EPPROBATE	No	-	-	No
28	SEVAQ+	Yes	No	-	No
29	SEEL e-Learning Quality Guidelines	No	-	-	No
30	Pick&Mix	No	-	-	No
31	ISO/IEC 19796-1	-	-	-	No[2]

[2] The access to this document is only possible through payment, which is the reason it has been excluded from the research.

32	EFMD - CEL	Yes	Yes	Yes	Yes
33	CHIRON	No	-	-	No
34	ACODE Benchmarks for Technology Enhanced Learning	Yes	Yes	Yes	Yes
35	e-Learning Planning Framework	Yes	No	-	No
36	eLG - e-Learning Guidelines	Yes	Yes	Yes	Yes
37	eMM - e-Learning Maturity Model	Yes	Yes	Yes	Yes
38	Acreditação de Instituições e de Cursos de Educação à Distância (EAD) em Moçambique	Yes	Yes	Yes	Yes
39	ODLQC Standards	Yes	Yes	Yes	Yes
40	NADEOSA Quality Criteria for Distance Education in South Africa	Yes	Yes	Yes	Yes

A detailed analysis of the selected models allowed us to verify that although all of them have very particular specificities, given the geographic and cultural contexts, they present very similar orientations, namely:

- Development and valorisation of the ODE in the institutional culture, particularly through its integration in the strategic plan.
- Continuous monitoring of the quality of the courses / programs (internal evaluation).
- Special attention to Learning Management Systems (LMS) and other ODE systems in terms of robustness, design and architecture.
- Adequacy of the courses / programs to the target public, namely through the active involvement of stakeholders throughout the process, from design to evaluation.
- Flexibility of learning materials and student autonomy, allowing them to manage their own learning.
- Detailed, current and clear description of learning methodologies and e-tutoring skills.
- Prior definition of the evaluation procedures, focusing on the moments in which it occurs and prioritizing processes of self-assessment, peer evaluation and personalized feedback.
- Support and training of staff.

After the analysis of all documents previously mentioned, the preliminary version of the framework, constituted by 10 areas, 33 dimensions, 47 criteria and 125 indicators was created. In the Table 3, the dimensions identified and the reference to the models that support them, with the respective ID are presented in more detail.

Table 3. Dimensions identified and respective models' reference

Areas	Dimensions	Models' references
Policy for quality assurance	Institutional vision and integration of ODE in the strategic plan	M02, M07, M11, M19, M20, M34, M36, M37, M38, M40
	Quality assurance system	M07, M08, M14, M19, M20, M36, M40
	Technical and technological plan	M11, M19, M34, M36, M40
	Project management and financial sustainability	M07, M08, M11, M14, M18, M19, M20, M36, M40
Design, development, and approval of courses	Definition of curriculum, course materials, and learning resources	M02, M07, M08, M09, M11, M15, M19, M20, M36, M37, M38, M40
	Pedagogical design	M02, M03, M07, M08, M09, M11, M14, M18, M20, M23, M37, M38, M40
	Technical and technological design	M02, M03, M07, M08, M09, M11, M12, M14, M15, M18, M19, M20, M23, M36, M37, M40
	Promotion of virtual mobility	M19
	Approval process	M07, M40
	Ethical issues	M07, M08, M09, M11, M15, M18, M19, M23
Student-centred learning, teaching and assessment	Autonomy, flexibility, and personalization	M07, M09, M12, M15, M18, M19, M23
	Interaction, collaboration and communication	M01, M02, M03, M07, M08, M11, M12, M14, M15, M19, M20, M23, M07, M15, M19, M36, M37, M38, M40
	Assessment, student progress and learning pace	M02, M03, M07, M08, M09, M12, M15, M19, M20, M23, M36, M37, M38, M40
Student admission, recognition, and certification	Consistency and transparency of admission requirements	M01, M02, M07, M08, M11, M15, M18, M19, M23, M40
	Completion procedures	M15, M19, M20
	Recognition and certification	M40

Areas	Dimensions	Models' references
Staff (teacher and non-teacher)	Recruitment and conditions of employment	M07, M11, M15, M19, M40
	Non-teacher staff - qualifications and competences	M02, M03, M07, M11, M14, M15, M19, M34, M36, M38, M40
	Teacher and tutor staff - qualifications and competences	M02, M03, M07, M11, M14, M15, M19, M34, M36, M38, M40
	Training and professional development	M02, M07, M11, M14, M15, M19, M20, M34, M36, M37, M38, M40
	Technical and administrative support	M07, M08, M11, M12, M19, M34, M36, M37, M40
	Teams dimension	M02, M07, M15, M38, M40
Student support	Course induction	M07, M11, M15, M18, M19, M34, M36, M37, M38
	Guidance and academic and administrative support	M02, M07, M08, M11, M15, M18, M19, M23, M37, M40
	Technical support	M08, M11, M12, M15, M18, M19, M36, M37, M40
	Complaints	M11, M15, M19, M23, M37
Information management	Collection and use of data	M07, M14, M15, M18, M19, M23, M34, M36, M40
Public information	Dissemination of information	M07, M08, M11, M12, M15, M18, M19, M23, M38, M40
On-going monitoring and continuous improvement	Monitoring of quality assurance policy	M07, M11, M19, M37, M40
	Monitoring of course design and approval process	M07, M08, M11, M15, M18, M19, M20, M36, M37, M40
	Monitoring of teaching and learning process	M01, M02, M07, M09, M11, M15, M18, M19, M34, M36, M37, M40
	Continuous improvement process	M02, M03, M07, M11, M15, M19, M23, M34, M36, M37
External quality assurance	Cyclical external quality assurance	M19

In the Chart 1 is possible to have a perception of the number of references per model. The framework is based on a total of 967 references from 23 different models. In the Chart can be verified the models that contributed most to the framework, taking into account the number of references:

- M19. E-xcellence, from EADTU (147 references)
- M07. Quality Assurance Toolkit, from Commonwealth of Learning (143 references)
- M37. eMM or e-Learning Maturity Model (79 references)
- M40. Quality Criteria for Distance Education in South Africa, from National Association of Distance Education and Open Learning in South Africa (77 references)

- M15. Online, Distance and blended learning scheme document, from British Accreditation Council for Independent Further and Higher Education (59 references).
- M11. OLC Quality Scorecard, from Online Learning Consortium (57 references)

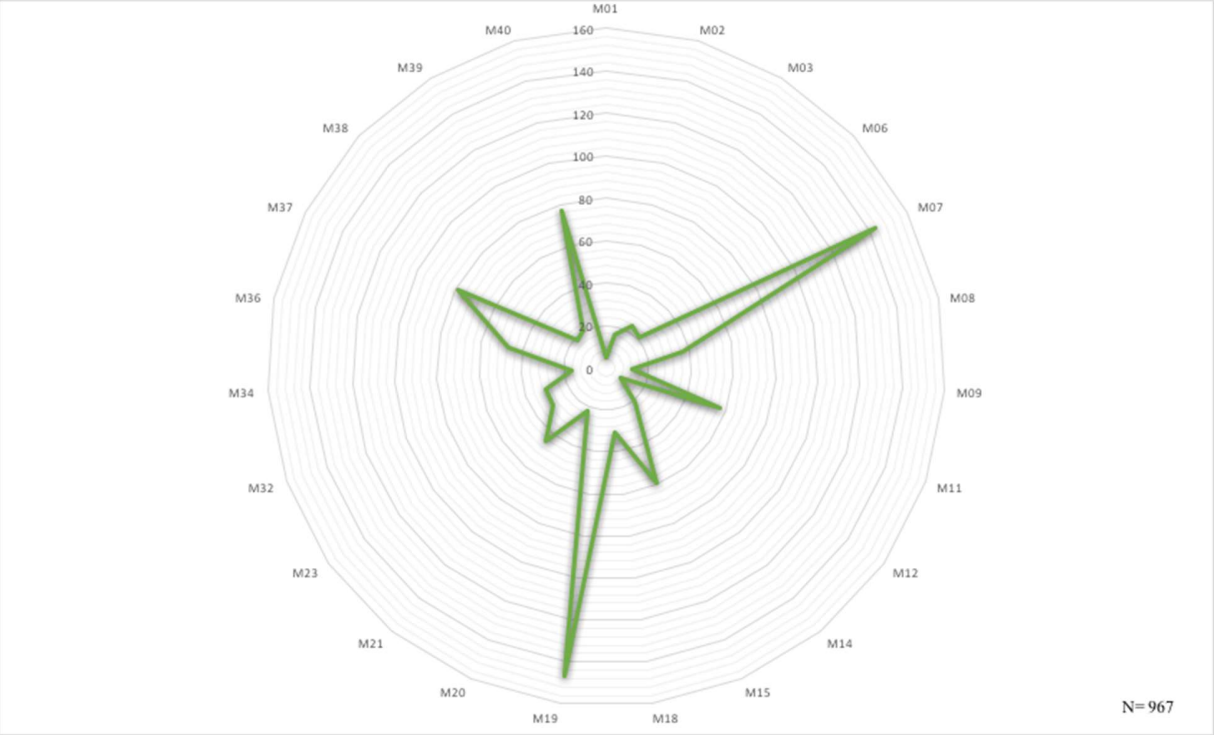

Chart 1 - Number of references per model

After the development of the preliminary version of the framework, followed the validation by international experts (speaking the Portuguese language) and after that the Delphi Study was carried out. Initially, a panel of experts was formed, and four profiles were defined to help select the specialists:

- Profile A - integrates senior leaders whose functions are directly related to the definition of ODE policies and strategies within the institution (e.g., rectors, vice-rectors, presidents, vice-presidents, directors, etc.)
- Profile B - integrates intermediate leaders whose functions are to coordinate units (or similar structures) where ODE courses are developed.
- Profile C - integrates technicians whose functions include the planning, development, offer and evaluation of ODE courses (e.g. instructional designers, e-Learning developers, multimedia technicians, etc.).
- Profile D - integrates teachers and tutors with experience in ODE.

The process of identification of specialists began with the identification of all Public HEI in Portugal, based on the information available on the website of the General Direction of Higher Education (DGES, 2017). After this identification, a search was made on the institutional sites of each HEI, trying to obtain information regarding ODE units or analogous structures. In some cases, it was not possible to obtain information through the institutional website, so emails were sent to the general contact of the institution and, in some cases, after no response, a telephone contact was established. In this more direct contact, it was sought to find out if there was a unit of ODE or similar structure in the institution, the name and contact of the responsible person (rector, vice-rector, president, vice-president, etc.) the names and contacts of the remaining team allocated to the unit, including coordination and instructional designers or those responsible for the didactic-pedagogical component. After several attempts of contact, it was not possible to obtain information regarding some HEI. In this regard, 102 people from 15 Portuguese HEI were identified and invited.

The first Round of the Delphi Study took place between October 11 and November 20, 2017, with the participation of 49 experts from the 15 HEI invited. A response rate of 48% was obtained in relation to the number of addressed invitations (N = 102).

The questionnaire was organized in two parts. The first part was intended to collect characterization data from the experts. In the second one, it was asked to indicate the degree of agreement regarding the integration of the previously established dimensions, criteria and indicators in the final version of the framework, with a 5-level Likert scale: 1 = Totally Disagree, 2 = Disagree, 3 = Do not Agree or Disagree, 4 = Agree, 5 = Totally Agree. At the end of each dimension, it was also possible to change the formulation of the items presented and to add new items, through an open-ended question. At the end of the questionnaire, there was still a free space for general comments and suggestions. The response process was individual and totally confidential and the estimated response time was 1 hour.

Concerning the panel of experts in Round 1, 49% are male and 51% female, aged between 30 and 70 years, as can be seen in the Table 4.

Table 4. Experts' Age – Round 1

Age	**N**	**%**
<30	2	4%
30-50	25	51%
51-70	22	45%

The experts' profiles are also quite variable, as can be seen in the Table 5. It should be noted that specialists could select more than one profile, if there was accumulation of more than one function (e.g. vice-rector responsible for the ODE area in the institution, coordinator of the ODE unit and teacher of an ODE course).

Table 5. Experts' Profiles – Round 1

Profiles	**N**	**%**
Profile A	7	14
Profile B	6	12
Profile C	12	25
Profile D	9	19
Profiles A e B	2	4
Profiles A e D	1	2
Profiles A, B e D	1	2
Profiles A, B, C e D	3	6
Profiles B e D	1	2
Profiles B, C e D	5	10
Profiles C e D	2	4
Total	49	100

The time of experience of the experts is also variable, with 39% being under 5 years, 31% between 5 and 10 years, 20% between 11 and 20 years and 10% claiming to have more than 20 years of experience (see Table 6).

Table 6. Experts' Years of Experience – Round 1

Years	**N**	**%**
<5	19	39
5-10	15	31
11-20	10	20
>20	5	10
Total	49	100

According to the results obtained in the first Round, there is some variability in the responses, as can be seen in Chart 2 where is shown the values of the mean, median, mode, standard deviation and variance for each dimension.

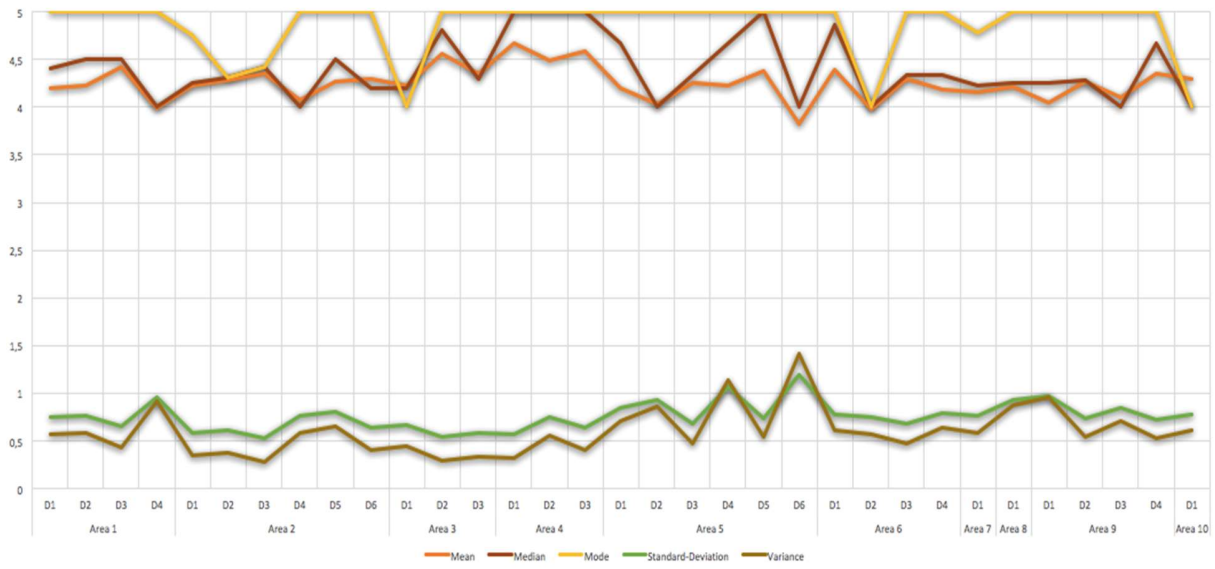

Chart 2 – Results of the Delphi Study 1st Round

From these results and the suggestions and comments made by the panel of experts were introduced changes and added new items (criteria and indicators). In the Table 7 is possible to see the Areas and Dimensions where changes were made and new items added.

Table 7 - Summary of suggestions and comments made in Round 1

Areas	Dimensions	Changes	New items
A1	Dimension 1	✓	•
	Dimension 3	•	✓
A2	Dimension 1	✓	•
	Dimension 2	✓	•
	Dimension 3	✓	✓
	Dimension 4	✓	•
	Dimension 5	✓	•
A3	Dimension 2	✓	•
	Dimension 3	✓	•
A4	Dimension 1	✓	•
	Dimension 2	✓	✓
A5	Dimension 1	•	✓
	Dimension 4	✓	•
	Dimension 6	✓	✓
A6	Dimension 1	•	✓
	Dimension 2	✓	✓
	Dimension 4	✓	✓
A7	Dimension 1	✓	•
A8	Dimension 1	✓	✓
A9	Dimension 3	✓	•

A10	Dimension 1	✓	✓

Number of items	41	18

Given these results, it was necessary to carry out a Second Round, as planned. This new Round started on the end of December, 2017 and was due to the end of January, 2018. However, given the low number of responses and some requests from experts, this deadline was extended until the end of February. In the Second Round, only the experts who had already participated in Round 1 were invited to participate.

Final Considerations

Based on the fact that there is no normative and regulatory framework for ODE practices in HE in Portugal, it is really important to create an instrument in order to evaluate and monitor the quality assurance of ODE courses (formal and non-formal), actively involving the HEI in the development of a continuous improvement strategy.

The authors believe that this instrument will play a significant role in the Portuguese HEI as it will facilitate the monitoring and certification process of fully online and blended courses offered by them.

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