

# **ANSWERS TO EURODOC 2005 QUESTIONNAIRE**

## **C R O A T I A**

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Zagreb, February 2005.

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## PART ONE

1. The most significant change in PhD candidates' situation involve around 500 new assistants employed by universities and research institutes in Croatia in 2004, but there was not any noticeable qualitative improvement of their status.
2. The main improvement of candidates' situation that PhD candidates would like to see is introducing a possibility of research funding for PhD candidates, at the moment PhD candidates cannot apply for any funds in the official science system since they have status of assistants. Funds for research and development are three times smaller than for higher education. Over 89% of funds come from the state. Therefore, science should be connected with economy and technology. Also, currently most institutions have low funding for attending conferences, everything depends on the budget of research institute and university, which is in most cases reduced and focused on the needs of PhD holders (professors or research fellows with permanent positions). Ministry has some funds as well but each PhD candidate is eligible to apply for it only once a year.
3. The hottest topics under discussion that in particular affect young researchers are :
  - a )Lack of economic resources/funds – researchers very often work with outdated and minimal equipment;
  - b) Old professional structures at academia and institutes are key factors that limit younger researchers to broaden their experience and fields of cooperation; young researchers are still seen as attached to their principal investigators.
4. Since there is no national association in Croatia, I can talk only about future actions. There was an attempt to establish Croatian association of PhD candidates (MLAZ) in 2004 at the Institute for Physics Rudjer Boskovic, but everything stopped due to lack of interest of a broader base of PhD candidates. There have been some contacts between research assistants from Institute for Physics Rudjer Boskovic who were involved in the attempt of foundation of national association last year, and Institute for Social Research in Zagreb, and we are going to start it over this spring.
5. There is no national association in Croatia.
6. There is no national association in Croatia. But, there was a research on young scientists in Croatia, and a book *Sociological Portray of Young Scientists* by Katarina Prpic proceeded from it. This survey was officially finished last year and at the moment it is questionable whether there is going to be any new survey on that topic this or next year.
7. There is no national association in Croatia.
8. The Republic of Croatia accessed the Stabilization and Association Agreement with the EU, and the Bologna Declaration in Prague in 2001. The Scientific Activity and Higher Education Act passed in Parliament on 17<sup>th</sup> July 2003, and came into force on 15<sup>th</sup> August 2003. Bologna Declaration has not been put into force in Croatia yet. There is implementation act on ECTS system at most universities (Zagreb and Rijeka University have done the most). Evaluation process of all reforms is scheduled for June 2005, and if it is positive, universities are expected to finish all reforms until September 2005.

9. There is no national association in Croatia, but there were panels on Bologna process at Zagreb University (September – December, 2004) and I can speak from what was elaborated at the panels.

Expectations from adopting Bologna Declaration are:

- a) Ensuring quality of recruitment, research and teaching;
- b) Promotion of mobility; promotion of European cooperation.

Fears are:

- a) Most experts at universities are afraid of short term for implementation of Bologna Declaration;
- b) Related to the adaptation process of older university and institute scientists; there is a fear they are not going to follow all recommendations, or that they are going to follow them only on declarative level; also there is a fear connected to mobility capacity of older professors;
- c) There is a fear about way of distributing financial resources to universities, since all financing come from one budget;
- d) Many concerns are related to the possible negative impacts of 3+2 model to the quality of study and research; some universities decided to introduce 4+1 or 5+0 model (prevailing at departments of law);
- e) Problem with introducing new terminology connected to ECTS system and two cycle system.

10. Lisbon Convention has not been put into force in Croatia yet.

11. **Table 1.** Advantages and disadvantages of PhD candidate's status

	<b>Advantages</b>	<b>Disadvantages</b>
<b>Assistants at universities/research institutes</b>	<ul style="list-style-type: none"> <li>• full fellowship from Ministry of Science, Education and Sport (MSES) for tuition fees and contract with their institutions (i.e. full salary)</li> <li>• MSES once a year and their university or institute on occasions (depending on a conference) give them financial support for participation on conferences</li> <li>• their working time encompasses time for lectures, exams and research</li> </ul>	<ul style="list-style-type: none"> <li>• often principal investigators expect PhD candidates to be on disposal in Croatia, if PhD candidate plans to continue postgraduate study abroad, they either have to wait to finish their PhD, or to risk losing a job in Croatia</li> <li>• funding for their own research is not at disposal for PhD candidates, until they finish their PhD they can only be assistants with no own projects</li> </ul>
<b>PhD candidates employed outside system of science, but with fellowship</b>	<ul style="list-style-type: none"> <li>• MSES funds their tuition fees while PhD candidates keep their salary for their own purpose</li> </ul>	<ul style="list-style-type: none"> <li>• very often their employers do not have any understanding for their duties at faculties, so they are forced to skip lectures and work on projects (if they are involved in any) during their free time</li> <li>• they have restricted approach to participation in projects</li> <li>• MSES does not fund their attendance of conferences</li> </ul>
<b>Holders of part time contracts with university/research institute</b>	<ul style="list-style-type: none"> <li>• MSES funds their tuition fees</li> <li>• their working time encompasses time for lectures, exams and research</li> <li>• MSES once a year and their university or institute on occasions (depending on a conference) give them financial support for participation on conferences</li> </ul>	<ul style="list-style-type: none"> <li>• most often they work at university/research institute on voluntary basis, or with very low wages</li> </ul>
<b>PhD candidates employed outside system of science, but without fellowship/unemployed or part-time employed PhD candidates without fellowship</b>		<ul style="list-style-type: none"> <li>• very often their employers do not have any understanding for their duties at faculties, so they are forced to skip lectures and work on projects (if they are involved in any) during their free time</li> <li>• they have restricted approach to participation in projects</li> <li>• if they want to take exam or be involved in a scientific project, they must do it during their free time</li> <li>• MSES does not fund their attendance of conferences</li> </ul>

12. There is no national association in Croatia, but from my experience which proceeds from communication with my colleagues, assistants at universities/research institutes are in the best position.

13. At the moment there is no action for implementation of standards stated in EURODOC Supervision and Training Charter. There is definitely a need of implementation standards from the Charter.

14. Thesis is evaluated by members of committee after completing all exams, which number varies from University departments. President of the committee submit report to the Faculty Council. After positive evaluation of PhD thesis Faculty Council elect committee for thesis defence. The lowest position of member of the committees is docent. PhD candidate's mentor cannot be president of the committee for evaluation or president of the committee for thesis defence. Committee has at least three members and keeper of the minutes. At least two members have to be professors at given faculty. Faculty Council decides upon the date of defence. The process of defence is as follows: after introduction of committee president PhD candidate gives elaboration of thesis, after which follows examination of candidate by members of committee and auditors. Finally, committee in privacy makes decision on thesis and its elaboration. Candidate who failed to defend thesis can report new theses after three months time.

Publishing of thesis is not obligated; it depends on its quality and financial resources. Most often it is not published. Practice of publishing thesis is most common in the case of PhD candidates who are employed at university or research institute, though it depends on its quality.

15. Postgraduate courses can be taken after completing a graduate university course and the academic title doctor of science (dr.sc.) or doctor of art (dr. art) is awarded upon completion. The university can also offer postgraduate specialist courses which last for one to two years, by which completion one can acquire the title of specialist (spec.) in a certain specialist field. Exceptionally, enrolment in these studies can be approved for candidates holding a degree in other scientific fields. In this case, candidates will be required to pass differential examinations.

Obligations of a PhD candidate include: attaining a degree of Master of Science within two years, and PhD within the following year. A young researcher employed as research assistant may have his/her employment contract extended for a maximum of 11 years following the concluding of the first contract.

Studies towards a PhD academic degree directly, without completing the MA thesis mean that students enrolled in the MA course of study wishing to earn a PhD without completing their MA thesis, should inform of their intention their mentor and the Postgraduate Scientific Study Board before the end of the 3<sup>rd</sup> semester.

16. Standards on research degrees in Croatia are monitored by peer review groups which are appointed pursuant to the legal framework and the authority of the Minister of Ministry of Science, Education and Sport. Their task is to nominate evaluators for each project proposal and, based on evaluators' grades, reach a final decision on accepting or declining a project. Projects are contracted for a period of three to five years. Principal researchers of contracted projects submit a report on their research once a year and based on the evaluation of the report, the Minister decides on continuation of project activities. Following the completion of the project, a final report is submitted, and its evaluation performed by the respective peer review group. There are 45 peer review groups. Projects are classified according to areas of science, and priorities are set within each area.

The National Science Council monitors the quality of activities and assesses scientific organizations. The national policy for technology development is also under the responsibility of the Ministry of Science, Education and Sport (MSES). It has been implemented through various

programs by the Technology Department of MSES. Scientific research legal persons (higher education institutions, scientific research institutes, academies) appoint Committees for Ethics. Their opinion is obligatory in the course of submitting project proposals, especially in the area of biomedical sciences.

Under the new Scientific Activity and Higher Education Act, the system of science and higher education should be managed by the National Committee for Science and the National Council for Higher Education. Research institutes and higher-education programmes and institutions have an obligation to carry out periodic evaluation (at least every five years). The Act also contains regulations for the foundation of an Agency for Science and Higher Education, which would carry out the expert work in the evaluation of scientific organisations and educational institutions. The Agency deals with the maintenance of quality and European standards in science and higher education, and runs the National Information Centre for Research and Academic Work, which makes it a part of the European Network of the administrative monitoring of the legality of work.

17. Croatia has a total of 152 bilateral scientific research projects with following European countries: Austria (20), France (11), Italy (12), Germany (19), Slovenia (73) and United Kingdom (17). In addition to scientific research projects modes of cooperation also include study visits for training of human resources, as well as scholarships for graduate programs abroad. Croatia participates in the following EU scientific research programs: Eureka, Fifth and Sixth Framework Program. Researchers are also involved in Tempus Program and Erasmus Mundus Program.

18. Young researchers are very well aware of their opportunity for mobility, but there is a big issue of possibility for it from a side of its approval from principal investigator or principal of the department. They very often want their assistants to be tight up with research institute or university department during their postgraduate study, and in a case of continuing their postgraduate study abroad there is a possibility of losing a job.

19. For postgraduate study and mobility programs <sup>2</sup>

- Oxford Colleges Hospitality Scheme
- OSI FCO Chevening Scholarships for Oxford, Cambridge and York University
- Staffordshire University MPhil/PhD in Economics: Distance Learning Mode
- Central European University, Budapest, Hungary - Postgraduate Programs
- Joint scholarship with the Croatian Ministry of European Integration
- Fellowships of Ministry of Science, Education and Sport
- Fulbright program
- Ron Brown Fellowships Program
- Yale World Fellows Program
- Master's at Harvard
- French Embassy Fellowships– Fernand Braudel Fellowship

For additional financial aid <sup>3</sup>

- Soros Supplementary Grants Program
- Global Supplementary Grant Program

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<sup>2</sup> Internatinal Educational Center [www.sic.hr](http://www.sic.hr)  
Ministry of Science, Education and Sport <http://www.mzos.hr>

<sup>3</sup> Internatinal Educational Center [www.sic.hr](http://www.sic.hr)  
Ministry of Science, Education and Sport <http://www.mzos.hr>

**Table 2.** Number of scholarships given to the Croatian students to study abroad, by the Ministry of Science, Education and Sport <sup>4</sup>

YEAR	NUMBER OF SCHOLARSHIPS
2000.	130
2001.	145
2002.	143
2004.	117

In 2003 603 Croatian students were involved with scholarships at foreign universities (but this are overall numbers, with no distinction between undergraduate and postgraduate students), so there is no reliable data on 2003.

20. The main multilateral mobility program (providing for student and teacher exchange) is CEEPUS (Central European Exchange Program for University Studies). The member countries include Austria, Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia. In the 2000/2001 there were 71 students and 25 teachers from Croatia to CEEPUS members and in the year 2001/2002 there was 66 students and 20 teachers from Croatia to CEEPUS members. From CEEPUS members to Croatia in 2000/2001 there were 105 students and 36 teachers; in 2001/2002 there were 92 students and 48 teachers.

Foreign nationals and stateless persons who are not permanently residing in the Republic of Croatia have the right to enrol at a course of study under the terms set by the Ministry, on the basis of intergovernmental agreements and treaties. The Ministry decides on the level of tuition fees. Foreign nationals may enrol in a course under conditions equal to those of Croatian nationals, but, in conformity with the decision of the authorised government body or higher education institution, they may be required to partly or fully bear the cost of their studies. Admission to studies may be limited or denied to foreign nationals if the course in question concerns military or police education or other studies of interest to national security. The tuition fee is different for each programme. Information can be obtained at the institution where student wish to enrol. To sum up, there is not broad practice of giving scholarships to foreign students in Croatia.

**Table 3.** Number of scholarships given to the foreign students to study in Croatia, by the Ministry of Science, Education and Sport <sup>5</sup>

YEAR	NUMBER OF SCHOLARSHIPS
2000.	72
2001.	99
2002.	138

In 2003 503 foreign students gain scholarships for Croatian universities (but this are overall numbers, with no distinction between undergraduate students and PhD candidates).

21. Currently, there is no joint degree program in Croatia. There are some postgraduate programs under Tempus program, in cooperation with universities abroad, but they still do not have real nature of joint degree programs. But, the University curricula of postgraduate education (master, doctoral studies) will be merged with counterparts as a joint program. This applies to curricula co-ordination, training course exchanges, as well as scientific research training. By the year 2006, the University of Zagreb would like to reach several /subject/ course activities.

<sup>4</sup> Ministry of Science, Education and Sport <http://www.mzos.hr>

<sup>5</sup> Ministry of Science, Education and Sport, 2002

22. There is no national association in Croatia.
23. European recommendations could be better promoted and implemented at the national and institutional level through cooperation of Ministry of Science, Education and Sport, all Universities and legislative bodies and forums for evaluation of implementation.
24. There is no national association in Croatia.
25. There is no strategy for reduction of gender inequalities. But, there is a big need for redefining contract offered to women, namely because there is still very common that women are during an interview for a position asked about their marital status and planning of family. That gives better prospect to their male colleagues to be given a job.
26. In research institutes there are about 64% women, at universities and in hospitals about 50%. But there is differentiation in scientific disciplines, women are highly represented in social sciences, humanities and bio sciences (there are about 67% women in medical sciences and 66% in social sciences and humanities), while men are highly represented in natural and technical sciences (there are about 72% men in technical sciences, and about 60% in biotechnology).

Although women gain their MA and PhD degree earlier than their male colleagues, they are underrepresented in the final score of MA and PhD holders. Slower advancement of young women toward doctorates indicates that they are less frequently engaged in most complex projects or research phases. Young male scientists have better prospect, not only because of scientific system and evaluation procedures, but due to the internal social organization of science as well.

## PART TWO

1. Universities that award PhD degrees in Croatia:
  - In Dubrovnik 4 faculties
  - In Osijek 11 faculties
  - In Rijeka 8 faculties
  - In Split 6 faculties
  - In Zadar 1 faculty
  - In Zagreb 33 faculties
  - In summary – 64 faculties<sup>6</sup>
2. **Table 4.** Total number of PhD candidates who are employed as research assistants<sup>7</sup>

Year	2000	2001	2002	2003	2004
<b>Total</b>	1636	2103	2297	2192	2514

<sup>8</sup>

There were 3494 PhD candidates in Croatia in 2004.

<sup>6</sup> University of Dubrovnik <http://cms.unidu.hr/>  
 University of Osijek <http://www.unios.hr/>  
 University of Rijeka <http://rektor.uni.hr>  
 University of Split <http://unist.hr>  
 University in Zadar <http://www.unizd.hr/>  
 University of Zagreb <http://rektorat.unizg.hr>

<sup>7</sup> There is no data on total PhD candidates in Croatia

<sup>8</sup> Ministry of Science, Education and Sport <http://www.mzos.hr>

3. There is no data on average age of entering doctoral programmes. Currently, 42,6% has B. Sc.; 57,4% has MA<sup>9</sup>.

4. **Table 5.** Candidates that defended PhD<sup>10</sup>

	1998	1999	2000	2001	2002
<b>Total</b>	339	338	280	255	314
<b>Women</b>	134=39,5%	158=46,7%	131=46,8%	125=49,0%	151=48,1%

Average age of PhD candidates at the time of completing their PhD is 35,8 for women and 36,6 for men.

There is no data on duration of completing PhD.

5. Nominal length of PhD programmes is 3 years.  
There is no data on average active time spent to complete PhD programme.  
Officially, part term modes encompass all PhD candidates except those who are employed as research assistants.
6. There is no reliable data on percentage of PhD candidates who complete their PhD.
7. There is no reliable data on PhD candidates who withdraw. There is no data on drop outs from postgraduate study, mainly due to the fact that postgraduate candidates sometimes study for 10 or even more years. There are no interim qualifications for those who do not complete their doctorates.
8. PhD candidates are registered at universities separately for each university, and the Ministry of Science, Education and Sport keeps the data only for research assistants. There are about 15% (in the year 2002 there were 2.297 registered junior assistants) of PhD candidates out of all employees in Croatian scientific system.
9. Price of tuition fees for MA and PhD thesis vary significantly from one to another faculty. MA is more levelled with the 2.500 euros on average. But, prices for PhD vary from 2.000 euros at Medicine faculty to 10.000 euros at Hotelier Faculty. The Ministry of Science, Education and Sport provides scholarships for young researchers for degree programs of Master and Doctor of Science.

The most common is that PhD candidates are funded by Ministry of Science, Education and Sport as the research assistants to the universities or to the research institutes project and spent part of the time on that project, without any chance to undergo their own project (in Croatia assistants without PhD degree can do their own research only as the free lancers). The actual duration for this kind of contract is much longer than doctoral studies; either 8 years (4 for master degree plus 4 for doctoral degree) for those who got employed before 30/08/2004; or 6 years for those who got employed after 30/08/2004 (they are obliged to defend their PhD thesis in 6 years).

The second pathway is to obtain fellowship for scholarship from Ministry of Science, Education and Sport, but without employment at the university or research institute, and to undertake research as a part time self funded activity.

The third pathway is to undertake research as a part time self funded activity, paying own scholarship as well.

<sup>9</sup> Ministry of Science, Education and Sport <http://www.mzos.hr>

<sup>10</sup> Statistical Yearbook 2003

Pursuant to the Higher Education Act (OG 59/96), Act on Scientific Research Activity (OG 59/96) and the Act on Rights of Veterans of the Homeland War and Their Family Members (OG 94/01), the Ministry of Science, Education and Sport provides funding for partial reimbursement of tuition fees for the academic title of a Master of Science or PhD to veterans of the Homeland War, children of deceased veterans of the Homeland War, disabled war veterans of the Homeland War and their children.

10. In Croatia assistants without PhD degree can do their own research only as the free lancers and they cannot gain any funds from Ministry or University for their own research projects.
11. Minimum national wage is 240 euros; stipend for those who are not employed as research assistants is 420 euros; average national wage is 570 euros, PhD candidates who work as research assistants have 580 euros. Average wage for those with high school or university degree is 820 euros, but it encompasses very wide range of positions – from primary school teachers to managers<sup>11</sup>.
12. Free basic health insurance is available to all citizens of Croatia according to Constitution.  
If they are unemployed they have rights as regular undergraduate students; they are eligible to ISIC card (International Student Identity Card) – eligible to students' discounts in a small number of shops and services, and to flight tickets.  
38% of PhD candidates in Croatia (calculated from the data from Statistical Yearbook 2003) do not work in science and research and there is no data on their employment status.  
PhD candidates are eligible to unemployment benefit under the regulations that propose at least 9 months of working experience, so if they were never been employed, they are not eligible to unemployment benefit.  
PhD candidates are eligible to pension rights, tax duties and maternal/paternal leave only if they are full time employed.
13. 71,6% of PhD candidates (1800 out of 2514) work at universities, i.e. have teaching duties, the rest of 562 (22,4%) work at public institutes and 152 (6,06%) at other scientific organizations<sup>12</sup>. They are not paid separately for their teaching duties.
14. The amount of time spent on teaching duties is on average 2-4 hours per week (my estimate).
15. The proportion of PhD candidates involved in a collaboration between academia and industry during their PhD is 12.9%<sup>13</sup>
16. There is no reliable data on the numbers of incoming and outgoing Croatian PhD candidates to/from Croatia every year.
17. There is no reliable data on the proportion of PhD candidates who remain working in academia after they defended their PhD. My free estimate is about 90%. It is a high percentage, but usually people who were employed at university during their postgraduate study want to continue since it is a position that cannot be achieved so easily.
18. There is no reliable data on the proportion of young researchers who go to R&D departments in companies.

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<sup>11</sup> Croatian Central Bureau for Statistic [www.dzs.hr](http://www.dzs.hr)

<sup>12</sup> Ministry of Science, Education and Sport <http://www.mzos.hr>

<sup>13</sup> Statistical Yearbook 2003

19. The average salary of young doctors in academic sector is 670 euros<sup>14</sup>. In private sector it varies significantly.

20. There is no national association in Croatia.

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<sup>14</sup> Croatian Central Bureau for Statistic [www.dzs.hr](http://www.dzs.hr)