**Joint Degree Management and Administration Network**

**Tackling Current Issues and Facing Future Challenges**

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<td>University of Graz</td>
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**Description from the Project**

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<tr>
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The Good Practices Report on Joint PhD Implementation and Management is a report elaborated by the WP Task Force in which it will be presented a list of good practices adopted by the network universities on the topic of the WP. It will start with the analysis of the internal practices adopted by the consortium members and the contributions of the results of the Call for Papers.
EXPLANATORY NOTE

The Good Practice report in the Development and Administration of Joint Programmes at Doctoral level is part of the second year work undertaken within the JOIMAN project. Some of the material and the terminology developed during the first part of the project were used in this report. The report is based on information about joint doctoral programmes gathered through a call for papers (from November 2009 till January 2010) and a self-evaluation exercise (from November 2009 till February 2010) with follow-up site visits that were implemented by the WP4 Task Force between April and June 2010.

The joint doctoral programmes that are part of the study were chosen from among the partners in the JOIMAN project.

For the purposes of the Final Report, the following documents are enclosed to this deliverable:

1. Summary of the Development of the Activities;
2. Self Evaluation Form;
1. Summary of the activities

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<th>Activity</th>
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<th>Partners involved</th>
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<tr>
<td>Launch and promotion of the call for proposals</td>
<td>November 2009 – January 2010</td>
<td>WP4 members, all partners</td>
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<td>Self-evaluation exercise</td>
<td>November 2009 - February 2010</td>
<td>WP4 Task Force members</td>
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<tr>
<td>Collection and Evaluation of proposals</td>
<td>February 2010</td>
<td>WP4 Task Force members</td>
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<td>WP4 Task Force meeting</td>
<td>March 2010</td>
<td>University of Graz; University of Bochum; University of Bordeaux; University of Deusto; University of Bergen; University of Padova; University of Lille; University of Vilnius</td>
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<tr>
<td>Selection of targets for study visits</td>
<td>March 2010</td>
<td>WP4 Task Force members</td>
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<td>Study visits</td>
<td>April – June 2010</td>
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<td>WP4 Task Force meeting</td>
<td>20th June 2010</td>
<td>WP4 Task Force members</td>
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<td>Preparation of the report</td>
<td>June - September 2010</td>
<td>WP4 Task Force members</td>
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<td>Evaluation meeting</td>
<td>September 2010</td>
<td>Graz, Antwerp and Bologna</td>
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<td>Final release of the report</td>
<td>November 2010</td>
<td>Graz and Bergen Universities</td>
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2. Self-evaluation form

Self-evaluation form
ON JOINT PROGRAMMES AT DOCTORAL LEVEL

JOIMAN is a project financed by the European Commission under the framework of LLP/Erasmus/structural network measure which started in November 2008 providing a platform for partners to share knowledge and know how on management and administration of Joint Degree Programmes. The project further aims at creating common guidelines and good practice examples on the administrative issues related to Joint Degrees’ management.

The aim
The aim of this self-evaluation exercise is to identify good practices through a self evaluation of various joint doctoral programmes. The self-evaluation reports will provide the basis for a best practice report on running a joint doctoral programme. Particular intention should be paid to identification of challenges and obstacles faced and how they have been overcome.

This exercise should furthermore provide a framework to stimulate internal discussions within and among the participating institutions and also provide opportunities to comment on and assist continuous improvement in the quality of the programmes.

Report
The self-evaluation report should be structured as far as possible in accordance with the headings below.
The report should express evaluation and analysis rather than sheer description. Identifying strengths, weaknesses, opportunities and threats will be an important aspect of this. The questions under each heading may serve as a starting point to your self-evaluation.

Submission and Deadlines
The report should be submitted electronically to Mrs. Raimonda Markeviciene, Vilnius University, Lithuania, email: raimonda.markeviciene@cr.vu.lt by 23. April 2010. All submission should be in Microsoft Word.doc
Facts and figures

1.1 Baseline information

<table>
<thead>
<tr>
<th>Name of programme</th>
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<tr>
<td>Name of co-ordinating institution</td>
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<td>Names of other participating institutions</td>
<td></td>
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<tr>
<td>Length of programme (academic years + ECTS)</td>
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<td>Website address of programme</td>
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1. Partnerships
Which criteria did you use when choosing your partnerships, and can you identify a best practice of how to choose the perfect partner for a joint doctoral programme?

2. Research cooperation or educational cooperation as the core of the joint degree programme?
Is your programme concentrated around common courses primarily, and to which degree is the programme organised around common research projects? Can you identify a best practice in how to design a joint doctoral programme?

3. Organisational structure
Why did you choose the organizational and management structure as you did and is it working the way you had intended it? Can you identify a best practice in how the organisational and management structure ought to be set up in order to succeed in running a joint doctoral programme?

4. Recruiting/admission
How do you succeed in your recruitment activities and selection procedures? Can you identify a best practice in how recruitment and admission could best be run in a joint doctoral programme?

5. Supervision
How do you secure that supervision within the programme is carried out according to the intentions of the programme? Can you identify a best practice in how the cooperation on supervision within a joint doctoral programme can take place?

6. Research/ formal training/courses/thesis/defence
How do you secure that the integration of research and the formal training through courses are carried out like intended in the programme outline?

How have you set up the final phase with the thesis and the defence in order to secure the intentions of the joint doctoral programme? Identify a best practice in how to best structure the integration between research and formal training in a joint doctoral programme?

7. Monitoring/reporting
How have you succeeded in securing good monitoring and a reporting system of the progress of the PhD students? Can you identify a best practice for setting up a well functioning monitoring system of students in a joint doctoral programme?

8. **Legal framework: Accreditation and approval procedure**
How have you succeeded in overcoming potential obstacles in different national legislations for accreditation and approval procedures? Can you identify a best practice in how to solve potential legislation obstacles?

9. **Entering workforce**
How do secure the employability of your PhD students, and to which degree do you cooperate with potential employers? Can you identify a best practice in how to succeed in the employability of the PhD students in a joint doctoral programme?

10. **Funding/fees**
How have you succeeded in setting up a well functioning funding system for the joint doctoral programme including research activities, mobility for PhD students and the funding of the PhD students themselves? Which funding sources do you rely on? Can you identify a best practice in how to structure the funding system, including fees, in a joint doctoral programme?
3. Good Practice Report on Development and Administration of Joint Programmes at Doctoral level

DEVELOPING AND MANAGING JOINT DOCTORAL PROGRAMMES

CHALLENGES AND OPPORTUNITIES

Document developed within the framework of the JOIMAN Network, by the joint effort of the following partners:

University of Bologna (coordinator), University of Padova, University of Science and Technology Lille 1, University of Strasbourg, University of Bordeaux 1, University of Deusto, University of Graz, University of Antwerp, University of Vilnius, University of Iasi, Masaryk University of Brno, University of Lund, University of Bergen, University of Bochum, University of Leipzig.
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1. Executive Summary

Joint curricula development has been a part of the internationalisation strategies of European universities for many years now. Despite the universities’ commitment, interest and accumulated experience, many managerial and administrative issues relating to such programmes still need to be addressed by identifying different approaches to challenges and sharing good practice.

The work carried out by the JOIMAN project called attention to a very important issue that generally tends to be underestimated – the added value of joint doctoral programmes. Even though there are many national differences in doctoral education, there is a general consensus that there should be no doctoral education without original research and that high quality doctoral programmes are crucial if Europe is to reach its research goals.

The 18 programmes examined by the JOIMAN project were developed to meet different institutional aims, such as strengthening research in a specific discipline, increasing the number of doctoral candidates, strengthening research activities with partners, and responding to international trends and the specific needs of countries/regions.

Firstly, joint doctorates allow candidates to be trained in specific fields of study that are not always available at an institution or in a country. Secondly, irrespective of whether they are based on ‘soft relations’ or a highly formal structure, joint doctorates built around European networks or international schools attract high profile doctoral candidates. This is because they provide an opportunity to experiment with different approaches to research, and thereby produce new knowledge.

The joint format of doctoral programmes improves the quality of doctorates by offering larger-scale services, mobility of scientists and diverse training opportunities and approaches. Because of their extensive use of interdisciplinary approaches, these programmes enable diversification in terms of types of facilities and the profile of young researchers.

The report highlights the indisputable added value such programmes have for the PhD candidates themselves. For doctoral students, the most important outcomes of joint programmes are: diversity of research through mobility and tutorship, access to job markets in different countries, links to research networks, the growth of multicultural and social awareness and the development of a broader range of transferable skills as well as personal development.

Choosing partners for joint doctoral programmes is crucial, and the study showed that the underlying rationale for several of these programmes is long-standing and intense scientific cooperation with partners. The JOIMAN project has found out that a clear organisational and managerial structure is a crucial factor in the success of these programmes. The study revealed that both the degree of integration and the structure of joint doctoral programmes depend on the main aim for the development of the programme. The degree of integration of the doctoral programme is closely linked to its aim. Hence, the organisation and aim of the programme are relatively interdependent. The study showed that, with regard to management structure, Erasmus Mundus Joint Doctorates (EMJD) differ greatly from other programmes that are not funded through EM (Erasmus Mundus). All EMJD programmes have a similar management structure,
while the other programmes use a variety of organisational models and have a multitude of organisational bodies that differ in scope and tasks. In non-EM-funded programmes with a high degree of jointness, administrative tasks tend to be handled at each institution. They only share responsibility for core scientific tasks such as research and courses. There is a substantial difference between EM-funded programmes and other programmes with regard to funding arrangements. Non-EM-funded programmes depend on several funding sources. However, EM-funded programmes also state that it is necessary to identify sources other than institutional ones in order to ensure the sustainability of the programmes. Funding arrangements are crucial in relation to dealing with the challenges of integrating all the elements involved in joint programmes. There is a need for strong investment at the European level, according to the majority of coordinators. Despite the growing interest in and popularity of joint programmes, statutory provisions relating to such programmes remain scarce at the national level. The study reveals that the difficulties mainly relate to joint degree diplomas, the academic calendar, visa requirements, the employment of doctoral candidates and requirements concerning tuition and admission.
2. Introduction

Those involved in the development of this report are administrators from 15 universities in Europe and three Erasmus Mundus National Contact Points, all part of the JOIMAN project. The JOIMAN project was divided into thematic task forces and work packages that worked separately under the coordination of a steering committee. Since this is the second part of the JOIMAN project, some of the material and the terminology developed during the first part of the project were used in this report. The report is based on information about joint doctoral programmes gathered through a call for papers and a self-evaluation exercise with follow-up site visits.

The joint doctoral programmes that are part of the study were chosen from among the partners in the JOIMAN project. All programmes that received funding from the first EMJD call were invited to take part in the study. In addition, some programmes that have been running for some years without specific joint programme funding, such as EM, were also included. The first joint doctoral programme funded by Erasmus Mundus started in 2010. A lot of the information gathered therefore came from programmes that are in an early stage of the process. Consequently, they mostly shared experience from the development phase. In addition to exploring the management and development of joint doctoral programmes, the task force has chosen to focus on research opportunities and research collaborations that form the basis for the development of the joint programmes included in the study. The study shows that there is diversity in relation to the concept of joint doctoral programmes, and we therefore use the concept in a broad sense here in the report. The programmes included in the study all fall under the category JOINT PROGRAMMES based on the definition from the JOIMAN glossary: A study programme developed and/or provided jointly by two or more higher education institutions, possibly also in cooperation with other institutions, leading to the award of a double, multiple or joint degree.

2.1 Final report

The final report, Developing and Managing Joint Doctoral Programmes – Challenges and Opportunities, aims to describe the challenges and possibilities, and provide guidance for those who wish to establish a joint doctoral programme. It also aims to be a useful tool for those already running a joint doctoral programme. It should serve as a reference work and a catalogue of issues to be considered when dealing with joint doctoral programmes.

While the focus of the report is largely on the aims/outcomes of the programmes, it also includes administrative structures and takes into consideration the different types of joint doctoral programmes, such as:

1. International collaboration
2. Individual doctoral Programmes
3. Joint doctoral programmes
4. Joint doctoral degrees

The final report describes the various challenges and opportunities involved in developing and running a joint doctoral programme. The report identifies the factors that influence the degree of jointness of each of the different types of joint programmes, and investigates the correlation between jointness and the quality of the programmes. Important issues are dealt with separately and in greater detail, for example:

- partnerships
- the level of integration/cooperation in terms of research/educational cooperation
- formal training and courses
- theses and defence
- supervision/monitoring
- organisational structure
- the degree of cooperation with potential employers and job opportunities
- admission
- various legal obstacles at different levels
- funding

The report explores the difficulties and challenges related to these issues, but it also offers some possible solutions. However, the report does not attempt to impose solutions and say what is good or bad, but simply identifies different factors and their correlation with various important issues involved in joint programmes at doctoral level. The report offers several possible roads to choose from when developing and running a joint doctoral programme.
3. Study Methods

The plan for the study involved the application of several methods of collecting information. The working group that conducted the study comprised representatives from institutions with experience in running joint doctoral programmes, and the study could thus draw on wide-ranging experience and competence in the field. In addition to reading existing literature and policy documents about the topic, several methods were used to gather information and experience from diverse joint doctoral programmes.

3.1 Call for Papers

The call for papers invited scientific staff, young researchers and administrators from higher education institutions with experience of developing and managing joint programmes at doctoral level to submit papers. The papers were intended to highlight key issues relating to joint doctoral programmes on the policy as well as the development and management level. They were also intended to serve as a key resource for institutions, administrators and scientific staff engaged in presenting and analysing the impact of joint programmes at doctoral level in the EHEA and other parts of the world. Five papers of high quality and relevance were submitted by European universities (the Faculty of Physics, University of Iasi, Romania; the University of Rome Sapienza, Italy; the University of Edinburgh, Scotland, UK; Mykolas Romeris University, Lithuania; Universitat Autonoma de Barcelona), and the selection committee, which consisted of three members from three partner universities, selected the paper submitted by Prof. Annamaria Silvana De Rosa (Research Centre and Multimedia Lab, University of Rome Sapienza, Italy) describing ‘The joint European/International Doctorate on social representations and communication’, which was presented at the Second International Seminar on Joint Degrees – Antwerp on 26 March 2010. In addition, the paper from the University of Edinburgh was presented at the final JOIMAN conference in Vilnius on 28 October 2010.

3.2 Self-Evaluation Exercise and Study Visits

In order to produce an informative final report with reliable information describing challenges and opportunities, the work package members decided to base their report on a self-evaluation exercise among selected joint doctoral programmes and on study visits/interviews.

The study aimed to find out how the different joint doctoral programmes were developed and administered, including issues such as organisational structure, the degree of jointness, solutions for funding, the issuing of diplomas etc.

3.3 Selection

The first step was to identify joint doctoral programmes in Europe. The joint doctoral programmes that are part of Erasmus Mundus Action 1 and funded by the EU commission were easily identified. The problem is that the majority of these collaborations have just started, which meant that many of the issues addressed in this survey were impossible for the consortia to answer at this point. Several programmes were identified by asking members of the JOIMAN network to send a list of programmes at their institution or in partner institutions. A few programmes were
located by searching the internet. The list was then compiled and again distributed to the network, with the result that a few more programmes were added. It was important to include a certain number of the Erasmus Mundus Joint Doctoral Programmes in addition to programmes not funded through this programme in order to see whether the funding source influences issues relevant to joint doctoral programmes. The programmes studied will not be named in the report. It is impossible to fully acknowledge all programmes, since they have been running for very different lengths of time and a comparison of individual programmes would therefore not be appropriate. The analysis and results presented in the report represent trends, and the object of the study is in no sense to compare the quality of the programmes.

3.4 Self-evaluation – Questionnaire
Through the self-evaluation, selected programmes were invited to take part in the identification of challenges and good practices. The aim of the self-evaluation was to identify best practices in running the programmes. The questionnaire contained 10 ‘golden’ questions that were sent to 15 PhD programmes. The self-evaluation report had particular focus on challenges relating to the creation, development, implementation and running of joint doctoral programmes. It covered issues such as organisational structure, recruitment/admission, supervision, instruction and courses/training, research, monitoring/reporting, theses/defence of theses. The self-evaluation form was only sent to the coordinators of the joint doctoral programmes, and not to all partners in the programmes. The self-evaluation endeavoured to explore what the coordinators of the programmes saw as best practices in the running and development of joint doctoral programmes.

3.5 Study Visits
The members of the work package decided to undertake a series of study visits aimed at collecting more information about various research-related issues that were identified as crucial to the success of joint doctoral programmes. The site visits, which included an interview with the coordinator of the joint doctoral programme, used a template for data collection. A review of various handbooks and/or reports was also included.

3.6 Limitations
The study has a number of limitations that must be considered when reading it:
1. The study relies on a self-report method of data collection as it had only two main sources of information on the development and management of joint doctoral programmes: self-evaluation reports and interviews conducted during the site visits. The results represent the perceptions of those who chose to take part in the study.

2. The responses only represent the coordinator’s view of the joint doctoral programme in question. The study only includes the opinions and views of the coordinators and not of all involved partners and PhD candidates. This is a weakness in relation to the reliability of the responses obtained to the questions asked in the self-evaluation exercise and during the interviews. Our study is thus a compilation of descriptions of
respondents’ own practices and experiences of developing and running joint doctoral programmes.

3. An additional limitation on the study’s ability to report outcomes is the relatively short time that most of the joint doctoral programmes have been operational. Several of the joint doctoral programmes included have only recently started up and have no graduates so far. Many of the respondents could not really provide answers to some of the issues concerning outcomes, but they were able to provide input about the problems or solutions relating to the development of programmes. Even though a limited number of the joint doctoral programmes have a longer ‘history’, long-term tracking of outcomes is not yet available.

4. The response rate is rather low. Thirty-two coordinators of joint doctoral programmes were approached and asked to take part in the self-evaluation exercise. We have received only six responses, and they were partly incomplete. The response rate for the self-evaluation exercise is only around 19%.

Despite the limitations mentioned here, the study includes 19 joint doctoral programmes from which a lot of information was gathered. The report is thereby based on experiences from these programmes as presented in papers, self-evaluations, study visits and literature on the topic of joint doctoral programmes.
4. Different Types of Joint Doctoral Programmes

While European universities have been involved in joint programme development since the 1980s, the Erasmus Mundus Programme has brought a substantial change in the ‘philosophy’ behind joint programme creation and administration, focusing on the use of consortia, and didactical and administrative integration. Through the papers, self-evaluations and study visits, it became clear that most of the joint doctoral programmes had come into being through different types of cooperation development. The types of international cooperation we were able to identify in the programmes are characterised by varying degrees of jointness and formalisation of the different activities on which the cooperation is based. There is a clear difference in the degree of jointness and integration between joint doctoral programmes funded through Erasmus Mundus and those that are not. The criteria for Erasmus Mundus Joint Doctorates (EMJD) entail a high degree of jointness and integration in all aspects of the cooperation at doctoral level. Few of the joint doctoral programmes with no EM funding had a high degree of integration or jointness in all activities.

The different types of joint doctoral programmes were based on the following characteristics:

1. **International collaboration on doctoral education**: There is little or no structure in relation to research cooperation and/or student/staff exchanges. A low degree of formalisation of cooperation, may share a few common activities in relation to research, but without integrated courses as part of the actual programme.

2. **Individual doctoral programmes**: e.g. cotutelle, including formalisation of cooperation around one or several candidates.

3. **Joint doctoral programmes**: A doctoral programme developed and/or provided by two or more higher education institutions, possibly also in cooperation with other institutions, leading to the awarding of a double, multiple or joint degree.

4. **Joint doctoral degree programme**: A joint doctoral programme leading to the awarding of a joint degree issued jointly by two or more higher education institutions.

Each of the types of programme presented above involves various challenges and opportunities in relation to collaboration on doctoral education. They differ in the degree of integration and jointness of the various activities they cooperate on. The different types of programmes also reflect how doctoral education is structured. Most of the joint doctoral programmes studied offer courses as part of their joint programme. Others have common research fields as the core of their programme and thus have less structure and integration in relation to activities such as courses. Although there are different ways of structuring and developing joint doctoral programmes, they all share the characteristic of having a certain amount of integration or jointness of activities in connection with doctoral education. These differences do not imply that one degree of integration is better than another. The differences between the types of programme relate to a scale of jointness but not necessarily of quality, as the quality of the programme depends on factors such as research quality, the people involved, legal constraints etc. The degree of integration is thus simply a marker used to distinguish between the different types and ways of organising a joint doctoral programme.
The degree of jointness is clearly connected to the type of joint doctorate programme. The study showed that this is the case for several aspects of the different programmes. In order to identify the programmes’ degree of jointness, the study focused on the integrational aspects of partnerships, courses, supervision, research, selection/admission, monitoring/reporting, quality assurance and degree structure. In addition, an analysis was carried out of the degree of jointness in relation to cooperation mechanisms, such as joint steering committees and evaluation boards, and the extent to which decisions on admission and evaluation were collective. It was clear that the doctoral programmes either have research or courses, or both, as the joint core of their programme. Research proved to be the most important joint element in the programmes. This is probably due to the fact that most of the joint doctoral programmes were based on previous research cooperation. However, the study showed that it is perfectly feasible to run a joint doctoral programme that is only organised around joint courses or training activities and where all candidates end up with a one-institution doctoral degree. There is thus great variety in the field of joint doctoral programmes.
4.1 Joint Doctoral Programmes – in brief

4.1.1 International collaboration exchanges
In international collaboration exchanges, most of the research cooperation takes place between few partners. The research collaborations are not formalised and they tend to be centred on a handful of people who know each other from the international research scene. They engage in a steady interchange of ideas and share common research interests through visits and research stays at each others’ institutions. The collaboration does not have a formal structure, there is very little formalisation, and there is rarely joint funding for projects. Within this type of joint doctoral venture, there may be some joint funding for networking and exchanges among staff and doctoral candidates, but with little or no formalisation. Several of the joint doctoral programmes reported that their programme started out on the basis of such loosely structured collaboration, and later developed into a more structured programme. This type of collaboration is nevertheless included here, as it is an important precursor of many of the joint doctoral programmes we studied. It is also perfectly feasible to have a loosely organised ‘programme’ based on exchanges of staff and doctoral candidates. This is described here as an international collaboration exchange, since it is loosely organised and not part of a structured programme of joint courses or other joint training elements.

4.1.2 Individual doctoral programmes – cotutelle agreements
The joint supervision agreements normally referred to as cotutelle agreements are increasingly being utilised by higher education institutions to formalise joint supervision of one candidate by two institutions that award doctoral degrees. It emerged from the study that several joint doctoral programmes use a cotutelle agreement as part of their organisational structure. They have a consortium agreement for the whole joint doctoral programme and a cotutelle agreement for each individual candidate. This makes it possible to have large consortiums with several partners, where cotutelle agreements between two partners are used for individual doctoral candidates. While the cotutelle agreement can only be used for joint supervision, it can also regulate other elements of doctoral education, such as which courses and other training activities the doctoral candidate is expected to complete. It is possible to use a cotutelle agreement in partnerships that award a joint degree or double degree, and they have also been used in cases where one institution awards the degree, while the diploma merely states that the degree has been awarded on the basis of joint supervision based on a cotutelle agreement.

4.1.3 Joint doctoral programmes
A joint doctoral programme is a programme developed by several higher education institutions, where the programme is provided by more than one institution. The majority of the programmes are both developed and provided by a group of higher education institutions. These programmes have a high level of formalisation. While the candidates can be jointly funded, they can also be formally affiliated to, and funded by, one of the universities. In such case, the ‘jointness’ is visible in regards with supervision related to which institutions they take their courses and spend their study period.

The majority of the Erasmus Mundus Joint Doctoral Programmes fall under this category. They include formalised arrangements for where the doctoral candidates spend their time and how they move between institutions. While the joint programmes jointly develop and execute the programme, they lead to double or multiple degrees. This is sometimes by choice, but mostly it is because legislation makes it impossible for
the partners to issue a joint degree. More and more countries in Europe are changing their legislation (Sweden 2010, the Netherlands 2010) and can, if they wish, develop joint doctoral degree programmes leading to joint doctoral degrees.

4.1.4 Joint doctoral degree programmes
A joint doctoral degree programme is a structured programme where all the elements of doctoral education are run jointly and the organisational structure and evaluation processes are managed on the basis of full integration of the partners. As they have been developed and run jointly, such programmes are integrated programmes that lead to one degree – a joint degree. These programmes have a high degree of integration in all aspects of running the joint programme. They are joint doctoral programmes, the only difference being that the programmes lead to one degree only. This means that the institutions involved award the degree jointly. The programme leads to a joint degree with one diploma (and diploma supplement). Largely because of legislative obstacles, this is not very common, and the survey found only one programme that issues a joint degree only. Some of the consortiums awarded a mixture of joint degrees and double degrees depending on the different laws that applied to the partners.

4.1.5 Differences in the Degree of Jointness
All the joint doctoral programmes have varying degrees of jointness in how they run programmes. The degree of jointness can be related to the funding of the programme, as EM has introduced several criteria for running a joint doctoral programme that require a high degree of jointness in all activities. However, if we look at joint doctoral programmes with no-EM funding, we see that they have a lower degree of jointness. While this may be due to the lack of joint funding, they also have a tendency to organise the joint programme around the activities that are deemed to be the most important to the partners: joint research and joint courses. The majority of the programmes are strongly research-driven, and their development goes through different stages of research cooperation, each stage formalising more activities as part of the cooperation. The degree of jointness is thus closely related to funding but also to the stage of development of the research cooperation. Changes in critical mass may correlate with the development stages, whereby higher numbers of doctoral candidates seem to require more structured administration and funding. Several of the programmes included in the study are concentrated around a handful of doctoral candidates. This clearly shows how the completion of joint degrees is strongly related to the individual cotutelle agreements, which are based on well-established research cooperation between the partners. Joint doctoral programmes use different ways of solving the administrative and legal issues. However, the strongest criteria for succeeding were clearly the quality of the research cooperation and the common research field shared by the partners in the programme.
5. Issues to be considered when developing and managing Joint Doctoral Programmes

5.1 Partnerships

The data gathered show that joint doctoral programmes are mainly offered by universities accredited to award doctoral degrees. When establishing a consortium to run a joint doctoral programme, the selection of partners is always a challenge for the initiating institution(s). The self-evaluations reports and study visits showed that most of the joint doctoral programmes are collaborations involving between two and five institutions. They are mainly European universities, with only a few non-European higher education institutions. Overall, the number of partners varies between two and 24.

<table>
<thead>
<tr>
<th>How many partner institutions are in the consortium of the joint doctoral programme?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Most joint doctoral programmes have developed from long-standing research cooperation and/or academic networks with research as their core joint interest. Few of the programmes sprang from previous educational cooperation; however, those that did were partnerships with long-standing cooperation on both research and education. Joint research interests are mentioned by most programmes as the core of the cooperation, and also the main reason for establishing a joint doctoral programme.

What kind of agreement is the partnership in the joint doctoral programme based on?

<table>
<thead>
<tr>
<th>Bilateral agreement</th>
<th>Consortium agreement of several partners</th>
<th>Mix of bilateral and consortium</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(19)</td>
</tr>
</tbody>
</table>

A few partners already had good experience of collaboration on running a joint Master’s programme. They decided to develop a joint doctoral programme as a natural next step. It is evident that personal ties have a great influence on the creation of joint doctorate programmes.

Other reasons for the selection of partners can be observed, however, such as outstanding international experience and reputation of (potential) partners, a common interest in the same research fields, and the existence of compatible national systems that would facilitate the development and management of a joint doctoral programme. Moreover, some partners were chosen very carefully as follows: the initiating institutions
decided to search for partner institutions on the basis of their outstanding publication record and their scientific production in the research field, their research environment, training facilities, and the fact that their research teams were able to offer excellent supervision for doctoral candidates.

All in all, a number of good practices seem to have been identified. If a university wishes to start a new international joint doctoral programme and to run it successfully, it would have to look for partners among higher education institutions with compatible or at least complementary scientific interests, and a strong administrative and teaching staff. As regards the selection of partners and the organisational structure of a joint doctoral programme, limiting the number of partners involved in making decisions is very important. It is also important to have a clear definition and division of responsibility between the partners. Cooperating institutions should be aware of the importance of regular communication and frequent meetings as well as the ability to involve both academic and administrative staff in the programme by identifying a clear role for all staff involved.

In addition, potential partner institutions should be able to offer a wide range of suitable courses to doctoral candidates, to present an appropriate organisational structure and be in a sound financial situation. With respect to the latter point in particular, institutions that intend to develop a new joint doctoral programme ought to consider including partners from the business community (depending on the research field, of course). Companies from the business sector could make a financial contribution to the programme, and to the activities it involves, i.e. they could support doctoral candidates by providing scholarships for them etc. In addition, candidates would have an opportunity to form connections with them and gain practical experience. Including companies as partners would entail opportunities for internships for doctoral candidates during their PhD programme. The candidates could find a job more easily if they had already been in contact with industry through their research project. For this purpose, it would be excellent to have a person who coordinates exchanges between universities and industry/business employers, and who can be continuously in touch with supporting companies and make frequent visits to companies in order to promote the programme, organise internships and seminars, raise additional funding/sponsorship, and create strong links between the universities’ programme and the business community. One of the institutions could be appointed as ‘brand manager’, and have a person serving as coordinator between the programme and industry. This would be a good practice in the running of joint doctoral programmes. Apart from companies from the industrial sector, organisations and other potential employers could be included. All partners form a network that could be useful to doctoral candidates, a unique international network and forum for leading researchers and companies in the relevant field. The best way to guarantee the future employment of doctoral candidates is to assure them a high publication record at the end of the programme, to give them opportunities to meet researchers in their field at international conferences, to present their research at conferences and enable them to spend time at two different labs at least (mobility!). The study reflected this to a certain extent, although only a few programmes have been running long enough to produce more than a few candidates.

In the study, about a third of the partnerships are based on bilateral agreements, while the rest are based on a consortium agreement involving several partners. One of the partnerships was based on a consortium agreement between several partners, although it used bilateral agreements between two institutions to organise cooperation
on shared candidates. This meant they had an overall cooperation agreement for cooperation on research and doctoral education, and bilateral agreements for individual doctoral candidates. The variations show that there are several viable structures for joint doctoral partnerships. The degree of jointness of partnerships does not relate so much to the quantity of partners in the consortium, but to the extent to which the partners have divided the activities among themselves and the degree to which responsibility for the activities is joint or dispersed.

<table>
<thead>
<tr>
<th>Partnerships</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilateral agreements</td>
<td>5</td>
<td>28%</td>
</tr>
<tr>
<td>Consortium of several partners</td>
<td>13</td>
<td>72%</td>
</tr>
<tr>
<td>Previous research cooperation</td>
<td>13</td>
<td>72%</td>
</tr>
<tr>
<td>Previous other cooperation</td>
<td>5</td>
<td>28%</td>
</tr>
</tbody>
</table>

5.1.1 Challenges and Opportunities

- **When setting up a new joint doctoral programme,** **partners should be selected very carefully.** It is relevant to give consideration to common research interests, the research environment and available training facilities, the number of partners and their sources/background. Judging by the self-evaluation reports and study visits, many partners were chosen as a result of previous cooperation and common scientific interests. The integration of industrial (associated) partners could be important with regard to the financing and sustainability of joint doctoral programmes, as well as doctoral candidates’ future careers. It is important to be clear about the number of partners to be included and also about whether industrial partners should be integrated.

- The study shows that it is a challenge in itself to run a joint doctoral programme with a large consortium of partners without a certain amount of joint responsibility for the programme’s core activity. **Having a large number of partners** requires a more structured organisation and management. This is not surprising, but it shows how demanding it is in terms of joint management structures to run joint doctoral programmes when several institutions are involved.

- **The most important challenges to overcome are the institutional ones and/or national requirements and regulations relating to doctoral degrees.** These challenges are very tangible when running joint doctoral programmes and the PhD candidates will sometimes have to comply with several institutions’ rules and regulations, leading to a double workload. This should be avoided.

- **When selecting partners,** institutions should be aware of the future organisational structure, and the role of each partner in the programme/consortium. The number of partners who need to be involved in decision-making should be limited. It is important to clearly define and agree on the division of responsibility between the partners.

- **Cooperating institutions should be aware of the importance of regular communication** within each institution and among partners and of holding frequent meetings (face-to-face or by video conference), as well as the
importance of involving both academic and administrative staff in the programme. A clear role should be identified for each person involved.

- Finally, when choosing appropriate partners, institutions should take into consideration that all partners should have a sound financial situation.

- A decision to set up a joint doctoral programme is one of the options the partners can explore for their joint venture. Several consortiums have opted to use cotutelle agreements. By using this form of agreement, it is possible to design special solutions for each candidate, and for the partners involved in training a particular candidate. For example, in one consortium some partners may not be able to award joint degrees. Some of the PhD candidates could nevertheless obtain joint degrees from this programme by using a cotutelle agreement between the institutions that will be directly involved with that particular candidate.

- When developing a joint doctoral programme, partners should be chosen who represent an important add-on and added value for the programme. The core of the programme, be it joint research or joint courses (which is the main reason for the establishment of a joint doctorate programme), could be decisive in relation to the structure of the programme. It is not necessary to have a fully integrated joint programme if the goal is only to organise courses together. One can still organise courses together, but award only one institutional PhD degree. As the study also showed, it is fully possible to establish a joint doctoral programme in which both partners award a degree. The PhD candidates are thus awarded double degrees.

5.2 Research – Formal Training – Courses – Theses – Defence

With respect to the implementation of research, formal training, available courses, theses and their defence, various models can be identified by scrutinising the self-evaluation reports and the questionnaires from study visits.

Developing a joint doctoral programme can entail different levels of integration of research and training programmes. The main rule for the organisation of research and/or educational cooperation among partners is that there are various possible approaches. They range from:

- greater autonomy of partners in the selection of topics and interrelated activities, to
- a jointly codified educational/research programme, planned in advance and implemented by all partner institutions.

In this context, it is worth quoting the view expressed by one of the respondents, according to whom ‘common research projects and common courses are important factors in the design of joint doctoral programmes. They constitute the material basis which identifies a group of universities working on the same project. Without a common theme for all the centres, regular meetings and homogenous evaluation criteria, it is quite difficult to concretize a shared course.’

5.2.1 Research and Courses (lectures)

The core of jointness is cooperation on research, the sharing of research facilities and creating and running courses (lectures) together. The programmes that have been
explored through the self-evaluation reports and study visits focus on each candidate’s research project, often combining it with mandatory formal training/courses that are only available at this particular institution or that are only offered at partner institutions once they have been developed jointly.

A high degree of integration was found in doctoral programmes where research and educational activities were codified beforehand.

A difference was observed with regard to the nature of research projects (joint vs. individual). Half of the programmes report that they share joint research projects and that the candidates are admitted to a programme with a clear research scope decided by the consortium. This difference is not only due to the degree of jointness of the programme, but also to traditions within the different scientific fields, where hard sciences often tend to be more team-oriented in their research than soft sciences. The study also found a clear connection between the structuring of courses and research and the different funding schemes. EM-funded programmes tend to organise most of the activities jointly, whereas non-EM-funded programmes are more diverse in relation to the jointness of their activities.

**How are research projects organized?**

<table>
<thead>
<tr>
<th>Joint research projects</th>
<th>Individual research projects</th>
<th>Mixture of joint and individual</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>40%</td>
<td>40% (19)</td>
</tr>
</tbody>
</table>

In addition to these programmes with a higher level of integration, some programmes are organised separately at each partner university, and there is a **high level of autonomy** in relation to the doctoral candidates’ research work and training courses. In some of the cases observed, partners opt for greater autonomy in the choice of activities when they wish to further strengthen already existing relations – the predominant focus being on long-standing scientific cooperation. This partial autonomy can sometimes make it difficult for doctoral candidates to follow the required activities at their home institutions while staying at the partner institution, because similar activities are not offered by the partner institution.

In addition to, or sometimes instead of, joint courses, partners organise an annual joint summer school and/or joint conferences or seminars for all doctoral candidates in the relevant research fields. They also invite guest speakers from partner institutions to give talks and lectures. If there are no joint courses, existing partners are normally kept informed about the activities of the other partner or partners.

Laboratory-based programmes may not include joint courses, since the aim of the research cooperation is to establish new practices and state-of-the-art research methods, and candidates are required to present their own projects.

In many joint doctoral programmes, all activities have to be approved by a Joint Committee/Joint Scientific Board every year. Some programmes are certified for ECTS credits (research activities, courses and seminars, or only the latter), while others do not use ECTS in their joint doctoral programme on the grounds that the doctorate should not be ECTS-certified since it consists of pure research work.

**Do you apply credits (ECTS) to the courses?**
The study showed that programmes that are organised around research have a tendency to apply institutional rules for the acknowledgement of courses. The EM-funded joint programmes, however, tended to have established joint regulations for the acknowledgement of courses. The choice of partners and the pivotal aims of the joint doctoral programme exert a great influence on the way the research/educational programme is drafted, organised and implemented. Reference to the scientific and didactic programme can be made in general terms in the consortium agreement and more specifically in the individual doctoral agreements for each candidate in the programme.

5.2.2 Example of Good Practice:
In this study, the highest integration level in scientific and didactic programmes was seen in one specific case. It is worth describing in brief here as an example of good practices. Candidates enrolled in this doctoral programme enjoy multiple supervision and take part in face-to-face individual and small-group mentoring activities. The latter are integrated with an open learning system and structured individual and collective international mobility among trainees and teaching staff, and candidates have an opportunity to ‘learn by doing’ in both academic and non-academic settings. Synergies are realised in scientific cooperation, not only at the institutional level, but also at the level of individuals or research groups located on different continents. The combination of an international scientific network, a joint doctoral programme and enterprise partners results in an integrated physical and virtual campus that ensures the highest quality in advanced research training. The interlocking system of virtual and physical mobility provides opportunities for extensive fieldwork, applied research and the acquisition of transferable skills. The candidates thus have an opportunity to belong to a joint programme. They all share the same research infrastructure platform and have flexibility to choose their own research and mobility paths. The programme leads to a joint degree that is awarded jointly by all institutions in the consortium.

5.2.3 Theses and their Defence, the Diploma
The thesis committees are largely joint committees in all the joint doctoral programmes studied. Theses are evaluated by a defence or joint committee or an international evaluation board comprising members from at least two partner institutions in addition to external experts. In a few of the programmes, they have opted to appoint a committee from more than two partner institutions, in addition to external referees. Very few programmes organise this at the institutional level alone. Half of the programmes report that they only use professors within the consortium to evaluate theses. However, the thesis committees are supplemented by external competence from outside the consortium.

Which rules apply for the evaluation of and requirements for the thesis?

<table>
<thead>
<tr>
<th>Crossed with: Which body evaluates the thesis?</th>
<th>Jointly decided requirements and criteria</th>
<th>Institutional requirements and regulations apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint defence committee</td>
<td>58.3%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Institutional defence committee</td>
<td>41.7%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>50.0%</td>
<td>50.0%</td>
</tr>
</tbody>
</table>
The study found that theses are most commonly written in the language of the home university in accordance with the national or local regulations. In other programmes, most of the work is usually presented in English.

The defence of the thesis often takes place in public and in front of a defence committee/joint committee/international evaluation board at one of the partner institutions, usually at the home university, in accordance with national and local regulations and rules. This joint defence committee is composed of the candidate’s supervisors (in most cases two supervisors/tutor and co-tutor) and members appointed by the partner institutions, who may be experts from outside the consortium.

Quality assurance systems are reported to be the responsibility of the individual institutions and not a responsibility that is shared by the partners jointly. However, in relation to the supervision and evaluation of theses, most programmes had joint committees and made joint decisions. As reported in the self-evaluations, quality assurance systems do not seem to be jointly developed and implemented, and the evaluation of theses and supervision of candidates is not seen as part of the joint programmes’ quality assurance system.

The study shows that there are diverse options for the diploma/certificate. In about 50% of the programmes, all partners can award a joint doctoral degree. Since there are still some partner institutions that, due to national laws, are unable to award a joint degree, some of the programmes have a mixture of joint degrees and double degrees. All the programmes studied consider themselves to be joint doctoral programmes, and this is stated on the diplomas or on a supplementary document to the diploma.

What kind of degree does the programme offer?

<table>
<thead>
<tr>
<th>Degree Type</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint degree</td>
<td>20</td>
</tr>
<tr>
<td>Double degree</td>
<td>40</td>
</tr>
<tr>
<td>Institutional degree only</td>
<td>10</td>
</tr>
<tr>
<td>Mixture of all</td>
<td>10</td>
</tr>
</tbody>
</table>

The study clearly shows that it is perfectly feasible to run a joint doctoral programme without awarding a joint degree and one diploma only. The current legal obstacles prevent some of the programmes from awarding a joint degree. Since many of the doctoral programmes studied are organised individually for each researcher, and the researcher ends up with either a double degree or a single degree with a diploma stating the joint nature of the programme, the study shows that joint doctoral programmes succeed in terms of their jointness without actually issuing a final joint diploma. The collaboration on research is seen as being of greater value to the programmes and the candidates than a diploma stating the competence of the candidate.

Experience from the joint programmes reveals different approaches:

a) Universities award a joint diploma issued in English that is a single certificate and is legally valid in all participating countries.
b) Universities jointly award a diploma plus an additional certificate explaining the joint doctoral programme.

c) Universities award a double degree/mixed degree, where the candidate receives a diploma from each of the institutions at which he or she has been supervised and/or spent a shorter period conducting research and taking courses. The diplomas are thus interdependent and seen as a representing a joint degree/double degree.

5.2.4 Challenges and Opportunities

- When developing a joint doctoral programme, partner institutions should take the structure of the programme into consideration and clarify:
  - The role of the research project/the role of formal training
  - The ratio between research and training courses in the programme
  - Joint research projects and their development
  - The organisation of common courses, lectures, conferences and seminars
  - Guest speakers from partner institutions
  - The integration of mobility periods into the programme
  - Whether or not ECTS will apply.

- Whether or not partner institutions decide to conduct joint research projects and/or hold joint training courses, the ongoing communication between partners is crucial. The need for continuous mutual exchange of information about activities at each partner institution in the joint doctoral programme should be self-evident.

- When establishing a joint doctoral programme, the partners must identify at an early stage whether the core of the joint activities will be joint research or joint courses, or both. For some partners, joint courses will not be of interest, as some doctoral programmes in Europe do not have courses as part of their doctoral education. If the joint doctoral programme is established with courses as the core joint activity, then there are several accreditation rules that need to be taken into consideration in order for the joint courses to be acknowledged as part of the PhD degree at the home institution.

- In the cases where the institutions within a joint programme have greater autonomy, it may be difficult for the candidates to take part in the activities at the home institution and the partner institution, since they are neither jointly planned nor mutually recognised. Some candidates thus end up with a double workload, and there is a potential conflict between the didactic programme provided by the home university and that available at the partner HEIs.

- Structuring a joint doctoral programme around joint courses can be a good way of integrating doctoral candidates and an excellent way of developing strong training opportunities for the partners in the consortium. In addition, it is easier to plan mobility arrangements in relation to joint activities such as courses.

- In order to integrate the courses as part of the joint doctoral programme it is important to define which credit system to use and whether courses should be accredited as part of the doctoral training. The important thing is that the decision
on how to integrate courses is a joint decision and that the same rule applies to all institutions in the consortium.

- A clear definition of didactic and scientific programmes could make relations more sustainable and bring significant benefits for candidates, the institutions themselves and research areas. Collaborative research and joint supervision are seen as an effective means of developing academic cooperation between partner universities. It is important to clearly define the aim of developing a joint programme. The study also showed that it is possible to realise the same synergies in training and research through a handful of individual cotutelle agreements as through a fully integrated joint doctoral programme.

- Joint training courses for doctoral candidates do not only have to be scientific courses. They can also include activities and training in more generic skills such as language courses, courses in didactics, methodology, training in complementary skills such as solicitation training, presentations skills, personal effectiveness etc. Strengthening candidates’ generic skills, adds further qualifications and increases candidates’ future employability. Partner institutions should define which obligatory training courses will be jointly developed, and it should be defined whether they will be offered at each partner institution or only at certain partner institutions. The issue of (mandatory) mobility would thereby be given much more emphasis.

- The study showed that the writing of theses and their defence often take place at one institution (mostly at the home institution), but with the involvement of a joint committee that includes members from all partner institutions and sometimes experts from outside the partnership. This model seems to be a successful one, and it is used by nearly all joint doctoral programmes the JOIMAN project investigated. However, future partner institutions can discuss and arrive at other arrangements in new joint doctorate programmes.

- The issue of the diploma awarded on the basis of a joint doctoral programme is a diverse one; the problem is due both to legislative constraints and to the interests of the institutions involved in the joint venture. At the moment, as described above, there are different ways of solving it. It will remain a challenge in future to overcome the obstacles in national and local regulations and enable a fully integrated joint degree to be awarded.

### 5.3 Supervision – Monitoring – Reporting

#### 5.3.1 Supervision

The self-evaluations and study visit reports demonstrate that the supervision of doctoral candidates, as one of the core joint activities of programmes, is often carried out as joint supervision, mostly by two persons under a cotutelle agreement: one supervisor at the home institution and one at the partner institution, i.e. doctoral candidates spend some of the joint doctoral programme period and carry out research and training activities under the supervision of the local mentor.

Do you apply the individual candidate agreement such as the cotutelle agreement in the programme?

Crossed with: Is supervision joint in your programme or not?
Only a few joint doctoral programmes offer their doctoral candidates multiple supervision by teams of three supervisors/tutors from partner institutions from three different countries. This model seems to be fairly rare at present.

**Does the evaluation and defence committee contain external members?**

<table>
<thead>
<tr>
<th></th>
<th>Joint supervision</th>
<th>One institutional supervisor only</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>53.8%</td>
<td>0.0%</td>
<td>46.7%</td>
</tr>
<tr>
<td>No</td>
<td>46.2%</td>
<td>100.0%</td>
<td>53.3%</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>2</td>
<td>15</td>
</tr>
</tbody>
</table>

For some programmes, joint supervision was the basis for the development of the programme. Several researchers had cooperated on research with several doctoral candidates for some years before they decided to structure this cooperation as a joint doctoral programme.

The study shows that there are a few programmes that do not use joint supervision and only have one supervisor for each doctoral candidate. These programmes tend to emphasise joint supervision as a common task that only applies during the training phase and not in connection with the candidate’s research project. Hence, a formalised system of two supervisors was found in fewer programmes than expected.

**Is supervision conducted jointly in your programme or not?**

*Crossed with: Which body evaluates the thesis?*

<table>
<thead>
<tr>
<th></th>
<th>Joint defence committee</th>
<th>Institutional defence committee</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint supervision</td>
<td>84.6%</td>
<td>33.3%</td>
<td>75.0%</td>
</tr>
<tr>
<td>One institutional supervisor only</td>
<td>15.4%</td>
<td>66.7%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>3</td>
<td>16</td>
</tr>
</tbody>
</table>

Many programmes require the doctoral candidates to sign an individual training plan/career development plan and a detailed work plan with a chart and timeline when entering the programme. In addition, they also sign a supervisory contract/supervision agreement with their supervisors. The supervisory contract specifies the arrangements concerning the content of the doctoral programme and summarises all topics relating to research, training and supervision during the whole programme period.

**5.3.2 Monitoring and Reporting**

The findings from the self-evaluation reports and study visits show that regular monitoring and reporting play an important role in relation to the success of joint doctoral programmes. The types of monitoring and reporting vary, ranging from weekly meetings of doctoral candidates based on a progress report at which they have to present their research activities, to interviews with doctoral candidates conducted every three months by one supervisor to monitor their progress. Other programmes require
doctoral candidates to submit a report twice a month to a Scientific Board, which evaluates their work. Other candidates only have to submit a detailed report at the end of each year as an interim evaluation. In such cases, an Evaluation Committee/Evaluation Panel or Monitoring Board appointed by the consortium evaluates the candidate’s progress. Some programmes stated that monitoring activity is a very good opportunity to get to know people involved in the programme. Holding meetings (summer schools for example) twice a year at two of the three partner institutions in a joint doctorate programme is another way of monitoring doctoral candidates’ development. Doctoral candidates present their projects at these events. This gives them an opportunity to discuss their research and improve their projects. One joint doctoral programme in particular is worth presenting in more detail as it has developed several tools for monitoring and reporting. In addition to general tools, such as regular progress reports submitted by the doctoral candidates and oral presentations at meetings, this programme allowed candidates to report progress via video conferences or to submit reports on a web-based system (intranet) owned by the joint doctoral programme. In addition, supervisors/tutors give face-to-face and online evaluations of candidates’ progress. The doctoral candidates themselves also complete evaluation forms for each scientific event they attend.

5.3.3 Challenges and Opportunities

- The joint supervision model involving several supervisors (at least two, but this depends on the number of partners in the consortium, of course) seems to work well. When developing a joint doctoral programme, partner institutions should discuss different models for joint supervision.

- The supervision agreement/contract between the doctoral candidate and the supervisors is an important tool and document about which the partner institutions should agree.

- A clear division of tasks at the institutional, departmental and individual level is important, especially with regard to the role of supervisor. The supervisor’s role should be clearly defined, enabling supervisors to concentrate exclusively on the supervision of research/training. Many supervisors still have to deal with a lot of administrative issues relating to joint programmes and mobility, which wastes important time and energy that should primarily be spent on research and the supervision of the candidates.

- Partner institutions should think carefully about what monitoring and reporting system will be appropriate. First and foremost, they should consider whether or not monitoring/reporting should be a joint activity. When discussing this topic, it will be important to clearly define persons/committees/boards involved in the programme and their responsibilities (this should be related to the role of each partner and the organisational structure of the joint doctoral programme).

- The monitoring and reporting tools identified in the JOIMAN WP 4 study showed that partner institutions are developing different types of tools. All of them are used regularly, but at varying intervals. Tools for the presentation of candidates’ research work and for reporting their progress, such via video conferences, web pages etc., could also be considered when planning a programme. The use of online assessment tools could be increased to enable supervisors to support their candidates by giving face-to-face and online evaluations of the candidates’
progress. Partner institutions should decide how often they require reports and assessments from doctoral candidates and which body will evaluate reports and presentations.

- With respect to successful, international scientific networking, doctoral candidates should have adequate opportunities for publishing their scientific results. They must be encouraged to give lectures at national and international conferences, but they should also have opportunities to organise scientific meetings themselves. The preferred publishing channel depends on the discipline and the doctoral programmes. Various measures should be implemented in order to adequately support young researchers.

### 5.4 Organisational Structure

A programme’s degree of jointness can be clearly identified by scrutinising its management structure. All the EMJD (Erasmus Mundus Joint Doctorates) programmes have a fairly similar management structure that is relatively close to the criteria listed in the call for the EMJD. However, the programmes that are not funded by EM (Erasmus Mundus) vary as regards how they run their programmes. Several programmes have a joint board management structure in which only core tasks are decided jointly. Most non-EM programmes have a strong coordinating institution that efficiently manages most of the tasks relating to the core activities. This is one of the similarities between non-EM-funded and EM-funded programmes. Most programmes have a board consisting of members from all the partner institutions. However, while these boards seem to be in charge of the programme at the overall level, they do not appear to be very involved in the actual running of the programme.

<table>
<thead>
<tr>
<th>Does the programme have one coordinating institution?</th>
<th>EM-funded</th>
<th>Not EM-funded</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>100.0%</td>
<td>64.3%</td>
<td>72.2%</td>
</tr>
<tr>
<td>No</td>
<td>0.0%</td>
<td>35.7%</td>
<td>27.8%</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>14</td>
<td>18</td>
</tr>
</tbody>
</table>

Many of the programmes have several different boards or committees that have been assigned different tasks, varying from overall policy/strategy development and coordination to administrative issues, selection and admission etc. The structure of some of the programmes examined is closely related to the size of their networks. For instance, one programme with two partners only has one body with 10 members, while another programme with more than 20 partners has a multitude of bodies that are responsible for different aspects of the programme.

The joint core of the programmes is often concentrated around common courses (lectures and training), as well as common research fields and/or larger-scale projects that involve several doctoral candidates. Decisions on admission, quality assurance and funding of candidates are often left to each partner institution in non-EM-funded programmes.

| What is the core joint activity of the joint programme? |
Few programmes mention that they have an administrative network for the running of the programme. However, the ones that do highlight this as a best practice that is necessary for the success of the programme. It is clear that programmes that have integrated most tasks relating to the running of the joint programme require more administrative support and competence. The programmes that have not opted for a high degree of jointness in all activities tend to manage the administrative tasks at each institution and only share responsibility for core tasks such as research and courses, tasks that are purely scientific.

Three types of organisational model for developing and running a joint doctoral programme were observed in the study:

- **Decentralised organisation**
  
  E.g. delocalised doctoral programmes. All the research and teaching activities are offered at the partner university in order to set up a doctoral school there (capacity building programme).

- **Bilateral or multilateral organisation**
  
  Based on the rules of the cotutelle agreement (joint supervision) between at least two partner universities.

- **A star-like organisation (integrated organisation)**
  
  All the partners delegate most of the administrative tasks to the coordinating university, but all decisions are taken at consortium level (the partners are branches of the organisation). The selection of doctoral candidates is done at consortium level.

### 5.4.1 Challenges

Several of the joint programmes studied had a steering committee with representatives from all partners and a coordinator of the programme. However, the day-to-day management of the programme was left to the coordinator in many cases, without a clearly defined network of institutional contacts with responsibility for implementing the joint doctoral programme in each partner institution. One of the many challenges relating to organisational structure is when the structure primarily applies to the coordinating university, in which case the management structure largely has to do with the operational level and the day-to-day running of the doctoral programme. It is important, therefore, to have clear administrative roles in each partner institution when running a joint doctoral programme.

In joint doctoral programmes, the doctoral candidates are spread between partner institutions and have few opportunities to meet during the programme period. Consequently, there are very few programmes where the doctoral candidates are strongly involved in the management structure. Furthermore, there are many challenges related to differences in legislation and tax rules, employment law, scholarships, mobility and accreditation rules. These are general challenges that, taken together, constitute the framework within which a joint
doctoral programme must be run. Managing a joint doctoral programme therefore involves overcoming these challenges. Since the solutions to these challenges are strongly linked to how a consortium is composed, and will therefore vary between joint doctoral programmes, it is impossible to present a best practice for overcoming these challenges here. The solutions will have to be found by each particular consortium.

5.4.2 Opportunities
With respect to management structure, some joint programmes have opted for an administrative network as part of the management structure. Using a strong administrative network as a tool for operating the joint doctoral programme means that each institution is involved in the implementation of the programme and can solve the various challenges and constraints more efficiently within the framework for the programme.

A few programmes have involved the doctoral candidates in the management structure through a representation system. One programme had opted for the specific role of an ‘ombudsman’ for the doctoral candidates, an office held by senior doctoral candidates. This provides an opportunity to find solutions for doctoral candidates and make sure that they are represented in the management structure.

5.5 Recruiting/Selection/Admission
When asked about the dissemination of information about their joint doctoral programme, all respondents identified internet and the university's and/or doctoral programme’s website as the main means of spreading information and recruiting eligible candidates. In addition to websites, almost all programmes also distribute information by e-mail and, to a lesser extent, through other channels such as newsletters, journals etc.

The terms recruiting/selection/admission are used differently by various partners and recruitment is often used as an overall term for:

- recruiting: all activities aimed at identifying, informing and encouraging potential candidates to enrol in a particular programme.
- the application process
- selecting: reviewing applications and selecting those with the best qualifications for the particular programme
- enrolling candidates: registering the candidates on the roll of the university.

Most of the programmes have a special body that is in charge of reviewing applications and selecting the best candidates. This selection committee is, in all cases but one, composed of representatives of all partners. Some of the programmes do not have a body that is exclusively in charge of selection, but, in many cases, one body has several functions and to some extent comprises the same persons and representatives of all partner universities.

<table>
<thead>
<tr>
<th>By which body is selection and admission conducted?</th>
<th>Conducted by a joint committee with agreed upon criteria</th>
<th>Conducted by each institution according to institutional rules</th>
<th>Mixture of the two models</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM-funded</td>
<td>80.0%</td>
<td>20.0%</td>
<td>80.0%</td>
<td>80.0%</td>
</tr>
<tr>
<td>Not EM-funded</td>
<td>30.8%</td>
<td>46.2%</td>
<td>30.8%</td>
<td>46.2%</td>
</tr>
<tr>
<td>Total</td>
<td>44.4%</td>
<td>38.9%</td>
<td>38.9%</td>
<td>38.9%</td>
</tr>
</tbody>
</table>
As regards the application process, not many respondents described this issue in detail, although the majority stated that an **online (paperless) application process** is in place, enabling more transparency and equal access to information by all partners. There were only three examples out of 17 where selection only took place in accordance with the internal rules and regulations of each institution, with no joint procedure whatsoever. However, each of the partner institutions keeps other partners informed about the selection procedure and results, and also about the nature and topics of candidates’ research projects. In some cases, selection is followed by a joint meeting.

One programme stated that a two-step system is used to select candidates. Selection does not mean that the selected candidates will be admitted, as two processes are carried out separately by two separate groups of persons. The selection is carried out jointly by academics/representatives of all partner universities, and admission offices at home universities are in charge of the admission process. Since there are different ways of applying the rules for admission and selection, it is uncertain whether all the data on admission/selection/recruitment presented in the study actually reflect the same model/procedure for admission.

Around half of the programmes included in this survey stated that the selection procedure and admission are based on a formal **interview**, at which students have to present a research project. The interview is conducted by at least two professors and, in some cases, via Skype or by telephone. The principal aim of the interviews is to verify the candidate’s linguistic skills and motivation. One such programme includes both a written and oral exam in the selection process. Two of the programmes include **pre-selection by home universities** based on a CV, motivation letter, draft research plan and at least one reference letter. The final selection is made jointly by all partner universities, however.

### 5.1 Challenges and Opportunities:

- One of the challenges observed is when the selection process does not take place jointly but separately at each partner institution in accordance with the internal rules and regulations of each institution. As doctoral candidates must satisfy the requirements of all institutions involved with regard to qualifications, enrolment, thesis, examination etc., this issue should be discussed and clarified prior to the first selection process.

- Having a two-step procedure for selection and admission/enrolment could prove to be a challenge, both for candidates and for the institutions involved. Selection does not mean that the selected candidates will be admitted, as these processes are carried out separately by two separate bodies: a joint selection committee appointed by the consortium and a formal admission office at each partner institution. Selection is carried out jointly by academics/representatives of all partner universities, while admission offices at the home universities are in charge of the admission process. This procedure means that students selected by the selection committee will not necessarily be enrolled at one of the universities involved. One of the good practices described was to include...
relevant personnel from admission offices already during the first phase of the selection process or even during the stage when the application procedure and selection criteria are decided.

- One of the good practices described concerns **online/paperless applications** and evaluation procedures that allow all partners to work remotely and ensure transparency. The process could be supported by an **online database** that contains all relevant information about the candidates and their application documents, and that is accessible to all partners. Having a centralised model for administrative procedures is an opportunity to share responsibility from the outset of the programme. This could help to avoid having different guidelines and even admission criteria at different partner institutions.

- **Interviews** proved to be one of the good practices. They provide an opportunity to learn more about candidates’ motivation for pursuing a particular programme and also to check their language skills. Tools such as Skype and other video conferencing systems make it even easier to bridge distances or time differences.

- Another useful tool is a **common web portal** for the recruitment process, containing all relevant information about the programme, target group, application process, selection criteria, partners etc. The aim is to centralise and unify admissions information and encourage applications by promoting transparency and consistency in the information provided.

### 5.6 Legal Framework

Potential legislative obstacles are an important hindrance to establishing joint doctorates, both between EU countries and with non-EU countries. Particular attention must therefore be devoted to dealing with recognition and legal problems relating to joint doctoral degrees.

Normally, the first phase, which leads to the creation and implementation of a joint programme, is very hard because of the bureaucratic difficulties involved in harmonising and streamlining the different procedures in different countries. These difficulties are often hard to overcome, and great effort, perseverance and good will are required to succeed.

After studying JOIMAN’s self-evaluations and surveys on joint doctorates in Europe, it has been possible to identify the main legal obstacles institutions have encountered when setting up joint doctorates. They are largely related to the awarding of degrees (joint degree certificate), the academic calendar, visa requirements and the employment of doctoral candidates (contracts, insurance), language, and requirements for admission and tuition fees.

**What kind of degree does the programme offer?**

Crossed with: Does the national legislation in all countries involved allow joint degrees?

<table>
<thead>
<tr>
<th>Type of Degree</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint degree</td>
<td>81.8%</td>
<td>14.3%</td>
<td>55.6%</td>
</tr>
<tr>
<td>Double degree</td>
<td>0.0%</td>
<td>57.1%</td>
<td>22.2%</td>
</tr>
<tr>
<td>Institutional degree only</td>
<td>9.1%</td>
<td>14.3%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Mixture of all</td>
<td>9.1%</td>
<td>14.3%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>7</td>
<td>18</td>
</tr>
</tbody>
</table>
The JOIMAN study shows that overcoming legal difficulties that initially hindered the conclusion of a joint agreement required several joint meetings and sometimes years of work and harmonisation, plus a great deal of communication with the respective administrative officers. In addition, from a normative point of view, the main difficulty often relates to the internal regulations and statutes of each institution. With respect to the trends noted in this study, joint doctoral programmes still do not receive sufficient attention. There is much more support at the institutional level, but it seems that it is still left to individual professors to take initiatives, with the problems this entails. Setting up doctoral programmes on the basis of personal initiatives undoubtedly has certain limitations compared with joint programmes supported by the central institution. Such initiatives should be fostered by the central bodies of higher educational institutions.

One difficulty in the creation of joint doctoral programmes has to do with the nature of the partnership and the choice of partners, despite the fact that they are sometimes based on long-standing relationships. This is due to differences in the laws and rules that apply to partner institutions in different countries. The Bologna process has tried to make rules uniform, but these endeavours have had little effect on doctoral programmes. Major obstacles have been found, for example in establishing doctorates with non-EU countries, since their regulations for doctorates can be completely different from those that apply in Europe.

Further problems concern official recognition of a doctoral title in different countries, because each of them has its own rules, which makes it difficult to create and harmonise a joint degree. Particular attention therefore needs to be devoted to quality assurance mechanisms and to addressing the specific recognition issues raised by joint doctoral programmes. Adequate quality assurance procedures should be jointly developed by partners in a joint programme.

The awarding of a single joint degree on behalf of different institutions still entails legal difficulties. Due to legislative constraints and formal regulations, a ‘joint curriculum’ with study periods at multiple institutions currently leads to single national degrees in most cases. This situation is due to the lack of explicit provision in national legislation for the approval of jointly awarded university degrees. A genuine joint degree awarded by several institutions from various countries falls outside the framework of both national and international legislation and leads to recognition problems.

Language is normally not an obstacle to setting up a doctorate, because most of the activities are carried out in English, but it can be an obstacle to the issuing of the diploma if language requirements are laid down in national law or institutional regulations. Other problems are related to the different timing of procedures and to the different length of the didactic/teaching courses.

As regards mobility in doctoral programmes, further growth in intra-European mobility presupposes a strong effort by governments and higher education institutions to consolidate and extend inter-institutional arrangements of high quality. This will assure full recognition of study periods and credits earned abroad. As regards extra-European

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1 Prof. Pavel Zgaga, Joint Degrees - Problems and developments, a presentation at the Erasmus-Eudora meeting, Linz, 2004.
mobility, there may be problems relating to framework conditions, such as conditions for entry and residence for third-country nationals in Europe, work permits and student services. All these problems must be addressed to facilitate access to doctoral studies in European higher education.²

Major problems can also arise in connection with employment contracts. In some countries, it is very difficult to enter into contracts that allow for mobility in relation to another country, while retaining the same rights as an employee with respect to taxes, health insurance, maternity/paternity leave, pensions etc. There may be several obstacles relating to mobility and employment rights in this connection.

5.6.1 Challenges and Opportunities:

- The diversification of the contents and profile of joint doctoral programmes undoubtedly calls for a common frame of reference for European higher education qualifications. This will increase transparency and thereby facilitate mobility among both national and international doctoral candidates. This frame of reference should be flexible enough to allow national and institutional variation, while at the same time being clear enough to serve as a definition.³ All involved institutions and individuals should use already existing organisations and services, such as the EUA Council for Doctoral Education (EUA-CDE) or the EURAXESS platform, to obtain assistance and guidance on various legal issues.

- Each university is autonomous in relation to its rules, regulations and statutes, which form the basis for criteria, requirements and prerequisites for local doctorates. However, amendments are possible, provided that they are in line with the internal rules of the institution concerned. Therefore, flexibility and understanding are of the utmost importance if administrative and legal differences between countries are to be harmonised. It is a good practice that the consortium applies the \textit{strictest rule as a general policy}. Although this may seem difficult, it is much easier with respect to the applicable national regulations to agree on a strict rule than on a less stringent one.

- The quality of joint degree programmes must be assured. The current lack of comparability of different countries’ quality assurance and accreditation systems should not be an obstacle to establishing joint degree programmes. Quality assurance and accreditation agencies should be encouraged to cooperate in order to find alternative methods that solve the problems and lead to full academic and professional recognition of the qualifications.

- Legislative problems can be overcome by sharing a problem with all the partners in the programme and examining the national laws in order to find a way of adjusting the common programme to the national educational framework. At the same time, continuous discussion is required to adapt joint doctoral projects to any absolute requirements of participating universities. On the basis of the regulations of each partner institution and within the framework of autonomy granted to all universities by their governments, universities can approve new regulations on research doctorates, and subsequently amend them to produce regulations that are better suited to international cooperation on doctoral

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programmes. When drafting an agreement, issues such as funding, rights and obligations and the role of each partner institution should be clearly defined.

- In order to overcome funding limitations, the rectors of partner institutions can sign a General Framework Agreement that commits the institutions financially.

Thanks to the Bologna process, national systems of higher education and related legislation are undergoing a process of harmonisation, and structures are becoming more comparable and compatible. However, European cooperation on legal aspects of education still needs to be strengthened with a view to developing comparable criteria and procedures.

However, only strong will and shared interests can enable major difficulties to be overcome.

5.7 Entering Employment

One of the aims of this study was to investigate candidates’ employability and the extent of cooperation with potential employers. Since many doctoral programmes included in this study have just started and no candidate has graduated yet, it is difficult to evaluate the practical feedback on the job market. However, all respondents seem to agree that the programmes produce added value for both the candidate and future employers, since the candidates gain international research experience and know how to work in an international work environment. Based on the data gathered, there is great optimism about candidates’ future employability or job prospects.

Academic research is frequently the main career opportunity in this context. This is especially true in the field of humanistic studies, but also in the natural sciences.

According to the data on career and job opportunities for doctoral graduates collected by the Assessment Committee of one university (to which one of the respondents belongs) over the last eight years, approximately 60% of graduates continue their research activity within the university framework, through research grants or similar scholarships in the country or abroad, whereas 40% of them find jobs in different contexts. The coordinator of a programme in medicine, on the other hand, maintains that only a small percentage of graduates are employed in the academic field, whereas a higher percentage are employed at the managerial level in national health services and an even higher proportion work as clinical monitors in the industry, where they largely carry out clinical trials. It would be interesting to further investigate whether, and to what extent, the choice of the academic sector as a preferred career is influenced by the nature and subject area of the doctoral programme.

The acquisition by the end of the programme of competence in at least one additional language was frequently mentioned by the programmes studied as a further asset, helping to ensure that doctoral graduates find adequate and appropriate jobs. Candidates in joint doctoral programmes are also frequently invited to attend national and/or international conferences as guest speakers.

In most cases, discussions have been held and joint decisions have been made by partner universities relating to jobs and career opportunities. Potential employment sectors for doctoral graduates on completion of the joint programme have been listed and evaluated. Exposure to different languages and cultures is deemed to be another advantage, which potential employers take a positive view of. Most respondents also
believe that one of the best opportunities for doctoral candidates attending joint programmes lies in their being exposed to prominent international experts in their field of research. This is the result of established cooperation with internationally recognised teams and centres of excellence in both European and non-European countries. Graduates can thus benefit from close relations with partner universities and be offered positions as teachers or researchers in one of the host universities, as was often the case for graduates of one doctoral programme studied. Graduates of joint doctoral programmes seem to have access to far wider options for research than would be possible at the national level.

According to some programme coordinators, the added value of a joint doctoral degree can also be seen from graduates’ high publication activity. They start publishing already before completing the programme. The constant contact with partner universities seems to facilitate publishing or writing reviews in international and foreign journals. The high profile of doctoral graduates and their intense, high quality, scientific publication activity is deemed to have a positive impact on both the quality and the image of the institution itself. This results in added value for academic staff as well. Another programme, which reports a high integration level, has implemented a dedicated website for access to publications, metadata and other kinds of digital multi-format documentation. The idea is that candidates and graduates will thereby have an opportunity to meet authors and discuss new publications and critical research areas, and that this will further enhance the cross-fertilisation of ideas between senior scientists and early research trainees. However, further investigation of this issue is required, as no reliable results are available due to the fact that no graduates or employers have been included in the survey.

5.7.1 Monitoring of Employability
As regards the potential monitoring of doctoral graduates’ employability, replies varied greatly. In some programmes, the collection of information about employability is only ‘informal’, as it is based on personal conversations and contacts between teaching staff and graduates. Other programmes, on the other hand, have a monitoring system in place, which can involve administrative staff who assists in programme activities collecting information about doctoral graduates’ jobs (this can have a positive effect on the image and profile of the institution, and on academic staff as well). The collection of information can also take place through keeping alumni statistics. As already mentioned, other programmes were unable to indicate an employability rate, since they have just commenced and no candidate has completed a degree yet. None of the programmes examined in this paper seem to be linked to the European Qualification Framework, whereas some respondents were not familiar with the framework at all. A high employability rate has nevertheless been registered where close monitoring of job and career opportunities for graduates is in place.

An example of best practices in this respect is provided by one joint doctoral programme where a career development plan is drawn up for each research trainee. Monitoring continues after the end of the programme via an active alumni organisation. Trainees are thus encouraged to develop a sense of belonging to the doctoral scientific community, through both the alumni organisation and a worldwide thematic network. Graduates’ professional progress is monitored and input is obtained on which skills are most important in relation to the development of future candidates. The aim is to improve their competitiveness and map the various job opportunities that are available
both in and outside academia. This is also useful with respect to providing up-to-date career counselling for trainees and graduates. An expansion of graduates’ career opportunities has been registered within and outside academia (e.g. in the media, financial and public institutions or in the development of new enterprises). Despite the general confidence and satisfaction among respondents, one interviewee expressed doubts about the job prospects of future graduates, which are not always rosy owing to the difficult economic situation that is also affecting universities worldwide.

**5.7.2 Cooperation with Potential Employers**

With reference to how employability is ensured and how cooperation is established with potential employers, a wide range of best practices has been observed. They include one case where doctoral graduates were offered internships in industry and found jobs in the industrial sector or good positions in other sectors, sometimes even before graduating. Graduates of this programme are in great demand on the international scene and they are all working at the moment.

A best practice recommended by one respondent that was also implemented to a certain extent consists of training researchers in companies, thus helping them to become acquainted with the industrial sector. Another practice is to appoint a ‘Manager’ to be in charge of organising exchanges between the university and employers, since it is crucial to have stable communication with the world of work. In this context, making a list of partner firms is essential with a view to creating internship/research opportunities before the end of the programme. A special role created by one programme is the ‘Brand Manager’, who acts as a go-between, by supporting candidates, keeping in contact with companies and establishing strong links with them.

Other programmes have been able to establish close cooperation with the industrial sector by including companies as partners and ensuring that all candidates are involved with one of them. Firms can thereby take part in the follow-up of the researchers’ work, for example by candidates spending periods in a workplace and not just in academic institutions. In one specific case, a high level of integration was registered in the organisation and implementation of the joint programme. The relations established between academic and research institutions and private companies and the inclusion of training in transferable skills – for which enterprise partners are responsible – as an integral part of the programme, provide research trainees with much wider experience in both methodologies and content, thus enabling them to broaden their career opportunities inside and outside academia. Such cross-cooperation between the private sector and university is rare in this field, and it is an additional asset, since graduates can adopt a transnational perspective and become experts in other sectors. They are thus more competitive in the market.

It is worth underlining the view expressed by one respondent, who believes that opportunities for the industrial sector to support doctoral projects financially should be streamlined and facilitated compared with the present situation.

On the basis of views expressed and practices observed, inter-institutional cooperation is deemed to be the future of doctoral studies. Innovative models for institutional network-based research training are considered to be an opportunity for improving the
attractiveness of European institutions and enhancing scientific cooperation within Europe and worldwide.

5.8 Funding
The majority of the joint doctoral programmes are funded by the institutions themselves or, in several cases, by national/government funds. Very few programmes have had the luxury of being funded as a consortium on a joint venture basis. Even though few funding sources were mentioned by the coordinators (funds from participating universities, sponsorship from institutions and private companies, additional funding from national and international research programmes and European calls such as Marie Curie ITN etc.), no best practice can be identified for how to structure the funding system, including fees, for a joint doctoral programme. This is clear evidence of the rather poor funding opportunities for joint doctoral programmes.

What kind of agreement is the partnership in the joint doctoral programme based on?

| Crossed with: Is the programme funded by Erasmus Mundus or not? |
|------------------|------------------|------------------|
|                  | EM-funded | Not EM-funded | Total |
| Bilateral agreement | 0.0%     | 28.6%         | 21.1% |
| Consortium agreement of several partners | 80.0%     | 64.3%         | 68.4% |
| Mix of bilateral and consortium | 20.0%     | 7.1%          | 10.5% |
| Total            | 5         | 14            | 19    |

All EM-funded programmes have a joint funding scheme. However, they also report that institutional funding is necessary in addition in order to run a sustainable programme.

5.8.1 Challenges and Opportunities:
- As regards fees, we do not have sufficient data on this matter to see any trends or identify any good practices relating to how to address this issue. This is definitely an issue that needs to be more closely examined as new programmes are developing and new practices developed. The way the fee structure is set up can be decisive for future joint doctoral programmes and whether they are able to overcome some of the challenges of integrating all elements involved in the running of a joint programme.
- There should be strong investment at the European level to support joint doctoral programmes, with particular emphasis on scientific doctoral programmes.
6. Why Joint Doctorates? The Added Value of Collaborative Programmes

‘Fundamental research in pure and applied sciences is a driving force for innovation and it encourages curiosity. [...] No country can excel in fundamental research on its own - it requires collaboration between universities and research centres in the north and in the south, and in almost all cases fundamental research is undertaken by teams of international scientists and engineers.’

Doctoral education in Europe is very diverse. Some countries have organised or are in the process of organising doctoral education in graduate schools, including doctoral candidates and, sometimes, second-cycle students; some countries have developed a different model, organising doctoral education in doctoral and research schools that only include doctoral candidates. Many additional differences still remain in doctoral education at the national level with regard to entry requirements (either formal and informal education), funding systems (including the way national governments finance scholarships, but also the fees candidates are required to pay) and, more generally, with regard to national support for mobility schemes in the third cycle.

While the observed practices show that different countries and universities have different solutions and that institutions have autonomy to develop their own missions and profiles, and thus their own priorities in terms of programmes and research activities, there is a broad consensus that (1) there should be no doctorate without original research, and (2) high quality doctoral programmes are crucial if Europe’s research goals are to be achieved.

The EUA report on doctoral programmes in Europe’s Universities (2007) states that (1) attracting the best doctoral candidates from all over the world, (2) encouraging mobility within doctoral programmes, and (3) supporting European and international joint doctoral programmes, are central to the development of an international strategy. From the point of view of the European Integration Process, joint doctorates can be seen as a powerful tool for making the Lisbon objectives more visible. They are a symbol of European research collaboration, and are therefore more attractive to young early stage researchers. On the other hand, it can be questioned what ‘added value’ a joint doctoral degree awarded at university level brings to a research programme, taking into consideration the differences between doctoral education worldwide and the resulting complexity involved in developing and running a joint doctoral programme.

For these reasons, one of the objectives of the research carried out by the JOIMAN project through the self-evaluation and study visits, was to identify the reasons why institutions are developing joint programmes and what added value a joint doctorate has for the institution, for the research group involved and for the candidates.

6.1. The Initial Phase of Joint Doctoral Programmes

By asking how the joint programme had been started and what the original impulse behind its creation was, we learned about different approaches to the creation of a joint...
doctorate. While there are different views on the added value of a joint programme depending on the approach taken, there is general consensus on a number of advantages of joint doctorates, for the institutions involved, for the research team and for the candidates.

Looking at the sample used in the investigation, we can identify two basic approaches:

a) the **bottom-up approach**, which leads to the establishment of a research network on the basis of cooperation between individual researchers or research groups;

b) the **top-down approach**, initiated by university leaders as a part of an institutional strategy, sometimes in response to external opportunities (e.g. funds) or policies.

The bottom-up approach is usually part of a **departmental strategy** or of a research group’s specific interest in the internationalisation of its research and doctoral training. Many of the programmes examined state that the main reason for creating the joint doctorate was to strengthen long-standing research collaboration with specific partners. In this connection, the transfer of shared knowledge gained through research to a teaching and research programme, such as a joint doctoral programme, is seen as particularly important in terms of strengthening the collaboration and the research itself.

The top-down approach can be part of an **institutional strategy** or it can be part of a wider local, national or international strategy of investment in education and research in a specific discipline, in a specific country or in a specific geographical region.

<table>
<thead>
<tr>
<th>Was the programme developed through a bottom up or top down process?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom-up process</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>(19)</td>
</tr>
</tbody>
</table>

The programme coordinators identified the following issues as the main reason for the creation of their programmes:

1. Strengthening research in a specific discipline in order to create a critical mass that is not achievable in a single institution. This is sometimes the case with small, highly specialised institutions that aim to reach the maximum level of excellence in the specific fields they are already specialised in.

2. To increase the number of doctoral students in order to improve visibility, reputation and funding.

3. To reinforce relations with specific partners.

4. Follow international trends and play a leading role in ongoing higher education reforms.

5. Respond to the specific needs of a country’s strategy at the request of a superior governing body or, more simply, implement national strategies for external relations or cooperation and development.
The availability of funds (at the national or European level) for the development of joint doctorates is a factor that gives an extra impulse to the creation of a programme, regardless of the institutional level involved in the creation of the doctorate (institution or department/research group).

6.2. Added Value for the Institution, for the Research Group and for the Research Field

6.2.1 Societal Needs

One of the main added values of joint doctoral degrees, according to the programmes studied, is that a joint effort by the best international researchers in a given field is more able to meet the needs of society and of the labour market – locally, nationally or at the international level. New joint doctoral programmes in Europe are starting to promote the participation of labour market actors in the development and organisation of doctoral programmes, thanks to the interconnections between partner institutions with different doctoral education traditions and as a result of the Erasmus Mundus requirements.

6.2.2 Thematic Research Networks

In almost all areas, the vast majority of researchers are part of an international research network, since the scientific community and research is international by definition. However, research networks can be loosely organised networks, or they can be highly structured and formalised. These structured international networks are usually committed to the provision of joint research and highly specialised joint teaching. In some cases, this experience leads to the development of a joint doctorate programme. The network experience, when it is transferred from its original research dimension to a more educational setting such as a doctorate, is an excellent opportunity for the institution and for the research group to test and exchange different approaches to a discipline. These networks are usually able to attract high profile doctoral candidates who have a positive impact on the image of the academic staff and of the institution involved.

6.2.3 Strengthening and Structuring Collaborations

In certain cases, joint doctoral programmes are conceived as an attempt to give a stable structure to long-standing research collaborations between institutions in different countries, in order to take the well tested cotutelle experience one step further. On the one hand, this requires a major commitment on the part of the institution, which is also required to support the initiative financially, while, on the other hand, it requires a critical mass of candidates in order to justify the structure of the programme.

6.2.4 Quality

One of the added values of the joint doctoral programmes is the improvement in the overall quality of the teaching and research element of doctorates. The radical internationalisation of science requires new opportunities for training, more mobility among scientists and large-scale services.

Joint programmes usually include organising joint learning activities such as summer schools, state-of-the art conferences and seminars, distance-learning activities and joint administration of candidates during the application, selection and monitoring phase. These activities require constant innovation and improvement in the approaches and practices of key actors in the institutions involved.

Furthermore, the quality gained through the international collaboration has been used by some institutions to negotiate with national authorities in order to attract additional funds.
6.2.5 Diversity and European Integration
The importance of diversity was clear in the joint programmes studied. Indeed, some of the joint programmes studied have been developed with a certain level of interdisciplinarity that can exploit the diversity of the research interests of the academics involved. But diversity, in the sense of enrichment, also has to do with the teaching and research carried out by different educational cultures. Joint doctoral programmes usually target international applicants, recruiting candidates with different profiles and backgrounds, which is enriching for the institution and the programme, and for the candidates themselves.

6.2.6 The Attractiveness of Joint Doctoral Programmes
The attractiveness of the programme in terms of recruiting good candidates is undoubtedly a strong added value of joint doctoral programmes. They are more visible to international candidates and are able to offer more attractive opportunities and, usually, more funds.

At the doctorate level, there is strong competition for young researchers in many disciplines, and the scholarship system in place in many EU Countries is not enough on its own to ensure competitiveness. On the other hand, the organisation of a joint doctorate means being included in a network, sharing contacts and joining an international team and being integrated into structured activities. It offers opportunities for young researchers who are considering international careers and increases the visibility of the institutions involved. The attractiveness of such programmes to young researchers increases with the degree of integration of the programme.

6.3. The Added Value for Doctoral Candidates
Some of the above-mentioned added values for the institutions and research groups that organise joint doctoral programmes will also be added values for the candidates, since, by benefitting the educational community, they also have a positive impact on candidates’ learning opportunities. Exposure to diversity, in the sense of different teaching methods/cultures and candidates’ backgrounds, is an added value for the candidates as well, since it allows new ways of carrying out research to be tested. Excellence, fostered by seeking to bring together the best researchers in a given discipline in a joint doctoral programme, clearly has a positive impact on candidates’ learning opportunities.

Due to the limited nature of the sample and to the fact that many of the joint programmes approached are in the initial phase of implementation, the study carried out by the JOIMAN group was not able to study the employment rate and the quality of graduates’ careers. However, it can be noted that the trend in collaborative programmes at doctoral level, especially programmes that aim to attract international funds from the EU or other international funding sources, is to involve the non-academic sector in the development and implementation of the programme. According to the coordinators, this should improve the employability of researchers, also outside the academia. Finally, the awarding of a double, multiple or joint degree could add value for the candidates, as it documents the added competence the candidates acquire from having conducted research in an international research environment.

In addition to those mutual added values – mutual in the sense that they benefit both the institutions and the candidates – the most relevant added value for candidates,
according to the views of the programmes approached by JOIMAN, is the valuable experience of mobility.

Indeed, international collaboration and mobility, as well as interdisciplinary and intersectional mobility, are seen as a very important instrument contributing to achieving the goals of the EHEA and ERA. Mobility is an integral part of doctoral training in the joint doctoral programmes and, even if it is not recognised and supported as an ‘added value’ in some cases (for example, where reintegration after a mobility period can be problematic), many doctoral programmes seek to provide appropriate mobility mechanisms in order to enhance the relevant research experience of their doctoral candidates. The doctoral experience is first and foremost an experience of research that advances knowledge and benefits the whole research system. At the same time, doctoral education is individual training that provides access to a research career. This qualification is portable: young researchers can access jobs in their countries of origin, in the host country, or even in third countries, since they are prepared for an international career.

Finally, the doctoral period is a phase of life, involving a cultural, social and economic dimension for young researchers. The intercultural experience of an international PhD, fostered by both the mobility part of the joint programme and/or by the diversity of the candidates, is in itself a factor that changes forever doctoral candidates’ perception of the world. More specifically, they can develop a long-lasting relationship with the university and with the host country or countries, possibly leading them to continue scientific cooperation there or even settle there permanently.

Clearly, mobility should not be seen as a goal in itself, but as one of the strategic tools of doctoral training, leading to a wider research experience for doctoral candidates in their chosen field, and better research cooperation and networking between institutions.

In general, in a structured doctoral programme, mobility can have a positive impact in terms of:

- Additional scientific and transversal skills and attitudes (openness, entrepreneurship, creativity, tenacity, project management, leadership, language skills)
- Opportunities for collaboration with the business world
- An interdisciplinary experience. It promotes a multi-disciplinary approach to scientific problems, and provides candidates with a scientific culture enabling them to restate the facts in their proper epistemological environment.
- Scientific maturity and independence of candidates
- Sharing experiences and knowledge
- Participation in international partnerships and networks
- Preparation for mobility in the career context and development of an international vision
- Broadening and deepening the knowledge of doctoral candidates in the research domain.
6.3.1 Generic competences

According to the most recent literature on doctoral education (EUA papers, Doc-career workshops and the Tuning project), training in generic competences and transferable skills is something that doctoral programmes need. In addition, at the first Doc-Career Workshop, participants were invited to identify similarities and specificities in skills and competences in a range of disciplines (Sciences, Technology and Engineering; Social Sciences and Economics; Biotechnology, Life and Medical Sciences). The workshop resulted in the identification of a group of core generic competences common to all fields that could increase the employability of the learner, also outside the academic context. These competences are related to communication, negotiation and management skills, the ability to apply creative thinking and the capacity to adapt to business contexts and deal with complex and multidisciplinary work.

According to the JOIMAN sample, the development of transferable skills and competences in the context of employability and career prospects in the private and public sectors seems to be reinforced by joint doctoral programmes. This can be explained by a number of factors: on one hand, as explained earlier, joint doctoral programmes can be part of an institutional strategy that should by definition be more sensitive to international trends and developments. In addition, the issue of sustainability usually leads to fund-raising strategies, which, in many cases, require the partners to define a structure that responds to donors’ needs (e.g. Erasmus Mundus requirements). Finally, joint doctoral programmes usually involve an organised critical mass of candidates who are more likely to be trained in transferable skills than individual candidates taking a traditional doctorate.
7 Conclusion

The study found diversity in types of joint doctoral programmes. They were based on different organisational models and largely took two main approaches. Even though the joint programme structures were diverse, the study revealed that the degree of integration (as well as structure of joint doctoral programmes) depends on the main aim of the programme. In some cases, programmes were based on either close scientific cooperation between the partners or on the goal of enhancing research in the home institution. For others, the main aim was to offer joint training courses in an international environment. The degree of jointness of the programmes is thus related to the activities defined as the core of the joint cooperation.

7.1 Useful Tips

The report is based on information collected about 19 joint programmes that have all succeeded in developing and running a programme. They have thus succeeded in overcoming some of the obstacles encountered in the development phase. In many ways, the composition of the partners defines the chances of a programme succeeding, due to funding, legal constraints and capacity in general. However, all the doctoral programmes in the report have in common that they have a strong coordinating institution and a strongly committed network of researchers, upon which the programmes are normally based.

Supervision. Supervision of doctoral candidates is always carried out jointly by two persons – one supervisor at the home institution and one at a partner institution. The requirement that a doctoral candidate must sign a training and supervision plan/a career development plan and detailed work plan and/or time frame seems to be quite standard practice.

Research/courses/theses. There is a tendency to choose the home institution’s rules for evaluation criteria for theses and the defence of theses. Common research topics and themes form the basis for most of the programmes. Joint courses are quite common in the programmes, and organising annual summer schools for doctoral candidates can be identified as an example of best practice.

Organisational structure. All the programmes have a strong coordinator institution that attends to most of the tasks related to the core activities (a star-like organisational model). The structure of a programme is closely related to the size of its network, and the programmes in which most organisational tasks are integrated have a greater need for administrative support. It may be crucial to establish an administrative network consisting of representatives of all partners to attend to day-to-day communication between the institutions and to support candidates, particularly during mobility periods when all the practicalities may represent a huge obstacle. Decisions on admission, quality assurance and the funding of candidates can be left to each partner institution or they can be decided jointly by a joint body such as an executive committee/scientific board. Having a centralised model for administrative procedures ensures transparency and equal sharing of responsibility by all the partners, as well as ensuring that the same guidelines and admission criteria are applied by all partner institutions.
**Legal framework.** The study shows that the difficulties mainly relate to the joint degree diploma, the academic calendar, visa requirements, the employment of doctoral candidates, requirements for admission and tuition. The study nevertheless showed diversity in how the programmes used their creativity to overcome the obstacles presented by national and institutional legislation. Many countries are included in the study and many kinds of legal constraints apply, but these programmes have nonetheless managed to organise and run joint doctoral programmes and conduct high quality research. The programmes function in spite of these constraints. If these constraints were abolished, the opportunities for strengthening the research outcome of these programmes would be even stronger. Implementing measures at the European level is seen as one of the means of influencing and reducing legal obstacles at the national level.

### 7.2 Possible Future Steps

**Joint doctoral degrees.** The higher education institutions that run joint doctoral programmes focus on joint research and the outcome of research as the programme’s goal, in addition to the outcome of producing young researchers. However, even though several programmes point out that they cannot offer a joint degree due to legal constraints, this does not seem to signify a great difference in how the programme is run. A joint doctoral degree, one diploma issued by two or more institutions, may be of a greater importance to the doctoral candidates in the joint programmes. One of the expected added values of joint degrees is an improvement in the employability and qualifications of doctoral degree holders. This was not included in the study, however, and no clear results or recommendations can be presented here. It is certainly one of the most important aspects of joint doctoral programmes that needs to be investigated more closely, particularly from the perspective of potential employers and doctoral candidates.

**Joint doctoral education and research.** The Bologna process has had a strong impact on the joint programmes, especially at the Bachelor and Master’s level. At the doctoral level, however, the harmonisation of legislation is still limited. This applies in particular to degree structure, employment and visa regulations for third country nationals. There is a strong need to harmonize these rules, although a great deal of responsibility rests with the institutions themselves and with national higher education structures. The study shows that, despite all these limitations and constraints, joint doctoral programmes succeed in their endeavours due to their commitment to research and excellence and to bringing the best doctoral candidates to the forefront of research and innovation. If Europe is going to achieve the goals set for ERA ‘to be the best and most competitive’, it is crucial to create a strong basis for cooperation in doctoral education by enabling the harmonisation of legal regulations, strengthening funding opportunities and strengthening employment schemes for early stage researchers. While the European Commission has passed the *Code of Conduct for the Recruitment of Researchers*, ratification and implementation of the code of conduct varies greatly between higher education institutions and between European countries.

Stronger integration of ERA and EHEA is possible through doctoral education and, in particular, through joint doctoral programmes. However, in order to succeed with this integration, a stronger link between the areas should be emphasised in the European
Framework Programmes for research. By including doctoral training in all European research programmes it would be possible to bring the new generation of researchers to the forefront of research through joint doctoral education. While we are waiting for new solutions to legal constraints, stronger funding and a more unified European policy on joint degrees and employability, we can look to the solutions found by these 18 programmes. They pave the way for new structures and innovative practices in joint doctoral education. One growing field that deserves particular mention is doctoral education organised in close cooperation with industry, and the shifting of doctoral funding from institutional to industry sources and large-scale funding programmes such as EMII and funding structures organised through Knowledge Innovation Communities (KICs). Research and innovation in a knowledge economy are international, interdisciplinary and increasingly intersectional, and this must be reflected in the organisation of doctoral education. The development of joint ventures in doctoral education will become more widespread in the years ahead and change the way doctoral education is traditionally developed and managed.
ANNEX 1
REFERENCES and FURTHER READING
(All links were valid on 23 August 2010)

Policy documents

- **Final Conclusions - Preparing Recommendations for the London Communiqué.** Bologna Seminar on Doctoral Programmes, Nice, 7-9 December 2006. Website: http://www.see-educoop.net/education_in/pdf/B-6%20NICE_ConclusionsRecommendations_Final_9Jan07.pdf
  or http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/declarations_communiques.htm

EUA studies

- **Doctoral Programmes for the European Knowledge Society.** Report on the EUA Doctoral Programmes Project, 2005. Website:


**Publications and articles**


**Presentations**


**Other useful links**


• EU: Investing in European Research. Website: http://ec.europa.eu/invest-in-research/index_en.htm

• Tuning 3-rd cycle. Tuning Educational Structures in Europe Projects. Website: [http://tuning.unideusto.org/tuningeu/index.php?option=content&task=view&id=210&Itemid=236](http://tuning.unideusto.org/tuningeu/index.php?option=content&task=view&id=210&Itemid=236)

• SoReCom Excellence Network/European PhD on Social Representations and Communication. Website: [http://www.europhd.eu/html/_onda03/01/00.00.00.00.shtml](http://www.europhd.eu/html/_onda03/01/00.00.00.00.shtml)

**Institutional experience**


• Guidelines for Developing Joint Doctoral Degree Programs, Griffith University. Website: [http://www62.gu.edu.au/policylibrary.nsf/binders/7d0526512aa9986b4a256f5b0063ed5a?opendocument](http://www62.gu.edu.au/policylibrary.nsf/binders/7d0526512aa9986b4a256f5b0063ed5a?opendocument)

• Handbook for the Creation of CSU/UC Joint Doctoral Programmes, University of California. Website: [http://www.ucop.edu/acadinit/uccsu/jointdochandbook030502.htm](http://www.ucop.edu/acadinit/uccsu/jointdochandbook030502.htm)

• Regulations governing the joint supervision of doctoral theses with a European university at the UB, University of Barcelona. Website: [http://www.ub.edu/acad/en/doctorial_programs/regulations/joint_supervision/index.htm](http://www.ub.edu/acad/en/doctorial_programs/regulations/joint_supervision/index.htm)