Eurodoc 2003 Questionnaire

FJI's Report – Spain

February 7th 2003

Questionnaire

A. PhD System

A.1 Please provide a short outline (½ A4 page) of the PhD system in your country including the following information: A.1.a) approximate number of PhD students, A.1.b) average length of PhD study; A.1.c) sources of funding. If your country participated in the 2002 Eurodoc Conference, then the information provided previously can be used as a basis for this answer.

Funding conditions of the PhD students or Early Stage Researchers (ESRs) in Spain are very precarious in general. Only relatively few cases are funded during part or the whole of their research period with labour contracts with all the garanties and social protection, like some contracts co-funded by the European Union (EU), and some models of grant-contract or so-called 2+2 (e.g. Aragón Regional Government [1], IAC [2]). In general, public funding (either from Central Government or from Autonomous Regional Governments) or from Non-Profit Private Institutions is by means of "research studentships", a "fixed" monthly support, granted by a large number of entities, and with an equally large heterogeneity in their conditions. In many cases, in a number that still remain to be quantified, the ESR does his/her PhD without any funding. Other do paralell activities inside their University Departments; while quite a few others work outside of their research centers.

Formally, the PhD system is regulated by law, together with other postgrad studies, and structured in two stages, the first one , of two years duration, is divided instead in two phases, one mainly academic, with courses and seminars, and another one of initiation into research in which the ESR develops a small research project. After this first stage and an evaluation, he/she obtain a ISCED[1] 6 - Intermediate stage degree ([3], [4]), the 'DEA' (Diploma de Estudios Avanzados or Advanced Studies Certificate). Following the DEA, the ESR has to continue working, for another two years, a original research project that allow him/her to obtain a ISCED 6 degree, the PhD degree. Actually, ESR work as such, from the very first moment when they integrate themselves in a research group. Spanish administration includes or has included research studentship holders in R&D personnel statistics [12], following recommendations of the Frascati manual [4], OECD, and ISCED-97 [3]. Nevertheless, that contrast with the fact that, ESRs are, officially, treated as merely students, without the labour rights and social protection of the rest of research personnel.

The following table details the dimension, length and other relevant characteristics of the Spanish PhD system:

- Number of postgrad and PhD programmes (1998, [9]): 2559
- Number of PhD students enrolled (2001-02) / graduated (2000-01) [5]: 61.310 / 14.412

By Age:	21-30	31-40	>40	/	<25	25-30	31-40	>40
	39.260	14.261	7.789	/	884	6.727	4.308	2.493
By Gender:	Male:	29.104 / 47,47%			7.340 / 50,93%			
	Female:	32.206 / 52,53%			7.072 / 49,07%			

- DEA Certificates / DEA Enrolled (2000-01, [9]): 9.5%
- New S&T PhDs per 1000 population aged 25-34 years (1999-00) [6]: 0.36
- PhD Degrees / Enrolled (2000-01, [9]): 10.2%
- PhD/Postgrad enrolled relation, Public Univ. 98-99 [9]: 59634 (59.3%) / 51576
- S&E Grad. (ISCED-97 L5-6; [6] 1998) / PhD Graduates ([7] 1998-99): 52771 / 12.477

1 Revised International Standard Classification of Education from 1997 (ISCED-97): ISCED 5b : Programmes at the tertiary level that focus on practical, technical or occupational skills for direct entry into the labour market (ISCED-76: level 5); ISCED 5a : Programmes at the tertiary level equivalent to university programmes (ISCED-76: level 6); ISCED 6 : Advanced research programmes at the tertiary level, equivalent to PhD programmes (ISCED-76: level 7).

- Effective Graduation Time (years):
  - [8]

	Total	<3	3	4	>4	Not Stated
1997/98	14,065	5,233/37.2%	1,608/11.4%	675/4.8%	929/6.6%	5,620/40.0%
1996/97	14,130	5,026/35.6%	1,349/9.5%	717/5.1%	731/5.2%	6,307/44.6%

  - [10]; see too [11], data from 1994-5:

<3	3	4	5	>5	
3.4%	14.3%	48.0%	23.9%	10.5%	Mean: 4.3±1 years

  According to [10], the graduation time is increasing.
- Labour Links (Total: 63710; 1998-99, [8]):

Teaching	Scholarship Holder	Admin. Personnel	Other	None	Not Stated
4.4%	4.8%	0.6%	1.7%	64.7%	23.9%

- Work of PhDs outside university (Total: 63710; 1998-99, [8]):

In Public Sector	In Private Sector	Not Paid	Not Stated
15%	10%	29%	47%

B. General Questions

What are the significant changes in the situation of junior researchers as compared to last year? Please note that the term 'junior researcher' is intended to refer to PhD students, post-docs and other early stage researchers.

B.1 Which actions or activities has your national association been involved in this year? And what are your association's future planned activities?

For the first time, the Government has taken into account the possibility of recognizing of ESRs, putting them on an equal footing to employees, with all social rights except unemployment benefits; although we have been waiting for Government's promises for more than a year. In some Autonomous Regional Governments, like Aragón, a new scheme has been established, introducing a grant-contract model [1]. In with respect to FJI's actions, there have been more and much talked-about demonstrations; important press releases, some with direct effects, successfully correcting bad practices; many and productive contacts with institutions, political parties and main trade unions; the mentioned establishment of the 2+2 scheme in Aragón; active participation of ESRs in our national electronic discussion list; participation in several meetings at european level ; etc.

B.2 What is the percentage of PhD students who: B.2.a) manage to complete their PhD within the allotted time period?, B.2.b) manage to complete their PhD but not within the allotted time?, B.2.c) do not complete their PhD at all?.

B.2.a: 54.8% | B.2.b: 18.9% | B.2.c: 26.3%
Source: [11], from a National R&D Plan's studentship holders survey

C. Mobility

C.1 Give an estimate of the number of PhD students leaving your country to study abroad, as well as the number of foreign PhD students coming to your country, for: C.1.a) a temporary stay during the PhD (leaving/coming); C.1.b) the complete duration of the PhD (leaving/coming).

Except for the PhD students coming for the complete duration of the PhD, we don't have data about these matter, just estimations: C.1.a_leaving ~ 30%, C.1.b_leaving <5%, C.1.a_coming ~ 20%. Following [18], Spanish are among the biggest outgoing nationality groups among the Marie Curie Fellows.

C.1.b_coming: Source/Ref.: [13], [3]

Year	Total	Foreign	UE	Non-UE
2001-2002	61.310	9.095(14,83%)	1.510(17%)	7.585(83%)
2000-2001	59.835	7.543(12,61%)	1.120(15%)	6.423(85%)
1999-2000	61.483	8.113(13,20%)	1.127(14%)	6.986(86%)

By Gender (1999-2000):	Total Foreign	Male	Female
All Countries	8113(13%)	4513	3600
EU	1127(14%)	595	532
Non-EU	6986(86%)	3918	3068

From 1998 data [8], the foreign PhD enrolled/graduated country of residence were: 64%/62% came from America (excluding USA and Canada), 14%/15% from EU countries, 2%/2% from USA, about or less than 1% from Japan, and the rest 19%/21% from other countries.

C.2 Find one example of a good practice of a university or institution to facilitate the mobility of junior researchers (e.g. in removing legal barriers, institutions specifically addressing issues related to foreigners, etc.).

Obstacles to mobility are different depending on the length of the stay and the situation of the researcher (e.g. ESR, Experienced Researcher (ER), staff, etc.) [14]. With respect to short stays, in general, there are quite grants, directly offered to the researchers, or to the research projects, by means of bilateral agreements [15], for the mobility of young researchers, although sometimes are not enough to cover expenses or are not adapted to the standard of living in the destination; in other cases, are not encouraged by the own research groups. Initiatives to make a PhD abroad are scarce. The ESRs from other countries find problems to certificate their university degrees in Spain, as well as the Spanish doctors that have made their PhD in a foreign country, the certification periods are excessively large, up to two years. In this sense, it would be desirable a recognition of researchers in Europe similar to the proposed directive for regulated professions[2].

D. Career Paths

D.1 What is the percentage of PhD students who wish to work in academia? What is the percentage of students who actually remain in academia? If there are no available figures, then please provide a general impression of the situation.

The PhD in Spain is usually seen as the only way to remain in the research system. Work outside academia is not promoted. Participation of enterprises in research, in terms of investment and human resources is still low. According to [10], the percentage of PhD

2 Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the recognition of professional qualifications, COM (2002) 119 http://europa.eu.int/cgi-bin/eur-lex/udl.pl?REQUEST=Seek-Deliver&COLLECTION=com&SERVICE=eurlex&LANGUAGE=en&DOCID=502PC0119&FORMAT=pdf

students (in a sample from people that have already finished his/her PhD) who prefer to work in academia (either in the University or in a Public Research Centre) is 63.3% (20.6% as university proffesor, 19.1% as researcher in a PRC, 23.6% in a public centre (univ./PRC)), and only 5.7% would like to work as researcher in a private enterprise. The first (1st) occupation after the studentship and the present (P) occupation actually are, divided by origin of the studentship holder from Exact/Natural Sciences (Sci.) or Social Sciences (Soc.) and Univ. or PRC, these:

	Univ.Sci.		Univ.Soc.		PRC Sci.		PRC Soc.	
	1st [%]	P [%]	1st [%]	P [%]	1st [%]	P [%]	1st [%]	P [%]
Non-research related	33.1	31.4	20.4	16.6	42.6	46.6	57.1	42.9
Univ. staff proffesors	13.6	28.5	20.4	32.3	5.0	8.7	-	7.1
Univ. hired proffesors	31.2	20.6	44.0	35.7	7.9	3.9	7.1	14.3
PRC staff researcher	1.4	2.0	-	0.6	5.0	9.7	7.1	7.1
PRC hired researcher	4.1	3.2	1.1	1.4	6.9	9.7	7.1	-
Enterprise researcher	3.7	2.8	2.6	0.9	5.0	5.8	-	-
Studentship holder	4.5	0.8	1.7	-	14.9	1.9	7.1	-
Other	2.6	1.8	3.2	1.1	3.0	1.9	-	-
Unemployed	5.9	8.7	6.6	11.4	9.9	11.7	14.3	28.6

D.2 In your association's opinion, do junior researchers receive enough information about career opportunities and possibilities outside academia?

No. There is not an established scheme or system to gather this information and to make it easily available to junior researchers, nor a specific preparation for junior researchers to work outside academia or public research centers. Skills developed during their PhD are valuable for the labour market, outside academia, but the formation acquired and the PhD degree obtained are still not recognized enough in the labour market. The offer from academia seems not to be attractive enough to society in general. One of the major flawns of the research system is the lack of proffessional opportunities for the PhDs. More over, the lack of a defined research career, deffinitively contributes to the abandoning of the research career or the brain drain of researchers that leave the country for better employment perspectives in research.

D.3 Give examples of initiatives in your country that promote careers paths outside academia.

Very few. Is not promoted in general, necessities and demand from enterprises and society are not taken into account. There is a network of Transference of Research Results Offices (OTRI) that promote knowledge interchange and transference of technology between enterprises and universities and public research centres that have obtained some results, although is not specifically oriented to promote career paths outside academia. There are some examples of training courses and funding plans for young researchers, like courses about labour orientation for doctors in Cataluña, and training research grants linked to enterprises.

A more concrete example of initiatives in this sense, is the I3P ('Itinerario Integrado de Inserción Profesional' / Integrated Itinerary of Professional Insertion) Project, by the CSIC (major public research organism) and co-funded by the European Social Fund, that promotes the relation between the research centres and industry, and the labour insertion outside of the academia; although its effectiveness is still to be evaluated (very recent programme) and the conditions in which it's realized, in the case of ESRs, are not satisfactory, so they are realized trough scholarships, in precarious conditions, under-employing qualified personnel. This could revert in the lack of attractiveness to choose this initiative. This action is not complemented with initiatives to favour the insertion of staff personnel after the training and a positive evaluation.

E. Gender Equality

E.1 What is the percentage of women at these different levels?
E.2. Specify the relevant percentages for the listed levels for the exact sciences (mathematics, physics and chemistry).

	General (E.1)	Exact Sciences (E.2)
(a) Undergraduate	53.1%	52.4% / 49.0% / 26.6%[3] 52.1% / 29.9% / 57.7%[4]
(b) Postgraduate	-	-
(c) PhD	50.7% / 52.5% [5]	53.8%[5]
(d) Postdoc	49.1% [5] / 37%[6]	-
(e) Assoc. Proffesor	39.6%[7]	-
(f) Proffesor	19.3%[8]	-

- Source: [16] year 1998-99, except where indicated.

Detailed for University Teaching Personnel [16] in decreased order of category:

Emerit	7,82%
Cathedratic	14.85%
Staff Professor	35.10%
Assistant	39.61%
Total University Proffesors	33.63% (31737)

Female researchers [6]: 33%

E.3 Are there any grants available for PhD or Postdoc research in your country which do not include maternity leave? If so, please give examples.

Until 07/11/2000 none of the research studentships in Spain recognized the maternity leave. Thanks to the pressure and efforts of FJI/PRECARIOS, it begun to be recognized since then. In general, now, many of the predoctoral post-DEA studentships include it, although with unjustified limitations (only 75% is paid during the maternity leave) in most of them; other have eliminated this ilogic restriction and pay 100% of the amount. Nearly none of them include paternity leave, except the PhD studentships of the Autonomus Government of Madrid [17]. The postdoctoral studentships are progressively being converted into postdoctoral contracts, thus adquiring the corresponding whole social protection. Other examples that NOT include maternity nor paternity leaves are the postgrad (ISCED 6 - Intermediate stage) studentships of the Autonomous Government of Galicia, or the postgrad studentships of several universities there (Vigo, Coruña y Santiago).

[3] Mean of Architecture and Superior and Technical Engineering / Experimental Science, long cycle / Experimental Science, short cycle.
[4] Mathematics, Physics, Chemistry.
[5] Experimental Science and Health Science.
[6] PhD graduates / Ramón y Cajal's postdoc contracts (MCyT, 2001).
[7] Mean of the Spanish types 'Asociado' (associate) and 'Ayudante' (assistant), something different to 'associate professor'.
[8] Mean of the Spanish types 'Emérito' (emeritus), 'Catedrático' (cathedra tic) and 'Profesor Titular' (staff).

E.4 Do you know of any initiatives at national or university level to facilitate gender equality? If so, please specify.

We don´t know any initiatives in tis sense. Just to mention that a few reports have been made recently to study this matter [16] and an association of women in research (AMIT) has been created recently to promote gender equality in the Spanish research system.

F. PhD Supervision and Training

F.1 Is there any evaluation of PhD supervision? If so, what does the evaluation involve? If not, what would you propose?

90% of the PhD students DO NOT evaluate their supervisors through polls [9]. The majority of the PhD students DO NOT evaluate their professors of the courses received during the DEA (ISCED 6 - Intermediate stage) [9]. The opinion of the recent doctors is nearly not taken into account (87% of cases) by the Doctoral Comissions (incharge of the PhD managing at universities) [9].

Evaluation is a quality control, and is good at all levels, in research too. In particular, evaluation of PhD supervision is good to measure the supervisor's ability to conduct a successful PhD of their ESRs. PhD supervisors should be evaluated frecuently, every year, by an independent body, through appropiate polls made by their PhD students. It would help both supervisors and students to a better development of their work.

F.2 With reference to Question B.2 (General Questions), is there a connection between the supervision of PhD students and the drop-out rate/length of time taken to complete the PhD? Please elaborate.

There are not quantitative indicators about that connection, but is believed that there is. The argument is that if you are not evaluated or you don't have external indicators about your work progress, it can produce des-motivation, you can take more time to reach your goals or even you can decide to change your profession or your country. It is important then a proper supervision from your PhD supervisor mainly. Doctoral thesis are evaluated by the department previously to the defence of the thesis just in 52% of the cases [9].

F.3 Indicate the relative importance of the following skills alongside the PhD itself. Please also indicate whether courses are available, in general, in these fields. Please use the following scale:

The results are center dependent. So, we have marked with capital letters the most frequent answer among all the answers received. Only in a few cases there is a complete agreement.

1 - not at all important; 2 - of average importance; 3 - extremely important

Skill	Mark	Course available?
Management:	2	NO
Communication:	3	NO/yes
Foreign language ability:	3	YES/no
Computer literacy:	2	YES/no
Teaching:	2	YES/NO
Presenting:	2	NO
Use of resources (e.g. lib.):	3	YES/NO
Time management:	2	NO
Interview technique/job search:	2	NO/yes

G. Discussion

G.1 What are the current problems in your country concerning PhD students and the PhD system itself? What are the current problems concerning post-docs and other young researchers?

Many of the problems have been commented throughout this questionnaire (see A.1). Summarizing, the main problem of PhD students or ESRs in Spain is the lack of legal definition, and that they are workers in fact, but not by right, which in turn has terrible consequences for their social protection and labour rights. Both pre- and post-docs suffer from the absence of a proper definition of a scientific career in Spain, that, in practical terms, affects not only to the personal and social conditions of a high percentage of the Spanish young researchers, but also is reflected in the high level of des-motivation of many research teams.

G.2 What issues do you think should be included in future Eurodoc work?

More collaboration among Eurodoc's members, above the dispersion of people and the lack of collaboration. To be a Eurodoc delegate in any congress or conference, it has to be compulsory elected on the Eurodoc list, and the aim of the particular conference has to be discussed on the list previously. After the conference (in not more than 2 weeks) a report has to be sent to the list. It should be define a preference list of conference we are interested in.

It is important to fix our next aims in the different workgroups, because we need results and conclusions to present on the different conferences and reports. Some extra reports have to be prepared and sent to different organisms and foundations to exert influence on the European research policy.

We should make some extra contacts working on the way to make easier for researchers the mobility and on the automatic acceptance of a PhD degree obtained in any European country Europe-wide.

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