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Rethinking the Value of Doctoral Supervision to Design
an Integrative Framework

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Abstract: Internationally, the Higher Education (HE) agenda is revealing a growing concern with the extension and impact of research at the postgraduate level, where doctoral studies are acquiring a greater significance and value, due to a set of professional, social, cultural and economic reasons. Thus, quality issues and discussions about doctoral supervision are extremely relevant to be considered and critically reviewed, because of their supra-national character and importance, although the discussion we will engage in is based on results gathered in a Portuguese context. The authors aim to contribute to the international context and broad reflection by presenting research that is being developed at a HE institution with the main objective of designing an integrative reference framework about the construct 'quality of doctoral supervision'. So the framework could be properly designed, we started by interviewing Portuguese experts on pedagogical and postgraduate research supervision, due to the epistemological links that can be established between those concepts. Therefore, with this paper we aim to (i) reflect on the international perspectives on this issue, and (ii) present the main results of the interviews, particularly by analysing their conceptions about the quality of doctoral supervision, so that a first draft of the framework can be designed.

Keywords: Doctorate, Pedagogy, Quality, Integrative Framework

Introduction: The Supra-national Character of the Subject

THE INTERNATIONAL HIGHER Education (HE) agenda is revealing a growing concern with the extension and impact of research at the postgraduate level, where doctoral studies are acquiring a greater significance and value. In fact, the international and European context demonstrates the existence of an increasing number and a greater diversity of research students enrolling in postgraduate studies, particularly in doctoral programmes. These facts emphasise the importance to put on quality issues, since it is observed that there are (i) more students who demonstrate being ill-prepared to pursue doctoral studies, since they do not have the necessary 'basic' competences, (ii) more "hidden" agendas when entering a doctoral programme, where ethical principles are starting to be violated, and (iii) more varied types of doctorates as well as products or outputs' forms, which are intensifying discussions about the objectives and nature of the doctorate, among many other aspects.

Therefore, it may be considered an international issue for discussion, the growth of demand for a postgraduate education based on quality standards. According to both conceptual and empirical perspectives, it may be expected that among academia intense discussions emerge regarding these issues, since the enhancement of quality at doctoral level is considered to

COMMON GROUND

be a hot and pertinent subject to most countries and HE institutions around the world. Thus, if research run at different settings may highlight specificities and contextual data, when properly framed in an international background it may contribute to broaden and enlighten a bigger discussion. Consequently, the authors aim to contribute to the discussion and joint reflection about doctoral research and supervision by focusing on a research that is being developed at a Portuguese HE institution, but supported by international literature and concerns, both extremely challenging to the enhancement of the quality of doctoral experiences.

The authors are developing a project at a Portuguese HE institution with the major objective of designing an integrative reference framework about the construct 'quality of doctoral supervision'. It must be stressed that, even though the study is being developed at a specific Portuguese HE institution, the conclusions the authors will present in this paper may speak not only to the whole Portuguese HE settings, but also to other international contexts, due to the supra-institutional and supra-national character and concerns of this issue. Therefore, this study may add a valid contribution to rethink and continue the discussion and conceptualisation about doctoral supervision quality.

To take a first step towards the design of the framework, this paper will focus on the main results gathered through interviews made to Portuguese research experts on pedagogical and research supervision, who are internationally well-known. Since in Portugal there is not any theoretical nor empirical study about doctoral research and supervision, it was essential to (i) obtain the first systematised conceptions regarding this issue in a Portuguese setting, and (ii) analyse those conceptions considering the international background, so a first approach and discussion can be stimulated (section 4).

Moreover, due to the links that can be established between those concepts–pedagogy and doctoral supervision–it becomes clear that other studies developed in other parts of the globe must be run. Even though there are some important studies to consider (section 2), we argue that it is essential to deepen this epistemological relationship, so the overall quality of doctoral supervision in general, and between the members of the dyad in particular can be enhanced. Consequently, although the data we will present was collected within a specific background, the results allow the creation of an enriching dialogue with international concerns (section 2).

Thus, with this paper the authors intend to: (i) contextualise this subject, by approaching (i-a) the importance in defining 'quality', (i-b) some supra-contextual factors that influence the overall background on this issue, and (i-c) some links between pedagogy and doctoral supervision (section 2); (ii) briefly present the methodological approach followed in this study (section 3); and (iii) analyse and systematise the main results of the interviews, particularly considering interviewees' perspectives on doctoral supervision challenges and quality (section 4).

Contextualising the Discussion about Doctoral Supervision Quality

Quality: A Multi-dimensional Concept

"*Much research has explored the characteristics of 'effective' supervision, and much has focused on collecting information about postgraduate research students' positive and negative experiences that can inform guidelines about supervision, and improve supervisory arrangements and practices.*" (Petersen, 2007, p.476)

We start by highlighting a quotation that reinforces the relevance in studying and discussing the quality of postgraduate research supervision in general, and at doctoral level in particular. It is even more pertinent, since educational discourses as well as others in different scientific domains are revealing an increasing use of certain concepts, which are suited of a 'common' and almost 'empty' understanding and theorisation. There are several documents and studies that make use of expressions such as: 'quality standards', 'high quality education and research standards', 'the highest scientific standards', 'quality assurance' and so on. However, we observe that, in most of those discourses, these concepts are not semantically nor epistemologically explained and explored. Although we consider that those concepts are extremely important, their use is becoming a 'cliché', almost loosing their 'essence': their epistemological complexity.

So, due to the fact that 'quality' is understood as a multi-dimensional, complex, multifaceted and hard to define concept (Green, 1994; Cheng & Tam, 1997; Mizikaci, 2006; Houston, 2008), further epistemological and conceptual discussions, even between disciplines, are essential to achieve a stronger understanding of this construct. Particularly, attempts to conceptualise and define the factors, based on empirical studies, of doctoral supervision quality are being internationally researched. As we have already stated (section 1), it is our intention that, by the end of the broader research, whose first part we will explore in this article (section 4), we will present a conceptualisation of this construct 'doctoral supervision quality', particularly at the level of students and supervisors' profiles.

(Supra-) Contextual Factors that Challenge Discussions about Doctoral Supervision Quality

When approaching and trying to conceptualise doctoral supervision quality, we consider that we must firstly systematise some of the main contextual and supra-contextual factors which are an important part of the background where this subject is based and will be debated. Although we try to synthesise those we consider the most important aspects that contextualise this issue, we must take into account that these topics can not be read in isolation:

- The 'new' characteristics of the knowledge society, full of overwhelming changes, reinforce unpredictability, uncertainty and *supercomplexity* of everyday life and situations with which citizens and institutions have to deal (Barnett, 2000; Park, 2005; Brew, 2007);
- External stakeholders (namely the civil society, the labour market, governmental and economic spheres) are increasingly pressuring the HE sector (UK Council for Graduate Education, 1996; Hodson & Thomas, 2003). More particularly, political, economic, social and professional pressures over HE are demanding higher levels of training and the development of both generic and specific competences so the country becomes scientifically and economically more competitive (Chambaz, Biaudet & Collonge, n/d; Burgess, Band & Pole, 1998; Harman, 2003);
- The increasing number of agendas within the HE sector (Brew, 2007) may interfere with the definition of quality at doctoral level;
- HE massification, namely at postgraduate level, as well as students' greater diversity and heterogeneity (Pearson & Kayrooz, 2004) clearly start to change doctoral supervision practices and conceptions.

These factors obviously influence the institutional culture (Hodson & Thomas, 2003) and also its dynamics and policies, emphasising that there are great challenges towards doctoral supervision and research (Athans, 2001). Park (2007), for instance, calls them "*drivers of change*" (p.13), essential to be considered when we try to answer the following generic questions: (i) what is the value and purpose of a doctorate in today's world?, and (ii) what is doctoral education future taking into consideration all those aspects and other variables which are naturally emerging and 'complexifying' this context?

We must in fact assume that the context is becoming more complex. Namely, we observe, as Enders (2005) underlines, the "*transformation of academic work*" (p.119) and "*the changing role of knowledge in European societies*" (p.127). Consequently, it becomes clearer the pertinence in understanding and conceptualising doctoral supervision quality, since the doctorate is considered not only a landmark in the development of highly skilled professionals to work inside and outside Academia, but also a product that will give the economy, society, culture and so on important outputs. This latter idea highlights that the doctorate is embedded in a paradigm that gives a great importance to the development of social relevant research. Thus, doctoral studies and research are rooted in ideals such as originality, creativity and innovation. However, a broader discussion must be stimulated regarding the concept of "*useful knowledge*", its understanding and consequences, as Peters and Olssen have already stressed (2005). This factor puts the emphasis on economic and political pressures over postgraduate studies in general, and in doctoral research in particular. In fact, there is starting to be a greater difference between some academic domains, especially in relation to funding and research applicability. Thus, questions like 'What should we do with doctoral research in arts, literature and culture?' and 'Does the market need literature?' are starting to emerge and must be answered. Again, following the idea of "*commercialization of research*" as underlined by Peters and Olssen (2005) for instance, more engaged reflection is needed.

Consequently, it is essential to reflect and develop more research on: (i) the definition of criteria that characterise the quality of doctoral supervision, such as the roles and responsibilities of supervisors and students (Pearson & Brew, 2002; Kandlbinder & Peseta, 2006; Park, 2005, 2007); and the evaluation of doctoral supervision quality (Aspland *et al.*, 1999) where the definition of supervisors and students' profiles and competences is a central aspect to be considered (Cullen *et al.*, 1994; Petersen, 2007; Lee, 2008; Lee & Boud, 2009a).

Linking Pedagogy and Doctoral Supervision

As we have already stressed (section 1), we will present the results gathered through interviews to the main Portuguese experts in pedagogical and research supervision. In fact, we have assumed, as several international studies validate, that pedagogy and doctoral supervision are undoubtedly linked. Pearson and Kayrooz (2004) have established the link between pedagogical, research and supervision competences, highlighting the pedagogical character developed at a doctoral level (particularly observed in section 4.3. of the data analysis).

In fact, the doctorate has been recognised as a training process, in which the student/young researcher has the opportunity to develop high level competences and skills essential to work inside and outside the Academia, as we have already mentioned previously. Walker (2010) goes further and emphasises that doctoral education is a human development process with great complexity and potentiality. Therefore, the doctorate fulfils not only scientific, intellectual and research objectives, but also civil, social, cultural and economic ones.

Following this idea, several studies developed within the United States, where the 'Carnegie Foundation' has an important role, underline the doctorate as an essential process for the student to develop his/her professional, academic and research identity, so s/he can become the 'steward of the disciplines', questioning and (re)creating knowledge (Walker *et al.*, 2008). Consequently, the development of a good research environment (more particularly "*the culture of intellectual community*"–p.10) is essential, where the supervisor will be one of the main responsible for creating opportunities for the student to holistically develop. As it is assumed:

> "*(...) doctoral education is a complex process of formation. (....) Formation (...) points not only to the development of intellectual expertise but to the growth of* '*the personality, character, habits of heart and mind*' *and* '*the role that the given discipline is capable of and meant to play in academe and society at large*' *(Elkana, 2006, pp.66, 80). What is formed, in short, is scholar's professional identity in all its dimensions.*" (Walker et al., 2008, p.8).

This idea has already been explored by Green (2005) who proposes: "*postgraduate research pedagogy, or* '*supervision*'" (p.152) is constituted by subject and identity formation, and knowledge production. Therefore, the dyadic relationship must be understood as an "*ecosocial*" environment where "*postgraduate research activity is realised*" (p.152) and where occurs "*the social dynamics of learning*" (p.152). More recently, Lee and Boud (2009b) underline this educative and pedagogical dimension of doctoral research and supervision, where the relationship between knowledge, practice and subjectivity deeply influences doctoral students' experience. Consequently, in this complex context of academic socialisation, the supervisor and the stimulating research environment will have a particular importance in the overall process of doctoral students' intrinsic and profound development (Athans, 2001).

Study Overview

In Portugal we can observe a high number of theoretical and empirical studies about clinical and pedagogic supervision (Alarcão, 1995; Abreu, 2003; Vieira *et al.*, 2006; Sá-Chaves, 2007; Alarcão & Roldão, 2008). However, the same is not true when focusing on research supervision: there is, in fact, a lack of conceptual and empirical studies about this subject. Nevertheless, although we do not have collected evidence nor research-based proofs, the Portuguese academic community is starting to be concerned and more aware of the growing number and a greater diversity of students enrolling in postgraduate studies in general, and doctoral programmes in particular. As a consequence, this situation is promoting discussions regarding (i) the strategies of doctoral supervision that must be adopted, (ii) the quality of those strategies and interventions, and also (iii) the competences and roles which are required from doctoral supervisors and students. Moreover, within some scientific domains (for instance, in Education and Social Sciences), concerns are increasing, due to the higher demand from the same number of supervisors to support a growing number of students entering doctoral programmes, who are showing (many of them) a lack or a low pattern of research competences and skills.

Thus, facing this background and bearing in mind the international context presented above, the authors are developing a project at a Portuguese HE institution with the major objective of designing an integrative reference framework about the quality of doctoral supervision, particularly considering the quality profiles of doctoral students and supervisors. This framework is intended to integrate validated perspectives based on theoretical and empirical findings. Also, it is planned to be holistic and flexible, adaptable to different HE contexts and gathering theoretical, conceptual, praxeological, ethical and empirical perspectives on the quality of doctoral supervision.

To achieve the main objective of this broader research, and since this case study (Yin, 1994) is the first approach to this subject developed in Portugal, it was considered essential to start by interviewing the main Portuguese researchers, whose work and contributions to the theoretical, epistemological and empirical advancement of pedagogical supervision has been internationally recognised, validated and well-known. We have made this theoretical and methodological choice, because we assume that pedagogy and research supervision are epistemologically interconnected (section 2.3.). Therefore, we have chosen the main Portuguese experts who could give the first conceptual approach within this subject.

Thus, within this paper, we intend to achieve the following objectives, which will contribute to give some small steps in terms of the framework design:

- To collect interviewees' conceptions about the challenges and changes that HE is facing, and that will have consequences in doctoral supervision quality;
- To gather perspectives about the main challenges, problems and dilemmas that are affecting doctoral supervision (and its quality);
- To reflect about the main characteristics that may define doctoral supervision quality, considering students and supervisors' profiles.

The participants of this study are four Portuguese well-known senior researchers in pedagogical and research supervision. Even though the sample is not statistically significant, their in-depth contributions through semi-structured interviews are essential to contextualise the subject within national and international borders. All four senior researchers are women: one is a Retired Full Professor (Researcher 1–R1), another is a Retired Associate Professor (Researcher 2–R2), the other is Full Professor (Researcher 3–R3) and the last one is an Associate Professor (Researcher 4–R4). Although the expertise and the research path of each researcher slightly differ from the others, they have strongly contributed to the advancement of HE pedagogy and pedagogical supervision. Also, all of them assume that "*research supervision is a sort of pedagogical supervision*".

After transcribing the interviews, we have used a CAQDAS (Computer Aided Qualitative Date Analysis Software) to make the content analysis: NVivo7. This software allowed a better organisation, systematisation, search of patterns and relationships (Richards, 2002; Johnston, 2006).

Data Analysis and Discussion: A First Contribution to the Design of the Integrative Framework

Even though, for better systematisation, we will analyse the main results within specific categories (figure 1), it is important to highlight the importance of trying to read the overall

data according to an interconnected and dynamic perspective. Only then we will be able to assume the complexity of the subject.
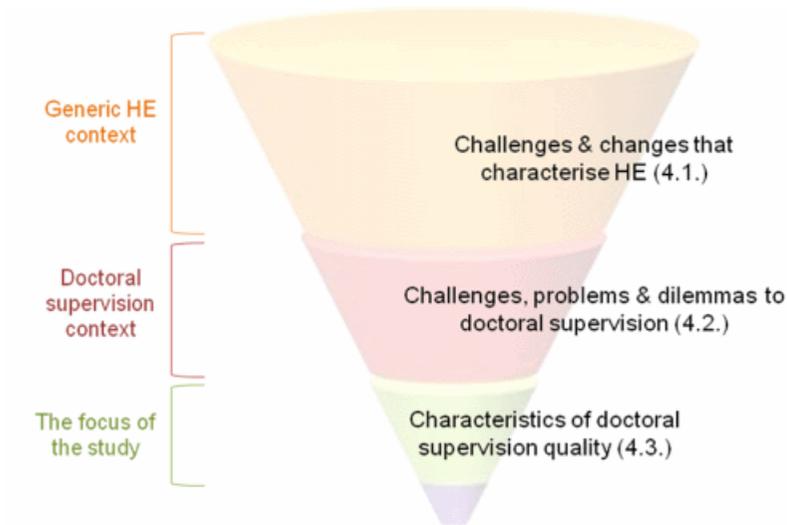

Figure 1: Main Categories that Emerged from the Content Analysis

As several authors have already pointed out (McAlpine & Norton, 2006; Park, 2007), when discussing doctoral supervision quality, it will be important to consider the overall context of HE and postgraduate studies as well as the epistemological conceptions that each element of the dyadic relationship have in what concerns the doctorate. Therefore, when designing the integrative framework, we will bear in mind those dimensions synthesised in the figure 1 which illustrate the main categories that have emerged from the content analysis.

Challenges and Changes that Characterise HE
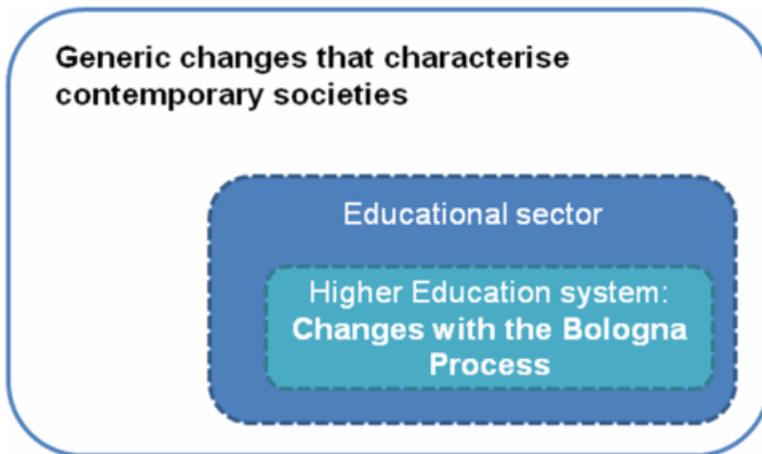
Figure 2: Overview of the Main Topics about the Challenges and Changes that Characterise HE

Considering this first broad category, the interviewees exposed similar perspectives, which are systematised in the previous figure. Before any other topic, Researcher 2 (R2) strongly emphasised the importance of contextualising the discussion and analysis about doctoral supervision within the generic context of contemporary societies. She assumed that all changes that are happening in society, culture, economy, and so on, influence policies and options that are being taken in diverse systems-namely the educational system. This researcher points out a perspective which is embedded in contemporary thoughts and philosophy, where discourses of Edgar Morin and Barnett about complexity, "*supercomplexity*", diversity, uncertainty, incompleteness and systematic changes can not be dissociated from the overall picture where HE system's challenges must be conceptualised. She considers that:

> "*The new* '*organisations' that arise from globalisation radically change the constitution of social patterns, putting (on a global scale) new problems of: identity, survival, communication, conflicts, diversity, social cohesion, training, education and human development (at several levels, namely: personal, professional, social, economic, cultural and civic), among others*." (R2)

Thus, the educational sector, particularly the HE system, can not ignore all of this, since it is actually impossible, due to the interaction and dynamics established between the different sectors. In fact, the research process and outputs can not be disconnected from educational, social, cultural, civic, economic and professional purposes.

Taking into account a more focused perspective, Bologna is consensually observed as a cornerstone and one of the main responsible for a renewed understanding and a structural re-organisation of HE. More particularly in what this subject is concerned, Researcher 1 (R1) assumes that Bologna reinforces (i) the role and importance of research, (ii) the role of the student as the main responsible for his/her learning and, more specifically, (iii) the role

of the research student as the central person in the process of (re)creating and (re)constructing his/her own knowledge. In fact, research is considered a very personal and intimate learning process that will require transformations in the young researcher's cognitive and intellectual structures (conception that is particularly stressed by R2). Simultaneously, the international and global dimension of research is emphasised, as well as the shifts in the research context. Consequently, mobility to do research and to contact and integrate research groups is being promoted more intensively.

Following similar ideas, Researcher 3 (R3) believes that the new structure of the Bologna cycles (and more particularly, the consequence of this new reality in Portugal) requires a re-conceptualisation as well as a closer and grounded reflection about the purposes of research developed at postgraduate level (both 2nd and 3rd cycles of Bologna). This researcher considers that the possibility of 'jumping' formative steps or learning cycles must be deeply discussed, mainly in what concerns the competences that a candidate to enter a doctoral programme must demonstrate and have acquired previously. This topic, she stressed, is increasingly more important, since it will have impact in the evaluation and monitoring of (doctoral) research process and product:

> "*The process of restructuring training cycles requires a new re-conceptualisation of the scope and research methodologies used in each cycle of postgraduate studies (2nd cycle–masters, and 3rd cycle–doctorates). This must have consequences in the evaluation and impact of the research produced at both postgraduate levels.*" (R3)

Finally, Researcher 4 (R4) considers that, even though there are changes that characterise HE and may influence academic research (where the Bologna Process is the main responsible), they should not influence the quality of academic research nor other processes that exist at a HE context. In this sense, we consider that this perspective seems to be unrealistic or naïve, since those international changes and shifts are not possible to control or to separate from actual practices.

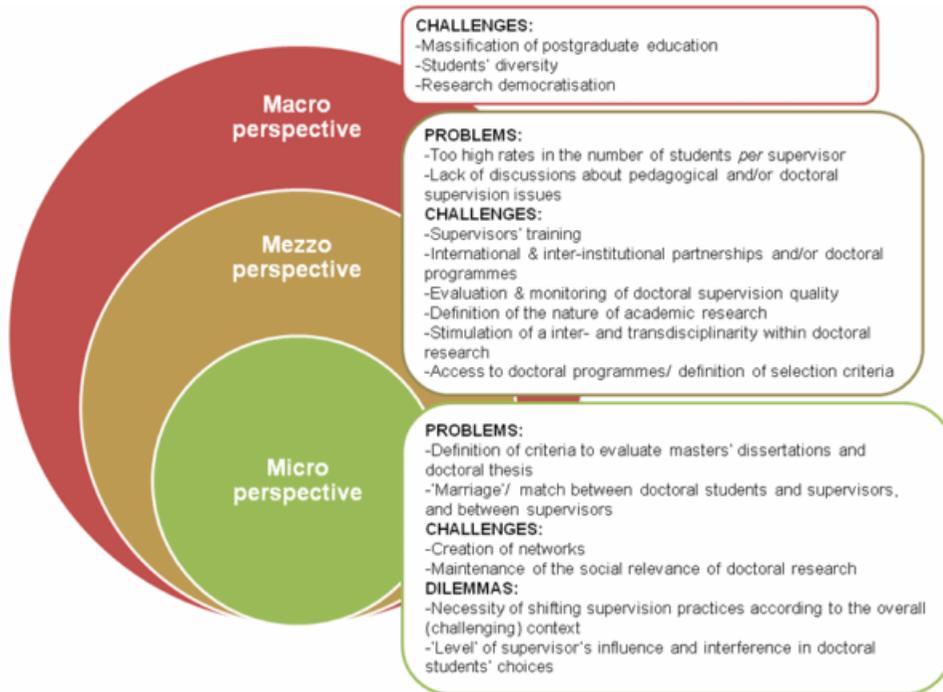### *Challenges, Problems and Dilemmas to Doctoral Supervision*

Figure 3: Overview of the Challenges, Problems and Dilemmas to Doctoral Supervision

When analysing the four interviews, we observed that it was relevant to categorise inter-viewees' conceptions considering three perspectives, according with a broader or a more specific spectrum in what the topics they have mentioned were concerned (figure 3).

Therefore, *at a macro level*, all researchers have referred the massification of postgraduate education and the heterogeneity of students, which may be enriching for research dynamics and relationships–as it was mentioned by R1 and R3. They consider that both phenomena may challenge doctoral supervision practices: while in the past, postgraduate research studies were usually for an (intellectual) elite, nowadays this is an opportunity open to diversified 'publics' with different characteristics, experiences and motivations. This is what R4 calls of "*research democratisation*". However, all researchers agree that not everyone has the profile to enter doctoral programmes, since high level competences are needed and not everyone is prepared. Also about this "*democratisation*", R3 questions the possible reasons that are behind this particular phenomenon. In fact, as a supervisor, she feels quite disturbed if the reasons are not of scientific or social nature:

> "*Epistemological changes may be a consequence of (economic) circumstances and not a consequence of scientific or social interests–and this fact is quite disturbing for me, as a doctoral supervisor.*" (R3)

At a mezzo level, we have gathered problems and challenges related with doctoral supervision, but not at the level of relationships or practices: these are still generic aspects of supervision.

As a consequence of massification and research democratisation, all researchers agreed that a great problem is rising, particularly in Education and Social Sciences. Although there is an increasing number of doctoral students enrolling in doctoral programmes, there has been the same number of supervisors. All of them stressed that there is not a proportional ratio which takes into account the changes in the 'supply and demand' at postgraduate level. This fact undoubtedly gives an extra weight to what R3 has referred in the last quotation. Even though HE institutions may not have shown any concerns about this specific reality (maybe due to financial constraints they are facing), we are aware that many of these institutions give a greater importance to postgraduate studies (particularly to doctorates) because of the economic factor behind it–high fees for students to pay. Researchers 1, 2 and 3 underline that these "*marketing pressures*" as well as "*financial problems*" (which are also present in the expression 'publish or perish' increasingly used nowadays–R3) within some domains may have negative consequences in the near future, particularly in what concerns the quality of doctoral theses and the lack of research impact (social, academic and/or cultural) they should always have. To worsen these problems, R1 and R3 highlight "*the lack of academic and professional dialogue in general, and the lack of an open dialogue between supervisors in particular*" (R1): "*this is still a taboo and still persists an individualistic way of working and understanding pedagogy in general and doctoral supervision in particular*" (R3).

Consequently, still at mezzo level, a challenge all researchers stress is supervisors' training, also to overcome some of the above mentioned problems and to anticipate the solution of others that may occur at a micro level of a one-to-one supervision.

Also, researchers 1, 2 and 3 mention that, to increase doctoral studies quality, it is important to develop "inter-institutional doctoral programmes or other institutional partnerships": it is central "to share knowledge, to establish connections, to develop inter and transdisciplinary research" (R1). Following this idea, R3 considers that the creation and intensification of "networks between research teams and institutions" and a "broadly academic discussion and reflection about these issues" are essential to be developed and stimulated. In addition, R2 and R3 highlight that it is extremely pertinent to define the nature of academic research: its conceptual and epistemological borders, its value and use, particularly the nature of research developed at doctoral level. This has also to do with the importance that R1 and R3 give to HE institutions' engagement in discussions regarding the monitoring and evaluation process of both supervision and research quality. The lack of regulations and guidelines about this issue are becoming more problematic and urgent to solve. About this subject, R4 underlines: "this is a moral question related with research and supervision credibility".

Finally, a more specific challenge identified by all researchers, which may also be considered at this mezzo level, is the definition of criteria to select the most suitable candidates that have the profile to enter a doctoral programme and to achieve it successfully. Regarding this subject, all supervisors agreed with the fact that it is difficult the select those criteria and to evaluate them. However, they consider it is essential that all candidates should have been engaged in research activities previously. Moreover, considering the diversified profiles of doctoral candidates as well as the "*low pattern of competences*" (R4) they are starting to demonstrate, researchers 1 and 4 assume that the curricular year of doctoral programmes can be "*an important mechanism to select those students who have the profile to go on and do a doctoral research*" (R4).

Finally, *at a micro level*, we have brought together the problems, challenges and dilemmas closely related with doctoral supervision practices and dynamics.

Even though the topic is not further explored, R3 underlines that, facing the challenges mentioned so far, the definition of criteria to evaluate masters' dissertations and doctoral theses is becoming a growing problem. This aspect may be related with the re-organisation of learning cycles and expected learning outcomes that Bologna supports, and also the necessity of defining the nature of academic research considering this 'new' reality. Particularly, in the definition of a set of criteria, it must be considered (i) "*supervisors' ethical and conceptual perspectives of doing research, as well as his/her own experience*"; (ii) "*different research policies followed within different scientific domains*"; and also (iii) "*institutional pre-defined research agenda*" (R3). These topics are particularly referred by R2.

Again, the unequal ratio students/supervisor, the absence of any strategic change to overcome this fact as well as the growing number of doctoral programmes may bring terrible consequences to the supervision practice. One problem that is starting to be more frequent is the match between a doctoral student and a supervisor-as mainly stressed by researchers 1, 2 and 3. Commonly referred as a 'marriage', their relationship is considered to be the most important factor so the doctoral supervision process can be successful. Nevertheless, due to numerous constraints, this 'marriage' is becoming harder or more difficult to be achieved.

Also because of massification, as well as to optimise human, scientific and academic resources, research networks among doctoral students are increasingly observed by all researchers as an important challenge to take into account. As R3 highlights, also because of the increasing complexity of phenomena that are being researched allied to time constraints (to pursue a doctorate), it is more pertinent to stimulate doctorates based on closer networks and team work. However, it is R3 who also remembers:

"*(…) the tendency of simplifying doctoral research objectives and requirements, due to time pressures and efficiency purposes, may affect the research social relevance.*"

So, it is assumed that social relevance must be maintained, otherwise doctoral research and the final product will loose its epistemological nature. It is researcher 2 who is particularly concerned about this subject. She underlines:

"*Research demands (…) an interdisciplinary culture, (…) a broad vision of the world, (…) a critical perspective about knowledge production and its social use, an audacity to transform knowledge and thoughts, a capacity to think and approach research problems considering their intrinsic complexity.*"

Within this perspective, this researcher clearly assumes that doctoral research must have undeniable implications-social, cultural and human. In fact, she argues that knowledge that emerges from research must be transformative.

Before we can conclude this section, we must refer some dilemmas that the interviewees have been facing or observed. Due to the overall perspective drawn above, R3 considers that the supervision process "*is starting to be more instrumental or technical, less demanding and rigorous*". Undeniably, this influences the quality not only of supervision practices and experiences, but even of the doctoral output or product. Following this idea, the same researcher (R3) as well as R1 think that, although diversified students' profiles are a great and positive challenge to the supervision process (because they will enrich the supervisor and

the research team), when facing a growing number of students with different set of profiles, it is difficult to adjust responsible and rigorous patterns of supervision to each one of them. Therefore, supervision may fall into a set a "*standard guidelines*", which may "*strangle the autonomy and creativity that the research process requires*" (R1). Thus, R3 speaks of "*tensions between the previous and the emergent* [supervision and research] *paradigm*": there is "*the need of changing the research supervision process*, *but the difficulty of doing so*."

Finally, considering this micro perspective, it is researcher 1, the most experienced, who openly approaches specific dilemmas with which she was struggling with in the last years of her supervision practice. The main dilemma may be expressed and systematised in the form of a question: in what extent must the supervisor interfere in doctoral students' research and learning path and choices? This experienced researcher assumed that it is extremely difficult to balance the following aspects: level of autonomy *versus* awareness of doctoral students' time to personally and academically grow and develop *versus* time pressures to finish the writing and defend the thesis. In fact, as researcher 2 stresses "[doctoral] *research must be understood as an intense process of training and* [holistic and human] *development*". Therefore, the supervision process must be committed, creative, reflective and transformative (R1).

Characteristics of Doctoral Supervision Quality: Students and Supervisors' Quality Profiles

Surprisingly, the four interviewees adopted a different focus when talking about the characteristics they considered essential to achieve high-quality levels in the doctoral supervision process. Nevertheless, we may conclude that their perspectives are clearly inter-related and may be gathered into the last figure (figure 4), which is a first generic approach to the quality profiles of both doctoral students and supervisors. So we can better describe researchers' perspectives, in this section we will follow an individualistic approach to the data.

Researcher 1 focuses on the main characteristics that constitute a good supervisor. She considers that "supervisors must know their students very well". Thus, this implies a "great capacity of observation, of listening and paying attention to a person's way of being". As it is expected, this senior researcher stresses the importance of supervisor's flexibility: s/he must adapt the "supervision strategy (…) to each student's profile". Additionally, she is very keen to affirm that the supervisor has the responsibility of "creating appropriate contexts for students to develop, so that they can overcome difficulties, problems and may enhance their own potentialities". Consequently, she considers that "to do supervision is also to teach", clearly observing a link between supervision and pedagogical competences. Moreover, this senior research considers that the supervisor must "develop a (meta)reflective thinking and critical analysis about their own actions, engaging in a self-supervising process".

Furthermore, R1 also underlines that both students and supervisors must be extremely committed, attentive and responsible. Additionally, they must communicate as well as discuss and solve a problem, when one is identified. Regarding students' profile in particular, this researcher points out two main aspects: the importance of (i) working in teams and having interpersonal competences, and mainly (ii) their involvement in the writing process: "*the student must be committed and engaged with it*". To conclude, this latter aspect is particularly related with her vision about thesis' quality:

> "*It must contribute with anything new to anyone/anything and thus it must have social relevance. Research is a creative and innovative process. Therefore, doctoral students and supervisors must be extremely committed with that, and must be very reflective. Consequently, this dialogical relationship must be creative and transformative.*"

On the other hand, the experienced researcher 2 gives a particular emphasis to two conceptual aspects that are particularly related with her perspective of research epistemology:

- "*The creation of new research training cultures*, *which must broaden methodological reflections*" and, consequently, must stimulate the production of knowledge which is important not only within a particular scientific domain but mainly to society;
- The creation of "research networks and scientific cooperation where research teams must open themselves to pluridisciplinarity".

In what regards supervisors' main responsibilities, R2 stresses the use of suitable supervision strategies, adapted to each student's profile and individuality (following the same idea of R1), and appropriate, in time, rigorous and enriching feedback to student's work. On the other hand, student's main characteristics are articulated with the supervisors' role. The student is the main responsible for constructing (new) knowledge. Therefore, s/he must have the time to manage research tasks, and mainly the time to think and to act, as well as to construct a solid literature analysis, where the overall research problem must be critically analysed and systematised, also contributing to the advancement and broadening of knowledge. Consequently, questioning and argumentation skills are essential in the overall student's development. Furthermore, both the student and the supervisor have to be committed and must guarantee research ethics.

The same vision of dialogic, creative and transformative relationship is shared by R3. However, her main focus is on the supervisor's profile. In fact, from this analysis, we may systematise some important guidelines directed to doctoral supervisors. In her words, the supervisor (particularly in the Education area) must:

- Engage in intensive self-refection regarding the principles s/he, as supervisor, shows about an educational phenomenon;
- Respect and integrate students' interests and motivations, trying to articulate them with more general educational interests;
- Guarantee the (social) relevance of a project: it has to develop useful knowledge;
- Promote an enriching learning context where the doctoral student will develop his/her competences. Therefore, dialogue, support and feedback are always needed (as referred by R1 & R2);
- Develop a good interpersonal relationship with the doctoral student (also mentioned by R1);
- Develop rigorous research, that must follow ethical principles and must be methodologically adjusted (also emphasised by R2);
- Be flexible, following the same idea that research is not a rigid process: it is an unpredictable and creative one;
- Engage student and him/herself in intensive and continuous reviews and corrections of written texts;

- Create contexts for the student (i) to develop a critical vision regarding the 'object' s/he is studying and (ii) to understand the essential role of research;
- Promote reflective habits, problem solving skills, as well as communication skills;
- Promote integrity and intellectual modesty, authenticity, tolerance facing the uncertainty and the unknown, the willing of "*taking a chance*" as well as moral courage.

In fact, these evidences demonstrate that researcher 3 is a very self-reflective person in all 'sectors' of her intervention: as a teacher, researcher, supervisor and citizen. All those aspects may well be considered almost a 'charter of principles' regarding doctoral supervision in general, and doctoral supervisor's main responsibilities in particular.

Finally, following most of the previous perspectives, R4 focuses her discourse on interpersonal skills: both doctoral students and supervisors must be able to engage in open discussions, to share ideas, to reach a consensus, to be involved, committed, interested, total honest and transparent with each other and with the research process. More specifically, the project must be well planned, discussed and everything must be on time, even though there are delays and unpredictable things to deal with. Additionally, supervisors must be flexible, self-reflective and must encourage students to expose their research to academic criticism by participating in conferences and submitting academic articles. On the other hand, students must develop autonomy and critical thinking. To conclude, we may underline that, when comparing this researcher's discourse with the others, it seems that R4 shares a more directive conception, based on daily aspects of the supervision process and with a smaller level of conceptualisation.

To conclude, we may gather the contributions explored in this section (4.3.) into the following integrative figure, which is an effort to systematise and group several characteristics that will be a part of the final integrative reference framework where the quality profiles of students and supervisors will be deeper conceptualised.
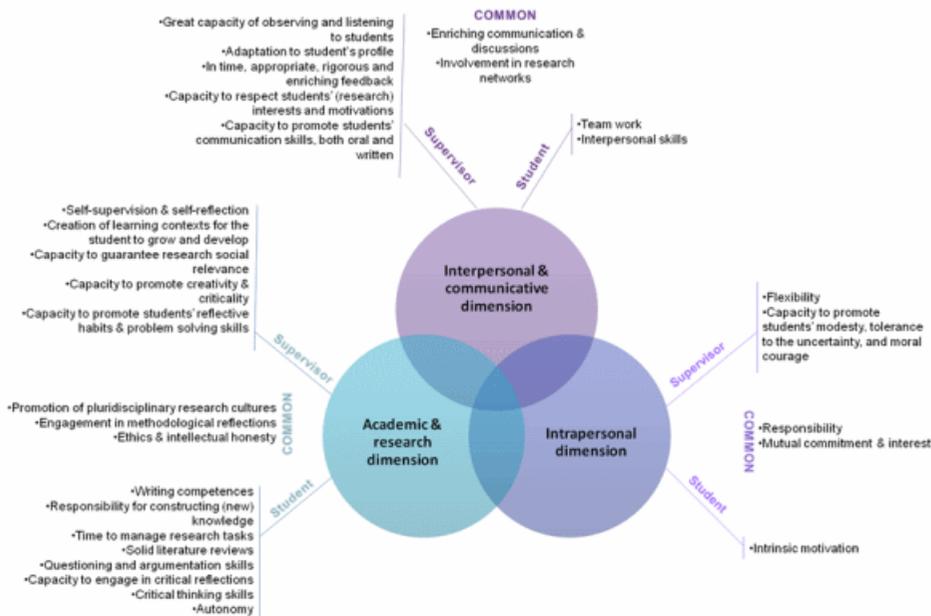
Figure 4: First Approach to Conceptualise Doctoral Students and Supervisors' Quality Profiles

Nevertheless, we are aware that this first semantic schema needs to be enhanced as well as dynamically enriched and reviewed. Also, the dialogue between this research and international investigations needs to be assured by following an interconnected and cyclic perspective, so a holistic framework can be designed.

Final Reflections and Considerations

As we have already stated, this is a study of supra-national importance and character. Nevertheless, within Portugal, this research suits itself of greater impact, relevance and implications, since this is the first attempt to publically discuss this subject and start to break down some taboos and silences. Thus, this research will be extremely enriched by gathering, in the near future, experiences and conceptions of doctoral students and supervisors, that will also be explored in the light of international context and concerns.

It is essential to underline that, although we have gathered perspectives of Portuguese experts on pedagogy and doctoral supervision, those first results foresee common perspectives with the international context, as we have observed in section 2. If we and other countries are starting to face and deal with certain discussions, problems, challenges and dilemmas, many of those have already been at the order of the day in other countries and, in some cases, have already been solved (Pearson & Ford, 1997). Consequently, all national systems, with a greater or smaller urgency, need to develop structures and initiatives to discuss this sort of problems and engage Academia, administrators and other external stakeholders in discussions around this issue, sharing perspectives and points of view. Therefore, we strongly believe that it is essential:

- To gather and understand students, supervisors, and institutional members' conceptions about the nature and value of the doctorate as well as its purposes, so a conceptualisation of doctoral supervision quality can be further developed;
- To continuously discuss specific regulations and/or guidelines on quality of doctoral supervision. In the case of some countries (Portugal included) it is vital to define quality standards and guidelines about doctoral supervision quality, so HE institutions may incorporate them in their own culture and specificities (following what the UK and Australia, for example, have already developed);
- To define a monitoring and evaluation process regarding doctoral supervision practices;
- To gather research-based evidences regarding (i) the types of doctorates (in this case, Portugal must develop conceptual, epistemological or empirical work regarding this issue); (ii) the 'space' and the type of involvement and success doctorate holders have in the external market and the professional paths they pursue after finishing doctoral degree; and (iii) the impact doctorates have in economy and society.

To conclude, we must state that permanent questioning and discussion may benefit international knowledge about this issue, and may motivate HE institutions and academic community to continue to rethink doctoral education, research and supervision quality.

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