

8th ICEEPSY 2017
**The International conference on education and educational
Psychology**

**DOCTORAL SUPERVISION AT NOVA LISBON UNIVERSITY: AN
EXPLORATORY STUDY**

Isabel Ribau (a)*, Mariana Gaio Alves (a)
*Corresponding author

(a) UIED, Departamento de Ciências Sociais Aplicadas, Faculdade de Ciências e Tecnologia, NOVA Lisbon
University, Campus da Caparica, 2829-516 Caparica, Portugal, i.coutinho@campus.fct.unl.pt.

Abstract

Since the implementation of the Bologna process and the Lisbon strategy, there has been an increase of the interest in higher education and in doctoral education in Europe. This political process aims to create not only a European area of higher education, but also research European area. Doctoral education is considered to be one of the keys to innovation and to the development of societies. The implementation of the proposals that emerged from the meetings of the ministers responsible for higher education (MMHE) and the European association universities (EUA), brought a new look to the third cycle (Dublin descriptor, 2004; Bergen framework of qualifications, 2005), and to the Doctoral education and supervision (ten principles of Salzburg, 2005). Within this context elements such as doctorate completion time, student's profile, skills and competence acquired in that period and mobility between institution assumed a greater importance (London Communiqué, 2007; Leuven Communiqué, 2009).

In Portugal, it was only during the last decade that researchers began to publish papers whose object study is doctoral education, the quality of supervision of doctoral research, supervisor and student profile and relationship. In this context, these research article pretend to characterize and analyse how the two aspects of doctoral education, monitoring and evaluation, are institutionally implemented in the third cycle at NOVA Lisbon University (UNL) and what implications may have on the success rate and completion time. The regulations of the third cycle in the nine schools that constitute the UNL and public annual reports will be analyses enabling to highlight some data.

© 2017 Published by Future Academy www.FutureAcademy.org.UK

Keywords: Doctoral supervision, supervision practices, monitorization process, evaluation process.



1. Introduction

Changing political and economic contexts in the 1980s and 1990s in societies such as the United States of America, Canada, Australia, Norway, Finland, and Britain, have implied changes in doctoral studies and challenges to universities. Some of these challenges are related to the implementation of evaluation in doctoral programs (PhD), the focus on supervision of doctoral research, the evaluation of the supervision process, evaluation and monitoring of publications, publication rates as well as the external definition of quality standards for doctoral and research programs (Park, 2005; Jones 2013).

In recent years, supervision of doctoral students has been the subject of investigations in several countries. This area of educational knowledge gained new importance at European level after the implementation in higher education of the Bologna process in 1999, which involved the definition of new goals, reaffirmed in Dublin (2004) and renewed in Salzburg (2005) and Bergen (2005).

1.1. Challenges of the third cycle in times of change

One of the challenges now facing both universities and supervisors is related to the emergence of mature students, sometimes also called lifelong learners or hobby PhD students whose profile are different from the traditional student and who hold part-time doctorates (Salzburg, 2005; Lee, 2009; Baptista, 2014 and 2015). This diversity of students with different expectations, needs, concerns and interests has led to a reflection on the goals, effectiveness and preparation that doctoral programs effectively give, as well as lead to rethinking supervision practices (Lee, 2009; Lee & Green, 2009; Halse & Malfroy, 2010; Maxwell & Smyth, 2010 and 2011; Lee & McKenzie, 2011; Lafont, 2014; Baptista, 2015; Mello, Fleisher & Woehr, 2015).

1.2. PhD a time of change (and growth): supervisors versus doctoral students

During the PhD it takes place a process of teaching and learning between supervisor and student, with particular characteristics. Simultaneously an inter-relational process between supervisor and student is construct and supervision depends on how they manage their relationship (Styles & Radloff, 2001; Ives & Rowley, 2005; Woolderink, Putnik, van der Boom & Klabbers, 2015; Holbrook, Shaw, Scevak, Bourke, Cantwell & Budd, 2014). During this period the student grows not only as a researcher (acquiring investigative competence, developing networks, and constructing knowledge) but also as a person. The supervisor must create and keep up a creative, productive atmosphere and offer problem-solving mechanisms when they emerge from the research. In this context supervisor skills are important to end successfully the doctorate (Ismail, Abiddin, Hassan & Ro'is, 2014).

In studies carried out in the doctoral supervision process, it was verified that the supervisor plays a fundamental role in the course and success of the supervision (Delamont, Atkinson & Parry, 1997; Lee, 2008 and 2009) and in the development of competence by the student (Grant & McKingley, 2011), since his/her style and pedagogy (Yeatman, 1995; Lee & Green, 2009), the learning environments he/she provides (Wolff, 2010) and the communication that establishes with the student (Connell & Manathunga, 2012; Baltzersen, 2013) are crucial for the quality of supervision (Kam, 1997; Gatfield, 2005; Lee & McKenzie, 2011). Also the personal significance of being a doctoral supervisor (Wright, Murry & Geale,

2007; Bøgelund, 2015), his/her professional development, as well as the conflicts between being a university teacher/ being a researcher / being supervisor (Kyvik & Smeby, 1994; Karagiannis, 2009; Malfoy, 2010;) will influence the supervision practices and process.

Some of the weaknesses found in these investigations were: the time of completion, the quality of doctoral programs, the dependence on the doctoral conclusion of the supervisor-student relationship, and the pedagogical, metacognitive, and communication capabilities of supervisors (Bui, 2014). It should also be pointed out that the type of competences that students must have before starting their doctorate (Lee, 2009; Baptista & Huet, 2012) and the acquisition of skills and levels of cognitive development of students upon completion of their PhD, may be unequal for different doctoral programs and different supervisory processes (King & Kitchener, 2004; Olehnovica, Bolgzda & Kravale-Paulina, 2015, Mello et al., 2015). From these investigative works, it is possible to verify that three aspects influence the process of knowledge construction during the PhD. The first is how the supervisor handles creativity, understands metacognition, develops communication, and provides ideas for achieving goals (know how to select and solve problems) by stimulating and enthusing students (Kam, 1997; Bengtsen, 2011; Ismail, Abiddin, Hassan & Ro'is, 2014). The second is the need for mechanisms of monitorization of the supervision process to ensure that the student makes progress and develops self-efficacy (Coutinho, 2007; Overall et al., 2011). And the third is the relationship established between the supervisor and the student, which should include the integration of the student in the research environment and research network, the willingness to listen, argue and discuss of both. (Kyvik & Smeby, 1994; Halse, 2011, Connell & Manthung, 2012, Halse & Bansel, 2012; Christensen & Lund, 2014; Määttä, 2015; Olehnovica et al., 2015).

There are different supervision models, some emphasise the relation between student and supervisor like the “Self-regulatory synergistic model of supervision” (Styles & Radloff, 2001), the “Alignment model” (Gurr, 2001), the “Supervisor style” (Gatfield, 2005) or the “Interpersonal behaviour supervision model” (Mainhard, van der Rijst, van Tartwijk and Wubbels, 2009). Vilkinas (2008) build a “Integrated competing values framework” to be applied to the supervision of the doctoral research and proposed five supervisor profiles: Monitor Deliverer, Broker, Innovator, Developer and Integrator. Lee (2007, 2008) after review work in the area, proposed five concept of research supervision held by supervisor that influence the supervision process: Functional, Enculturation, Critical thinking, Emancipation and Relationship development. In 2010 and 2011 Maxwell and Smyth developed a model for the supervision, which includes the pillars of supervision: the students, the knowledge and the research project. All these models, based in research, aim to understand supervision process and to highlight its features.

1.3. State of the art in Portugal

The doctoral education has been studied in recent years in Portugal at NOVA Lisbon University and at Aveiro University (UA). In the first one (UNL) the development of studies began in this area with the implementation of a project called "Project Telos II. Lifelong Learning: Effects on Higher Education Graduates", which run from 2003 to 2006 at the Education and Development Research Unit (UIED). In 2010 and in the continuity of the project "Project Telos II" an article was published by Alves & Azevedo

(2010) and a book entitled "University and lifelong learning" was edited (Alves, Cabrito, Lopes, Martins & Pires, 2010). In the book the authors presented different approaches to the central theme of the project, which was the understanding of the lifelong learning processes of postgraduate students in higher education. At the University of Aveiro, research in the field of doctoral supervision was initially carried out at the Laboratory for the Evaluation of Educational Quality and later at the Integration Unit for Continuing Education (UNIFOC). The first international publications appeared in 2010 (Baptista & Huet, 2010). In both university institutions the studied population was the postgraduate students of both masters and doctorates, focusing particularly on "mature" students in the Education field.

The first studies focus on the experiences of doctoral students, analyze the skills perceived as developed by them. They focused on the perception that students of the doctoral program of educational sciences in UNL and UA had about the quality of the doctoral program as well as the impact that this had on their life (Alves & Azevedo, 2010; Alves, Neves Azevedo & Gonçalves, 2012; Baptista & Huet, 2012). The knowledge construction during the doctorate (Figueiredo, Huet & Pinheiro, 2012), the expectations and emotions of the students during the supervision process in relation to supervisors (Baptista, 2014 and 2015), as well as sociological issues related to attendance, participation, implementation and expectations regarding doctorates (Alves, Cabrito, Lopes, Martins & Pires, 2010) were also studied.

The results concerning expectations and competences development during the PhD in UNL showed that in general students are satisfied with the quality of the programs they attend and with the competences developed in post-graduation courses in the field of education, but in some items they are less satisfied (teamwork, development of interpersonal skills, Knowledge of a second language, development of communication skills) (Alves, Neves Azevedo & Gonçalves, 2012).

It is important to highlight that supervision quality and the quality standards of the doctoral supervisor were analysed by Baptista and Huet (2010 and 2011). These authors emphasized the need to define and contextualize quality criteria, that would allow doctoral programs quality and supervision and quality standards for doctoral practices be measured, as well as the development of programs to prepare supervisors to respond to the needs of both students and supervisors.

In another study carried out from the point of view of doctoral supervisors, the results indicated that they consider that doctoral students should develop interpersonal and communicative competences, as well as academic and scientific competences during the period of the doctoral program (Baptista & Huet, 2012). However, when mature students reflect on their supervision practices and their experiences it is possible to see that they do not fit the needs of the students. Mature students have indicated some characteristics that supervisors should have to perform supervision well: be available, have time, give feedback timely, have scientific knowledge and research / research skills, have social skills, be empathetic, be supportive and intelligent (Baptista, 2014 and 2015). From the research carried out, with supervisors, by Baptista and Huet (2010, 2011, 2012), a profile of doctoral supervisor emerges and also some clues about the parameters of quality that could be used in the analysis of doctoral supervision. However, these studies were carried out only with students and supervisors of Aveiro university.

From the review of the literature on doctoral education research in Portugal, it has not been possible to identify published studies on metacognition, self-regulation and psychosocial attributes of

doctoral students. There were also no studies found on doctoral completion times, delay or abandonment of doctoral programs, or on the causes of (in) success in completing the doctoral degree. There is also a gap regarding supervisory practices during the doctoral research project, how supervisors support students during this period of time, and how supervision practices are monitored and evaluated, or what the real competency profile is, and what abilities PhD students have when they complete their PhD program. And even a simple characterization of the supervisor's perception of what research is in doctoral supervision was not found.

One of the goals of this research is to contribute to "fill the existing void" about supervisory practices, to understand how these practices are monitored and evaluated and to create knowledge about the supervision process at NOVA Lisbon University.

2. Problem Statement

Different doctoral students' success and completion rates across the various schools that constitute NOVA Lisbon University, lead to question the supervisory practices currently applied, as well as its monitorization and evaluation procedures.

3. Research Questions

What supervisory monitoring and evaluation process are current within doctoral supervision at NOVA Lisbon University? Is the monitoring and evaluation of the process of doctoral supervision effective and efficient?

4. Purpose of the Study

The main goal of this research project is to create knowledge about doctoral supervision at the NOVA Lisbon University and reflect about the doctoral regulation and supervision practices. We intent to characterize the supervisory monitoring and evaluation processes proposed in university schools rules, as well as the NOVA's doctoral student and supervisor academic profile. It is also intended to build an adequate monitoring and evaluation process for supervision and develop a supervisory practices handbook with procedures and instruments that can be applied.

5. Research Methods

Initially a documental analysis will be done using public documents, as legislation and regulations of the third cycles in the UNL schools and also annual reports of the university. We intend to characterize doctoral students profile that emerge from the third cycle regulations and the proposed supervision monitorization process and evaluation, identifying similarities and differences amongst those schools at the NOVA Lisbon University. Being so, the aim of this research paper is to characterize the monitoring and evaluation procedure during the doctoral program, proposed by the legislation and school regulations and its implication in the success rate.

In a second phase, already running, a survey will be applied to know the supervision practices, monitorization processes and how evaluation of supervision is carried out.

6. Findings

The UNL various schools show different doctoral success rates. In the Faculty of Science and Technology (FCT) between 2013-2015 there has been an improvement of success rates, which has not been observed in other schools. In some schools an accompanying committee of the doctoral process has been created and carries out the monitoring of the quality and development of the doctoral research. At the same time the implementation of a rule related with the obligatory publication um scientific article, with peer review, before submitting the final thesis, may be also influencing the success rate.

6.1. Before and after Bologna - an overview of the doctoral education

The reference to doctoral degree appears in Decree-Law n.º 216/92 on October 13, before Bologna implementation, in the third cycle, with the following wording "The doctoral degree proves the realization of an innovative and original contribution to the progress of knowledge, a high cultural level in a given area of knowledge and the ability to carry out the independent scientific work "(Chapter III, Article 17 (1)). Almost all legislative text of the Decree-Law n.º 216/92 is related to organizational procedures. The supervisor or doctoral student profile, supervision rules, expectations, supervisory work, monitoring and evaluation are not mentioned. In fact, the only reference to the role of the supervisor in this legislation relates to the procedures that the latter must carry out in order to inform about the evolution of the research work of the student. "The supervisor shall annually inform the competent body of the university, through report on the progress of the candidate's work "(Chapter III, Article 23).

In 2006 the Decree-Law n.º 74 of 24 of March 2006 approve the three-cycles organisation and the Bologna descriptors that are based on learning acquisition and competence development. This law emphasise a paradigm change from a passive model of education based on knowledge acquisition, to a model based on developing competences, from the simple one (instrumental, training) to more complex (interpersonal, area specific). Two years later, and after the application of the Bologna process to the first and second cycle, a new decree-law reinforces what is intended with the third cycle, and regulates the existence not only of students who hold part-time doctorates but the need of monitor and evaluate the implementation of the Bologna process by listening to all stakeholders (teacher, students, supervisor). The Bologna process caused changes in PhD structure, being the "schooling process" one of them (Alves & Azevedo, 2010). The Decree-Law n.º 107/2008 on June 25, underline some of Bologna's objectives for higher education and regulates how they can be monitored and evaluated: "(...) The transition from an education system based on the transmission of knowledge to a system based on the development of student competences, where the components of experimental or project work, among others, and the acquisition of transversal competences must have the decisive role (...)". The article 28 of the same Decree-Law refers to the profile of the doctoral student's competences after the conclusion of the same, which meets the framework of qualifications presented and approved in Bergen (2005) referring that "1 - The degree of doctor is conferred to those who demonstrate: (A) the ability to systematically understand a scientific field of study; (B) the skills, aptitudes and methods of research associated with a scientific field;

(C) Ability to design, design, adapt and carry out a meaningful investigation respecting the requirements imposed by the standards of academic quality and integrity; (D) have carried out a significant set of original research work which has contributed to the extension of the frontiers of knowledge, part of which merits national or international dissemination in publications with a selection committee; (E) Be able to critically analyze, evaluate and synthesize new and complex ideas; (F) Be able to communicate with peers, the rest of the academic community and society in general about the area where they are specialized; (G) be able, in a knowledge-based society, to promote technological, social or cultural progress in an academic or professional context". Still, there are no supervisor profile nor supervision practices proposed. But the scientific orientation is attributed, by the regulation to the supervisor who usually has as only attribute have the PhD degree and to be appointed by the scientific committee of the doctoral program. One of the supervisor duties in some UNL schools is to make an annual report on the progress of the student's work and to monitor the research project evolution. The evaluation of the doctoral supervision isn't contemplated in the regulations of the third cycles nor the supervision competences of the supervisor.

According to university autonomy, they can legislate and make their own regulations, as long as they follow the international recommendations proposed by the Bologna process and the Lisbon Strategy and international parameters proposed by EUA. In this context, each university can define its rules, creating and adopting a supervisor profile, advising on supervision practices and implementing monitoring and evaluation processes for doctoral supervision.

In NOVA Lisbon University, the implementation of the Bologna process has given rise to an awareness of the importance of the doctoral education and the need to support both students and supervisors during the PhD. In this context, Doctoral School were founded in this institution and, as recommended by international studies, courses were designed and implemented to promote the professional development of supervisors and to support PhD students during their academic career and help to develop transferable skills.

6.2. Regulations and legislation of the third cycles in UNL: proposals for monitoring the doctoral process and for the implementation of quality

The Nova Lisbon University consists of nine schools: Faculdade de Ciências e Tecnologia (FCT); Escola Nacional de Saúde Pública (ENSP), Faculdade de Economia- Nova School of business and economics (Nova SBE); Instituto de Química e Bioquímica António Xavier (ITQB); Instituto Superior de Economia e gestão - Nova Information Management School (Nova IMS); Faculdade de Ciências Sociais e Humanas (FCSH); Faculdade de Ciências Médicas- Nova medical School (NMS); Faculdade de Direito (FD); Instituto de Higiene e Medicina Tropical (IHMT).

From the analysis of the general regulations of these schools or from the doctoral programs regulation it is verified that the monitoring of the supervision process is made by the monitoring committees (Nova IMS, FCT, ENSP), thesis commissions (ITQB, FCM) or tutorial commission (IHMT). From the aims, composition and the nature of the monitorization reports is possible to assume that they correspond to different concepts and models. It was not possible to verify the existence of following commissions in Nova SBE, FCSH and FD, since they aren't mentioned in the regulation or in the

documents publish at the internet page of those schools. A simple resume of the information about supervision and monitorization is presented in the Tabel 01.

Table 01. Information extracted from PhD Regulations at UNL schools (<http://www.unl.pt/escolas/escolas>).

UNL Schools	Scientific orientation				Monitoring commission				Research work annual report elaboration		Regulation
	Teacher	Researcher (With a PhD)	Expert in the field	Senior researcher	Composition	Function/aims	Metting frequency	Monitorization reports	Student	Supervisor	
FCT	x	x			x	x		x		x	n.º 905/2010 and n.º 209/2014
FCSH	x	x									n.º 438/2008
Nova SBE	x	x							x		n.º 488/2010
FCM	x	x			x	x		x	x		n.º 320/2015 and n.º 8774/2015
FD											Regulation approved in 21/05/2014
IHMT	x	x	x		x	x		x	x		n.º 474/2012 and n.º 761/2015
Nova IMS					x	x		x		x	n.º 287/2010
ITQB	x			x	x	x	x	x	x		n.º 269/2008
ENSP	x	x			x	x		x	x	x	Aviso n.º 21553/2008

Scientific orientation is clearly regulated in almost all schools. The co-orientation can be performed in all schools by a researcher with the PhD. It interesting to note the use of the word *orientation* instead of *supervision* in official documents. In portuguese they have different meanings, orientation is more restricted than supervision. Supervision is related to observation, monitorization, teaching, coaching, showing a way, care, attention, help, support; orientation suggest “show the way”, give a direction, guidance.

It is also possible to verify, from the PhD regulation, that the quality of the knowledge produced during the doctorate in some doctoral programs is certified not only by the scientific committee of each course, but also by peer review. In FCT, FCM and Nova SBE the publication of articles based on the doctoral research, before the acceptance of the request of the thesis defence is formally required.

6.3. Preliminary results and discussion

In 2016-2017, 79 doctoral courses are running in these schools. It is interesting to note that FCT has 44% of all doctoral programs, that the FCSH has 25% and ITQB has only 10%. All the other schools have 21% of doctoral programs (<http://www.unl.pt/escolas/escolas>). The percentage of students attending the doctoral programs, from 2008 to 2015, does not have the same percentage: FCT has an average of 25% of all doctoral students, and FCSH has 39% followed by ITQB with 11%, Tabela 02.

Table 02. Number of doctoral students enrolled in the different schools of NOVA Lisbon University. Data retrieved from Activities reports: <http://www.unl.pt/nova/relatorio-de-atividades>, accessed in 2/5/2017.

Anos	FCT	FCSH	Nova SBE	FCM	FD	IHMT	Nova IMS	ITQB	ENSP	Total
2008	469	625	45	85	77	18	15	33	233	1600
2009	609	855	36	147	82	6	28	249	31	2043
2010	589	939	36	152	90	52	34	243	59	2194
2011	539	868	33	220	88	62	34	252	68	2164
2012	563	910	42	146	100	66	39	251	75	2192
2013	494	911	47	165	126	100	50	246	86	2225
2014	456	636	58	177	118	114	82	265	98	2004
2015	426	650	71	200	125	112	89	270	105	2048
Average	518	799	46	162	101	66	46	226	94	2059
%	25	39	2	8	5	3	2	11	5	100

The schools who have an higher average of enrolled doctoral students are FCSH (799 students) followed by FCT (518 students) and ITQB (226 Students). The school with lower enrolled doctoral students are Nova SBE and Nova IMS with an average of 46 students.

The number of students getting involved in doctorates in the different schools at UNL fluctuates, Table 02, but also the number of students completing doctoral programs, Table 03.

Table 03. Graduated students in the different schools of NOVA Lisbon University. Data retrieved from Activities reports: <http://www.unl.pt/nova/relatorio-de-atividades>, accessed in 2/5/2017.

Anos	FCT	FCSH	Nova SBE	FCM	FD	IHMT	Nova IMS	ITQB	ENSP	Total
2008	53	35	2	11	0	7	0	44	0	152
2009	50	49	3	10	4	8	0	33	2	159
2010	51	58	6	7	1	14	3	34	8	182
2011	62	65	4	7	0	14	2	45	5	204
2012	61	64	5	8	2	1	2	44	4	191
2013	82	83	5	13	4	8	3	38	2	238
2014	75	90	5	18	8	8	1	32	7	244
2015	81	75	9	15	4	7	5	44	5	245
Average	64	65	5	11	3	8	2	39	4	202
%	32	32	2	5	1	4	1	19	2	100

The schools who doctorate more students per year are the FCT and FCSH. In the opposite position are the school who graduate less, Nova SBE, Nova IMS, FD and ENSP.

The retention rate of students differ comparing the nine schools, Table 04. The retention rate was obtained considering the number of students that conclude the course (graduated students), the number of students enroled in the doctorate (students enrolled in PhD) and the average time to complete the course (in all schools was used 4 years except for FCTⁱ and FCSHⁱⁱ):

$$retention\ rate = \frac{[(graduated\ students \times time\ to\ complete) - students\ enrolled\ in\ PhD]}{students\ enrolled\ in\ PhD} \times 100$$

Table 04. Retention rate of students in the different schools of NOVA Lisbon University.

Anos	FCT	FCSH	Nova SBE	FCM	FD	IHMT	Nova IMS	ITQB	ENSP	Total
2008	59	79	82	48	100	-	100	-	100	81
2009	70	79	67	73	80	-	100	47	74	74
2010	69	77	33	82	96	-	65	44	46	64
2011	59	72	52	87	100	10	76	29	71	61
2012	61	74	52	78	92	94	79	30	79	71
2013	40	66	57	68	87	68	76	38	91	66
2014	41	48	66	59	73	72	95	52	71	64
2015	32	57	49	70	87	75	78	35	81	62
% Average	54	70	57	71	89	64	84	39	77	68

Analyzing the retention rates it is possible to notice that ITQB has the lower retention rate (an average of 39%), followed by FCT (an average of 54%) and Nova SBE (an average of 57 %). The other schools have retention rate higher then 60%. We don't have information to explain these results yet. In literature it's recognise that the successful completion of a PhD is influenced by several factors, but they all agreed that, the quality of supervision and the relationship establish between supervisor and student are important factors (Kam, 1997; Styles & Radloff; Jones, 2013; Orellana et al, 2016; Beck, 2016).

Knowing that some schools have follow-up commissions, it can be inferred that monitoring may be one of the strategy to promote the reduction of retention rate, since the purpose of these commissions

is not only to monitor the progress of student research work during doctorate, but also to prepare a report on it, given suggestions. Two of the schools with retention rates less than 50% in 2015, FCT and Nova SBE, require the publication of articles since 2013, which can be seen as an incentive for students to improve their performance.

It should be noted that since 2012 the FCT has shown an improvement in success rates. This may be related to the monitorization of doctoral research supervision by the thesis monitoring committees, to changes in supervision practices or to the changes in the funding in higher education. The requirement of having articles with peer assessments to have doctoral scholarship or pós-doctoral grant from “Fundação para a Ciencia eTecnologia”, in the last years are a driving force for, not only master and doctoral students publish, but also to conclude the degree. The supervision process may also be changing, bringing new proposals for doctoral education and promote an improvement to doctoral success and completion.

Analysing the success rate and time-to-complete for the year 2011, it is verified that varies among schools, Figure 01.

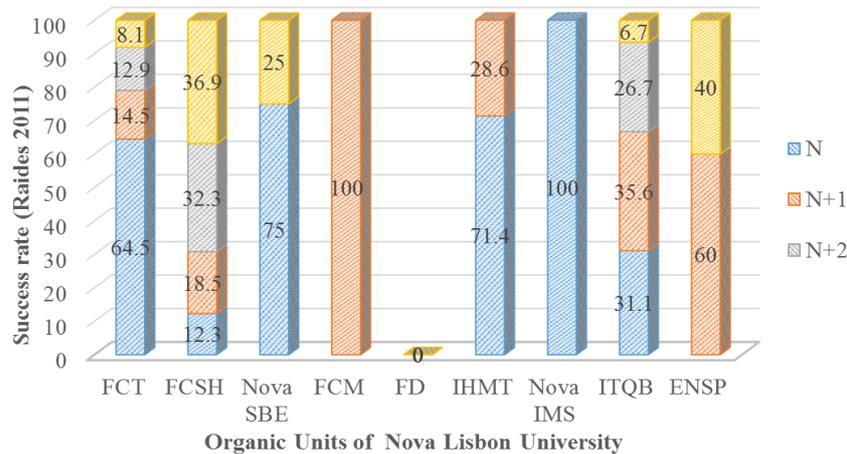


Figure 01. Success rates and time-to-complete in the different schools (Organic units) of Nova Lisbon University. Data retrieve from "New in 2011-2012: curricular offer, teachers, graduate students and employability", Published in May 2013. www.unl.pt, accessed in 2 May 2017.

It is possible to verify that in 2011, only in one school, Nova IMS the totality of the students that concluded the doctorate did it within the stipulated term of 4 years. In IHMT, Nova SBE, FCT and ENSP the number of students that complete the PhD in the time defined for it drop to 71,4 %, 75,0 %, 64,5% and 60,0 % respectively. Looking the datas its possible to realize that in some schools (FCM) students need one year more to conclude the doctorate and that the time-to-complete isn't the same in all schools. It means that the students use more time to do the doctorate then they should. This can be related to multiple causes. There aren't only one reasons for it, but in studies that examined the time-to-completion and the doctoral attrition, it was possible to identify some issues: personal problems, institutional problems, stress and exhaustion, social isolation, research problems, poor planning and manage of the doctorate time; supervision practices, fundings or even suporte and guidance from the supervisor (Park, 2005; Gatfield, 2005 and 2007, Lee, 2007 Beck, 2016; Hunter & Devine, 2016; Orellana, Darder, Pérez & Salinas, 2016; Castelló, Pardo, Sala-Bubaré & Suñe-Soler, 2017). The difference in the results present here may be related to supervision practices and guidance received from the supervisor, but we don't have data to prove these hypothesises yet.

At this moment two surveys are being applied to doctoral supervisors and to doctoral students, to be validated. These surveys are expected to enable to complete the data already presented, as well as to contribute to perceive the supervision practices and how the supervision process is monitored and evaluated in different schools.

7. Conclusion

The main goal of this research project is to create knowledge about doctoral supervision at the NOVA Lisbon University and reflect about the doctoral regulation. We examined public documents, from 2008 to 2015, as “Relatóriosde actividades” (<http://www.unl.pt/nova/relatorio-de-atividades>), public reports from the UNL and doctoral regulations related to the third cycle to assess the data and gathering information that was scattered.

Having in mind that the representation of doctoral courses is different in the various schools, as well as the number of students who attend the courses and who completed them (graduated students), the results were analysed. It was possible to apprehend the evolution of the number of students enrolled in PhD since 2008, the evolution of graduated students since 2008 and perceived that both numbers suggest that there are students that take more than 3 or 4 years to conclude the degree or even drop the academy before they conclude. Why they need more time to complete the degree? What are the obstacles to conclude timely? These questions must be answer to understand the results reported here.

The preliminary results collected in the third cycle regulations shows that the success rate is low in almost all schools, and the average of retention rate, between 2008 and 2015, is higher then 50 % in eight of the nine UNL schools. Although the number of students enrolled in the doctoral education is diminishing in FCT since 2012, the success rate are improving. There aren't sufficient information to comprehend it. Nevertheless the results indicate a need to understand the change in doctoral attrition in some schools and why it remain unchanged in other schools.

The supervisory monitorization process that is possible to recognise in the documents analysed is related to the existence of follow-up commissions and with its implementation. Generally these commissions must monitor the research project evolution, suggest changes if necessary and produce a report regularly. From the analyses of the schools regulations, it has not been possible to identify any procedure of monitoring or evaluation the supervision, nor the supervision practices.

In the next phase of this study, a surveys will be applied aiming at characterizing: supervisory practices during doctoral studies; communication, relational and personal beliefs of doctoral students and supervisors; monitoring and evaluation practices and procedures during doctoral supervision.

Acknowledgments

I am grateful for the support given by my doctoral supervisor, Profa. Mariana Gaio Alves, and for NOVA Lisbon University support.

References

- Alves, M. (2010). Contributos para pensar a regulação entre educação, trabalho e emprego. In Alves, M., Cabrito, B., Lopes, M., Martins, A & Pires, A. (Eds.). *Universidade e formação ao longo da Vida. Coleção Educação e Desenvolvimento*. Costa da Caparica.

- Alves, M., Azevedo, N. (2010). Third-Cycle Studies in Educational Sciences: expectations and competences development. *European Educational Research Journal*, 9, 69-81.
- Alves, M., Neves, C., Azevedo, N., Gonçalves, T. (2012). Reconstructing Education? The Case of Master's and PhD Programmes in Education in a Portuguese Institution. *European Educational Research Journal*, 11, 520-534.
- Alves, G., Cabrito, B., Lopes, M., Martins, A. & Pires, O. (2010). Universidade e formação ao longo da vida. Alves, M., Cabrito, B., Lopes, M., Martins, A & Pires, A. (Eds.). *Coleção Educação e desenvolvimento*, Costa da Caparica.
- Baltzersen, R. (2013). The importance of metacognition in supervision. Processes in higher education. *International Journal of Higher Education*, 2, 128-140.
- Baptista, A. (2014). With all my heart: Mature students' emotions while doing a research-based PhD. *Procedia- Social and Behavioural Sciences*, 114, 914-918.
- Baptista, A. (2015). Mature students' voices on the ideal and reality of doctoral supervisors' role and practice. *Procedia – Social and Behavioral Sciences*, 191, 1544-1551.
- Baptista, A. & Huet, I. (2010). Avaliação da qualidade da supervisão de investigação pós-graduada: desafios e propostas de intervenção. In J. L. Silva *et al* (eds.). *Actas do Congresso Ibérico "Ensino Superior em Mudança: Tensões e possibilidades*, Braga, Portugal: Minho University and CIED editions.
- Baptista, A. & Huet, I. (2011). Perfil de um supervisor de investigação de doutoramentos de qualidade: um contributo para o desenho de um referencial integrador. In *actas do II Encontro Nacional de Investigadores da Qualidade*. Troia, Portugal.
- Baptista, A. & Huet, I. (2012). Making sense of metaphors about doctoral students' competences: analysis of supervisors' voices. *Procedia – Social and Behavioral Sciences*, 47, 930-937.
- Beck, M. (2016) Examining doctoral attrition: a self-determination theory approach. *The Nebraska Educator*, 3, 5-19.
- Bengtsen, S. (2011). Getting Personal - what does it mean? A critical discussion of the personal dimension of thesis supervision in higher education. *London Review of Education*, 9, 109-118.
- Bøgelund, P. (2015). How supervisors perceive PhD supervision – And how they practice it. *International Journal of Doctoral Studies*, 10, 39-55.
- Bui, H. (2014). Student-supervisor expectations in the doctoral supervision process for business and management students. *BMHE*, 1, 12-27.
- Caselló, M., Pardo, M., Sala-Bubaré, A. & Suñe-Soler, N. (2017). Why do students consider dropping out of doctoral degrees? Institutional and personal factors. *High Educ.*, DOI 10.1007/s10734-016-0106-9.
- Coutinho, S. (2007). The relationship between goals, metacognition, and academic success. *Educate*, 7, 39-47.
- Christensen, M. & Lund, O. (2014). Doctoral education in a successful ecological niche: a qualitative exploratory case study of the relationship between the microclimate and doctoral students' learning to become a research. *International Journal of Higher Education*, 3, 103-113.
- Connell, R. & Manthunga, C. (2012). On doctoral education. How to supervise a PhD, 1985-2011. *Australian Universities' Review*, 54, 5-9.
- Delamont, S., Atkinson, P. & Parry, O. (1997). *Supervising PhD. A guide to success*. London: The Society for Research into Higher Education & Open University Press.
- Dublin descriptors. (2004). The Bologna framework and National Qualifications frameworks – An introduction. Retirado de www.dges.mctes.pt/.../BolognaFrameworkandSelfCe (30/12/2015).
- Figueiredo, C., Huet, I. & Pinheiro, M. (2012). Construction of scientific knowledge and meaning: perceptions of Portuguese doctoral students. *Procedia – Social and Behavioral Sciences*, 69, 755-762.
- From Berlin to Bergen. General Report of Bologna follow-up group to the conference of European Ministers responsible for higher education. (2005). Bergen, 19-20 May 2005.
- Gatfield, T. (2005). An Investigation into PhD supervisory management styles: development of a dynamic conceptual model and its managerial implications. *Journal of Higher Education Policy and Management*, 27, 311-325.
- Grant, B. & Mckingley, E. (2011). Coloring the pedagogy of doctoral supervision: considering supervisor, student and knowledge through the lens of indigeneity. *Innovations in Education and Teaching International*, 48, 377-386.
- Gurr, G. (2001). Negotiating the "rackety bridge" – a dynamic model for aligning supervisory style with research student development. *Higher Education Research & Development*, 20, 81–92
- Halse, C. (2011). "Becoming a supervisor": the impact of doctoral supervision on supervisors' learning. *Studies in Higher Education*, 36, 557-570.
- Halse, C. & Bansel, P. (2012). The learning alliance: ethics in doctoral supervision. *Oxford Review of Education*, 38, 377-392.
- Halse, C. & Malfroy, J. (2010). Rethorizing doctoral supervision as professional work. *Studies in Higher Education*, 35, 79-92.
- Heiskanen, H. & Lonka, K. (2012). Are epistemological beliefs and motivational strategies related to study engagement in higher education? *Procedia – Social and Behavioral Sciences*, 69, 306-313.
- Holbrook, A., Shaw, K., Seevak, J., Bourke, S., Cantwell, R., & Budd, J. (2014). PhD candidate expectations: Exploring mismatch with experience. *International Journal of Doctoral Studies*, 9, 329-346.
- Holdaway, E., Deblois, C. & Winchester, I. (1995). Supervision of graduated students. *The Canadian Journal of Higher Education*, 25, 1-29.
- Hunter, K. & Devine, K. (2016). Doctoral students' emotional exhaustion and intentions to leave academia. *International Journal of doctoral studies*, 11, 35-61.
- Ismail, A., Abiddin, N., Hassan, R & Ro'is, I. (2014). The profound of students' supervision practice in higher education to enhance student development. *Higher education studies*, 4, 1-6.
- Ives, G. & Rowley, G. (2005). Supervisor selection or allocation and continuity of supervision: Ph.D. students' progress and outcomes. *Studies in Higher Education*, 30, 535-555.
- Jones, M. (2013). Issues in Doctoral Studies - Forty Years of Journal Discussion: Where have we been and where are we going? *International Journal of Doctoral Studies*, 8, 83-103.

- Kam, B. (1997). Style and quality in research supervision: supervisor dependency factor. *Higher Education*, 34, 81-103.
- Karagiannis, S. (2009). The conflicts between science research and teaching in higher education: an academic's perspective. *International Journal of Teaching and Learning in Higher Education*, 21, 75-83.
- King, P. & Kitchener, K. (2004). Reflexive Judgment: Theory and research on the development of epistemic assumptions through adulthood. *Educational Psychologist*, 39, 5-18.
- Kyvik, S. & Smeby, J.-C. (1994). Teaching and research. The relationship between the supervision of graduated students and faculty research performance. *Higher Education*, 28, 227-239.
- Lafont, P. (2014). Knowledge production of the doctoral thesis: between scientific utility and social usage. *Procedia - Social and Behavioural Sciences*, 116, 570-577.
- Lee, A. (2007). Developing effective supervisors: Concepts of research supervision. *South African Journal of Higher Education*, 21, 680-693.
- Lee, A. (2008). How are doctoral students supervised? Concepts of doctoral research supervision. *Studies in Higher Education*, 33, 267-281.
- Lee, A. (2009). Developments in postgraduate education and their implications for research supervision. National Academic Third Annual Conference (NAIRTL).
- Lee, A. & Green, B. (2009). Supervision as a metaphor. *Studies in Higher Education*, 34, 615-630.
- Lee, A. & McKenzie, J. (2011). Evaluating doctoral supervision: tensions in eliciting students' perspectives. *Innovations in Education and Teaching International*, 48, 69-78.
- Leuven Communiqué. (2009). The Bologna Process 2020- The European Higher Education area in the new decade.
- London Communiqué (2007). Towards the European higher education area: responding to challenges in a globalised world.
- Määttä, K. (2015). A good supervisor- ten facts of caring supervision. *International Education Studies*, 8, 185-193.
- Mainhard, T., van der Rijst, R., van Tartwijk, J. & Wubbels. (2009). A model for the supervisor-doctoral student relationship. *Higher Education*, 58, 359-373.
- Malfroy, J. (2011). The impact of university-industry research on doctoral programs and practices. *Studies in Higher Education*, 36, 571-584.
- Maxwell, T. & Smyth, R. (2010). Research supervision: The research management matrix. *Higher Education*, 59, 407-422.
- Maxwell, T. & Smyth, R. (2011). Higher degree research supervision: From practice toward theory. *Higher Education Research & Development*, 30, 219-231.
- Mello, A., Fleisher, M. & Woehr, D. (2015). Varieties of research experience: Doctoral student perception of preparedness for future success. *The International Journal of Management Education*, 13, 128-140.
- Olehnovic, E., Bolgzda, I., & Kravale-Pauline, M. (2015). Individual potential of doctoral students: structure of research competences and self-assessment. *Procedia - Social and Behavioural Sciences*, 174, 3557-3564.
- Orellana, M. (2016). Improving doctoral success bu matching PhD students with supervisors. *International journal of doctoral studies*, 11, 87-102.
- Overall, N., Deane, K. & Peterson, E. (2011). Promoting doctoral students' research self-efficacy: combining academic guidance with autonomy support. *Higher Education Research & Development*, 30, 791-805.
- Parker, C. (2005) New Variant PhD: The changing nature of the doctorate in the UK. *Journal of higher Education Policy and Management*, 27, 189-207.
- Pitchforth, J. Beames, S., Thomas, A., Falk, M., Farr, C., Gasson, S., Thamrin, Sri. & Mengersen, K. (2012). Factors affecting timely completion of a PhD: a complex systems approach. *Journal of the Scholarship of Teaching and Learning*, 12, 124-135.
- Pyhäältö, K., Vekkaila, J. & Keskinen, J. (2012). Exploring the fit between doctoral students' and supervisors' perceptions of resources and challenges vis-à-vis the doctoral journey. *International Journal of doctoral studies*, 7, 395-412.
- Realising the European Higher Education Area. (2003) Communiqué of the Conference of Ministers responsible for Higher Education. Berlin 19 September 2003.
- Regulamento n.º 287/2010, Regulamento do Ciclo de Estudos Conducentes ao Doutoramento, em Estatística e Gestão de Informação, Diário da República, 2.ª série - N.º 57 - 23 de Março de 2010; Regulamento n.º 905/2010 ,
- Regulamento geral dos ciclos de estudos da FCT – UNL conducentes ao grau de doutor da UNL (3.º ciclo de estudos superiores) e Regulamento geral dos ciclos de estudos da FCT –UNL conducentes ao grau de doutor da UNL (3.º ciclo de estudos superiores), publicado em Diário da República, 2.ª série - N.º 209 - 29 de outubro de 2014;
- Regulamento do Ciclo de Estudos Conducente ao Grau de Doutor pela Universidade Nova de Lisboa na Escola Nacional de Saúde Pública, Aviso n.º 21553/2008;
- Regulamento Geral dos Programas de Doutoramento da FE UNL- Despacho 4887/2010, de 18 de Março publicado no Diário da República n.º 54/2010, Série II de 2010-03-18;
- Regulamento n.º 441/2011 e Regulamento n.º 320/2015 - Regulamento geral dos ciclos de estudo conducentes ao grau de doutor da NOVA Medical School/Faculdade de Ciências Médicas da Universidade Nova de Lisboa, Despacho n.º 6445/2015 publicado em Diário da República, 2.ª série - N.º 111 - 9 de junho de 2015;
- Regulamento n.º 519/2015- Regulamento do Ciclo de estudos conducente ao grau de Doutor em Medicina na Faculdade de Ciências Médicas, Despacho n.º 8774/2015 publicado em Diário da República, 2.ª série - N.º 153 - 7 de agosto de 2015,
- Regulamento n.º 438/2008-Regulamento do Ciclo de Estudos de Doutoramento da Faculdade de Ciências Sociais e Humanas da Universidade Nova de Lisboa;
- Regulamento n.º 474/2012 Regulamento Geral do 3.º Ciclo de Estudos Superiores, conducentes à Obtenção do Grau de Doutor pelo IHMT/UNL publicado no Diário da República, 2.ª série - N.º 223 - 19 de novembro de 2012; Diário da República, 2.ª série — N.º 214 — 2 de novembro de 2015;
- Regulamento n.º 761/2015, Regulamento do Curso de Doutoramento em Genética Humana e Doenças Infeciosas-Regulamento n.º 761/2015.

Regulamento n.º 339/2010 - Regulamento do Curso de Doutoramento em Saúde Internacional; Regulamento do doutoramento em direito, aprovado em Conselho Científico no dia 21.05.2014.

Relatórios de actividades. Retrive from: <http://www.unl.pt/nova/relatorio-de-atividades>

Salzburg Final Report. (2005). Bologna seminar doctoral programmes for the European knowledge society. Retrive from: www.eua.be/eua/jsp/en/upload/Salzburg_Report_final.1129817011146.pdf (10/2/2016)

Vilkinas, T. (2008). An exploratory study of the supervision of Ph.D./Research students' theses. *Innovative Higher Education* (2008) 32, 297-311.

Wolff, L. (2010). Learning through writing: reconceptualising the research supervision process. *International Journal of Teaching and Learning in Higher Education*, 22, 229-237.

Woolderink, M., Putnik, K., van der Boom, H., & Klabbers, G. (2015). The voice of PhD candidates and PhD supervisors. A qualitative exploratory study amongst PhD candidates and supervisors to evaluate the relational aspects of PhD supervision in the Netherlands. *International Journal of Doctoral Studies*, 10, 217-235.

Wright, A., Murray, J. & Geale, P. (2007). A phenomenographic study of what it means to supervise doctoral students. *Academy of Management Learning & Education*, 8, 458-474.

Yeatman, A. (1995). Making supervision relationships accountable: graduated student logs. *Australian Universities' Review*, 2, 9-11.

ⁱ In FCT there are 15 courses that need only 3 years to be complete and 20 that need 4 years to be concluded, so the factor -time used 3,6 (weigh average).

ⁱⁱ In FCSH there are 7 courses that need only 3 years to be complete and 14 that need 4 years to be concluded, so the factor -time used 3,7 (weigh average).