

# The Doctorate and the Organization of Doctoral Schools. Diagnosis of Status and Prospects for a Possible Future

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**Abstract:** *The article presents the results of an evaluative research focused on doctoral studies of present-day Romania. Based on a series of sectorial and disciplinary evaluation reports, we discuss the organization of doctoral studies, the status of PhD students and supervisors, academic quality in doctoral studies, and evaluation and quality assurance. The analysis focuses on changes introduced by the new model of doctoral school, and on the variability in performance and its sources, such as the specificity of disciplinary domains, variability of performance between institutions and individuals, and institutionalization of evaluation norms and practices.*

**Key words:** *doctoral studies, evaluation, Romania*

**Rezumat:** *Articolul prezintă rezultatele unei cercetări de diagnoză a sistemului de studii doctorale din România. Cercetarea se bazează pe o serie de rapoarte pe domenii disciplinare și sectoriale, discutând organizarea studiilor doctorale, statutul doctorandului și al conducătorului de doctorat, calitatea academică în studiile doctorale, și procedurile de evaluare și asigurare a calității. Analiza este centrată pe schimbările introduse de noul model al școlilor doctorale, și pe variabilitatea în performanță și sursele sale – precum specificul domeniilor disciplinare, variația de performanță între instituții și indivizi, precum și instituționalizarea normelor și practicilor de evaluare.*

**Cuvinte cheie:** *doctorat, evaluare, România*

The paper analyzes the current state of doctoral studies in Romania. The research is part of the European Social Fund - POSDRU structural project „Doctoral Studies in Romania - Organization of Doctoral Schools“, coordinated by The Executive Unit for Financing Higher Education and University Scientific Research - UEFISCSU. The research team included numerous experts, and relied on the constant coordination efforts of the project team: Delia Bădoi, Luciana Bratu, Virgil Brumaru and Bogdana Humă.

This diagnosis is based on a comprehensive research methodology, including several types of evaluations. A team of experts has realized six evaluation reports on disciplinary fields, covering science and mathematics, engineering, social sciences, medical sciences, agricultural sciences and veterinary medicine, and arts, architecture and physical education. Cross-disciplinary diagnosis reports covered special issues such as: doctorate in research institutes, doctorate in the Romanian Academy of Sciences, legal aspects of doctoral studies, financial aspects of the doctoral system, the professional doctorate, ISI publications in the doctoral system, tendencies in doctoral studies, and online transparency of Romanian doctoral schools. A survey was conducted, via e-mail, with questionnaires for PhD students and for doctoral coordinators: the quantitative research included 855 supervisors and 3111 PhD students. A qualitative investigation, based on focus groups with

students and supervisors from the six disciplinary categories defined above, supplemented the results with in-depth information. All reports are available online on the project site<sup>1</sup>.

## Organization of Doctoral Studies in Romania

The operation of the current national doctoral studies system is marked by the transition towards the Bologna system. This systemic change generates conflict zones between the institutionalized practices of the previous system, and the ones initiated under the current system. The field reports draw attention to such areas where the re-structuring is still diffuse, such as: the harmonization of PhD studies in universities and research institutes, the management of doctoral schools, the regulation of the duration of doctoral studies, and the forms of differentiation of doctoral studies.

The relative merits of the organization of Bologna doctoral studies compared with the traditional organization are controversial topics among the doctoral supervisors and students: the dominant opinions vary from one area to another and are characterized by significant minorities of the contrary opinion. For example, approximately 70% of the doctoral supervisors in the field of exact sciences believe that the traditional organization was better, compared to 38% in Medical Sciences. Except for the field of economics, where 70% of the doctoral supervisors find that the doctoral school has an appropriate form of organization, in the other fields the views are controversial, as they are only shared by 50-60% of the doctoral supervisors. The main controversial aspects of the current organization refer to the distinction between the training program and the scientific research program, and to limiting the doctoral studies to 3 years - topics explored in detail in the sections below.

**Table 1.** Opinions of doctoral supervisors and students regarding the form of organization of doctorates by field of study

% agree with the statement...	The doctoral school is an appropriate form of organization	The Traditional organization was better	The credit system is pointless in the organization of doctoral studies	The distance learning doctorate is not different from the day courses doctorate	The distance learning form is not adequate for the doctorate
<b>Doctoral supervisors</b>					
Exact sciences	49%	<b>69%</b>	<b>67%</b>	46%	38%
Engineering	60%	59%	<b>65%</b>	40%	<b>44%</b>
Social Sciences, Law, and Security Sciences	64%	60%	57%	56%	27%
Humanities	62%	65%	56%	55%	26%
Economy	<b>72%</b>	55%	48%	57%	28%
Medicine and Pharmacy	60%	38%	49%	55%	30%
Agronomics and Veterinary Medicine	62%	59%	53%	51%	35%
Arts, Architecture, Sports	50%	60%	44%	56%	13%
Total respondents	59%	59%	59%	48%	35%
<b>Doctoral candidates</b>					
Exact sciences	41%	<b>61%</b>	<b>64%</b>	50%	26%
Engineering	<b>56%</b>	49%	<b>57%</b>	39%	<b>35%</b>

<sup>1</sup> <http://www.studii-doctorale.ro/>

% agree with the statement...	The doctoral school is an appropriate form of organization	The Traditional organization was better	The credit system is pointless in the organization of doctoral studies	The distance learning doctorate is not different from the day courses doctorate	The distance learning form is not adequate for the doctorate
Social sciences, Law, and Security Sciences	50%	45%	45%	<b>54%</b>	26%
Humanities	46%	<b>52%</b>	44%	50%	28%
Economy	50%	44%	40%	<b>54%</b>	21%
Medicine and Pharmacy	<b>57%</b>	32%	44%	50%	24%
Agronomics and Veterinary Medicine	54%	45%	56%	37%	32%
Arts, Architecture, Sports	55%	41%	43%	54%	22%
Total respondents	51%	47%	51%	47%	28%

*Source: Report of Quantitative Survey*

The credit system is poorly institutionalized, and the doctoral candidates do not have the possibility to choose among many courses. A significant proportion of doctoral candidates and supervisors, over 40% in all fields, rather see it as a form without substance in operation.

In the absence of clear organization, the innovation and best practices are focused on repairing the deficiencies, and have a reduced visibility in the community. The need to organize more effectively the doctoral studies and clarify their logic is therefore evident.

### ***Relationship between Universities and Research Institutes***

The current doctoral system in Romania is different on several general lines. The Bologna system doctorate, organized according to Law 288/2004 and the Government Decision no. 567/2005, coexist with the pre-Bologna doctorate, about to be abandoned. Then again, the Bologna doctorate co-exists with the doctoral studies organized by the research institutes of the Academy, currently following a classical training of 4 years by day courses and 7 years by distance learning. Agreements can be entered between the Academy institutes and the university institutions organizing doctorates during the period of advanced training program<sup>2</sup>.

Although the national research institutes cannot organize academic doctoral studies, in practice, many PhD students and supervisors carry their research activity in research institutes, without entering a formal partnership. The Government Decision no. 567/2005 states that „the Romanian Academy Institutes and other research institutes in Romania and abroad can participate in the cycle of university doctoral training through consortia with the university institutions organizing doctorates“. The lack of such consortia have negative consequences on institutes and universities<sup>3</sup>:

- the doctoral students in institutes use the institutional resources to complete their doctoral theses, and the institutes do not receive any recognition for the support they provide in their training;
- there are difficulties in the information flow regarding the opportunities offered to the doctoral candidates on the websites of the university institutions organizing doctorates, such as the grants from Structural Funds;
- problems might occur regarding the intellectual property rights between the university institutions organizing doctorates, the institutes and the doctoral candidates;

<sup>2</sup> Legislative report, Report of the Romanian Academy

<sup>3</sup> Report on Doctorates in Research Institutes

- the doctoral candidates who not work in research institutes cannot use their research facilities, in the absence of a partnership between the university institutions organizing doctorates and the institutes.

### ***Duration of Doctoral Studies***

Except for the medical field, the duration of the current PhD studies is considered too short, both by the doctoral candidates and by the doctoral supervisors. In some fields<sup>4</sup>, the lack of correlation of this duration with the duration for conducting a typical research project is also mentioned. The duration of doctoral studies' issue is correlated with:

- the issue of separation between the preparation and the research stage: where the courses are seen as bearing little relevance to the doctoral training, they are perceived as a waste of time;
- the regulation stating that during the preparation period the doctoral candidates will not have a doctoral supervisor or carry out a research project, is often ignored in the practice of doctoral studies<sup>5</sup>;
- the distinction between day courses and distance learning doctorates: the doctoral students by distance learning may have less time to develop their research projects and theses;
- a low correlation between the doctoral and master' studies: a continuation of the master's research projects is not encouraged during the doctoral studies, whereas this continuity would allow a generous period for projects to be carried out.

The duration of the doctoral studies fundamentally reflects the efforts of the doctoral candidates and supervisors to complete the theses. As discussed in the section on the status of the doctoral candidates, under the current system, the doctoral degree is often a secondary activity - even for the doctoral candidates by day courses. The effort to complete a doctoral thesis is often unsystematic, with chronic delays in meeting deadlines, which adversely affect the guidance process<sup>6</sup>. This lack of synchronization also reflects the supervisors' requirements, formed under the previous system in which the doctoral duration was four years and often more.

The sociological survey by questionnaire indicates that three quarters of the doctoral supervisors find that the current doctoral duration is too short. In exact sciences, engineering, agronomics, medicine and veterinary sciences, as well as in humanities the percentage is over 80%. The satisfaction regarding the current duration is considerably larger among the doctoral students in all fields.

**Table 2.** Evaluation of current duration of doctoral studies by field of study

	Doctoral Supervisors			Doctoral Candidates		
	Short duration	Adequate duration	Long duration	Short duration	Adequate duration	Long duration
Exact Sciences	<b>85%</b>	15%	0%	<b>64%</b>	35%	1%
Engineering	<b>83%</b>	16%	0%	<b>61%</b>	38%	1%
Social sciences, Law and Security sciences	70%	30%	0%	50%	47%	3%
Humanities	<b>87%</b>	13%	0%	<b>66%</b>	34%	1%
Economics	65%	<b>35%</b>	0%	33%	<b>65%</b>	2%
Medicine and Pharmacy	36%	<b>63%</b>	2%	32%	<b>61%</b>	<b>7%</b>
Agronomics and Veterinary Medicine	<b>86%</b>	14%	0%	54%	44%	2%
Arts, Architecture, Sports	67%	33%	0%	45%	54%	1%
Total respondents	75%	25%	0%	53%	45%	2%

**Source:** Quantitative Survey Report

<sup>4</sup> Report on Agricultural and Forestry Sciences, Zootechnics and Veterinary Medicine, Report on Engineering

<sup>5</sup> Report on Exact Sciences

### ***Day Courses and Distance Learning Doctorates***

The differentiation following the learning mode is another controversial aspect of the current organization of the doctoral studies. The two types of doctoral studies are covered by identical provisions on training, duration of study and degrees.

The main risk of the distance learning organization form is its transformation in a parallel circuit, with lower performances and requirements<sup>7</sup>, mainly supported by its financial value. For example, the social and human sciences report states that the doctorates by distance learning are „*merely a simplified form and easier practice (by reducing the students' participation in the academic activities) of the day courses form, an indulgent form of training, which is neither morally nor institutionally acceptable*„(p.5). The variability within this form of training is greater in the doctorate in engineering, where „*some PhD candidates by distance learning are already specialists in contact with the real economy, sometimes with support teams (if, for instance, managers) and can achieve scientific consistent theses. The doctoral candidates on scholarship are usually young graduates, less experienced, but with better scientific training. (...) in Engineering, we believe that the doctorate by distance learning is truly effective only if the doctoral candidates work with a company as regards their research activity*”(p.4). The report on medical sciences stresses that the day courses doctorate is necessary to accommodate the requirements of professionals already integrated into the medical practice, and it is not attractive for the young graduates.

### ***Administration of Doctoral Schools***

For the moment, one can say there is no clear distinction between the doctoral school as an *administrative or academic entity* within faculties and universities. For some, it is only a „school“ with doctoral candidates and supervisors, a curriculum and teaching, learning, research and evaluation procedures. But the administrative and managerial aspect is marginalized or is included in the administration of the general student flows, ignoring, even relatively, that we deal with other types of learning/teaching/assessment and other „students“. Consequently, the organizational structures of the doctoral schools are poorly defined and operate in parallel with the administrative structures of the bachelor's and master's studies. They are institutionally governed by University Charters and Rules of academic operation and organization of the doctoral studies, which make their actual organization variable. For example, the regulations do not explicitly specify, in sufficient detail, the tasks or powers of the doctoral school' director or dean<sup>8</sup>; the doctoral schools do not always have individual functions. The doctoral schools can be organized within colleges or universities.

This lack of formal institutionalization has negative consequences on the status of the doctoral candidates and supervisors, and on the funding of doctoral studies from universities' budgets, as the doctoral schools do not have their own budget. Also, the institutionalization of inter-disciplinary and inter-institutional cooperation is hampered<sup>9</sup>.

### ***Correlation of Doctoral and Master' Studies***

The doctoral schools operate independently of the master's programs, while their correlation is left to the initiative of the institutions organizing the doctorates. There are initiatives to integrate them, but usually the institutional concern in this regard is lacking<sup>10</sup>. When such initiative is practiced in a non-systematic way, it can have desultory and unintended effects, disadvantaging the students who are not coming from the associated research masters – either due to a lower probability of being accepted on the budget supported places or to a disadvantaged start as compared with their peers<sup>11</sup>.

<sup>6</sup> Report on Human and Social Sciences, Report on Arts, Architecture and Urbanism, Sports; Report of Medical Sciences

<sup>7</sup> Report of the Social and Human Sciences, Report of the Agronomic and Forestry Sciences, Zootechnics and Veterinary Medicine

<sup>8</sup> Legislative Report

<sup>9</sup> Medical Sciences Report

<sup>10</sup> Report of Agronomic and Forestry Sciences, Zootechnics, and Veterinary Medicine

<sup>11</sup> Exact Sciences Report, pp. 9-10

The MA studies are currently designed as an extension of the BA studies, but not as pre-doctoral courses - although it is a necessary condition to enroll in a doctorate<sup>12</sup>. This lack of coordination has two negative consequences:

- the courses during the training period are sometimes redundant with the master's courses of the respective institution organizing doctoral studies<sup>13</sup>;
- the research conducted in the doctoral programs does not continue the research in the masters' program.

There is a high risk of redundancy because the doctoral candidates have often graduated BA or master studies from the same institution organizing doctoral studies (see Table 11). We can see in Table 10 that 42% of the doctoral candidates who have completed master's programs in the same field and in the same university think the doctoral school training repeats their earlier training, compared to 31% of the doctoral candidates who have completed masters studies in the same field, but in another university. It follows that, in part, the degree of redundancy is influenced by the lack of differentiation of the courses by the teachers, which means that having the same teacher could increase the risk of overlapping. On the other hand, the redundancy is also due to the lack of differentiation, depending on the level and type of qualifications, given that it is also experienced by a minority of the graduates of other universities.

**Table 3.** Opinions of the doctoral candidates on the quality of their courses, by field and by the university where they graduated at the master' study level

	Where he or she obtained the master degree				Total
	Same field, same faculty	Same field, other faculty	Other field, same university	Other field, other university	
The doctoral school's courses in the current format are useless (v32)	34%	26%	32%	23%	28%
The doctoral school's courses are about the same as the BA/master' courses (v33)	42%	31%	35%	27%	34%
The doctoral school's courses are purely theoretical (v34)	56%	49%	54%	51%	53%
The doctoral school's courses are more complex than the master's (v37)	53%	60%	57%	57%	56%
As regards the level of generality of the doctoral school courses, from your experience, you would say that all have a relatively large level of generality (v40)	35%	25%	29%	30%	31%
The doctoral curriculum at your faculty/institute includes new disciplines (as compared to those at the master studies level) (v41)	53%	49%	55%	58%	55%

**Source:** Report of the quantitative survey

\* The answer to each allegation has been recorded on the four points' scales: two indicated the agreement and two indicated the disagreement with that assertion. The figures in the tables indicate the percentages of those who expressed their agreement. The differences up to 100% represent those who disagree and those who did not answer the question. The latter were between 2 and 6% of the sample, depending on the question.

<sup>12</sup> Report in the fields of Arts, Architecture and Urbanism, Physical Education and Sports, p. 10

<sup>13</sup> Report on Engineering, p. 3; Report on Social and Human Sciences, p. 4, p. 15; Report on Exact Sciences, p. 9

***Admission to Doctorate***

The recruitment of the doctoral students is made in particular among the graduates of the same higher education institution. Indeed, the quantitative survey indicates that approximately 70% of the current doctoral students have graduated college in the same university where they are conducting their doctoral studies, and 45% of the PhD students have also graduated a master' course at the same university. This ratio is expected to increase as the pre-Bologna doctoral students are leaving the system, and the requirement to have graduated a master's program becomes mandatory.

**Table 4.** *Distribution of doctoral students in the doctoral study fields*

Please provide us some details, useful for classifications, regarding the form of doctorate you are attending: <i>Tick all situations which fit!</i>			
TOTAL SAMPLE	Yes	No	Total
You are attending day courses doctoral studies	58%	42%	100%
You are paying fees for your doctoral studies	32%	68%	100%
You have a scholarship	33%	67%	100%
You have a PhD grant from Structural Funds (POS DRU)	20%	80%	100%
You have graduated a faculty in the same field	84%	16%	100%
You have graduated the same university where you are now PhD student	69%	31%	100%
You completed master' studies in the same field	52%	48%	100%
You completed master' studies at the same university where you are now PhD student	45%	55%	100%
Have you completed/are you attending a doctoral school?	62%	38%	100%

**Source:** *report of quantitative survey*

The new system of doctoral studies has changed the system of admission by formalizing it and by the participation of several doctoral supervisors in the doctoral commission. The pre-Bologna system had institutionalized the practice of recruiting candidates among the collaborators of the doctoral supervisors, who expressed their interest in doctoral studies prior to admission. This selection type is based on a mutual acquaintance prior examination, and becomes incompatible with the new type of examination, especially when there are more candidates than the budget supported number, which gradually turns admission into a genuine contest<sup>14</sup>. But difficulties persist in making objective selection criteria, especially when the committee includes doctoral supervisors with different specializations. The Social and Human Sciences Report finds that „in many fields, the actual outward show of the candidate before the committee matters very much, as well as his or her performance portfolio up to that time (more than the research project, which often belongs to a narrow specialization or theme, and therefore cannot always be accurately evaluated by other doctoral supervisors members of the committee). the evaluation by all doctoral supervisors in an institution, regardless of their specialty, is also an admission flaw. However, a deeper problem exists: the habit to evaluate following the known status (very good student, known in previous years) and following the quality of the project. There is often a competition between statuses, and not between projects”(p. 10).

<sup>14</sup> Exact Sciences Report, p. 6

Partly because of the custom of pre-selection of candidates by the doctoral supervisors, another difficulty is the relatively low competition because of the small number of candidates, generally close to the number of available positions (from 1/1 the majority, to 2/1)<sup>15</sup>. The recruitment processes are mostly based the coordinated efforts of the doctoral supervisors, rather than on institutional policies. Opening for doctoral candidates from abroad are also lacking. Under these circumstances, there are many critical assessments regarding the current admission practices:

„This type of uncompetitive admission to doctorate, characterized by a large number of positions available and a certain degree of subjectivism, contributes to the low quality of the doctoral studies, as well as to a decrease in value of the title of doctor in the academic community“<sup>16</sup>;

There are certainly some positive assessments - such as the ones in the Engineering Report, where the selection process is deemed objective.

## **Status of Doctoral Candidates and Supervisors**

### ***Status of Doctoral Candidates***

The PhD student has a status equivalent to that of a research assistant during the preparation program and to a researcher during the research program. However, because of unclear regulations, the previous years of service of the doctoral candidates are not considered as years of specialized service (in research)<sup>17</sup>. Also, the status of the doctoral students is uncertain in some special circumstances, such as when a doctoral candidate extends the deadline of the thesis beyond the three years set.

The doctoral candidate status implies roles such as:

- student – as the doctoral studies are university studies;
- junior researcher;
- member of the faculty, as the doctoral candidate is involved in didactic activities;
- member of the chair to which the doctoral supervisor belongs.

The Government Decision no. 1717/2008 clarified the status of the doctoral students, with implications on their access to the medical services in the public system. On the other hand, as the graduation age for doctoral studies is generally 27-28 years, the situation of the doctoral students on scholarship aged over 26 years remained unclear, as they are not included in the categories exempt of contributions.

The procedures for representation of the doctoral students interests in relation to the institutions organizing doctoral studies, and their representation in the Councils and in the university Senate are still unclear.

Most of the PhD students have other activities in order to earn some money during their doctoral studies - including a majority of the doctoral students who received grants from the structural funds (see Table 13). Basically, the doctoral studies are carried out part-time, in parallel with other occupations. The double workload is likely to influence the capacity of the doctoral students to develop their thesis on time, and to be a source of frustrations related to a reduction of the duration of the doctoral studies.

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<sup>15</sup> Report regarding the doctorate in engineering, p. 5; Report on the Agronomic and Forestry Sciences, Zootechnics and Veterinary Medicine, p.5

<sup>16</sup> Report on Medical Sciences, p. 5

<sup>17</sup> Legislative Report



**Table 5.** Relation between having a scholarship and having incomes from other sources

	Exact Sciences	Social Sciences, Law, and Security Sciences	Humanities	Engineering	Agronomics and Veterinary Medicine	Medicine and Pharmacy	Economics	Arts, Architecture, Sports	Total
<b>Weight in total sample of those who ...</b>									
Obtain incomes from other sources than the doctoral studies activity*	75%	81%	81%	64%	53%	89%	81%	91%	75%
Obtain incomes from research grants	41%	18%	10%	36%	27%	20%	18%	16%	26%
<b>Weight in total students with scholarships (other than POS DRU) of those who ...</b>									
Have a scholarship (other than POS DRU) and obtain incomes from other sources than the doctoral studies activity*	38%	54%	60%	44%	15%	35%	66%	86%	46%
Have a scholarship (other than POS DRU) and obtain incomes from research grants	49%	27%	16%	44%	48%	19%	38%	15%	37%
<b>Weight in total students with scholarships POS DRU of those who ....</b>									
Have a scholarship POS DRU and obtain incomes from other sources than the doctoral studies activity*	52%	71%	61%	48%	34%	80%	60%	100%	53%
Have a scholarship POS DRU and obtain incomes from research grants	23%	11%	7%	17%	10%	14%	12%	40%	14%

**Source:** Report of quantitative survey

\*We have included in the doctoral studies activity the research projects and the didactic activity. The obtained incomes refer to the last calendar year.

As regards the continuity in the research carrier, the postdoctoral programs are in an early stage of development. In these circumstances, the doctoral candidates are willing to join the labor market before the end of their doctoral studies, often even after their BA degree, in order to avoid unemployment after graduation. In Table 14 we can see that a majority of the doctoral candidates in all fields, except engineering, have worked before their admission and are still working in the same place as PhD students. Generally about 15-20% of the doctoral candidates do not work in parallel with the PhD activity, except for those in agronomics and veterinary medicine (58%), engineering (53%) and exact sciences (27%).

**Table 6.** Professional situation of doctoral candidates since the beginning of their doctoral studies to date by fields

	Was and still is working in the same place	Was working then and is working now in a different place	Was working then and is no longer working now	Was not working then and is not working now
Exact Sciences	65%	8%	6%	21%
Engineering	40%	7%	15%	38%
Social Sciences, Law and Security Sciences	71%	11%	5%	13%
Humanities	66%	12%	6%	16%

Economics	<b>70%</b>	12%	3%	15%
Medicine and Pharmacy	<b>78%</b>	11%	1%	11%
Agronomics and Veterinary Medicine	36%	5%	<b>15%</b>	<b>43%</b>
Arts, Architecture, Sports	<b>76%</b>	11%	4%	10%
Total Respondents	59%	9%	8%	24%

**Source:** Report of Quantitative Survey

Note: (1) The data in the table indicate percentages in rows. Example of data reading: 65% of the doctoral candidates in exact sciences had a job at the beginning of their PhD studies, which they have kept. (2) The total on a row may differ from 100%, due to rough percentages. (3) The cells with blue background and bold fonts indicate significant positive associations in the cell. Example of reading: the doctoral candidates in exact sciences had a job they kept in a significantly higher proportion (65%) than the average (59%). (4) The cells with red background and italic fonts indicate significant negative associations in the cell. Example of reading: the doctoral candidates in engineering had a job they kept him in a significantly lower proportion (40%) than the average (59%).

**Status of Doctoral Supervisors**

The faculty and 1<sup>st</sup> grade scientific researchers, holding the title of Doctor, affiliated to an institution organizing doctoral studies may become doctoral supervisors by order of the Minister of Education and Research, upon proposal of the institution organizing doctoral studies, following a proposal of the National Council for Attestation of University Titles, Diplomas and Certificates. An approval is granted based on an assessment of the teaching activity and research. A doctoral supervisor may only be affiliated to one institution organizing doctoral studies and will lose this quality when transferred to another institution.

The number of doctoral candidates guided by one doctoral supervisor is determined by the institution organizing doctoral studies, up to a maximum of 15 doctoral students. At the same time, the questionnaire based survey indicates that a significant proportion of doctoral supervisors do exceed this limit - about 20% in economics, arts, architecture, sports, medicine and pharmacy. Also, except for the exact sciences, 20 to 40% doctoral supervisors are guiding between 11 and 15 PhD students.

**Table 7.** Number of doctoral students under one supervisor by field

	5 or less	From 6 to 10	From 11 to 15	16 or more	No-answer	Total
Exact Sciences	56%	31%	10%	3%	1%	100%
Social Sciences, Law and Security Sciences	20%	31%	38%	12%	0%	100%
Humanities	18%	34%	37%	11%	0%	100%
Engineering	39%	37%	20%	2%	1%	100%
Agronomics and Veterinary Medicine	33%	32%	25%	9%	1%	100%
Medicine and Pharmacy	26%	36%	21%	17%	1%	100%
Economics	16%	31%	24%	20%	8%	100%
Arts, Architecture, Sports	13%	26%	37%	24%	0%	100%
Total Respondents	35%	34%	22%	8%	1%	100%

**Source:** Report of Quantitative Survey

The cells in grey background indicate a significant positive statistic association between the two variables

Although the doctoral studies are based on a requirement of close correspondence between the research projects of the PhD students and the specialization of the supervisor, there are some situations of considerable divergence - situations in which the guidance is general, rather than actual training<sup>18</sup>.

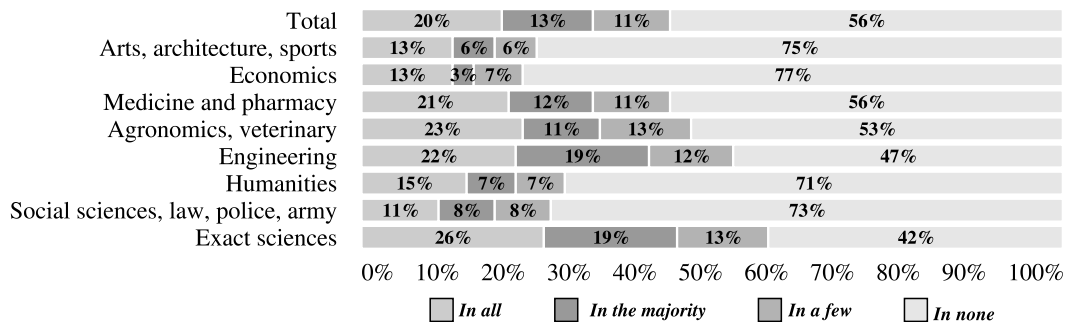
**Doctoral Candidate – Supervisor Relationship**

The relationship between a doctoral candidate – supervisor is the main engine of training throughout the doctoral research program. The relation is defined by contract, but the provisions are highly general. The main risk of the relationship is the dependency on the supervisor’s style, which may vary widely, in the absence of formal or informal mechanisms to standardize the effort and the demands in a doctoral school.

The organization of doctoral studies in the doctoral school aims, *inter alia*, to make the PhD candidate relate in the course of his or her work with several doctoral supervisors, who participate in the evaluation committees. However, the involvement of other members of the Doctoral School, in addition to the direct PhD supervisor, is often very limited and even decreases during the research project. Effective guidance continues to be almost exclusively the responsibility of the doctoral supervisor, whose exigency is in many cases the only guarantee of the quality of the doctoral work<sup>19</sup>.

The doctoral students’ participation in their supervisors’ research projects vary significantly, depending on the disciplines. Still, 40 to 80% of the PhD students did not participate in such projects (see Figure 7).

**Figure 1.** Degree of involvement of doctoral students in the research projects/grants of their supervisors



Source: Report of Quantitative Analysis

**Academic Quality in Doctoral Studies**

The minimum standards of academic quality is established in the doctoral schools by the legislation in force, which is applied when the establishment of an institution organizing doctoral studies is approved. For instance, a greater number of doctoral supervisors would ensure the research topics diversity and avoid a feudalization of the doctoral candidate - supervisor relationship, by transforming the doctorate into a „school“. There are, however, doctoral supervisors who believe that a direct relation doctoral candidate - supervisor, without a school and a curriculum as intermediaries, is more effective. Also, most doctoral candidates describe the first year courses, if rigorously taught, as a serious opportunity for personal and professional development.

The doctoral candidates and supervisors remarked that in spite of some good forms of legislation aimed at ensuring the academic quality of the doctoral schools, the legislation is often applied on a distorted content. Thus, although there is a need for an admission exam, it is often formal, based on previous discussions between the potential doctoral candidate and the supervisor, the latter knowing before the admission exam who he or she wish to work with (the admission is often taken in „closed circuit“).

<sup>18</sup> Report Arts, Architecture, Sports, p. 7

Considering the university autonomy it is the choice of the institution organizing doctoral studies to establish additional standards of quality, according to international best practices. For example, in the exact sciences and natural sciences, there are frequent rules of the institutions organizing doctoral studies which do not allow presenting the thesis unless the doctoral candidate has published studies in top national and/or international magazines (with focus on the international ones). Other institutions organizing doctoral studies have set explicit performance criteria to ensure that academic distinctions are obtained in the PhD studies. For example, „*Very Good*“, „*Cum Laude*“, „*Magna Cum Laude*“ and „*Summa Cum Laude*“ are honors associated with a number of articles published in top publications abroad. This also happens, even if less frequently, to the best institution organizing doctoral studies in social and human sciences.

### ***Research Performances in Doctoral Studies***

The advanced Research largely relies, anywhere in the world, on the skills and availability to work of the doctoral (and postdoctoral) students, guided by doctoral supervisors. International rankings show that Romania has a low performance in research. For example, there is no Romanian university listed among the first 500 universities of the world; and in Europe we are among the last positions in terms of publications in the main flow of knowledge and/or patents.

Our position in the international rankings suggests two things:

(1) either the quality of the doctoral candidates and doctoral supervisors, in other words, of the existing doctoral schools, is weak and uncompetitive internationally;

(2) or the doctoral candidates and supervisors do not know how to make visible their scientific production, which, if examined carefully, can be of quality.

Our analysis suggests that the answer is complex and mixed. In some cases, the Romanian doctoral schools are not competitive enough internationally. They address outdated issues, convert science in a „hobby“, without paying attention to the relevance and impact of the research. Accordingly, they do not enter the international competition, and do not receive a „feedback“ from the scientific community, which lowers their scientific production. In other cases, the doctoral schools are not visible enough. For instance, the socio-economic and human sciences research in some institution organizing doctoral studies are not visible internationally (e.g. in the Web of Science system) in the 90s; after entering the competition in the Web of Science, they have succeeded since the year 2000 to become visible in internationally indexed publications and/or journals.

It is worrying that in some areas, there is a large number of theses, while the scientific productivity is relatively low<sup>20</sup>. It seems to be the case, for example, for the medical sciences in Romania. In this area, the doctoral candidates who are studying various therapies often limit themselves to the currently available explorations or interventions – practiced in the unit where they work and covered by the health insurance companies. They carry their research mainly through statistical interpretation of topics already known worldwide. This drastically reduces the degree of innovation in medical research. Analyzing the latest trends in this area, we believe that the poor international visibility of the medical research in relation to the number of PhD produced - especially in biomedical sciences - is due to the fact that quality research in the field has not been displayed in worldwide visible journals.

The change of opinion of the doctoral schools regarding internationally relevant doctoral research must be implemented through „top down“ institutional mechanisms. The doctoral candidates could also add some „bottom up“ pressure in this respect, but they often adopt the professional culture of their doctoral supervisor. If the latter does not have a modern, internationally oriented professional culture he or she will perpetuate through the PhD candidates the same modest researches and publications, of local impact. The doctoral supervisors who do not have a professional culture of international performance, must acquire it or at least stimulate this change in the new generations of PhD students.

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<sup>19</sup> Report Arts, Architecture and Urbanism, Physical Education and Sports; Report of Medical Sciences; Report of Social and Human Sciences;

<sup>20</sup> Report regarding the Analysis of ISI publications of persons who have recently obtained the title of Doctor in Science in Romania.

### *Evaluation of Doctoral Students' Activity*

The on-going work of a doctoral candidate is assessed by the doctoral school commission, during the preparation stage and during the scientific research program.

Substantial assessment of the quality of the research activity of the doctoral candidates is mostly done, where appropriate<sup>21</sup>, through team meetings in the research projects, and by presenting the theses to the chair or the doctoral school before sustaining them.

Overall, the evaluation process has certain vulnerabilities. The evaluation is hampered by the frequent practice of deferment in handing in essays and the thesis<sup>22</sup>. In some fields and institutions, the evaluation is often largely dependent on the activity of the doctoral supervisor<sup>23</sup>, while other members of the doctoral school have a rather formal involvement. Often, the final presentation of the thesis and the report of the commission members drafted after the doctoral supervisor accepts a thesis as final, are more a formality, and lack an actual evaluation role: there is no significant percentage of rejected theses upon their presentation. Also, qualifications as means of encouraging the performance of a PhD student, are only practiced in some doctoral schools<sup>24</sup>. Moreover, in the absence of objective assessment criteria, this system may lead to a competition between the doctoral supervisors to obtain maximum distinctions for the doctoral students under their guidance<sup>25</sup>.

Also, there is no comprehensive system for detection of intellectual fraud. This is generally left at the discretion of the doctoral supervisor. As there is a considerable supply of BA theses offered for sale, and works commissioned on given subjects<sup>26</sup>, there is a risk that such works should be processed in the doctoral dissertations, in the absence of a careful monitoring of the doctoral supervisor. Also, there is a risk of low originality of the works using paraphrases and compilations<sup>27</sup> in excess. Such risks are amplified by the lack of guidance and standards regarding the formal aspect of writing the thesis in the doctoral school.

In order to supplement these deficiencies in some areas and doctoral schools, additional requirements have been imposed on the PhD students, such as the requirement of publication<sup>28</sup>. The performance measured by such indicators may be associated with the distinction conferred on the doctoral students. Such increased requirements also apply to doctoral students with grants from structural funds.

In some areas there is considerable support for strengthening the evaluation by inviting foreign experts, while in other fields the opinions are mostly unfavorable. In practice, however, external evaluation is limited to the presence of specialists from national universities and institutes – which also makes impossible a realistic evaluation based on experience of the cost/benefit analysis of such practices.

**Table 8.** *Opinions of doctoral supervisors and students regarding the usefulness of foreign experts in the evaluation commissions of the doctoral theses, by field of study*

	Doctoral supervisors		Doctoral candidates	
	Less useful	Useful indeed	Less useful	Useful indeed
Exact Sciences	38%	<b>62%</b>	46%	54%
Engineering	40%	<b>60%</b>	45%	55%
Social Sciences, Law and Security Sciences	41%	59%	46%	54%
Humanities	45%	55%	38%	<b>62%</b>
Economics	<b>60%</b>	40%	50%	50%
Medicine and Pharmacy	<b>64%</b>	36%	<b>59%</b>	41%
Agronomics and Veterinary Medicine	<b>67%</b>	33%	<b>56%</b>	44%
Arts, Architecture, Sports	63%	38%	42%	58%
Total	47%	53%	48%	52%

**Source:** *Report of Quantitative Analysis*

<sup>21</sup> Report of Research Institutes

<sup>22</sup> Report of Social and Human Sciences, Report of Medical Sciences

<sup>23</sup> See also the discussion in the Section „Doctoral Candidate – Supervisor Relationship”.

<sup>24</sup> Report of Exact Sciences

<sup>25</sup> Report of Social and Human Sciences

<sup>26</sup> See websites such as: <http://www.lucraridiploma.net/>, <http://www.licente.org/>, <http://www.consultantalicenta.com/>, and hundred of websites with similar profile.

<sup>27</sup> Report of Social and Human Sciences

<sup>28</sup> Report of Exact Sciences

## **Evaluation and Quality Assurance**

### ***Institutional Procedures of Quality Evaluation***

Periodic external evaluation of the institutions organizing doctoral studies and of the doctoral supervisors is set by the law. The doctoral supervisors must be evaluated every five years by committees of experts. The last such evaluation took place in 2007. This exercise was, however, largely a formality, due to the lack of a clear methodology<sup>29</sup>. The periodic evaluation of the institutions organizing doctoral studies in 2007 also did not take place due to the lack of evaluation methodologies<sup>30</sup>.

The internal evaluation of the doctoral studies is also largely formal. The doctoral supervisors are evaluated within the general process of internal evaluation in the university department, without specific criteria regarding the doctoral supervision activity<sup>31</sup>. As a positive practice some institutions organizing doctoral studies have initiated internal evaluation systems also based on feedback from the doctoral students<sup>32</sup>.

### ***Transparency in the Organization of Doctoral Studies***

When we refer to the legislation on the doctoral studies we come to identify more weaknesses and risks: the lack of consistent legislation and poor enforcement of the laws. From this point of view, the academic and scientific community can play a major role in ensuring the quality of doctoral studies through an informal and complementary monitoring and evaluation of what is achieved through institutional procedures. The transparency of the doctoral studies and performances can enable a competitive production in the institutions organizing doctoral studies, the creation of an environment of peer evaluation, and also the dissemination of positive practices.

An empirical analysis of the information available on the websites of 52 doctoral schools of the University of Bucharest, UBB Cluj-Napoca, and UAIC Iasi shows that certain types of information, mainly those relating to the admission procedures and timetables, are easily accessible - although generally lacking information on the fees and the number of supported seats. Then again, information on the courses during the preparation stage, titles and summaries of dissertations, and information on the research activity of the doctoral supervisors are usually absent<sup>33</sup>.

The current regulations (GD 567/2005) do not explicitly specify what should be published on the website of the institution. But there are also positive practices in some institutions organizing doctoral studies, which make available online the summaries of the doctoral dissertations<sup>34</sup>.

## **Conclusions**

The diagnosis of the doctoral system indicates that the doctorate in Romania is not institutionally and legally uniform. Comprehensive partnerships between the universities and the research institutes - including those of the Romanian Academy are lacking; these partnerships should be regulating the contributions of the participants, intellectual property rights, access to doctoral research infrastructure etc.

Despite the establishment of formal doctoral training and the title of doctor, differentiation often appears in the criteria and practices related to the award of the title of doctor. For example, there are identical formal requirements and diplomas for the doctoral students by day courses and distance learning, while the two categories have different needs, and the requirements are often lower for the doctoral students by distance learning.

There is a common practice to exceed the time limits specified in the plan regarding the research and drafting the doctoral dissertation, resulting in guidance difficulties, a lower quality of the dissertation and a high drop-out risk for the PhD candidates engaged in successive delays.

<sup>29</sup> Legislative Report

<sup>30</sup> Report in Arts, Architecture and Urbanism, Physical Education and Sports

<sup>31</sup> Report on Engineering, Report on Agronomics and Forestry Sciences, Zootechnics and Veterinary Medicine, Report on Exact Sciences

<sup>32</sup> Example of the „A. I. Cuza“ University of Iași, mentioned in the Exact Sciences Report.

<sup>33</sup> Report on the transparency of the organization of doctoral studies

<sup>34</sup> For example, the „Carol Davila“ University of Medicine and Pharmacy, the Academy of Economic Studies in Bucharest, or the „Ion Ionescu de la Brad“ University of Agricultural Sciences and Veterinary Medicine.

The doctoral schools lack clear individual management and administration: they are transversal structures, without distinctive roles; the roles of the director and of the doctoral school council are not clearly defined. Also, doctoral schools are rarely integrated with the master programs. The institutional strategies for the recruitment of PhD students also lack, resulting in a relatively uncompetitive admission, closed to the candidates from abroad. The credit system works rather like a formality, without allowing individual options in the doctoral training.

There is a lack of minimum objective criteria at the national level regarding the results of the PhD students' scientific activity, such as publications or participation in conferences. Also, there are no clear checking procedures on the intellectual property on the work produced by the PhD students and all researchers in general. Evaluation of doctoral theses upon their submission to university chair or doctoral schools is variable, often reflecting a high level of formalism.

Although there are formal mechanisms (laws) of quality assurance, their implementation in the existing doctoral schools is often deficient. The periodic external evaluations have been hampered by the lack of clear methodology, while the internal evaluations are often a formality. There is an incomplete publication on the websites of the institutions organizing doctoral studies of relevant information on their functioning, performance, obtained results and opportunities offered to the doctoral candidates.

There is a lack of systematic procedures for assessing the internal quality of doctoral studies, including, among others: evaluations by the doctoral candidates; monitoring research performance indicators for doctoral students and supervisors in doctoral schools.

Overall, the doctoral school concept in Romania is, in principle, a concept that corresponds to the international models of performance, which has been implemented differently in the various universities, but which sometimes did not lead to the expected performance.

### ***List of evaluation reports***

Andruh, Marius et.al, *Report on Exact Sciences*

Banabic, Dorel et. al., *Report on Engineering*

Băban, Adriana and Szentagotai, Aurora, *Report of the qualitative analysis*

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Damian, Radu, *Report on Doctorate Financing*

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Lascăr, Ioan et.al., *Report on Medical Sciences*

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Velter, Victor and Brumaru, Virgil, *Analysis of ISI publications of Romanian authors from institutions which organize doctoral studies*

Voicu, Bogdan et. al., *Report on opinions of PhD students and supervisors in Romania*

Zamfir, Nicolae-Victor et. al., *Report on Doctorates in Research Institutes*