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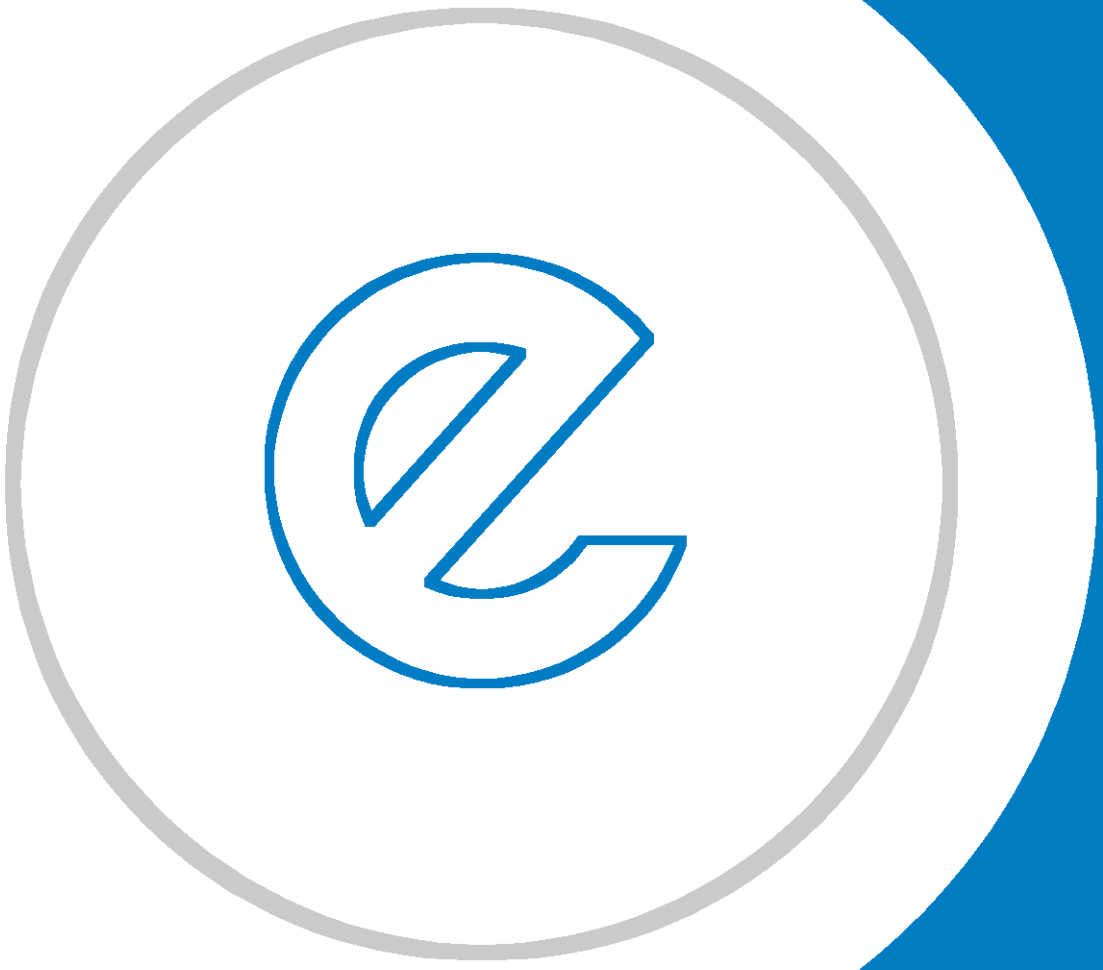
The European Council of Doctoral Candidates and Junior Researchers

POLICY PAPER

Recognising the Value and the Purpose of the Doctorate: Eurodoc's Recommendations



Abstract

The growing and ongoing diversification of Doctoral Candidates and Graduates' profiles on the one hand, and the changing character and context of doctoral programmes on the other, has led to a variety of debates on the quality and impact of the doctorate. Within this context, the pioneering and ambitious goal of this policy paper is the replacement of ECTS (European Credit Transfer Scheme) with the promising approach of Learning Outcomes, which focuses on what learners are expected to know and be able to do after the completion of their study programmes. Learning Outcomes provide not only a powerful tool for recognising and quantifying learning achievements, but they are also an effective structure for comparing qualifications or linking obtained knowledge. However, potential pitfalls need to be properly addressed. As for implementation, learning outcomes maybe long, demanding, and therefore costly. As well, every EU country is characterized by a specific socio, economic, and institutional context that can affect how learning outcomes are assessed and defined.

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European Council of Doctoral Candidates and Junior Researchers is an international federation of 32 national organisations of PhD candidates, and more generally of young researchers from 32 countries of the European Union and the Council of Europe. Eurodoc was founded in Girona (Spain) on 02/02/02. Since 2005, Eurodoc has its seat in Brussels, Belgium.

Eurodoc mission statement

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Rapid changes in society — including the development of information and communication technology, the growing production of knowledge in the economy, increasing international competition, technological evolution, as well as changes in the occupational structures and in the contents and organization of work — have challenged both working life and higher education to develop new tools so that the workforce is prepared and has the necessary competence to deal with these societal transformations[i] (Tynjälä 2008).

Official documents produced by the European Commission (EC) repeatedly argue for European citizens' need to develop a rapidly-changing set of skills and competences. These skills and competences would allow individuals to adjust to global competition and constant economic renewal, to ongoing complex changes and challenges (social, health, financial, economic, environmental, scientific, technological, political…), to diverse working environments, and to communities of collaboration and social networking.

In 2010, in *An agenda for new skills and jobs*, the EC asserts that in an economy based on and driven by knowledge and innovation, a skilled workforce is an essential asset for achieving smart, sustainable and inclusive growth through the *Europe 2020 Strategy*. It also states that "jobs occupied by highly-qualified people are expected to rise by 16 million between now and 2020" (p.9). Advanced research and research training at the doctoral level are regarded as key elements for building a knowledge economy and a knowledge society[ii]. Recently, the European University Association (2016) has released a document according to which doctoral education reform should continue, and it provides recommendations on how to further implementation, make structures more coherent (for instance the establishment of advisory boards, and peer learning activities) and gain ownership from all parts of the institution. It also considers challenges such as ethics, digitalisation and globalisation, which have gained importance.

Doctoral degree holders are amongst the most highly skilled people in the labour market, and the recognition of the importance of this segment of workers for economic and social development is increasing[iii]. Consequently, not only considerable effort has been put into expanding the pool of doctoral graduates at the national and European level, but also increasing attention is being paid to the impact and quality of the doctorate[iv]. The impact of the doctorate is particularly relevant given the need to monitor and measure the quality and relevance of publicly funded research. Therefore, it is crucial to understand the growing diversity in the profile and career paths of doctoral candidates (DCs), as well as in the programmes and contexts (e.g., institutional, social, political, economic, policy) in which doctoral training occurs[iii].

The Value and the Purpose of the Doctorate

Traditionally, doctoral training aimed at building a research and/or teaching career inside academia[v]. DCs obtained training and trained themselves with the aim of producing a thesis, which should be an original contribution to the development of the discipline, and of preparing themselves for becoming academics. Thus, DCs were expected to develop a set of skills helping them move into a career as a university professor or as a scholar in any other type of academic research institution[vi]. However, although today the doctorate continues to be a requirement for the academic career, many recipients of the degree do neither work nor expect to work in academia.

In 2009, ca. 30 % of doctorate holders in the EU didn't work as researchers[vii]. Findings from recent surveys, including Eurodoc Survey I, show that a growing number of DCs contemplates the possibility of pursuing a career outside academia[i]. Specifically, private and public companies begin to emerge as preferred career destinations for many DCs and doctoral holders. This implies that the knowledge, skills and competences demanded by employers have changed and that the knowledge, skills and competences obtained through the doctorate are needed outside academia. The 2006 Eurodoc *Statement of Standards in the Assessment, Expectations and Outcomes of Doctoral Programmes in Europe*[viii] emphasises such key skills and competences of doctoral degree holders (e.g. acquisition of complex knowledge, project management, diverse communication skills, creative and critical thinking, problem-solving abilities, self-motivation).

However, for many years the relevance of doctoral training as a preparation for a non-academic career has been questioned. In particular, employers tend to find the doctorate too academic and not sufficiently oriented towards the needs of industry and other employers outside academia[v]. Business and industry stakeholders have differing views on the most important knowledge, skills and competences that should be developed during the doctorate. Some argue that graduates should be equipped with broad competences preparing them for later career challenges, targeted skills to create synergies between supply and demand in key labour market areas; others, believe that flexible skills should be the focus of the training for enabling business and industry to respond quickly to changing local, national and global employment opportunities[ix].

The growing diversification in the profiles of DCs and graduates, as well as in the character and context of doctoral programmes (e.g., in admission criteria, course structures, attendance patterns and requirements for progression, content and format of outputs and examination, modes and forms of instruction, types of research being conducted, sites and partnerships) made it more challenging for external stakeholders to differentiate between programmes, degrees and candidates[iii].

These developments underlie many of the ongoing debates around the quality and impact of the doctorate. They illustrate the importance of re-thinking the doctorate's value and purpose, especially when considering that all recent official data sources (e.g., EUROSTAT, OECD) highlight the continuous growth in the number of DCs and of doctoral degrees being awarded. Although the number of R&D personnel measured as

full-time equivalent has grown over time, the number of permanent academic or research staff has not kept pace with the growth in doctoral candidates. Therefore, many doctorate holders must seek and are interested in alternative careers to academia. Consequently, it is crucial

(i) To avoid simplistic interpretations or generalisations that do not help clarify the meaning and the individual, economic, social or cultural impact of the doctorate, and

(ii) To ensure that doctoral holders are not only well equipped to pursue non-academic careers, but also that the non-academic sector understands the structure, purpose, and value of the doctorate.

Eurodoc's Recommendations

As the agenda related to transferable skills gains strength in different systems, the challenge is to develop a common taxonomy and nomenclature for the transferable skills expected of new PhD graduates. It will also be necessary to develop tools, instruments, and processes for assessing transferable competencies. Upon this context, Eurodoc recommends to develop clear entry and exit profiles for doctoral programmes. Exit profiles in particular should be based on the learning outcomes DCs are expected to develop during their training. These exit profiles should clearly state what the graduate is expected to know or is able to do in order to gain the academic qualification and to occupy a position in the labour market. Learning outcomes are descriptors of specific ends in a learning process (e.g., a module, a course unit, a qualification). They state the knowledge and abilities a learner obtained in a given context[x]. As a result of their relevance, the concept of learning outcomes are widely used in the field of education, training and lifelong learning, whether one deals with research or policy-making. For instance, learning outcomes are defining principles within the European Qualifications Framework (EQF) or the Bologna Process. The European Centre for the Development of Vocational Training (CEDEFOP 2009 in Werquin 2012) has highlighted the following dimensions of learning outcomes: 1) "They may materialise in the form of knowledge, skills, and/or competencies; 2) They can be the result of any kind of learning whatever the setting, whether formal, non-formal, or informal"[xi]. This is very different from the traditional approach, whereas the focus is on the content of a course or a programme, rather than what learners are expected to know, and be able to do once their programme is completed.

Eurodoc recommends that learning outcomes replace ECTS as the preferred system for crediting the learning and work time DCs dedicate to their research and training.

Why focus on learning outcomes?

As highlighted by LERU in their paper on *Doctoral degrees beyond 2010*[xii], doctoral training helps to acquire and further develop a range of very advanced skills. These skills relate both to the research process itself and to a broader set of transferable or generic skills that are valuable for the pursuit of a career in a wide range of professional sectors. Knowledge, skills and competences are one way in which learning outcomes are materialised[xiii]. In learning contexts such as doctoral training, learning outcomes often appear as components of competences that learners must acquire or further develop through the different constituents of the programme (courses, modules).

Learning outcomes can help course designers to determine precisely the key purposes of a course, how its different components fit and how learning progression is integrated[xiv]. They also help to (i) ensure consistency of delivery across modules or programmes, and (ii) clarify areas of overlap between a module, programme or qualification, and increase transparency and comparability of standards between and within qualifications (e.g., between different types of doctoral programmes, between masters and doctoral degrees). We recommend that learning outcomes are integrated as fundamental mechanism for the recognition of the accreditation provided by doctoral training. Therefore, for (i) strengthening the connection between doctoral degrees and the qualifications systems, and (ii) recognising the doctorate as an opportunity to learn to do research through research and DCs as researchers at an early stage of their careers[xv].

Learning outcomes can be assessed and are instrumental in the assessment process. Outcomes-based qualifications not only are more credible and useful than traditional qualifications but they also bring increased transparency to the system, including to external stakeholders such as employers[ix]. They correspond to what end-users such as DCs, providers of doctoral training, researchers, policy-makers, or employers should be able to identify in terms of what a person actually knows or can do in order to obtain a qualification or to occupy a position in the labour market. This identification together with the assessment and validation of the learning outcomes obtained helps to reinforce the legitimacy and credibility of the qualification. It also helps to clearly identify where those dropping out before completing the degree stand in relation

to those that are awarded the qualification, that is, the nature and level of the knowledge, skills and competences they acquired before exiting the programme.

Given the simplicity of the language used to describe learning outcomes and because they provide a precise description of what learners acquired in terms of knowledge or skills when they successfully completed some learning, learning outcomes not only facilitate the establishment of a common language in different fields but also help to establish a (often missing) link between training systems and the world of work. Therefore, the use of learning outcomes facilitates the social recognition of the doctorate as a professional experience. During their training, DCs are expected to both fulfil the requirements of the position they were hired to, and acquire an additional set of relevant skills and competences allowing to award them with a doctorate[xiii]. Through the use of learning outcomes these requirements and skills are easily identifiable by relevant stakeholders, inside and outside academia.

Learning outcomes allow to create a recognition system that is consistent across countries, cultures, languages and fields of research. Consequently, they help foster intersectoral, disciplinary, and geographic mobility. Furthermore, learning outcomes may be a relevant tool for recruitment processes. During the training learners expand and demonstrate their competences. The Learning Outcomes certificate proofs the successful accomplishment of the training. This provides employers with a means of connecting qualifications to actual competences acquired during the training[ix].

Qualifications systems and qualifications frameworks would be further emphasised as effective policy tools, and the equitable harmonisation of education and training activities ensured. Information about qualifications can more easily and systematically be recorded in Diploma Supplements. In addition, it becomes possible to produce more informative and objective assessments about the evaluation and recognition of learners credentials', namely by using clear level and level/cycle descriptors or indicators as a reference[xii]. As highlighted before, this would benefit those exiting the doctoral programme before completing the training by helping to clarify where they stand in relation to those that were awarded the degree.

At the same time, although learning outcomes have proven to be very useful and promising, it is important to take into account the potential pitfalls, which can be of various nature. For instance, within the academic world, learning could be considered

open ended, rather than being limited by pre-established learning outcomes. As for implementation, learning outcomes maybe long, demanding, and therefore costly. As well, every EU country is characterized by a specific socio, economic, and institutional context that can affect how learning outcomes are assessed and defined[xvi]. Therefore, these potential pitfalls need to be properly addressed in order to implement such innovative concept.

Replacing ECTS by learning outcomes

ECTS (European Credit Transfer Scheme) should be replaced by learning outcomes. They provide not only a powerful means of recognising and quantifying learning achievement but also an effective structure for comparing qualifications or linking obtained knowledge. As highlighted by Eurodoc in 2006[xvii], ECTS may have some advantages when it comes to identify common standards in doctoral training. Nonetheless, there are several examples of where ECTS's structure does not fit into a doctoral programme in the same way they do in other cycles/levels of training. It is therefore important to consider other methods of undertaking and measuring training and learning.

Learning outcomes not only encompass the proposals made in Eurodoc's discussion paper (e.g., they can easily be formalised into a training portfolio) but they also are a fruitful solution as outlined above. Therefore, we recommend to replace ECTS by learning outcomes.

Additional recommendations

Additional recommendations that complement or build on the definition of clear entry and exit profiles based on learning outcomes include:

i. transparency in hiring processes for DCs (as suggested in the HRS4R) regarding content, duration and other conditions of the job. This could be supported by personal meetings, mentorship, and other initiatives such as welcome days for new DCs;

ii. develop a clear structure for the doctoral programme (e.g., courses to be taken, duration of training), taking DCs perceptions of the quality and usefulness of the training into account (relevance to perceived/wanted career development, inside or outside academia; skills DCs consider most useful and would like to see improved);

iii. provide training opportunities to improve the overall standard of doctoral training (effectiveness of individual training programmes), and to ensure that doctoral training is not exclusively focussed on research training;

iv. implement formal and written supervising agreements (relationship between supervisor and supervisee; expectations of each party; feasible project plan with detailed timetable and key objectives; take all other early career researchers obligations into account, such as teaching or administrative responsibilities) and provide and ensure continuous, mandatory training for supervisors, and mentoring for new supervisors. Having such measures in place will help to ensure standards are maintained.

Concluding remarks: Recognising doctoral candidates as professional researchers

The best way to guarantee clear entry and exit profiles of DCs and doctoral holders is acknowledging DCs as researchers and as professional workers, with a clear employment contract offered to all. If DCs are recognised as full staff members of universities and research organisations, full members of the academic community, and have their rights recognised accordingly, institution-wide hiring processes apply, affiliation and contribution to programmes can be guaranteed, training can get contractually demanded, and supervision frameworks integrated. Learning outcomes not only constitute a means of formalising all of this to external stakeholders, including employers, but also provide a powerful tool for the social recognition of the value and the purpose of the doctorate.

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