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ERASMUS MUNDUS

Clustering Erasmus Mundus
Masters Courses and
Attractiveness Projects

LOT 2: EMPLOYABILITY

SURVEY RESULTS

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List of Abbreviations

CV	Curriculum Vitae
EACEA	Education, Audiovisual and Culture Executive Agency
EM	Erasmus Mundus
EMA	Erasmus Mundus Students and Alumni Association
EMBN	Erasmus Mundus Brand Name
EMMC	Erasmus Mundus Masters Courses
EU	European Union
GIS	Graduate Impact Survey
HEI	Higher Education Institution
PhD	Doctorate
R&D	Research and Development



I. Introduction

After over seven years of Erasmus Mundus and in line with the new Europe 2020 strategy, the present study aims at evaluating the employability of Erasmus Mundus students and graduates according to several questions that arise when discussing employability and its preconditions. Since its creation in 2003/2004, students from over 90 countries have enrolled in or graduated from an Erasmus Mundus Masters Course (EMMC). The programme was launched to promote and further elaborate the quality of European higher education by enhancing the mobility of students and graduates and the cooperation between academic institutions. By granting scholarships to the students, the Erasmus Mundus concept enables students from different countries to continue their academic formation in Europe and hence intensifies the intercultural exchange between Europe and third countries, between universities on the one hand and students and graduates on the other, and can be understood as a linking element between Europe and the rest of the world and its young professionals.

Parallel to this, the development and design of the European Employment Strategy and the concept of employability have gained in pace. New discussions have arisen around the question of how the skills and competences that are transferred during educational and vocational training can be adapted more efficiently to the labour market's requests. Generally, employability can be defined as a combination of factors permitting access to work, to maintain it and to progress in one's career. As this capacity of people does not refer to one sole position or job, employability defines a set of skills which can be applied in different circumstances and enlarged according to further requirements. Being now integrated into the Europe 2020 goals in the "agenda for new skills and jobs", the employability of young people in Europe is one core aspect of a comprehensive economic growth strategy.

Furthermore, when discussing the employability of students or graduates, several perspectives need to be considered: the transition phase from university to work (so-called early career perspectives), the competences that are required in the labour market, the position that higher education graduates are supposed to fulfil and finally the role of higher education in enhancing students' employability. The transition from university to work is determined by the characteristics of graduates (e.g. gender, age, family background) but also by the educational pathway and the higher educational institutions. In this context, higher education programmes (such as Erasmus Mundus) may play a significant role not only as a selector but also because they provide general knowledge, transferable competences, attitudes and personal skills more valued by employers in highly skilled professions. Moreover, dynamic and internationally oriented labour markets have given rise to new demands for the workforce.

Studying the integration into the labour market of young people who have studied in an Erasmus Mundus Masters Course raises several topics already covered in the economic literature (Paul & Rose 2008). Generally, one major question is the role of young highly skilled graduates in a knowledge-based economy (Guégnard & Paul 2009; Chevalier & Paul 2009; Allen & Van der Velden, 2005a.). In the context of the excellence programme Erasmus Mundus, this evidently relates to the skills that are transferred to students but also to their personal attitudes and career orientations. Also, this



conceptualisation raises the question of which added value in terms of transition from university to work the programme provides in a context of the massification of higher education and of competition between young graduates in the labour market.

The next point refers to the high importance that is accorded to mobility in Erasmus Mundus. As the programme was designed in part to attract students from all over the world, every curriculum contains at least two changes in university or country and hence language competences and culture. The present study therefore also investigates how international mobility during the studies may or may not promote employability and – as a central point of the analysis – which shape mobility takes after the completion of studies. As Erasmus Mundus is designed as a means to attract young and highly skilled students from third countries, the mobility of young people from developing countries directly relates to the phenomenon of brain drain or brain gain. In accordance with Vinokur (2006), we can identify this “who wins, who loses and how much” debate that is spanned at economic macro and micro levels as leading to “unenforceable policy recommendations” and resolve it by alternative approaches like “brain circulation” (Saxenian 2002) that point out to temporal shifts and the actors’ voluntariness in high skills’ mobility. As the subject of the study is the employability of students and graduates all over the world, we will concentrate on the motivation for staying abroad or returning back home after graduating and whether this choice is related to employment perspectives.

In addition to specialised knowledge, geographical, personal and subject-related flexibility have become more relevant, as has the ability to take up challenges that are not closely related to the specific field in which students have been trained. As Janson, Teichler and Schomburg (2009) demonstrate, studying in another country is beneficial for the learning process of students and supposed to have a valuable impact on the personal development of students, mostly on their intercultural and social competences. Thus, the support for temporary study in foreign countries is expected to have a positive impact on students, notably on their employment and work perspectives. Moreover, the Europe 2020 goals target an increase in the innovative capacities of the European economy and an optimal use of the available human capital. In the same way, internationally, foreign language and intercultural competences are more valued, notably since Erasmus Mundus graduates are expected to aspire to a position in an international environment.

Nowadays the competition between higher education graduates in the labour market is rigorous. As the systems in higher education curricula are manifold, it seems interesting to find out about the added value, prestige and quality of the Erasmus Mundus diploma in the labour market. Whereas prestige itself can hardly be measured, the quality of Erasmus Mundus is linked to the academic contents as well as to all incentives that may enhance the employability of young graduates. Hence, the aspect of how higher education programmes can help students to find a job or give incentives to establish closer relationships between students and the labour market (for example via work placements or internships) is another crucial issue of the present survey.

Given the fact that employability is shaped by both higher educational institutions and the students and graduates themselves, we have established two different surveys for carrying out this study: one qualitative, concentrating on the programmes’ perspective (represented by the coordinators), and another quantitative survey conducted with Erasmus Mundus students and graduates (Chapter I). The following Chapter II therefore first gives an overview of the methodological approach, the consulted literature and the research studies and then explain the two methods of how information



was gathered and analysed for assessing employability. Afterwards, the distribution and coverage of both surveys in terms of the gender, age and social and economic determinants of the participating students and graduates as well as the nature of the EMMCs are presented (Chapter III).

Following this, Chapter IV concentrates on the main part of the study and bring together the results of the quantitative survey and the qualitative interviews. Each of the aspects that have been developed as relevant in terms of employability is discussed in one subchapter which first gives an outline of the main findings, then presents the results in more depth and illustrates them with respective graphs or tables in order to then conclude on perspectives and recommendations for enhancing employability among EM programmes. As such strategies always have to be considered in the concrete framework of the individual Masters Course and their related labour markets, the recommendations given are of a rather general nature¹. As will be shown, several factors influence each other or can be considered as interrelated. Therefore, the last subchapter of Chapter IV is dedicated to this interdependence, summarising the results gained throughout the report by an index on employability. Finally, Chapter V concludes the study underlining the most important findings in order to then provide an outlook on future development and further desirable evolutions regarding the employability of Erasmus Mundus students and graduates.

¹ For a more detailed compilation of recommended strategies, please consult the Practical Guidelines published on the Erasmus Mundus website: http://eacea.ec.europa.eu/erasmus_mundus/clusters/index_en.php



II. Methodology

With reference to the aims of the study presented in the introduction, the consortium pursued a **two-dimensional approach** consisting of:

- an **online survey** among Erasmus Mundus students and graduates and
- **qualitative interviews** with responsible coordinators of the Erasmus Mundus Masters Courses on the basis of semi-structured guidelines.

This approach was chosen to cover both the beneficiaries/users of the programme and the way Erasmus Mundus is presented to students by the academic representatives – always relating this to the requirements and responses of the labour market.

1. Common methodological framework of the study

Using the review of appropriate literature (as presented in the introduction) as a starting point, the consortium defined a set of categories that each shed light on a specific part of employability in the context of Erasmus Mundus. These categories refer on the one hand to general problems raised in the context of higher education and the transition from university to work (professional orientation offered within the study programmes, the provision of competences and their matching with labour market requirements and information on the occupation of graduates) and on the other hand reflect the particularities of Erasmus Mundus as educational programme (the establishing of networks between students and alumni, the issue of mobility and the impact of EM as an excellence programme on the job search).

For each topic, relevant key variables were chosen and attributed to the respective methodological instrument. The following figure illustrates the different topics that are covered within the study, distinguishing between methodological approaches. Subsequent to that, every category and its relevance for the evaluation of employability among EMMCs will be explained.

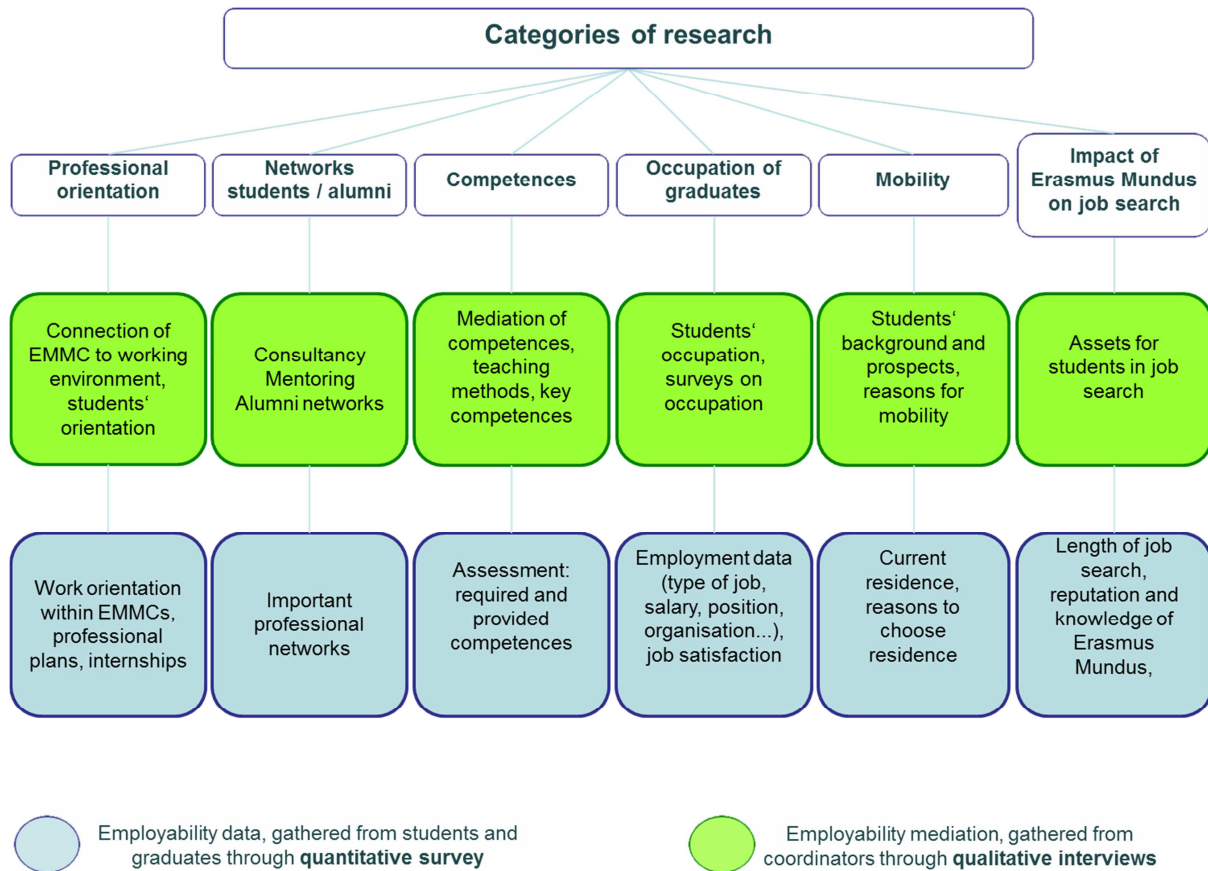


Figure 1: Connective categories of research

Source: Own illustration

“Professional orientation” deals with the way the EMMCs help to concretise professional plans and perspectives of students, with the general vocational orientation the programmes contain and in particular with their connection to the working environment. Through the active involvement of people with practical experience and contact to possible employers, study coordinators can contribute to building bridges for their graduates to future jobs during their courses already. It will thus be investigated by which measures these connections can be established in the EMMCs.

Networking has become one of the central capabilities in mobile, knowledge-based societies. Its importance for learning and employment is underlined precisely by educational exchange programmes such as Erasmus Mundus, where a large variety of networks become relevant: networks among students, between students and graduates, within the scientific community or to professionals in a specific field. The current study will test the degree to which these networks are fostered in the EMMCs (in particular between students and alumni) and the extent to which they contribute (directly or indirectly) to the creation of jobs.

The topic of **competences** constitutes the basic topic for the research presented herein. While quantitative survey delivers a comparison between competences provided by the EMMCs and competences required in the labour market; this assessment is complemented by the qualitative assessment of competences by EMMC coordinators. This category is be illustrated in more detail in the following chapter.



The type of **occupation** of graduates from Erasmus Mundus Masters Courses is the most important “hard data” on which to judge their “employability”. For this purpose, extensive information can be gained from the online survey, such as current occupational status, the kind of organisation, position and salary of employed graduates or the reasons for not being employed. These results will be put in context with indirect information from the qualitative interviews, e.g. based on graduate surveys and tracer studies. As employability is also a matter of labour market accessibility, significant interrelations are to be expected between the academic discipline and direct job opportunities or the probability to continue studies in a PhD.

The Erasmus Mundus programme links education directly with the aspect of **mobility** – first by offering study programmes with mandatory mobility open to students from all over the world. But by concentrating on the aspect of employability, the subsequent phase of mobility comes to the fore, when this largely international group of graduates decides about their professional futures. Are EM graduates more inclined to return to their home countries for work or do they see their professional future in Europe? Which parameters become relevant for this decision? Both survey instruments allow us to judge the employment-related mobility of EM graduates (and the mobility preferences of students) and the reasons for that, from the perspective of those responsible for the programme as well as from the subjective perspective of the students.

The **job search** is probably the one category where “employability” becomes most evident. The length of the job search can be seen as a first indicator of the success. During this phase, graduates offer their degree on the labour market and obtain direct feedback on how “employable” they are. In higher education, the degree alone or the reputation of a specific school often serves as reason to employ applicants, while additional “soft skills” and good professional networks are increasingly considered relevant. Erasmus Mundus Masters Courses are on the one hand relatively new joint programmes that might face awareness problems on the labour market; on the other hand, the particular focus on excellence and internationality is also expected to be rewarded by employers. These direct effects are measured within the online survey (by self-assessment) and contrasted with the information given by EMMC coordinators, reviewing the respective labour market response.

The above mentioned approach is exemplified within the next section for the central category of this study, the assessment of competences.



2. Measuring competences as basis for employability

The aspect of competences is referred to in various research literature as the most reliable category to make employability measurable. It has also been the basis for this consortium's cooperation. In its core part, the present study draws upon the approach of **measuring competences** – and the respective shortage and surplus between required and provided competences – in order to **evaluate employability**. In this respect, the study offers reference to the critical view first brought forward by Brown/Hesketh (2004) that a knowledge-based economy with a surplus of talents will lead to a mismatch of working expectations and real labour market demand. Employability thus has to be considered as:

- a) a set of specific competences/skills and
- b) the market-related usability of competences.

However, an exhaustive analysis of market requirements is impossible to conduct within the framework of this study, although both aspects and all relevant groups of actors shall be considered. In contrast to a merely deficit-orientated approach, recent welfare economics have inspired an employability concept that goes beyond the mere goal-oriented usage of abilities and skills and focuses on an enduring capability to resolve employment biographies (Otto & Schneider 2009). Focusing on the active creation of skills, a broader concept of competences comes to the fore, which responds to the growing importance of coping with the ever-changing demands and working conditions graduates increasingly face.

Have graduates of Erasmus Mundus acquired competences in accordance with the needs of the labour market? Do these competences result from the education in the universities or are they linked to a complex social or school trajectory of graduates having studied in Erasmus Mundus? While early research on human capital economics usually overlooked this notion of skills, many economists have subsequently tried to reintroduce this concept (Hartog 2000; Allen & van der Velden 2001; Heijke, Meng & Ramaekers 2003; Paul & Suleman 2004), joining the work of sociologists, psychologists or educators. However, there is no consensus in the literature on the definition of competences nor on their measurement (Loo & Semeijn 2004; Suleman & Paul 2005). The approach employed here is essentially empirical; we compare the skills acquired by young people and required in their employment on a declarative basis for students and graduates from Erasmus Mundus (Allen & van der Velden 2005b).

Therefore, the study conducted by MKW/Céreq, focuses on competences as its core element by conducting:

- a) an **assessment of competences** (distinguishing between provision and requirements) among students and graduates; and
- b) a **critical elevation** of the methods and reasons to mediate these competences among coordinators

of the Erasmus Mundus Masters Courses.



The following scheme illustrates this dual approach that structures the study for the topic of competences:

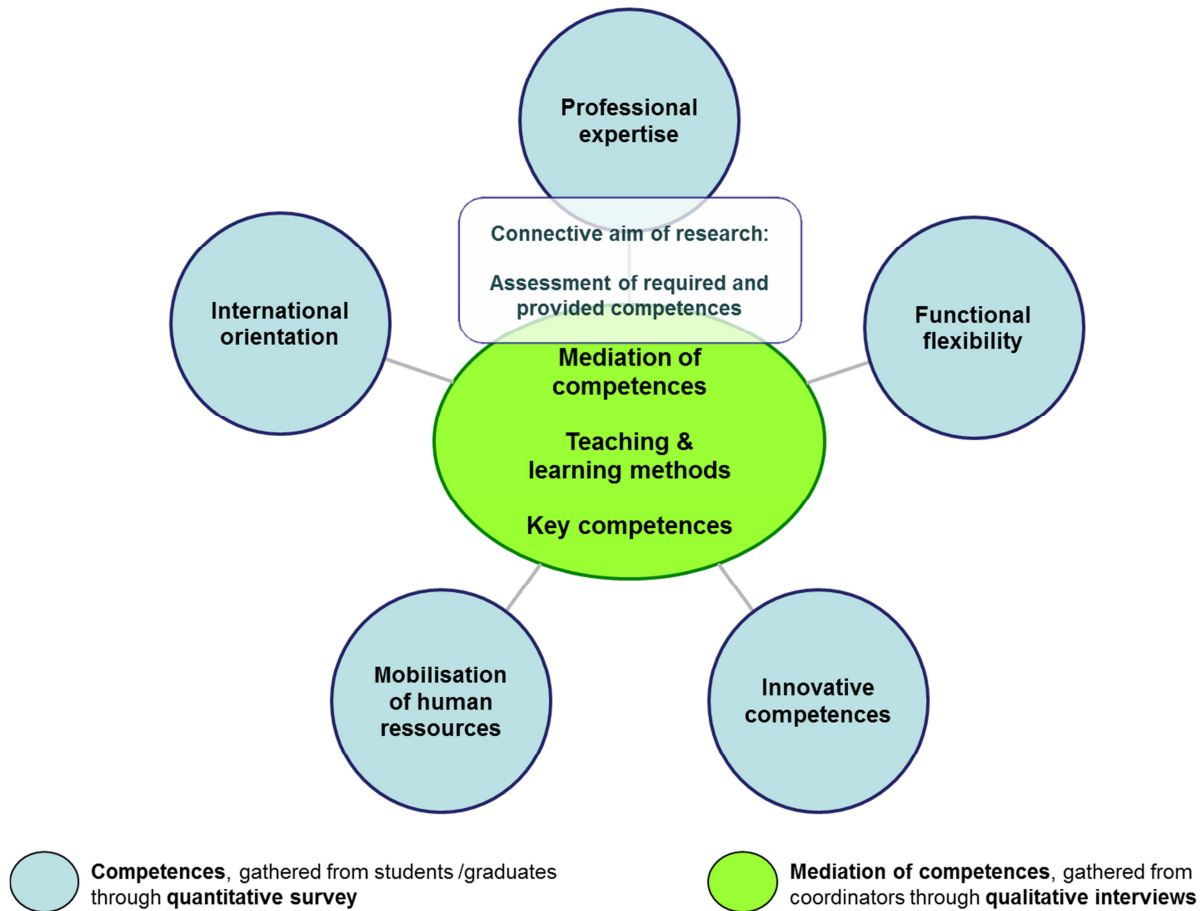


Figure 2: Dual approach of the study, illustrated on “Competences”

Source: Own illustration

The quantitative measurement will also refer to the framework of competences elaborated and surveyed in the context of the REFLEX study (Allen & van der Velden 2005ab). For the current study, they have been operationalised into **five categories**, which in the following will be briefly characterised by listing their respective sub-categories.

Professional expertise:

(Mastery of own field or discipline – Knowledge of other fields or disciplines – Analytical thinking – Ability to rapidly acquire new knowledge)

Many higher education graduates are expected to become experts in their professional field. Experts distinguish themselves from novices through their superior mental organisation of and ability to recall domain-specific knowledge, and by the way they approach problems, make diagnoses, use automated procedures, have intuitive feelings about solutions and correctly infer conclusions and interpretations (Boshuizen 1989). Expertise implies, first and foremost, a high degree of mastery of the knowledge and skills that are relevant in one’s own domain of work. A second characteristic feature of experts is an ability to use this mastery to diagnose and solve complex problems in their own area of work. Finally, since experts are often expected to act as an authoritative consultant or



advisor for others, they need to be able to command authority and act decisively in uncertain situations.

Functional flexibility:

(Ability to negotiate effectively – Ability to perform well under pressure – Ability to coordinate activities – Ability to work productively with others)

The world of work is dynamic rather than static. Rapid developments in technology, markets, organisations and relevant knowledge make it necessary that higher education graduates are able to take on diverse challenges, many not directly related to their own field of expertise, and to quickly acquire new knowledge. They must be broadly employable and have the ability to cope with changes (Schmid 2000). Flexible graduates need to possess a high level of ability to deal with change in a positive way, seeing changes as windows of opportunities rather than as threats, being eager to learn and to try new things and using their work as a tool for acquiring new competences through experience.

Mobilisation of human resources:

(Ability to clearly express your opinion– Ability to mobilize the capacities of others –Ability to assert your authority - Ability to use time efficiently)

Higher education graduates are expected to have the ability to effectively mobilize their own competencies and actively steer and direct their own work as well as that of others. First of all, graduates need to possess a strongly developed ability to mobilize and make use of their own competencies, which implies an ability to work autonomously when working alone, to cooperate fruitfully with others when working in a team, to manage their own skills and to be motivated intrinsically by the work at hand. Secondly, graduates may be called upon to mobilize the capacities of others. Related to the first two aspects, graduates need to be able to organize work so as to make optimal use of the available human resources, creating synergies in teams, setting up clear lines of communication and where necessary adapting the work environment to fit better with their own competencies and those of their colleagues or subordinates.

Innovation and knowledge management:

(Ability to come up with new ideas and solutions – Willingness to question your own and others' ideas – Ability to present products, ideas or reports to an audience – Ability to write reports, memos or documents)

In considering the importance of higher education graduates for the knowledge society, it is important to take account of the fact that such workers are often expected to do more than simply carry out a set of prescribed tasks. This relates not only to the innovation capacity of higher education graduates but also to their ability to create an environment in which knowledge production and diffusion are optimised and to implement innovation in their own job as well as in the organisation as a whole (Cörvers 1999). First of all, graduates who possess a high degree of innovative capacities, creativity, curiosity and a willingness and ability to question the status quo can directly contribute to the development of new knowledge and ideas for the organisation to use. Secondly, since not all innovations need to be developed within the firm or organisation itself, graduates can contribute to innovation by gaining access to new ideas developed elsewhere. Finally, since even the greatest ideas rarely implement themselves, an ability to take an idea from the



drawing board to the work floor requires a high degree of organisational abilities, negotiation skills and assertiveness.

International orientation:

(Ability to write and speak in a foreign language – Professional knowledge of other countries – Understanding of international differences in culture and society)

Globalisation and the blurring of national borders increase the importance of a strong international orientation. This requires not only a good command of foreign languages but also an ability to understand and empathise with other cultures and a willingness and ability to appreciate the limitations of one's own national context – in short the development of intercultural competencies.

These deductively determined categories will structure the analysis for EM students and graduates in the online survey. The qualitative research will serve to **control and re-check** these results by focusing on how (teaching and learning methods) competences are conveyed within EMMCs and by assessing the importance EM Masters' coordinators accord to certain competences. This latter approach is a genuinely inductive one, using open answers to gather new items and categories which will be used to contrast with the deductively gained data.

This framework, based on the central categories, will also serve as a fundament for the entire data collection process, the specific methods of which will be explained in the following section.



3. Quantitative approach

Given the fact that students and graduates of/from Erasmus Mundus Masters Courses constitute an international and possibly very widespread target group, the data was collected via an **online survey** conducted in English. This target group is expected to reveal specific information regarding the competences acquired during the Masters' programmes, on professional plans and perspectives and – for the graduates – on the effects of this education on their prospects in the labour market. Furthermore, the survey delivers a clear separation of fields of study, social background, origin and mobility patterns of graduates and students that will serve as the central independent variables to correlate with occupational data.

Thus, the quantitative study mainly delivers “**hard facts**” on the professional situation of Erasmus Mundus graduates. As the framework of this study excludes the introduction of a control group (e.g. graduates from comparable non-EM Masters Courses) or the contrastive questioning of employers, some variables, for instance competences or the impact of the programme, have been gathered via **self-assessment** by the respondents.

However, in order to clearly **separate the perspectives** (before and after the transition to the labour market), it was necessary to design the survey instrument in such a way so as to differentiate between graduates and students by using a central filter question. This separation also enables us to compare results that are gained from a viewpoint from within ongoing courses with an ex post perspective towards the EMMCs.

Moreover, it has to be stated that the present survey is a **combination of two instruments**: the survey on employability of EM students and graduates and the annual Graduate Impact Survey that is conducted for the EMA organisation. This decision is due to an expected closeness as regards both content and time, given that the particular focus of the 2011 GIS was on “career”. The combination of the two surveys ensured that members of a similar target group were not approached twice with a similar research focus, thus increasing the response rate. Eventually, this goal was achieved, as the present survey constitutes the largest examination of an Erasmus Mundus population on the topic of employment so far.

The consortium – together with the service provider ICUnet² – designed the questionnaire and undertook several stages of testing and readjustment as well as a **pre-testing phase** with a population consisting of 49 (enrolled or graduate) students of HEI in Europe from different countries, many of whom had international study experience. Besides guaranteeing the technical functioning and the comprehensibility of questions and items, final modifications were successfully implemented to reduce the time necessary to complete this complex survey to less than 20 minutes. The survey was implemented through the open source software “Limesurvey”.

Due to the assignment to different tenders and the respective analytical focus, neither of the contracted providers intended an exhaustive analysis of the questionnaire. The current study concentrates on the **employability within Erasmus Mundus**, covering a majority of the 107 questions

² Service provider of the Erasmus Mundus Students and Alumni Organisation



in total, which have been divided up for the target groups of graduates and students by different filter paths.

As a final structure the consortium decided to have six **groups of questions** which consist of former parts of the Graduate Impact Survey, amended by specific employability parts:

- 1 Profile and self-perception data
- 2 Perception of Erasmus Mundus (also from a promotional aspect)
- 3 General impact evaluation (and expectations)
- 4 Impact on academic and personal development (assessment of skills)
- 5 Impact on career (including occupational status, assessment of competence, professional orientation and EMMC career relevance (only for graduates))
- 6 Impact on private and professional networks.

The entire questionnaire is available in the Annexes.

4. Qualitative approach

To reveal concrete strategies and measures provided by the EMMCs to enhance employability the consortium conducted, as a second pillar of the study, **qualitative interviews** with responsible coordinators of Erasmus Mundus Masters Courses. As regards the enhancement of employability among Erasmus Mundus students and graduates, this target group is responsible for the creation of environments that inspire the development of competences and thus contributes to an active concretion of professional plans on the part of students/graduates. This refers not only to the central issue of teaching, but also to the task of building relationships to the labour market and of monitoring graduates' further professional activities.

The interview phase was preceded by background research that reviewed relevant literature, available data regarding the Erasmus Mundus programme as well as relevant secondary data and information and contact data of all Erasmus Mundus Masters Courses.

As for the **methodological approach**, the interviews were based on a **semi-structured interview guideline** (available in the Annexes). This instrument was chosen in order to tackle the central categories of research but at the same time leave room for additional (non-expected) aspects raised by the coordinators. Accordingly, the conversation path was intended to be mainly structured by the participants, with the interview guide operating "one layer below", and was designed to assume the shape of a free conversation at eye level. Interviews were transcribed immediately afterwards, thus supporting the memory of all contents in re-working them actively. All transcripts were stored on a secure server.

The **thematic structure** of the guidelines was chosen both to correspond as much as possible to the central categories presented above while guaranteeing a fluent, logic and down-to-earth course of conversation. For this latter purpose, overly narrow and specific questions were avoided in order to



achieve more complex answers. The interviews were conducted according to the following guidelines:

- A. Masters programme (concept, mobility, teaching methods)
- B. Competences regarded as central to be conveyed
- C. Students/Graduates (background, orientation, current activity)
- D. Connection to the working environment established through EMMC
- E. Academic discipline and sustainability
- F. Networks used to provide career-related consultancy and mentoring

A print version of the interview guidelines is also available in the Annexes.



III. Coverage of the survey

1. Quantitative survey

1.1 Response

In February 2011 the invitation to the combined “Graduate Impact Survey” with a specific focus on employability was sent out via EMA and a list of Erasmus Mundus contacts provided by ICUnet. In total 22,218 invitations were sent out. The invitations were distributed via two channels:

- 1) to all contacts that ICUnet had at its disposal based on the student data bases provided by the EACEA throughout all the years of project management (since 2007)
- 2) through the data base of the Erasmus Mundus Alumni Association (5,950 members as of January 2011).

3,452 potential participants (EMA members) received the invitation twice, as their e-mail addresses were included on both lists. Consequently, a **target group of 18,766 contacts** can be estimated. It is important to mention that not all EMA members are included in the contact lists of the EACEA, e.g. EU students who did not receive EM scholarships in previous years³.

During the **online phase between 10 February and 16 March 2011**, 3,660 young people responded to the “Graduate Impact Survey” with a specific focus on employability. Of these datasets, **2,820 were completed**, which means that these respondents answered all the questions posed to them (according to their answers to certain filter questions) in the online questionnaire.

1.2 Distribution by field of study

Following the categorisation used by the EACEA, we chose to define six categories in order to decompose the **fields of studies** that are represented in the Erasmus Mundus Programme: Agriculture and Veterinary; Engineering, Manufacture and Construction; Health and Welfare; Humanities and Arts; Science, Mathematics and Computing; and finally Social Sciences, Business and Law.

The field of study has a significant impact on the employability of graduates. As we will see later, there are for instance differences in terms of the vocational orientation of the programme inside the different fields of study.

³ Information provided by ICUnet

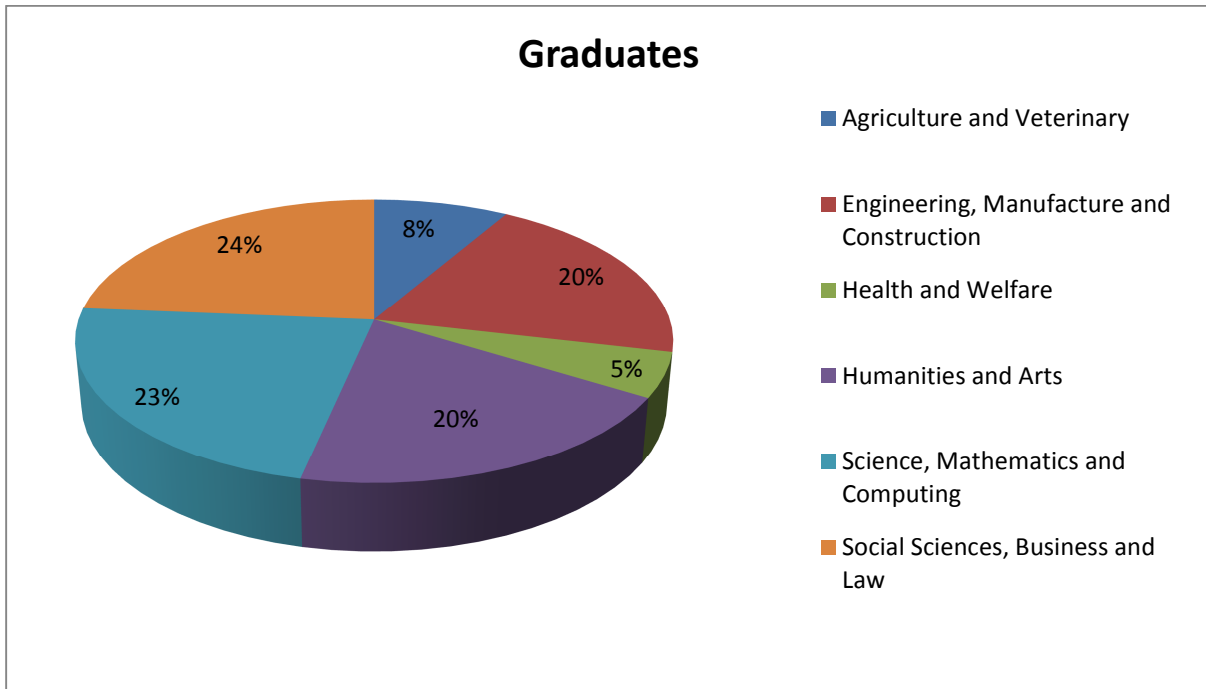


Figure 3: Field of study for graduate population (n=1554)

Source: Graduate Impact Survey 2011

The biggest population is made up of those who graduated from Social Sciences, Business and Law, followed by Science, Mathematics and Computing. Whereas Engineering, Manufacture and Construction are together with Humanities and Arts in the middle (20%), only 5% of the graduates graduated from an EMMC in Health and Welfare, while 8% graduated from a programme in Agriculture and Veterinary.

The proportion of fields of study in our student sample is very similar. There, Science, Mathematics and Computing comprises the largest group. 24% of the students study in an EMMC in Engineering, Manufacture and Construction. The Humanities and Arts group is a bit less represented than in the graduate population.

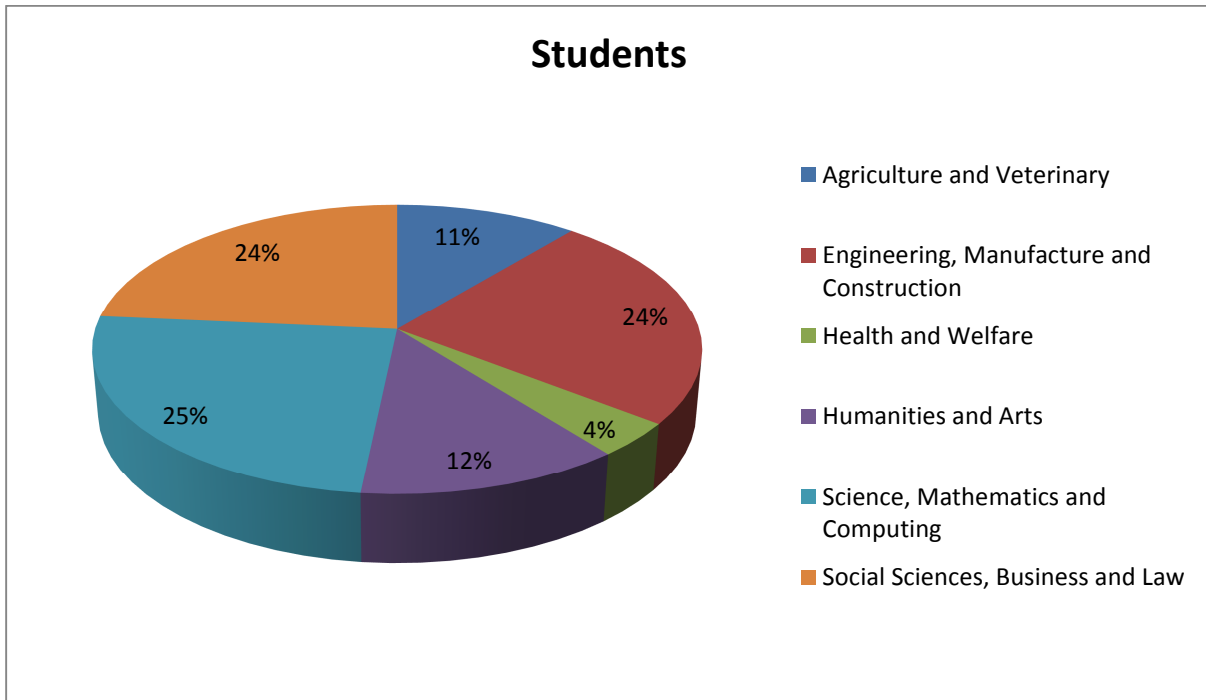


Figure 4: Fields of study for student population (n=1266)

Source: Graduate Impact Survey 2011

1.3 Background of respondents

The main objective of this section is to give precise information on the population surveyed in the “Graduate Impact Survey”. **55% of the respondents graduated from an EMMC and 45% are still students in this type of programme.** Altogether, 1,554 questionnaires were completed by graduates and 1,266 questionnaires by students.

1.3.1 Year of graduation and enrolment

As we will see later in the report, employability is largely determined by the **experience in the labour market**. Generally, when surveying the transition from university to work, pertinent studies analyse the situation one, two, three or five years after graduation (see for example: REFLEX/CHEERS Surveys, Generation Surveys). In the “Graduate Impact Survey 2011”, we did not restrict our sample to a specific population. As a consequence, there are graduates who entered the labour market more than four years ago. The biggest category, however, is **graduates who finished their studies in 2010**; they make up **41% of our graduate population**. This fact is crucial, as it means that the largest group in the sample has been in the labour market for less than one year (depending on when they finished their EMMC, in June or September). In addition, the time frame between graduation and answering the survey (in early 2011) was very short. Another 45% of the graduate population finished studies in 2009 or 2008, i.e. they have spent at least one (or two) full years in the labour market. 14% have spent more than three years in the labour market.

The time since graduation is thus a key variable for later analyses on employability and access to work. When referring to the entire group of graduates from the EMMCs, we will have to consider their relatively short period in the labour market.

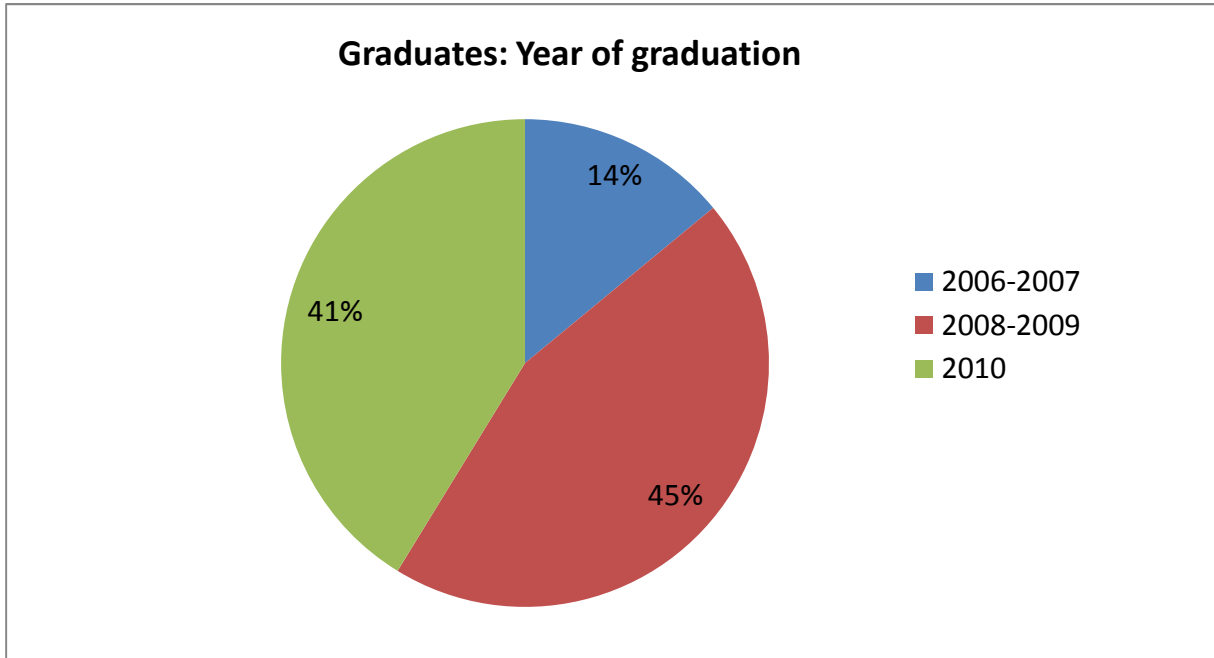


Figure 5: Year of graduation (graduate population, n=1554)

Source: Graduate Impact Survey 2011

When we look at the **population of students** in our sample, more than 50% of it is in their first year of the EMMC (or just started the programme), while only 5% have taken up their studies in 2008 and are thus in the second year of their studies.

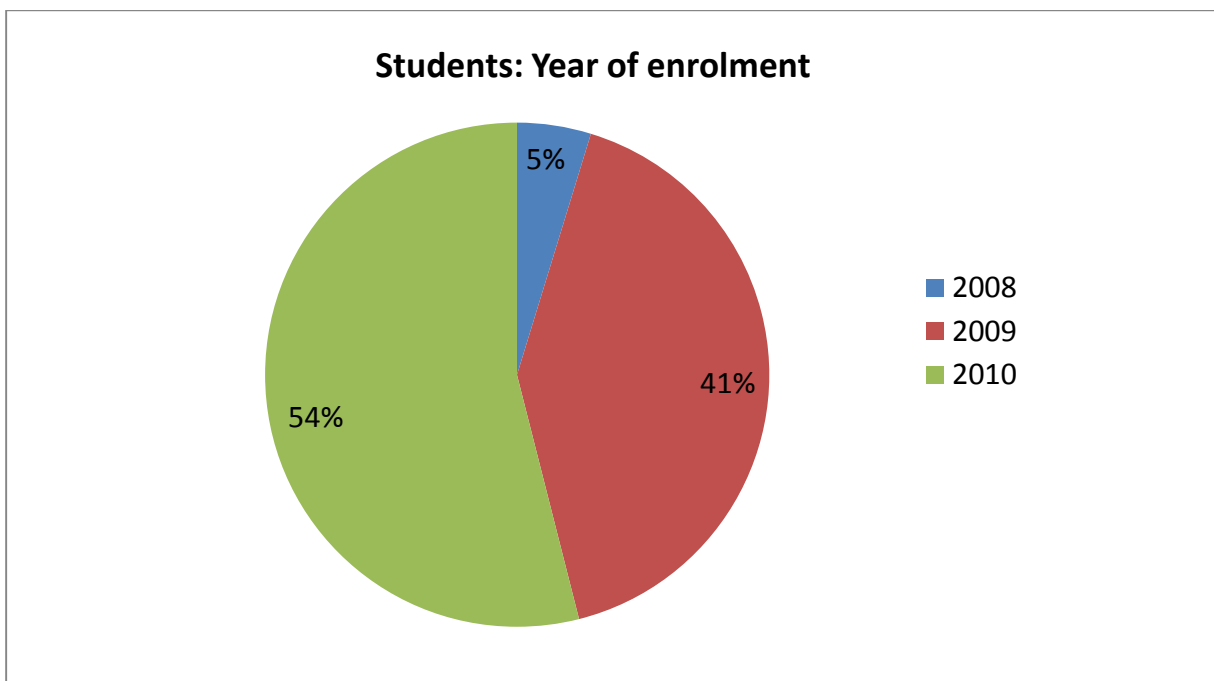


Figure 6: Year of enrolment (student population, n=1266)

Source: Graduate Impact Survey 2011



1.3.2 Socio-economic data

Erasmus Mundus is a programme open to students with a first university degree from the entire world. As some countries are underrepresented in the population and an analysis by individual country would be far too detailed to obtain reliable results, we chose to break down the **nationalities of the respondents into nine categories** which will be used throughout the analysis. These nine categories are the European Union (27 countries); North America; Latin America (South America, Central America and Caribbean countries); Europe non-EU; South, West and Central Asia; South-East Asia; East Asia; Africa; and other countries⁴. The typology of the categories can be found in the annexes.

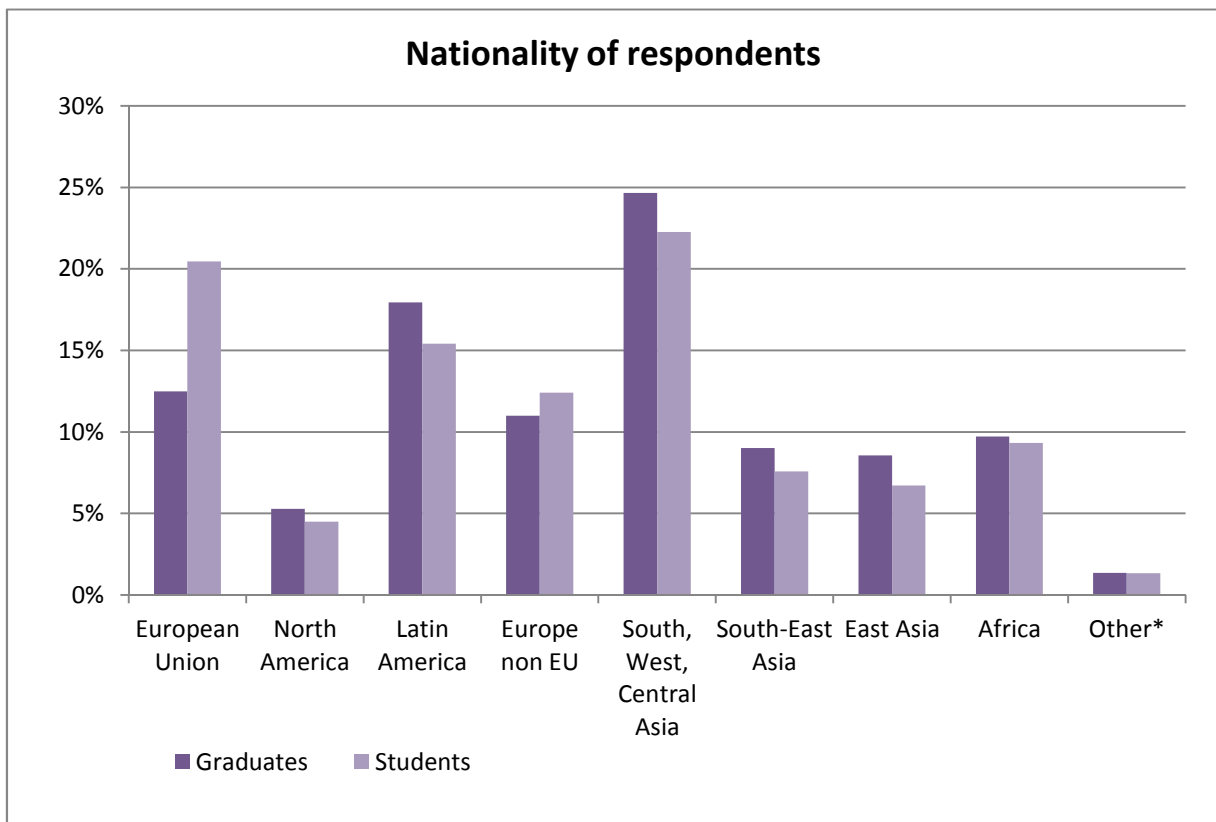


Figure 7: Nationality of respondents

Source: Graduate Impact Survey 2011

* Other: Oceania and undefined

Graduates and students from **South, West and Central Asia** are the most represented nationality group in the survey, followed by Latin America. The proportion of students from the European Union has significantly risen since they have had better access to the EM scholarship. The other regions are quite equally distributed except for the category “Other”, which is only scarcely used.

Gender is another important variable when analyzing the employability of graduates, and it also affects the probability of being in a specific advanced degree programme. Specific literature on the subject has shown that women have a lower probability of achieving access to advanced degrees as well as to higher levels of management when they are working. This survey shows a slightly higher proportion of men.

⁴ This group comprises Oceania (Australia, Fiji, New Zealand and Vanuatu) and countries that could not be determined due to incorrect data entry.



	Graduates	Students	Total
Female	46%	44%	45%
Male	54%	56%	55%

Table 1: Gender by type of respondents

Source: Graduate Impact Survey 2011

Social origins also have a great impact on the employability of higher education graduates. Many indicators were proposed in the construction of the questionnaire in order to measure the social origin of the respondents. We chose to take into account the **family income** of the respondents by its relative position in the home country (respondents' self-assessment). Although such an assessment bears the risk of subjectivity, it is the one variable that relatively easily guarantees comparability across countries.

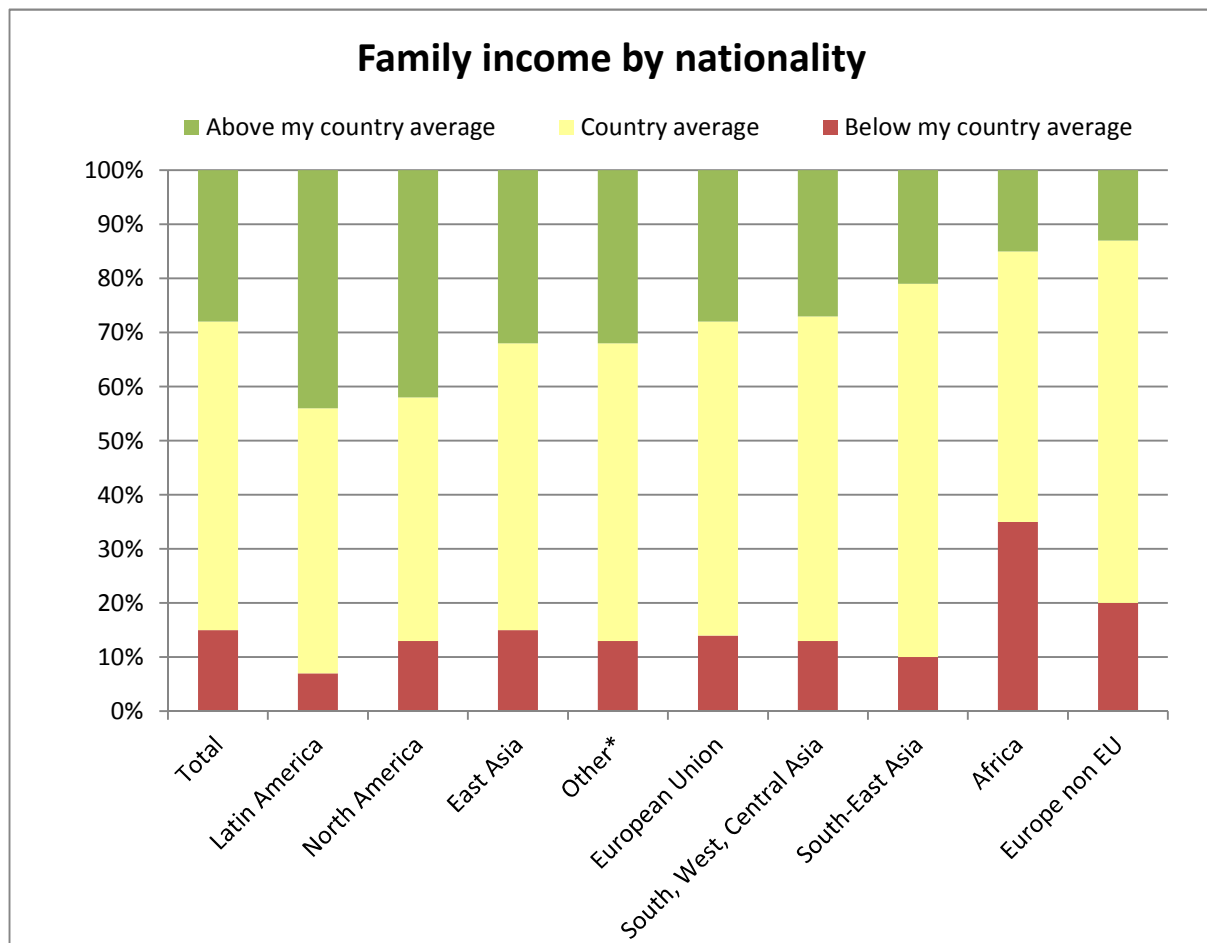


Figure 8: Family income by nationality

Source: Graduate Impact Survey 2011

In terms of family income, this population can be estimated as typical for higher education students: balanced, with a slight overhang for the higher incomes. Almost 60% of the respondents feel they belong to the **average in terms of family incomes**, and only 15% declare to belong to the lower category. There are not so many differences between nationalities. Nevertheless, graduates and students from North and Latin America are above the country average in terms of family income (shares of 42 and 44 per cent), while graduates and students from Africa are those who declare to be most significantly below the country average (35%).



Most of the diplomas received after the Erasmus Mundus Masters Course belong to the ISCED 5 A category in the “International Standard Classification of Education” (UNESCO 2006). Graduates with a bachelor degree have access to this type of diploma. Nevertheless, trajectories in higher education are marked by bifurcation. As we can see in Figure 9, **a good third of our population already holds a Master Degree** (or comparable) when entering an Erasmus Mundus Master Course.

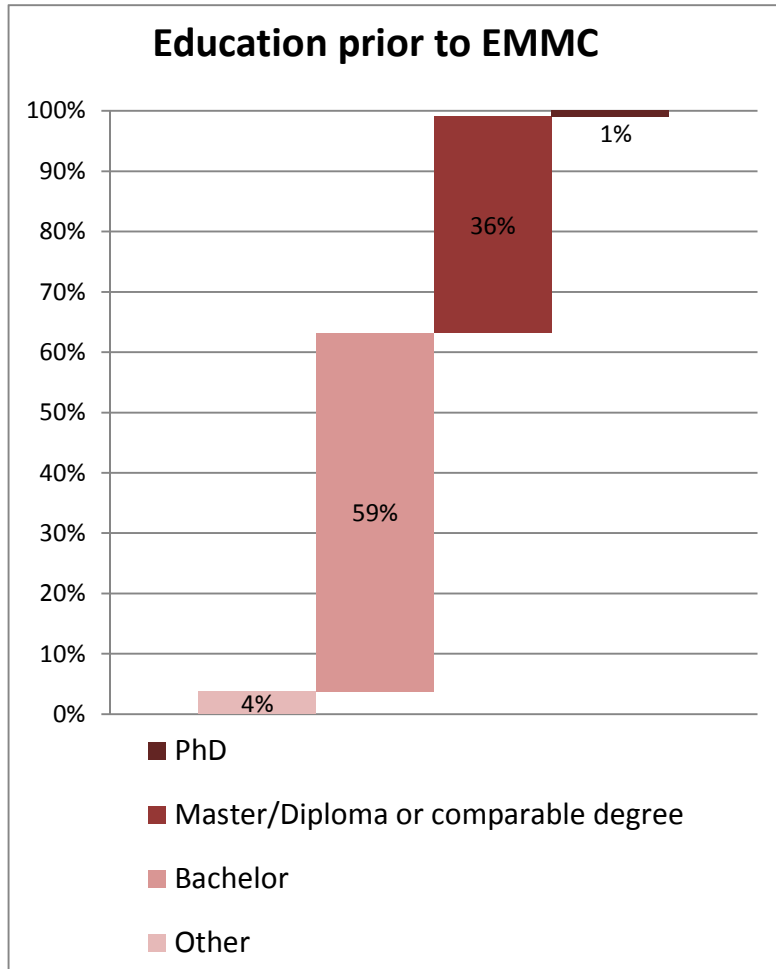


Figure 9: Level of education prior to the EMMC
 Source: Graduate Impact Survey 2011



1.3.3 Financing (scholarship)

Pursuing an EMMC allows students to fund their studies thanks to an Erasmus Mundus scholarship. However, this possibility is restricted and subject to a severe selection process. Consequently, other types of funding must be made available on different levels (local, national and private sector). In total, **80% of the graduates benefited from the EM scholarship**, 6% from the EM scholarship and another type of funding and 7% from another scholarship. **Only 8% of graduates funded the EMMC entirely on their own.** This trend is steady over the different years of graduation.

Nationality	Only EM scholarship	EM scholarship + Other scholarship	EM scholarship + self-financed	Other scholarship	Other scholarship + self-financed	Self-financed
European Union	3%	3%	15%	15%	18%	45%
North America	80%	1%	10%	1%	0%	7%
Latin America	88%	1%	5%	2%	2%	3%
Other	90%	0%	5%	0%	0%	5%
Europe non EU	90%	0%	2%	5%	1%	2%
South, West, Central Asia	91%	1%	2%	2%	1%	2%
South-East Asia	96%	0%	3%	0%	0%	1%
East Asia	90%	0%	2%	2%	2%	4%
Africa	94%	0%	2%	1%	0%	3%

Table 2: Funding by nationalities (graduate population)

Source: Graduate Impact Survey 2011

We can see that graduates from different regions of the world are not equal in terms of funding. While a very high percentage of graduates from **outside the European Union** funded their studies with a **EM scholarship** (highest percentage: South-East Asia and Africa), **European students highly relied on other sources**. 45% of the graduates from the EU were self-funders. This observation is also due to the fact that the first generation on Erasmus Mundus (Programme I from 2004-2008) did not include scholarships for European students.

Nationality	Only EM scholarship	EM scholarship + Other scholarship	EM scholarship + self-financed	Other scholarship	Other scholarship + self-financed	Self-financed
European Union	42%	3%	28%	3%	6%	17%
North America	74%	2%	14%	0%	0%	11%
Latin America	88%	1%	7%	1%	1%	3%
Europe non EU	91%	1%	6%	1%	0%	1%
South, West, Central Asia	93%	1%	1%	1%	0%	4%
South-East Asia	93%	1%	0%	2%	0%	4%
East Asia	91%	1%	2%	2%	0%	4%
Africa	93%	1%	1%	3%	1%	1%
Other	82%	0%	6%	6%	0%	6%
Total	80%	2%	9%	2%	2%	6%

Table 3: Funding by nationalities (student population)

Source: Graduate Impact Survey 2011

This clear distribution has somehow attenuated when we regard the funding for the **current students**. As the Erasmus Mundus Programme II (2009-2013) foresees also the opportunity of funding for EU nationals, more European students profit from the Erasmus Mundus scholarship. But still, the amount of (additional) self-financing is higher than for students of other origins.

1.3.4 Perception of Erasmus Mundus

Within this last section on the background of the survey respondents, we concentrate on the **reasons** for students to **choose Erasmus Mundus** and examine if there is a relation to employability, e.g. the expectation of good preparation for labour market entry.

For a first assessment, all respondents could pick a maximum of three out of seven reasons “that convinced them to choose Erasmus Mundus as a Masters course”. The results are invariant to the group of respondents.

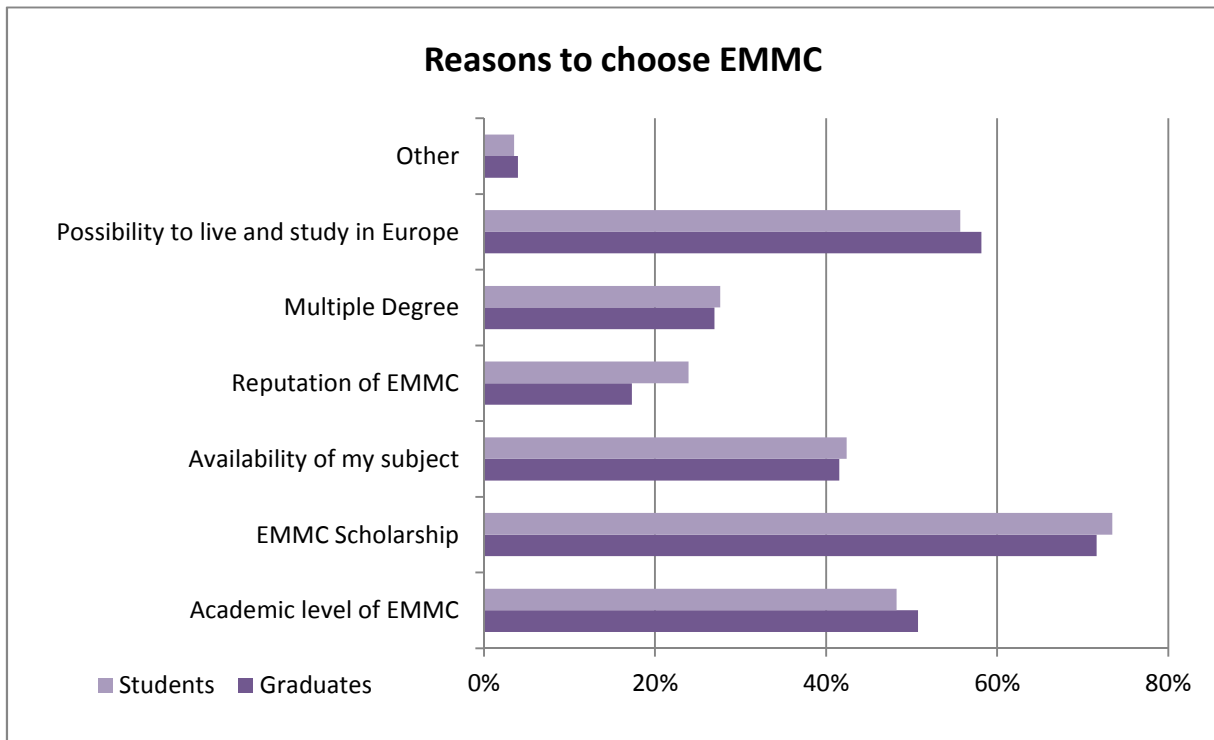


Figure 10: Reasons to choose Erasmus Mundus as Master’s programme

Source: Graduate Impact Survey 2011

The **Erasmus Mundus scholarship** is clearly the most important reason to choose Erasmus Mundus; for almost three out of four (graduate) students, this factor is decisive. The **possibility to live and study in Europe** also attracts a high number of students. Academic reasons and the availability of their subject are important for about half of the EM students. Obtaining multiple degrees and the reputation of Erasmus Mundus only play limited roles.

However, there are again significant differences when distinguishing between EU and non-EU students:

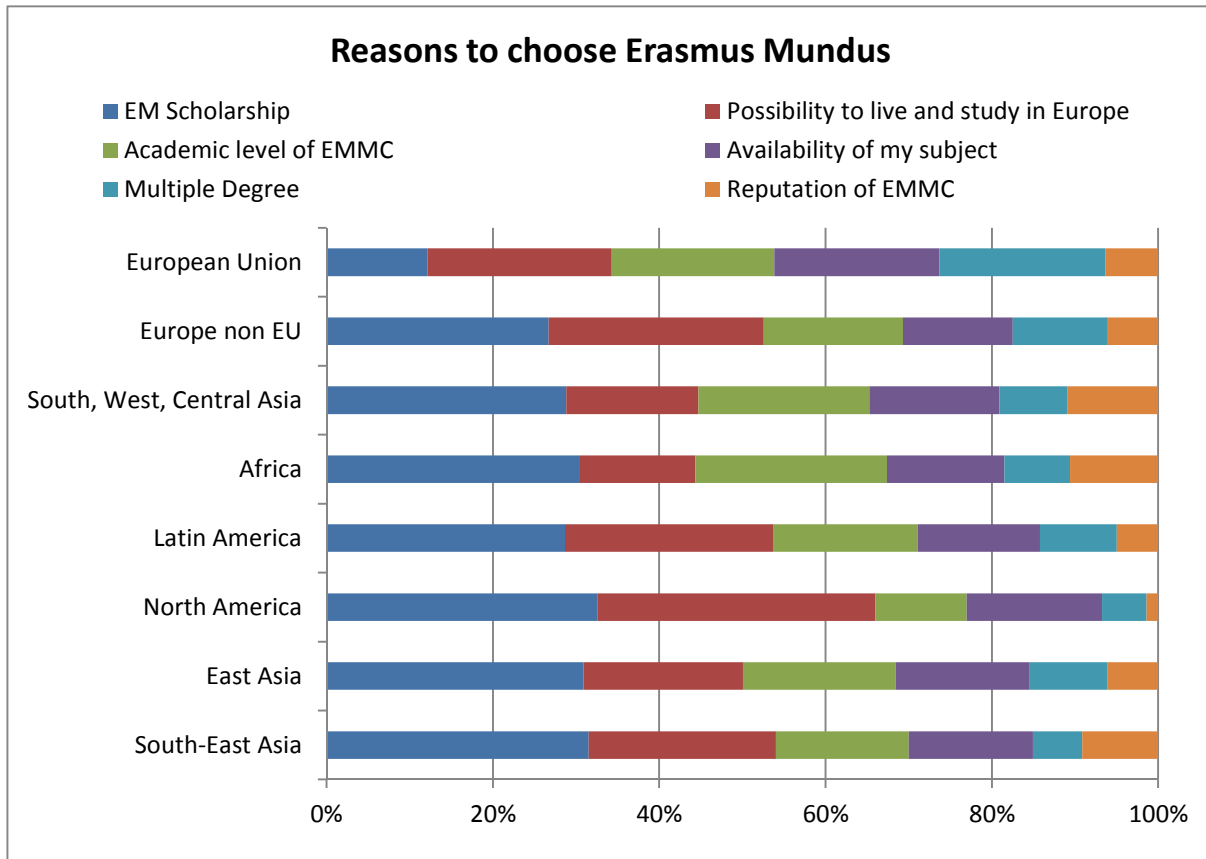


Figure 11: Reasons to choose Erasmus Mundus by nationality

Source: Graduate Impact Survey 2011

For **Europeans**, their limited access to the **EM scholarship** (until 2009) means that this is **not a central motivation** for them. Instead, the European students emphasize the possibility of studying in Europe and also make reference to the availability of their subject or to obtaining multiple degrees – which may be of more use for their future career if they stay in Europe. Besides the scholarship, students from outside the EU stress the **possibility to live and study in Europe**, which is most appealing for (North) American students and non-EU Europeans. For students from Africa and Asia, however, the **academic level** of the EMMCs seems to be a particularly strong incentive.

The finding that the reputation of Erasmus Mundus is not referred to as a central motivation for students to study in an EMMC might be due to limited **knowledge** of Erasmus Mundus in specific regions of the world (mainly Africa and South-East Asia, but also other parts of Asia), as the figure below shows. In fact, when we analyse the (subjective) information on “how well known Erasmus Mundus is” in their respective country, we find considerable – and maybe surprising – differences.

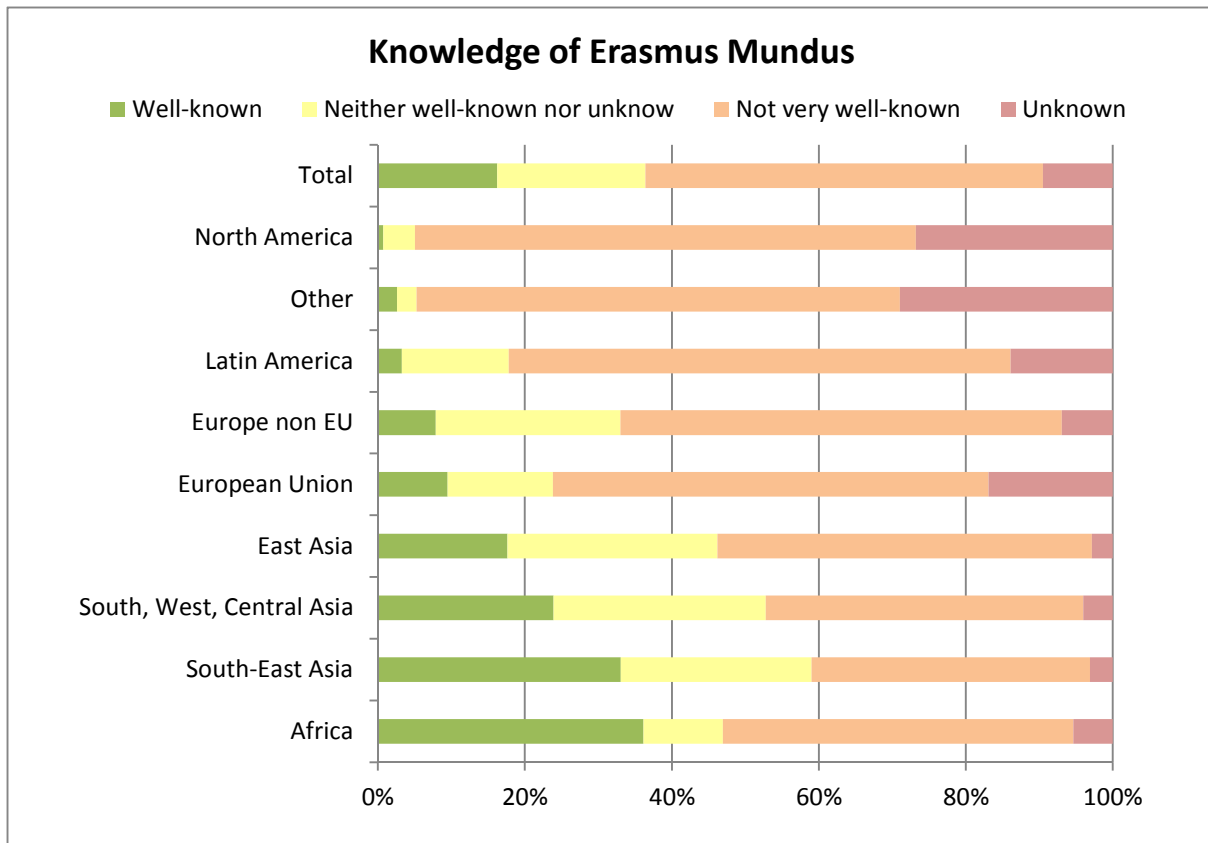


Figure 12: Knowledge of Erasmus Mundus by regions of the world

Source: Graduate Impact Survey 2011

54% of all respondents describe Erasmus Mundus as “**not very well-known**”. Within the European Union, where the programmes are implemented, the awareness is only average. It decreases further when we turn “**westward**”: in Latin and North America, as well as in Oceania (“Others”), a large number of respondents describe the programme as “unknown”. In contrast, in **Asia and Africa** the programme seems to have **gained quite a reputation**. 36% of the African students describe it as “well-known” in their country, and for about the half of the Asian population within the sample Erasmus Mundus is not unknown.

Summing up, we can state that the Erasmus Mundus programme seems to have gained a greater profile in some regions of the world, while in others it remains largely unknown. Among the reasons to choose Erasmus Mundus, the availability of the scholarship is – except for Europeans – the most important one. However, it has been showed that precisely in regions where the programme is less known – North/Latin America and Europe non-EU – the possibility to live and study in Europe is a major incentive. Consequently, the **identification of reasons that are appealing for students from specific regions of the world** may help to further promote the programme.



2. Qualitative interviews

2.1 Response

The qualitative survey consists of guided telephonic interviews with coordinators of Erasmus Mundus Masters Courses with an average duration of 44 minutes. The interviews were conducted in English and in some particular cases in German, French or Spanish. The appropriate guidelines were elaborated by the contractor and pre-tested and adapted in collaboration with the EACEA.

The target group to be contacted for the interviews was defined in cooperation with the EACEA and consists of all EMMC consortia that have started their programme in the first phase of Erasmus Mundus (2004-2008) and that are either still subject to EU funding (first or second period of funding) or continue under the Erasmus Mundus brand name (EMBN) after their EU funding has expired. This latter category consists of only three EMMCs (all starting in 2005) whose funding has ended in 2009. Overall, 94 university consortia received an invitational note in November 2010 and were contacted by the contractor thereupon.

Altogether, in the **interviewing phase, which lasted from early December 2010 until mid-February 2011, 51 interviews** with EMMC coordinators were conducted, which equals a response rate of 54%. The target group demonstrated very satisfactory accessibility. Almost all interviews conducted proved very fruitful, partly they were held with two interviewees (e.g. administrative and academic coordinator) or additional information (e.g. current employment of alumni) was sent via e-mail.

As for the **distribution of the interviewed EMMCs by their respective runtime**, EMMCs which began operating early or late (those beginning later than 2008 were not included in the selection) have the lowest representation, while those of “medium runtime” (starting in 2006 or 2007) show a higher response.

Year of launch	2004	2005	2006	2007	2008	Overall
EMMC (in its 1st funding period)	-	-	5*	15	8	28
EMMC (in its 2nd funding period)	8	6	6	-	-	20
EMBN	-	3	-	-	-	3
Total	8	9	11	15	8	51

Table 4: Runtime of EMMCs interviewed

Source: Interview results

* EMMCs currently in the last year of funding

2.2 Distribution by field of study

The distribution of the fields of study for the qualitative interviews is slightly but not significantly different from the online survey. As for the interviews, we deal with a much smaller group. For this reason, slight variations that are due to the randomisation of the group have a much higher impact on the overall distribution. Secondly, it might be the case that in particular fields of study there is a higher readiness to participate and share information.

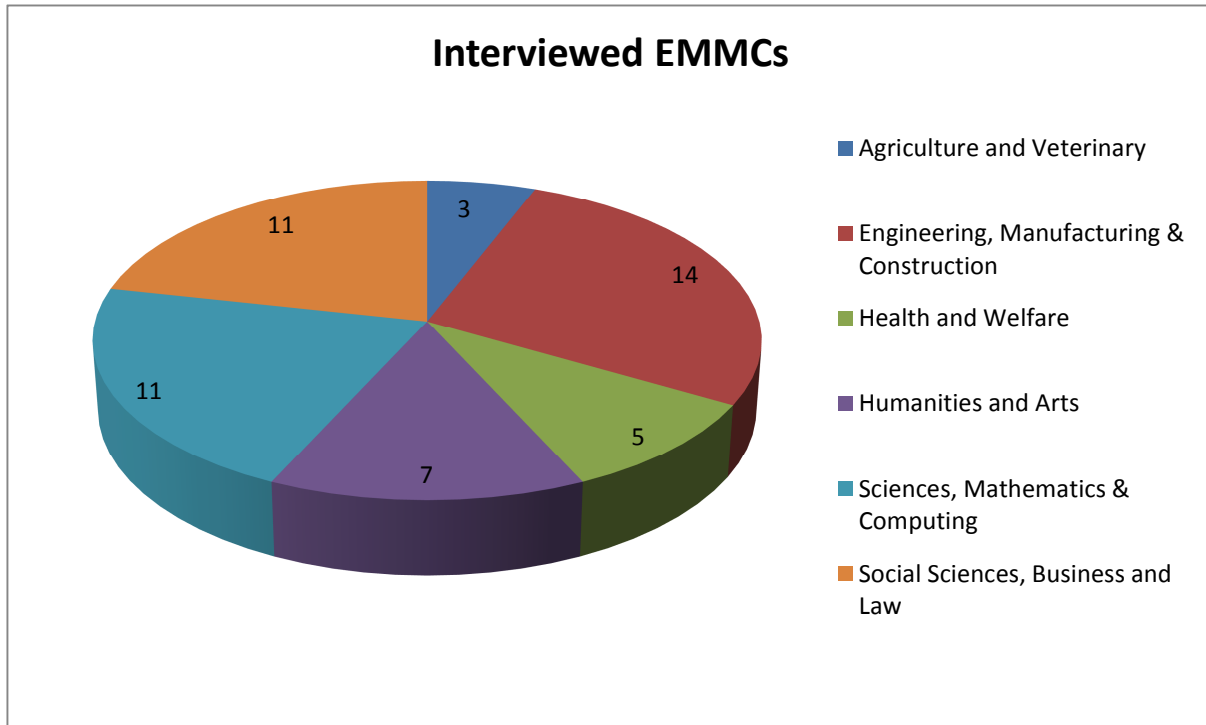


Figure 13: Fields of study in EMMCs interviewed⁵

Source: Interview results

Coordinators of EMMCs from the field of Engineering, Manufacture and Construction have been the most frequent interview partners. Only three interviews were conducted in the field of Agriculture and Veterinary, while EMMCs of Health and Welfare are relatively better presented among the interviews than in the overall distribution.

However, altogether the distribution over the fields of study in both research instruments is largely consistent with the overall distribution of actual EMMCs⁶. Smaller categories like Agriculture and Veterinary or Health and Welfare are also the smallest categories of this sample, while larger categories like Sciences, Mathematics and Computing; Engineering, Manufacture and Construction; and Social Sciences, Business and Law also dominate both samples.

⁵ In cases where individual EMMCs overlapped with two or more categories, they were classified based upon the information drawn from the interviews.

⁶ Information provided by the EACEA and through the EACEA website

2.3 Typology of EMMCs

Having gained a first insight into the teaching and learning methods of the respective programmes, the EMMCs can be characterised according to their **educational focus**. This typology is of course highly important with respect to employability, as different educational focuses imply a different orientation towards the labour market. The following typology will thus be reflected for a **qualitative description of employment prospects** within the different programmes. Basically, from the qualitative interviews, we could distinguish between two types of orientation:

- **Application-based:** study programmes that have a highly practical curriculum and aim at the unfolding of skills outside the university sphere in later employment;
- **Research-based:** study programmes following strict academic goals, preparing students to excel in subject-related skills and for careers in academia, research and development or teaching.

In many cases, however, EMMCs have a mixed focus, as many programmes intend to offer a polyvalent education and to prepare students for several types of careers. Therefore, for the typology, we constructed two “**mixed groups**” that each indicate a preference in one direction (“more application based”, “more research based”). This allows us to obtain a selective view of the EMMCs in the qualitative survey while still focusing on the particular characteristics.

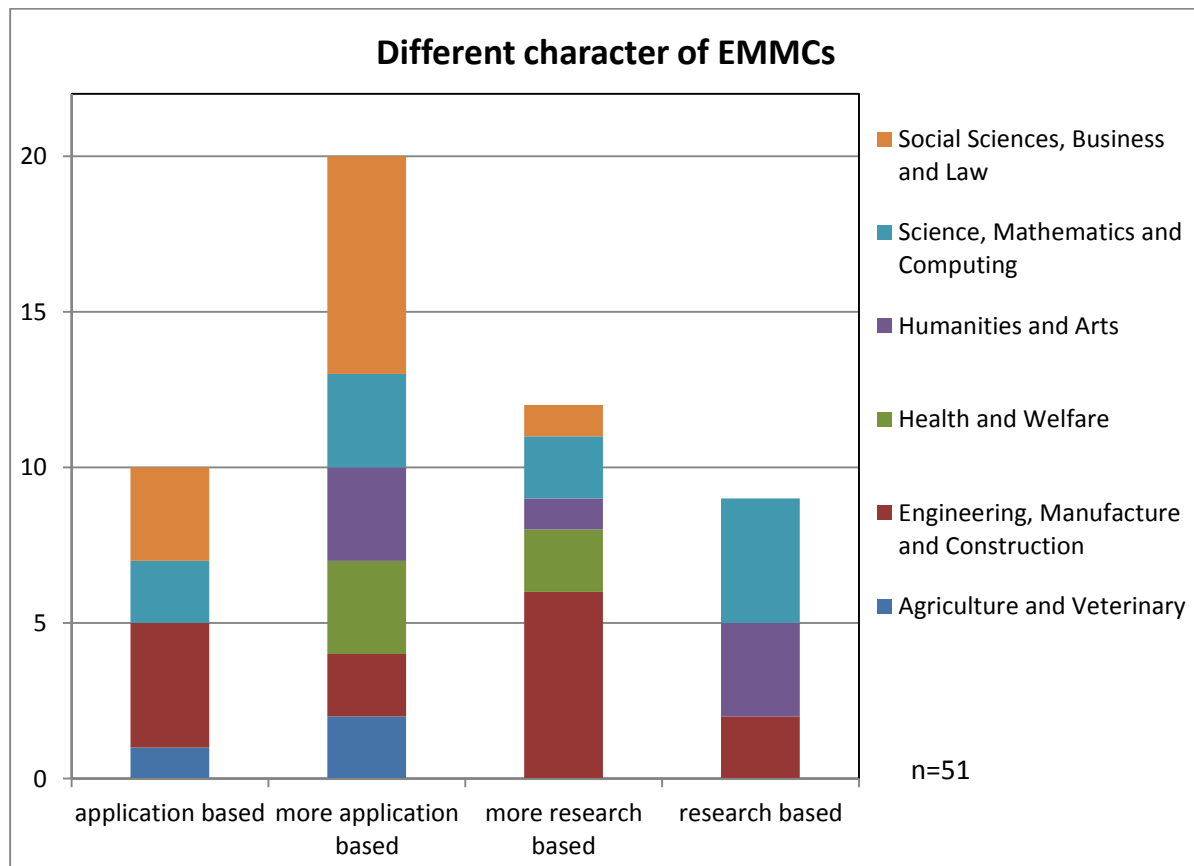


Figure 14: Character of EMMCs by field of study

Source: Interview results



The **application-based EMMCs** are slightly predominant as regards the overall distribution within the interviewed sample. They are particularly predominant for the fields of **Social Sciences, Business and Law and Agriculture and Veterinary**. Those EMMCs often contain different practical elements that are exercised outside the university like case studies or field work. Turning towards the research-based programmes, a stronger representation of Humanities and Science/Mathematics/IT can be observed. In these programmes, “internships” are often spent in research institutes or laboratories, and a high number of students are on their way to a PhD.

However, a research orientation doesn't imply that all students in these EMMCs pursue an academic career – and vice versa. Therefore, the following analysis of survey results will start with an examination of work orientation within the Erasmus Mundus Masters Courses in general, irrespective of their character. Hence, EMMCs should provide for different types of careers, within both the private and the academic sectors.



IV. Results

1. Career orientation of EMMCs

When analysing the different factors of employability of Erasmus Mundus Masters Courses, the overall working orientation and the practice-related elements offered within the programmes play a prominent role in preparing students and graduates for their future careers. Therefore, this first section of the Results chapter deals with the students' impression of the EMMC in general and more specifically with the different practical elements of the courses. The evaluation of the measures taken by the coordinators that follows (as discussed in the qualitative interviews) will lead to some concrete examples for good practice of work orientation in EMMCs.

General results

Overall, **EMMCs are appraised higher than “regular” Master programmes** of a similar discipline, especially in their impact on the personal development. The **high practical integration** of the EMMCs surely plays a role for this appraisal, even though some **deficits in the preparation for a job and career advice** must be admitted. Additionally, **work orientation varies** according to the **fields of study** students are enrolled in. Within the qualitative interviews, the **direct relation between contacts established during Masters Courses and later employment** emerged as an important feature of the programmes.

Findings

1.1 Overall assessment of the programme

To begin the evaluation of the career and work orientation of the EMMC programmes, a first glance at the overall assessment of Erasmus Mundus reveals that **EMMC programmes are better rated by graduates than regular Master courses in the same field of study**. In all categories, at least **40%** rate the performance of the EMMC higher than a normal Masters programme. The impact on personality development (71.5%) and the programme's international reputation (61%) received the highest marks among the five categories.

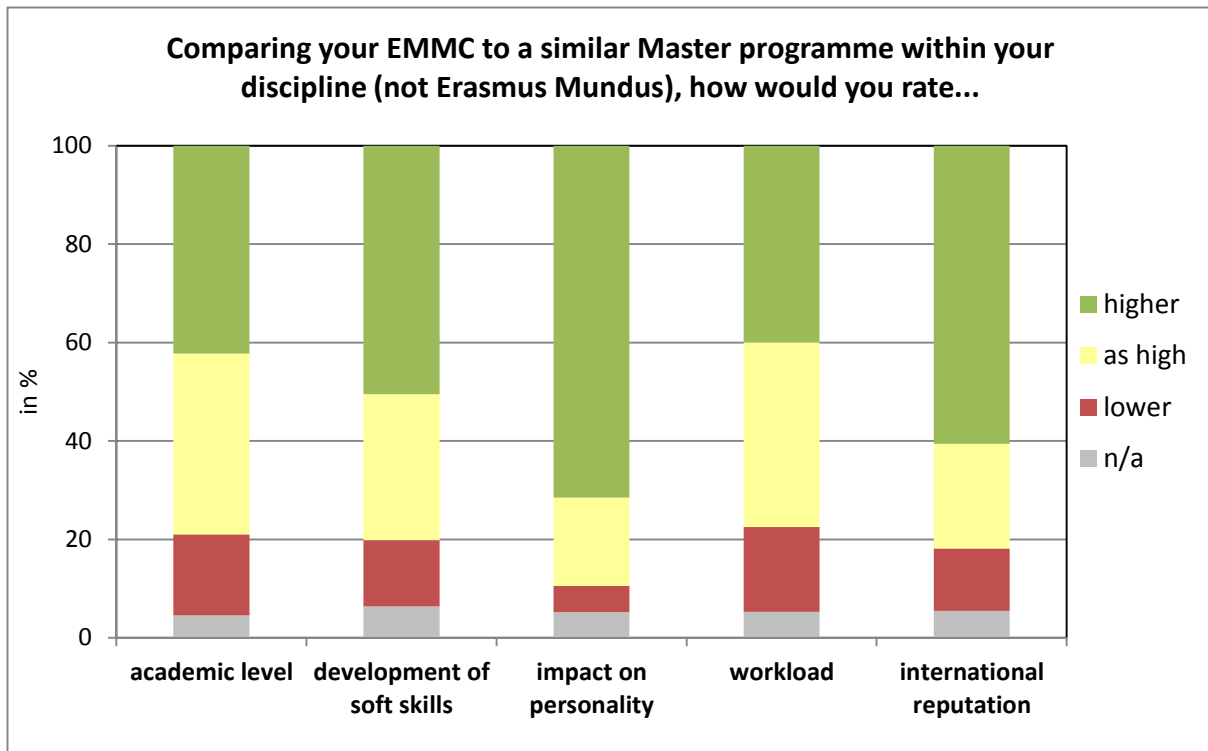


Figure 15: Overall rating of EMMC (graduate population)

Source: Graduate Impact Survey 2011

1.2. Work orientation

Working from the assumption that the connection between academic studies and the professional world is an important benchmark for evaluating employability, the questions on the qualitative survey thoroughly assessed the curricula contents related to job orientation and the measures taken to enhance this orientation. Graduates and students were therefore asked to estimate the **general work orientation of their programme** and to what extent its different features are/were part of the EMMC curriculum:

- work orientation
- input from professionals
- meetings/forums with administration
- preparation for entry into the job market/career advice.

The following graph depicts only the graduates, which seems more relevant as their perspective integrates the two sides of work orientation: the elements offered within their courses and the labour market requirements they have to face after graduating.

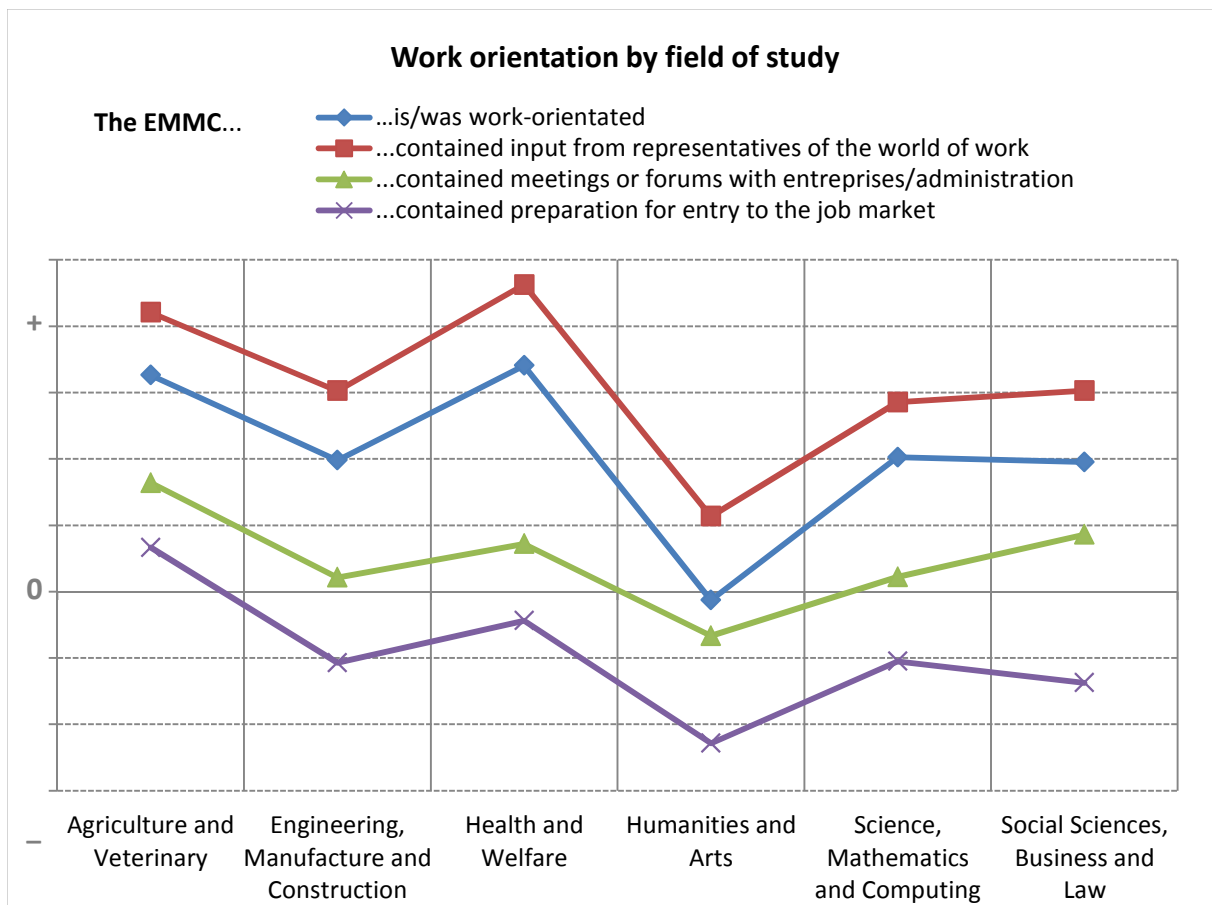


Figure 16: Work-orientation of EMMC (graduate population)

Source: Graduate Impact Survey 2011

- While the items “**work oriented**” and “**inputs from professionals**” are most positively declared, “**preparation for entry to the labour market**” plays a minor role in all EMMCs.
- In all aspects, programmes of **Humanities and Arts** and Science, Mathematics and Computing integrate considerably **less practice-oriented** elements. The lower degree of work orientation and practical input may also reflect the **stronger research orientation within the respective programmes** (see also III.2.3).
- EMMCs from the fields of **Agriculture** and Health show the highest integration of work-oriented elements across all items. In the case of Agriculture, this is again reflected by its “application-based” characteristic. The field of **Health and Welfare** particularly stands out for its high level of participation of professionals.

Interestingly, the students’ survey partially revealed more work orientation in the programmes, for example better work orientation for students of Humanities and Arts. This observation can lead to different conclusions. On the one hand, students are likely to be less able to estimate the work orientation of a Masters Course; on the other hand, the better performance can also be a sign of improvements in the curricula in order to link EMMCs more strongly to the professional world. It remains up to further monitoring of the programmes and the students to shed light on this evolution.

1.3. Connection to working environment

The nature and occurrence of the practical elements of the programmes that are considered as ways to establish work orientation to help students/graduates enter the labour market that have been observed **during the qualitative interviews** can be regrouped into six groups:

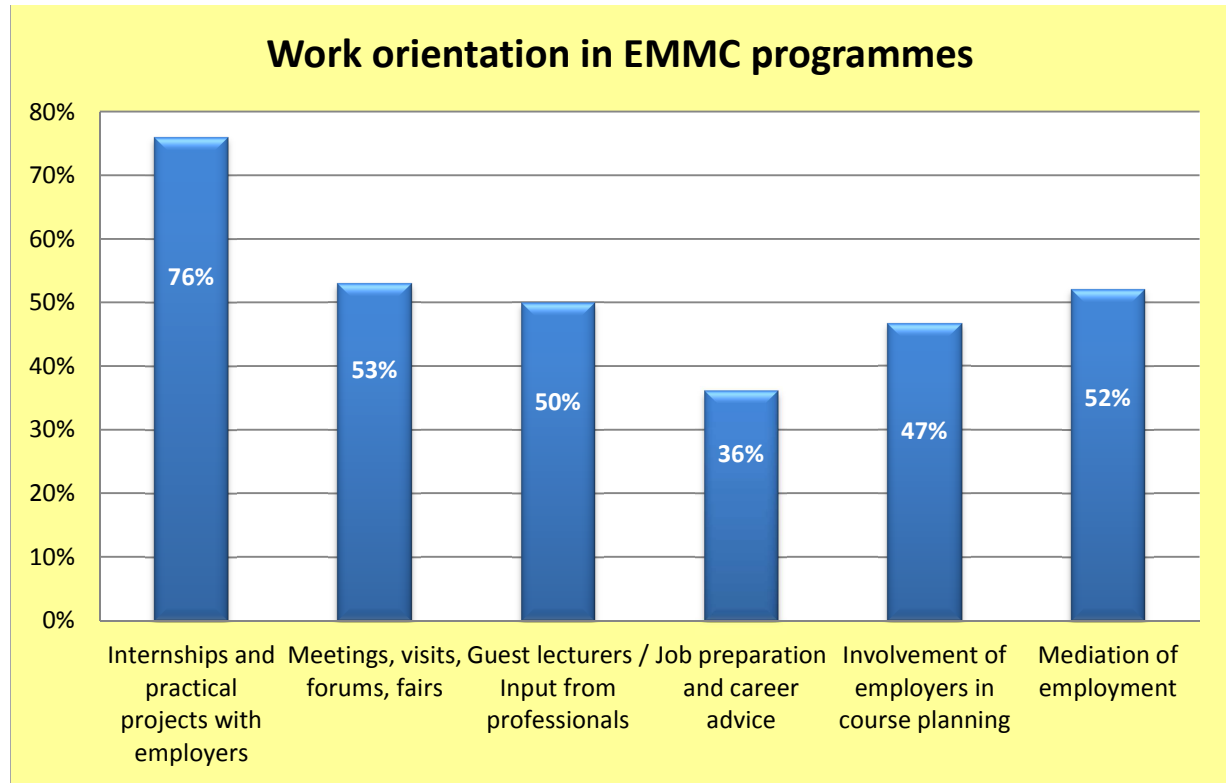


Figure 17: Work orientation in EMMC programmes

Source: Interview results

- **A good 3 out of 4 EMMCs provide course elements together with employers or research partners**, mostly via internships, but also through practical projects during the course or cooperation in the Master Thesis. As these efforts often implicate an additional workload for students, this shows the importance they accord to **work contacts and experiences** during the course of studies.
- More than one half of EMMCs organize **meetings or forums with enterprises** and institutes or company visits where students can get in touch with possible workplaces and get deeper insight into their practices.
- The direct participation of professionals in the course can be twofold: either employers and practitioners are invited as **guest lecturers** or they **engage with the EMMC on a long-term basis** as external observers or via an advisory board. Both aspects have been referred to by about 50% of the coordinators.
- Most EMMCs offer **administrative help for students** (visa, housing, bank account, etc.) or mentoring for course-related issues (curriculum, thesis), but **only 36% provide active consultancy on career-related issues** (e.g. CV and interview training, identification of career paths, special employment courses). This is an indication of the lack of preparation for entry into the labour market that the survey of students and graduates showed.
- A very positive result lies in the fact that in **52%** of the interviews it was stated that **contacts provided during the EMMC lead to the engagement** for some of their graduates afterwards.



Best practices in the field of career-orientation

Going deeper into the design and concrete application of the above mentioned measures, several examples of good practice that show **how** an effective and efficient connection between labour market and students can be **implemented and managed** were revealed during the interviews. The analysis and comparison of different measures and ways to integrate employers into the programme as well as the incentives given to students in order to advance their career orientation furthermore showed that employability of students is not only a matter of academic skills and quality, but also is influenced by the intensity with which coordinators and academic institutions fill out their role as linking function between students and the labour market.

It is obvious that such examples can give good and viable incentives for other EMMCs, but accompanying aspects (e.g. discipline-related perspectives or special personal contacts of the EMMC staff) which also contribute to this success cannot simply be transferred to other programmes. Nonetheless, some parallels between the best practice cases point to a certain strategy for the effective promotion of career orientation. For more examples, please also consult also the Practical Guidelines⁷ for enhancing employability within EMMCs.

1. More application oriented programme in Social Sciences, Business and Law

- Strong connection between practical and educational results: during his/her mandatory internship, **every student has a personal mentor in the company**. This coach supervises the Master Thesis and assesses the students' performance in a report counting for their grade.
- Consequently, students work harder during their internship and regard it as a preparation phase. **Over 50% find permanent employment directly after graduating.**

2. More research oriented programme in Science, Mathematics and Computing

- Involvement of an existing **network** of researchers and private employers as **associated partners** that **regularly employ graduates**. For the future, an advisory board consisting of members of these institutes is scheduled.
- **Teaching staff sees itself as an "interface"**: Ideas that evolve in university projects and thus have a rather low investment potential are brought to a level making them manufacturable for industry. This regularly leads to start-ups stemming from PhD-projects.

Taking into consideration all best practice cases that have been revealed along the interviews, they apply a **mix of the means** mentioned in the graph in Figure 17. Furthermore, the **reciprocity aspect of the cooperation** appears in all examples, while the **involvement of (regional) employers in the course planning** plays a more important role than **job preparation and career advice**. Moreover, the good connection to the working environment goes along with **regular alumni networking**, mainly established via graduates that have found employment and can promote the programme within or to companies.

⁷ The Practical Guidelines are available at http://eacea.ec.europa.eu/erasmus_mundus/clusters/index_en.php



Perspectives and Recommendations

All together, the results of qualitative and quantitative surveys on subjects related to career and work orientation give important insights into the structure of the programmes and the importance they accord to these aspects. The revealed flaws offer starting points for the following chapter on students' orientation and lead us to the following recommendations:

- **Improvements in job preparation and career advice offerings** are recommendable, as the high impact of links to professionals and work experience during the course of studies reveals.
- The **involvement of employers** in course planning (e.g. participation in the advisory board, labour market surveys) can be a **useful instrument** in order to adapt the programme to the expectations and needs of the labour market.
- The important role of **graduates as linking elements** between EM students and the professional world should be leveraged for access to employment.
- Notwithstanding the orientation of the EMMCs to labour market requirements, coordinators stress a persisting need to balance employers' participation, always guaranteeing the **autonomy of academia**.



2. Career orientation of students

Alongside the programmes' offerings, the individual career plans of students and the input they gathered before the EMMC or in work placements during their studies is another important aspect to investigate. As we are dealing with the concrete plans and wishes of students and graduates here, the major part of this chapter relies on the quantitative results of the survey. Complementary to that, the coordinators' point of view will be used as an indirect source of information.

General results

First and foremost, the **motivation and commitment** of EM students is an added value for the courses, even though their **professional orientation is not significantly higher** than in other study programmes. Regarding the plans of Erasmus Mundus students, only **about 60% plan to work directly after graduation**, while about **30% want to continue with (PhD) studies**. A good 10% are still undecided. This distribution varies moderately according to each academic discipline.

Professional contacts that are made **during university studies influence the career orientation of students** considerably, as **20% declare that they profited from these contacts for their future work**. Lastly, the element of an internship is not so central to many EMMCs, which also has to do with the fact that many EM students arrive with **previous work experience**. Those students have particularly clearer plans for their future career.

Findings

2.1. Professional plans of students

Within the qualitative interviews, a very high number of coordinators assessed the academic quality and in particular the **motivation** of EM students as higher than in comparable/national study programmes. Many EM students engage in **extra-curricular activities** like study groups, alumni associations or the organization of conferences. Several coordinators even reported on **individual projects and ideas** that EM students bring into the course and which go beyond the pure Master Course:

*“Many of the Erasmus Mundus students seem to run a **life project**; they have a clear plan and an orientation where they want to go.”*

(Coordinator, Portugal, Engineering, Manufacturing and Construction).

In many cases this high commitment is also reported as an **added value** (higher standards) **to the whole course** or even the university:

*“One thing that distinguishes Erasmus Mundus students from the French/local students is that they always seek to **take part actively** in the courses, they want to discuss and get to know their teachers. **They almost force the course to become something special.**”*
(Coordinator, France, Science, Mathematics and Computing).

However, this **only partially** goes along with a **clear focus towards a specific career**. A majority of coordinators describe the EM students as “not necessarily better oriented than other students”. Rather, given the fact that many come from third countries, they are **very open** “to any chance that they meet on the way” (coordinator, Italy, Social Science, Business and Law).

The results gained from the qualitative interviews can be differentiated according to fields of study. It is evident that such estimations from the coordinators’ side can only represent an indirect conclusion on students’ career orientation. Although we are dealing with relatively low numbers in total, some general trends become apparent.

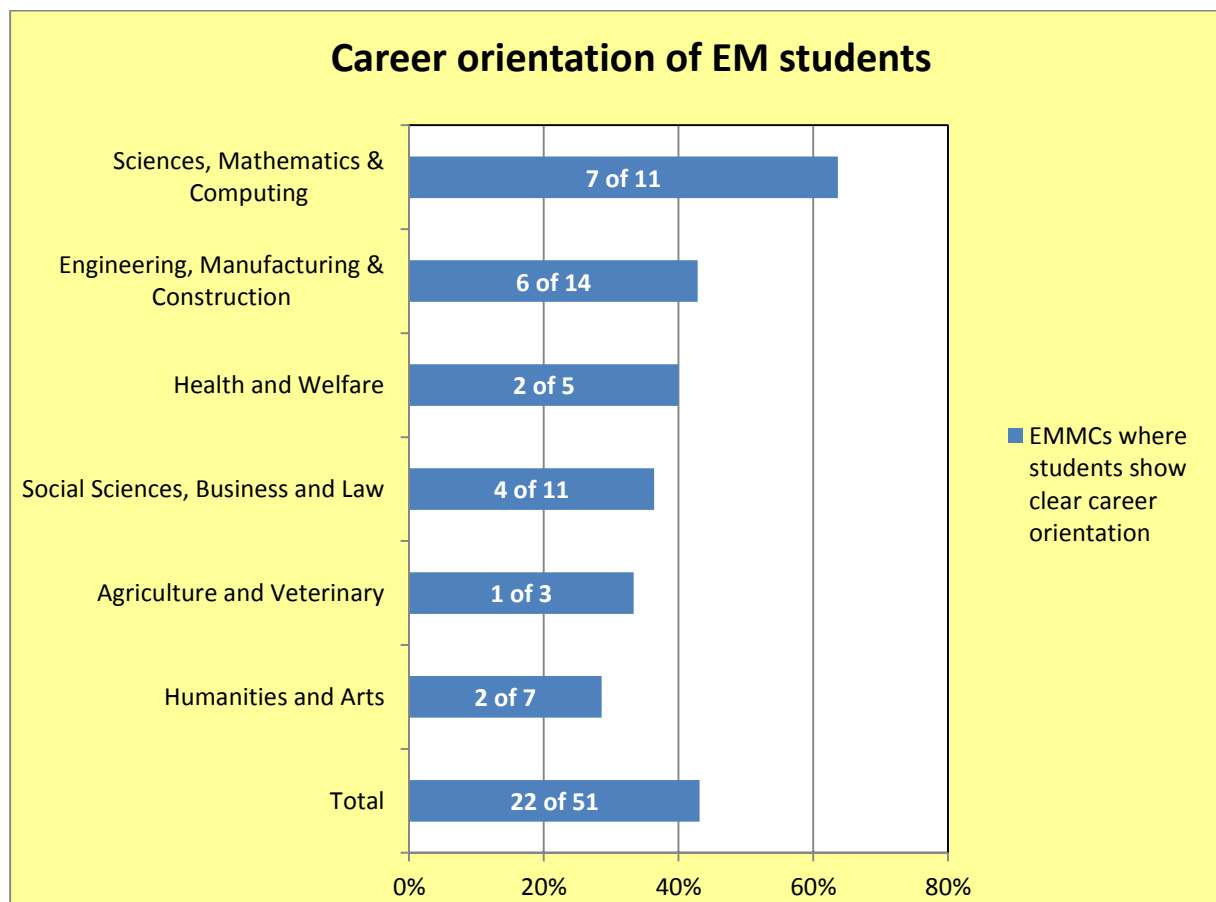


Figure 18: Career orientation of EM students by field of study (coordinators’ assessment) Source: Interview results

These results show a generally **high correlation with the graduates’ assessments of career orientation in their EMMCs** (see Figure 16). However, some particularities are striking:

- “**Humanities and Arts**” seems to be the field where the issue of career orientation is most critical (with the lowest approval rate in both surveys).
- The high career orientation observed in the fields of “**Science, Mathematics and Computing**” and “**Engineering, Manufacturing and Construction**” can be affirmed.
- All in all, the career orientation tends to be more distinct in the fields of **sciences** compared to **social sciences and humanities**.

Turning towards the quantitative survey, the expectations for and the commitment to one’s future career are the determinants of employability. Nonetheless, having graduated from or being enrolled in different EMMCs gives students different perspectives for their future in the labour market; some students are more interested in continuing their studies, while others are more ready to work. The following table thus shows these differences in the **plans that students have for their future professional career** according to the fields of study.

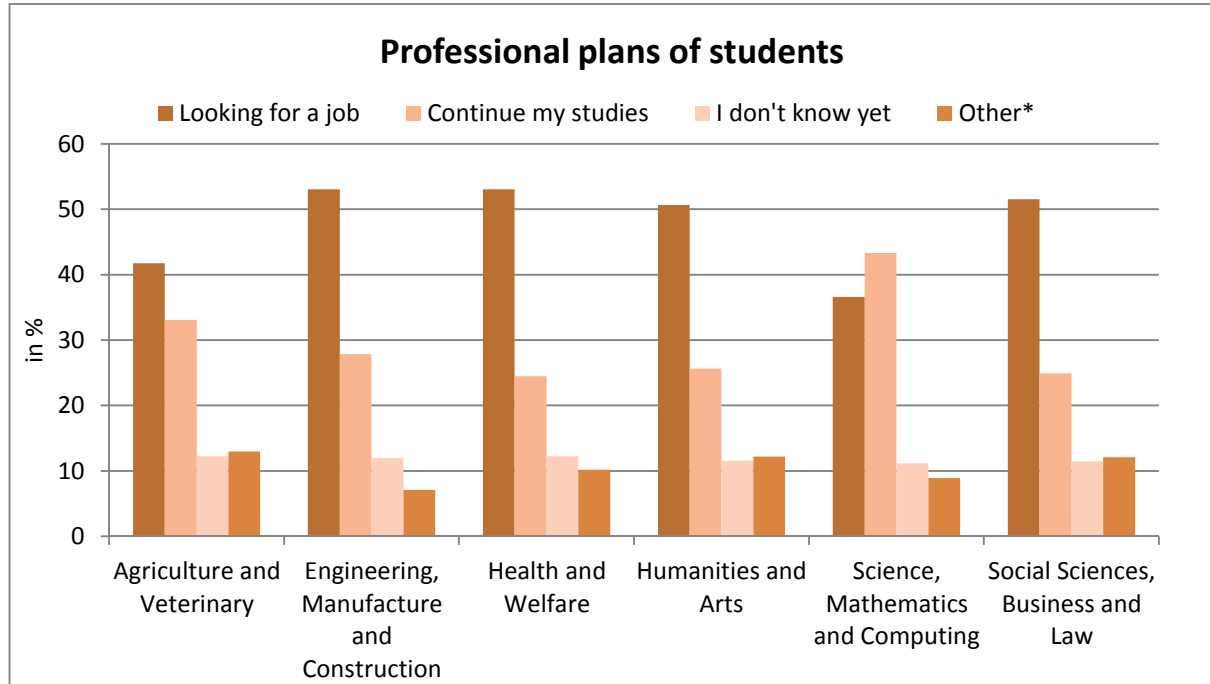


Figure 19: Professional expectations of students by field of study (student population)
Source: Graduate Impact Survey 2011

In this question, the category “looking for a job” includes all types of workplaces (academic institution, public or private employment). Most of the students aim at an **academic institution**, whereas only 30% pursue work in a private organization. However, there are some differences:

- Students engaged in an EMMC in Engineering, Manufacturing and Construction; in Humanities and Arts; and in Social Sciences, Business and Law are more interested in **entering the labour market**.
- In Agriculture and Veterinary, one-third of the students declare their intention to **pursue further studies**, while in Science, Mathematics and Computing, the interest in further studies is just as high as the interest to start a job.
- Among students indicating they want to pursue further studies, almost **90% of them want to do it in a PhD programme**. Among these, more than 50% want to continue in a PhD programme outside Erasmus Mundus.
- Students in **Humanities and Arts** are **more oriented towards finding a job**. Taking into consideration the relative weak performance of this field in the assessment of work orientation (see Chapter 1.2), a certain mismatch between the orientation of students and the programme design becomes apparent.
- A constant level of **11-12% of students** is still **undecided** about their future.

2.2. Internship and previous work experience

There is a consensus within the institutions of higher education that internships are an important element for students to find out about their aptitude for a certain career or professional field. Surprisingly, internships are not standard within the EMMCs. The quantitative survey showed that **more than 40% of all students declare that they will not do an internship** during their EMMC. 30% of students who were enrolled between 2008 and 2009 declared that they had already completed their internships. Students from **Humanities and Arts** are most likely to indicate that they will not do an internship during their future studies (more than 50%).

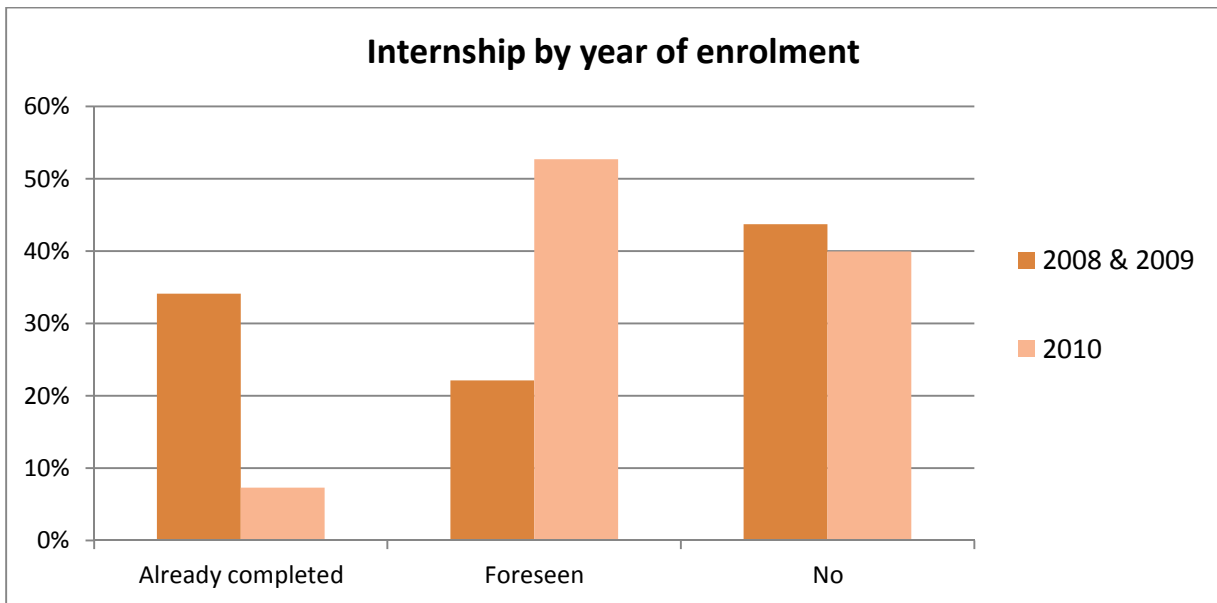


Figure 20: Internship by year of enrolment (student population)

Source: Graduate Impact Survey 2011

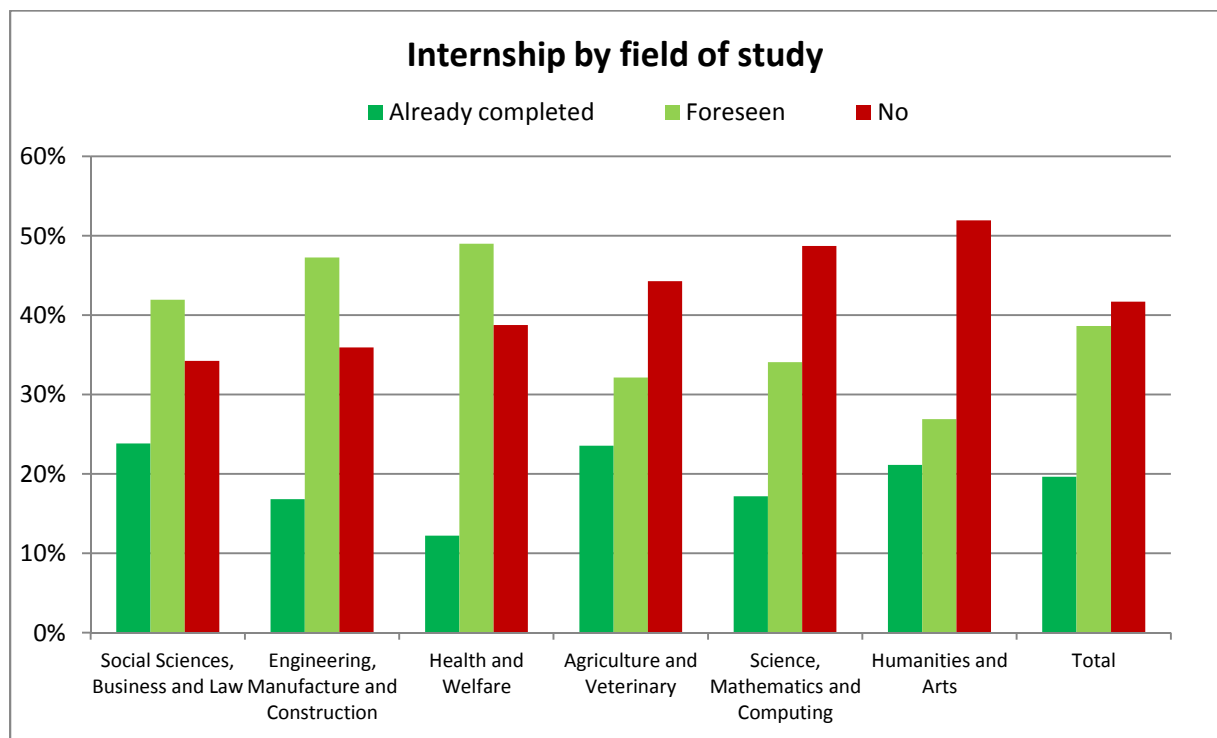


Figure 21: Internship by field of study (student population)

Source: Graduate Impact Survey 2011

Regarding the busy work (and travel) schedules that EM students usually have, the results on internships should nevertheless be interpreted cautiously when assessing their career orientation. **60%** of the graduates in the survey state that they have had **one mandatory internship**, while 29% have not had one. Additionally, there are large differences between fields of study. In Science, Mathematics and Computing, 42% have not completed a mandatory internship. Only 30% of the students, but 50% of the graduates, declare that there is **assistance in their EMMC to find an internship**. The assistance is particularly strong in study programmes of Agriculture and Health and particularly weak in Humanities and Arts.

Besides internships foreseen in the curriculum, some students choose the option of working at a **voluntary internship** in order to improve their career prospects. Thus, almost 40% of the graduates in the sample have had one voluntary internship, and 7% have even had two – which is proof of their appreciation in terms of employability and the students’ commitment to get in touch with the professional world at the same time.

Regardless of the nature of EMMC graduates’ internships (whether voluntary or not), the vast majority (**84%**) of them consider it a very positive or **positive experience** which also **impacts on the personal career plans**, as the following figure shows.

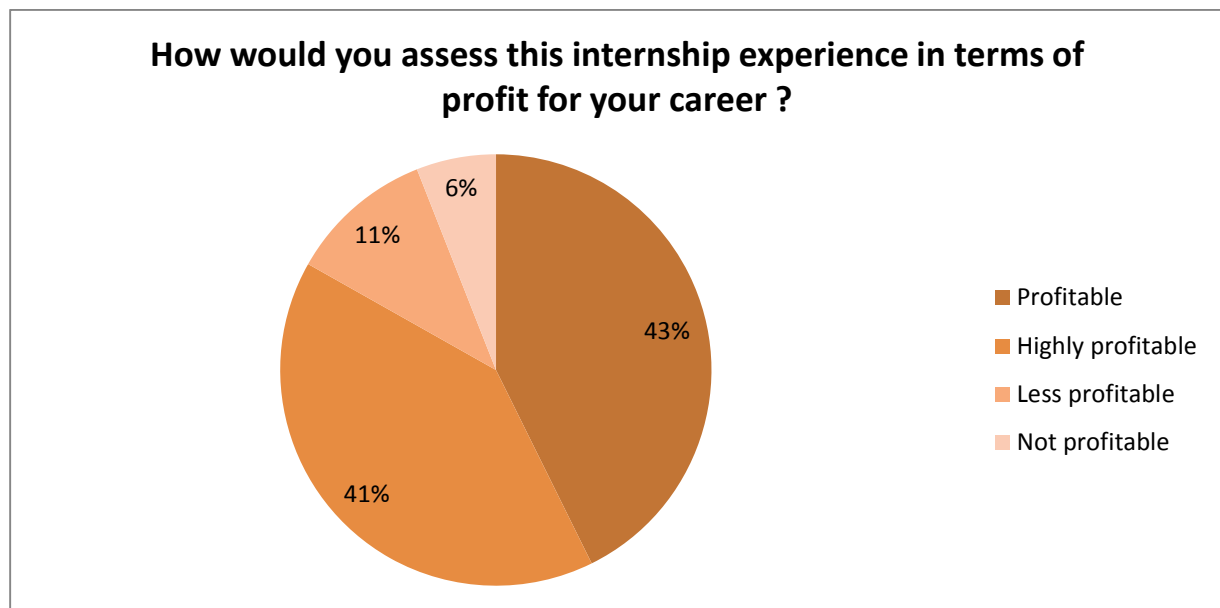


Figure 22: Profit from internship experience (graduate population)

Source: Graduate Impact Survey 2011

But doing an internship is not the only work experience that the students know during their studies, as the following figure illustrates: **almost 50% of them had a permanent job before starting their EMMC**. Also 82% of the students who didn’t have a permanent job before their EMMC had a work experience.

This quantitative statement was further investigated by the information gathered from the **qualitative interviews**. For this purpose, we asked the coordinators about the background of their students: in some EMMCs the majority of students enter the programme directly after a Bachelor or another academic degree, while in others there is a high share of students with professional experience, who use the Master as specialisation in a concrete field. The career orientation of

students has been presented in chapter 2.1. Our interest was to find out whether a **previous work experiences goes along with a better orientation towards a professional career**⁸. This hypothesis is largely confirmed. From the selection of EMMCs with a particular high work experience, 85% also report a clear orientation towards their professional career.

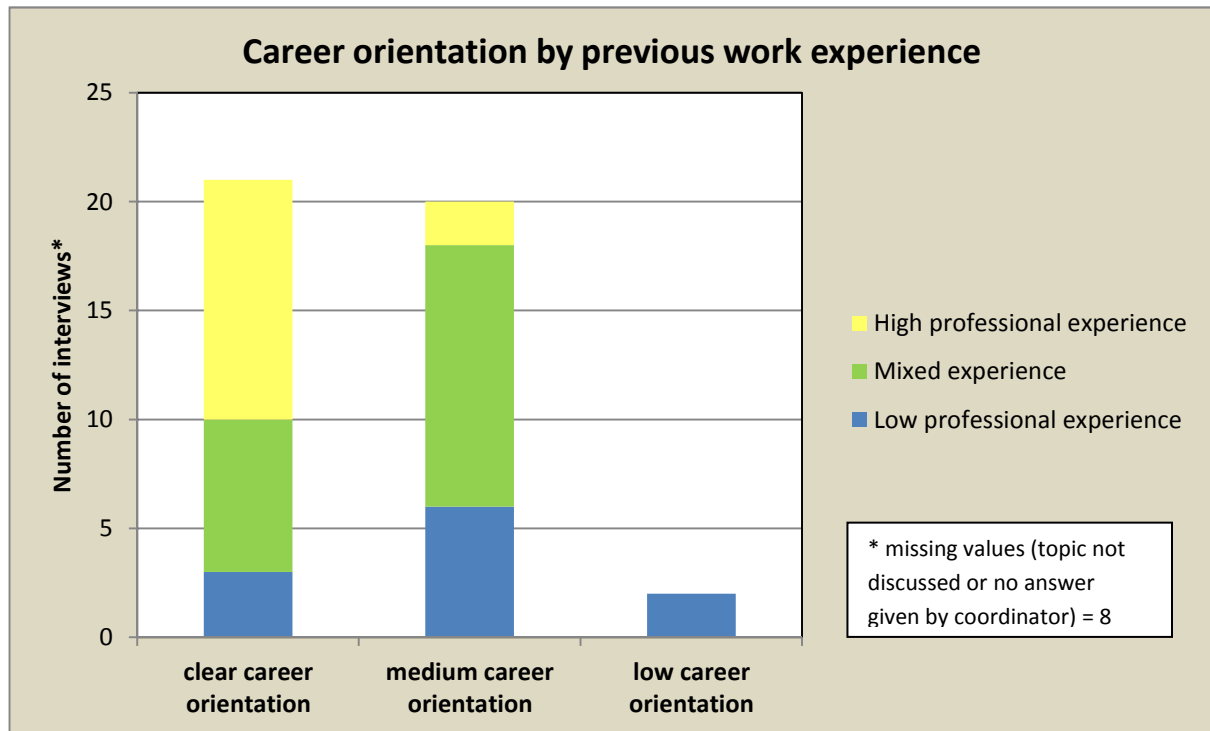


Figure 23: Career orientation of students by previous experience

Source: Interview results

2.3. Professional contacts

Based on the fact that network-building with professionals is one of the most important sources of future employment perspectives and one of the issues a study programme should provide for, the students within the sample were asked if they already possess “professional networks that they consider relevant for future job opportunities”. 41% of the students affirmed this, while 59% answered the question in the negative. The distribution for fields of study shows slight differences: while students from **Social Sciences, Business and Law** seem **best equipped with relevant professional contacts** (47% yes), the fields Engineering, Manufacturing and Construction (35%) and Agriculture and Veterinary (32%) show the lowest affirmation rates with regard to accessibility to professional networks.

In order to be able to assess the particular contribution of the Erasmus Mundus programmes in this respect, all of those (students) who answered the first question in the positive were asked the follow-up question “Have these contacts been established through the contribution of your EMMC?”. The results for this question reveal some very interesting facts. First, the overall distribution is equally balanced: one-half of the EMMC students with relevant professional contacts indicate that

⁸ For this purpose, the two answer categories “students’ orientation” and “students’ background” were each divided into 3 groups: (clear, moderate and low career orientation – high professional experience, mixed experience and low professional/only academic experience). The correlation between those two items reaches a value of 0.44.



they have established them through their Masters programme; the other half negates this. We can thus state as a benchmark that about **20% of the students enrolled in an EMMC gain professional contacts that they consider relevant for their future career during their EM studies**. Secondly, we can clearly observe that the relevance of EM contacts increases over the time enrolled in the programme, from 44% for those having started in 2010 to 70% for those enrolled since 2008. The distribution for fields of study sheds a particular light on the kind of promotion within the EMMCs. It is interesting to observe that exactly those **fields assessed most difficult in establishing contacts in general obtain the highest affirmation rates for contacts provided by the EMMC**: Agriculture and Veterinary (60%) and Engineering, Manufacturing and Construction (54%).

We can thus conclude that EMMCs foster the establishment of professional networks, though there is still room for improvement here. At the same time, we observe a particularly strong linkage to professional networks in disciplines where students do not (yet) usually possess them.

Perspectives and recommendations

Regarding the professional plans, the high commitment and willingness to profit as much as possible from the programme are very important assets of the EM students. While the analysis of the distribution, perception and impact of internships for career orientation revealed that work placements during the EMMC are not a central element, a majority of the coordinators stated that contacts that are made during EMMCs led to employment for students after graduation. This latter observation emphasizes once more the role and responsibility of EM programmes as enabler of adequate career options and orientations. In this regard, some recommendations can be derived from the combination of the quantitative and qualitative survey:

- As Erasmus Mundus students are highly committed but not outstandingly well-oriented for their careers, the **EMMCs should try to offer as much practical connection as possible** to help students obtain a clearer view of work opportunities.
- Internships and work placements are just one way to achieve this. EMMCs should also **make use of previous work and international experiences** that their students bring with them.
- The **positive effect of professional contacts** established during the course of studies **on students' career orientation** should be taken as an incentive to concentrate more on these contacts in order to create **sustainable networks** from which future generations of students can also profit.
- **Multi-criteria application procedures** help to identify excellence and commitment among students. Besides academic quality (grades), consortia can select based on motivation letters, treatment of special topics (in papers, projects and theses), practical experience, etc.
- A good strategy to offer both career guidance and to promote a course to possible stakeholders is **making students' success stories or research projects visible**, e.g. on the course web page, in publications and via the programme's alumni association or EMA.



3. Creation of networks between students and alumni

As the previous results have shown, work-oriented course contents and professional contacts during the EMMCs influence the career orientation of students. In addition to employers or practical elements integrated by the university coordinators, **alumni are an important link** for students to the professional world. To get an overview of the different networks and their frequentation, students and graduates were first asked in the quantitative survey about their professional networks. After exploring this in the first section of this chapter, the second part of this chapter will then explore the creation, shape and management of these networks, as well as the degree of activity that can be considered most useful. For this purpose, the answers of the coordinators on how they generate participation, what subjects are tackled by the networks and what their main targets are will be integrated into the analysis.

General results

EM students and graduates accord **high importance** to **intra-EM contacts** as regards links to the **professional world**. These networks between students and graduates can provide **helpful devices for students (job offers, networking)** and **coordinating personnel (feedback on employability and labour market needs)**. Taking up this active exchange between students and alumni, EMMC coordinators accord **high importance to networking**; about 45% of the EMMCs even offer a broad variety of alumni activities integrating **concrete strategies to reach employability via the alumni network**.

Findings

3.1 Most important professional networks

The different professional and educational background of EM students, which was the subject of the last chapter, is also reflected in a variety of potential professional networks that they can develop and apply. Those with previous work experience may still be in contact with their former employer, whereas others may not have gathered any professional experience. Moreover, EM students often come from another part of the world, and as a result many might not be very interested in making sustainable professional contacts among fellow students but rather directly with relevant employers. But the results of the first question give us a clear and quite homogenous picture across all students and graduates:

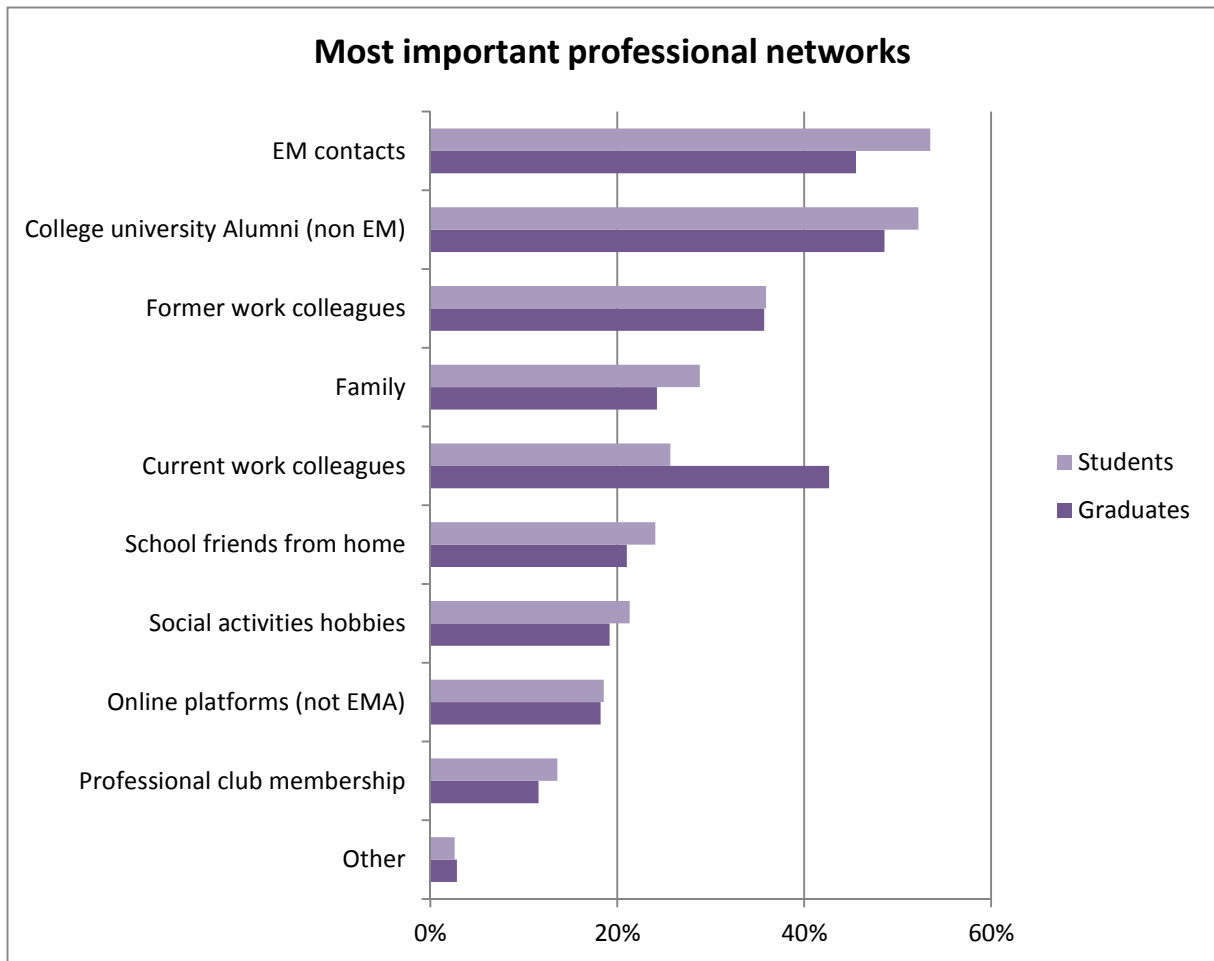


Figure 24: Professional networks considered most important (3 of 10 items to be selected)
 Source: Graduate Impact Survey

The **obvious relevance of EM contacts for career orientation** for both students (53%) and graduates (46%) shows immediately that the main ties evolve during studies. And they **remain** important: graduates still accord a higher importance to EM contacts than to contacts with current work colleagues (43%). There is only a negligible difference (max. $\pm 2\%$) between those students/graduates with work experience and those who have not worked before. Besides EM, the main sources for professional networking are fellow non-EM students, whom graduates also rank higher than work colleagues. Overall, the results of this question are evidence for the **high relevance of the contacts established at university** – they are **persisting networks** that students and graduates rely on, no matter if they had been working before or have already entered the labour market.



3.2 Building and maintaining networks within EMMCs

Overall, it can be stated that a vast majority of EMMCs offer an alumni service, even though there are differences regarding their organisation, their role and the frequentation of the networks. In order to give an overview of the most important ideas or guidelines for an effective network as mentioned in the **qualitative interviews**, the answers below are clustered along three main questions – the general use, ideas for incentives for the creation of networks and their maintenance after graduation.

a) What is the benefit of a student/graduate network?

- For **students and graduates**:
 - It raises the **identification** with the EMMC (they feel “like a big family”)
 - It provides better access to **job/career opportunities** and hence an employment placement
 - For non-European students: it helps to **keep in touch with Europe**
- For the **coordinating universities**:
 - It helps to **keep contacts** to (international) students as the most important **resource**
 - It is an important **means of promotion** for the programme
“We see our students like ambassadors of our Course”
 (Coordinator, Portugal, Engineering, Manufacture and Construction)
 - **It gives direct feedback on employability and thus feedback on the success of the programme**
 - It initiates **future cooperation**, common research projects or future engagement
“Today’s graduates are the employers of tomorrow” (Coordinator, Italy, Social Sciences, Business and Law)

b) How to encourage active participation among the group of EM students?

- Using **interactive and participative modules**, group assignments or presentations that provide encouragement of workgroups among students
- Providing **common course elements** for all study tracks, e.g. summer or winter schools, where students can exchange research and career opportunities, possibly also with the participation of employers
- **Mentoring** and practical recommendations **from 2nd to 1st year students**
- **Offering leisure time activities**, e.g. **intercultural cooking**
- **Participation of students in the course** management, e.g. by the **election of a student representative** and involvement in the **management board** or by the preparation of conferences and symposia
- Creation of an **alumni association**

c) **How to keep the network together, also after graduation?**

- Exchange via **social communities** like Facebook (more personal exchange) or LinkedIn (more career-related exchange)
- Regular (but not permanent) **mailings or newsletters concerning the EMMC**, e.g. on new applications, new developments in research, events (“keeping in touch”)
- Ask for and give feedback on **current occupation** of graduates, e.g. via a graduate survey
- **Physical meeting of students and alumni**, where graduate students act as mentors (report on research fields, present current activities, possible career paths)
- **Provide visibility** of (former) students, e.g. success stories on the homepage
- Use the **service of EMA** as a stepping stone

3.3 Overall characterisation of EMMC networks

As a result of the interviews, the character of the student/alumni networks the EMMCs provide can be split up into several groups according to the **extent, the frequentation and the contents** that are communicated in the networks concerning employability aspects. The following figure shows the types of networks and their relative distribution:

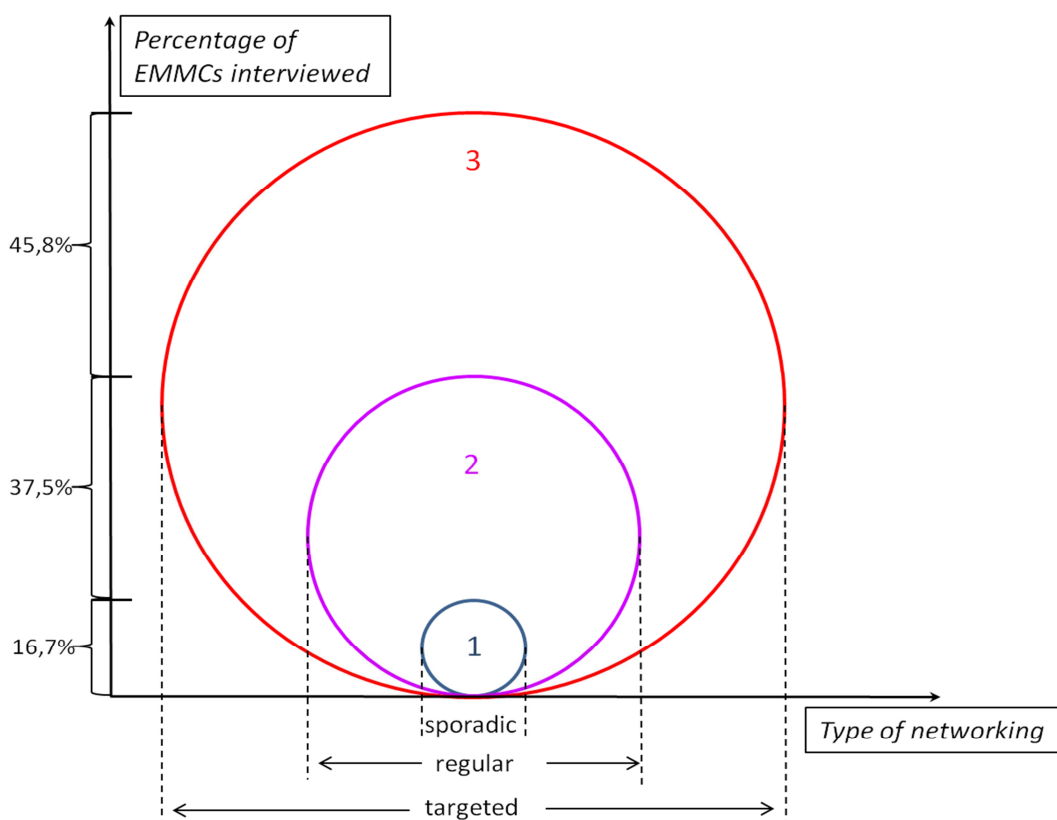


Figure 25: Type of student/graduate networks and relative distribution

Source: Interview results



To classify these differences, the coordinators' statements have been regrouped into **three types** of networking. Of course, boundaries overlap in some cases, nevertheless this scheme gives a good overview of existing structures and their features.

- On the lowest level of **sporadic networking**, there is rather loose contact between the concerned groups of students, graduates and teaching staff. Often there is no physical meeting of students and alumni; alumni organizations are non-existent or have been unsuccessfully attempted several times by the management board. The exchange that does occur takes place in informal ways – coordinators were not informed about the networking process. All in all, the activity is restricted to individual actions without sustainable effects. Approximately one in six EMMCs interviewed have been assigned to this group (1).
- The next 37.5% of EMMCs (2) already engage in **regular forms of networking** with students and graduates. This means that overall, different exchange measures – contacts to graduates, alumni organizations, web portals or meetings – are employed on a regular basis. At the level of the individual EMMC, however, this is restricted to single activities which are not yet embedded in a general strategy.
- Therefore, another main type of networking could be distinguished: a purposeful or **targeted way of networking**. Those EMMCs stand out not only through a broad variety of conducted activities but also through a target-oriented concept of how to apply different strategies to the major goal of employability. Facebook groups that exchange job opportunities, student-run associations as graduate student forums, graduates as contact points for work and study opportunities – the best practices related to this aspect stem exclusively from this last group, in total 45.8% of the interviewed EMMCs.

Perspectives and Recommendations

As this chapter has shown, the relevance of contacts between students and graduates in a professional network is uncontested. Consequently, the main purpose here is to establish guidelines for the effective and sustainable creation and use of the network, as well as indicating its advantages for both sides – students/graduates and the programme coordinators. Ideally, this mutual positive effect can contribute to a lasting and effective professional network and thus can enhance employability among EMMC students. In order to implement these systems, the following recommendations can be derived:

- **EM contacts are the most important source of professional networking** for students and graduates, even after entering the labour market.
- An **active coordination team** need **not necessarily be present in all kinds of networks**. It can even make sense to **leave the overall network management to students and alumni**.
- **Identifying active and committed students** who can take over important network activities (web page design, databases with publications, events, CVs, blogs, student stories, etc.) or who can serve as **“contact points”** (for fellow students or compatriots), including after graduation, is a valuable step.
- In terms of **effective resource management**, it is also advisable to follow a **step-by-step strategy**: which measures can be implemented right now, and which need more preparation?



4. Assessment of competences

Obviously, employability among students and graduates is not only about good access to networks or the labour market but also about their skills (soft and hard) and the special qualifications that make EM students different from their competitors. The assessment of competences is a crucial element of the present study, based upon previous research in this area. For this purpose, the students and graduates were asked what competences they acquired during the EMMC and graduates were asked which of these are the most required in the labour market. In order to get a multi-dimensional picture, these results will also be contrasted by and complemented with the qualitative interviews with the coordinators.

General results

Altogether, students and graduates assess the **competences provided during their EMMCs as relevant and important**. But when comparing this provision with the **requirements of the labour market, some deficits** become apparent. The competences of the group **“functional flexibility”** in particular are assessed as equally important by Master’s coordinators and graduates, but they are not conveyed in a way that equips students with all the necessary skills for future work. Concerning **employment in an international environment**, Erasmus Mundus graduates are **best prepared**.

Findings

4.1 Students’/graduates’ perspective

The assessment of competences is one of the most important aspects of this survey. It gives precise information on the level of competences that graduates and students acquired during the EMMCs and that graduates regard as necessary in the labour market.

The reference for the evaluation of this crucial point is the **REFLEX/CHEERS framework**⁹, of which 19 competences were chosen as determinants in order to grasp the demands that workers in a knowledge society face. As students and graduates were asked in the present sample, the **competences are assessed in two different ways**. For employed graduates, the **required competences** in their jobs were compared to the **competences acquired/provided** during their EMMCs, whereas students and unemployed graduates simply rated the competences provided in the EMMC.

⁹ The REFLEX survey is a collaborative and international work introduced in 2005 in order to respond to the question which is the role of higher education graduates in a knowledge society. Basically 3 questions are addressed in the REFLEX project: (1) which competences are required by higher education graduates in order to function adequately in the knowledge society? (2) what role is played by HEIs in helping graduates to develop these competences? (3) what tensions arise as graduates, HEIs, employers and other key players each strive to meet their own objectives, and how can these tensions be resolved? In this international study regrouping 13 European countries, more than 40,000 graduates have been interviewed 5 years after their graduation in 2000.

The methodology used for the measurement of competences is the self assessment of competences acquired in higher education and those which are used on the job. One of the limits of this method is that it leaves space to individual subjectivity: it is not impossible that some individual skills measured are linked to social or cultural judgments or values. The interest of this type of method, however, is the possibility to compare competences on large samples, which other methods based on job-analysis or on the “supervisor rating methods” can hardly do. Therefore, for the current evaluation, we revert to the REFLEX framework in order to evaluate competences in the context of employability.



As proposed in the methodology framework, we have regrouped these **19 competences** into the following **five categories**:

- **Professional expertise:**
 - mastery of own field or discipline
 - interdisciplinary know-how
 - analytical thinking
 - ability to acquire new knowledge
- **Functional flexibility:**
 - ability to negotiate effectively
 - ability to perform well under pressure
 - ability to coordinate activities
 - ability to use time efficiently
- **Mobilisation of human resources:**
 - ability to work productively with others
 - ability to mobilize the capacities of others
 - ability to clearly express your opinion
 - ability to assert your authority
- **Innovative competences:**
 - ability to come up with new ideas and solutions
 - willingness to question your own and others' ideas
 - ability to present products, ideas or reports to an audience
 - ability to write reports, memos or documents
- **International competences:**
 - ability to write and speak in a foreign language
 - professional knowledge of other countries
 - knowledge/understanding of international differences in culture and society.

The following figure shows the results to the question “To which extent has your EMMC provided you with these competences?” for **students and graduates outside the labour force**, indicating the mean value for each competence.

The overall provision of competences in the EMMCs is assessed highly **positively**. Out of all items, “**Knowledge/understanding of international differences in culture and society**” has the highest rating (4.31). Further competences which students and unemployed graduates appraise highly in their courses are language and writing skills, the acquisition of knowledge, analytical thinking and discipline-related expertise. Turning towards the deficits, especially **work- and teamwork-related aspects** like mobilising others’ capacities, asserting one’s authority and negotiating effectively (3.43) show lower rates. Nonetheless, they are still in the positive range.

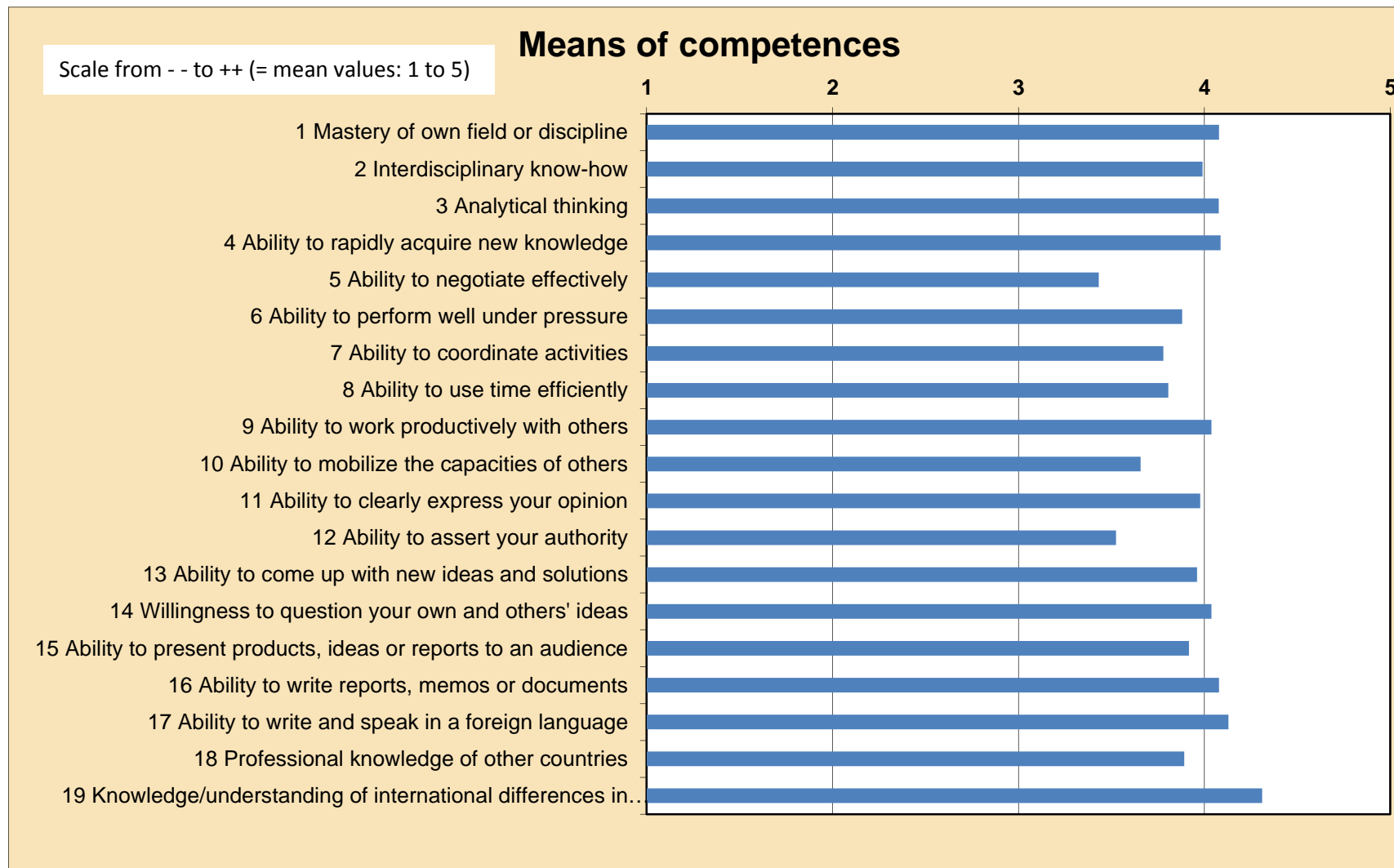


Figure 26: Means of competences provided (population: students and non-employed graduates)

Source: Graduate Impact Survey 2011

For an analysis of the **relevance of competences** with regard to employability, the **employed graduates' assessments** reveal more important results. The following figure is split up into required (blue) and provided (red) competences, which makes it possible to ascertain both the individual rating and the difference between provision (in the EMMC) and requirements (in the job). The narrower the gap between the two lines, the more concordance between requirement and provision can be observed.

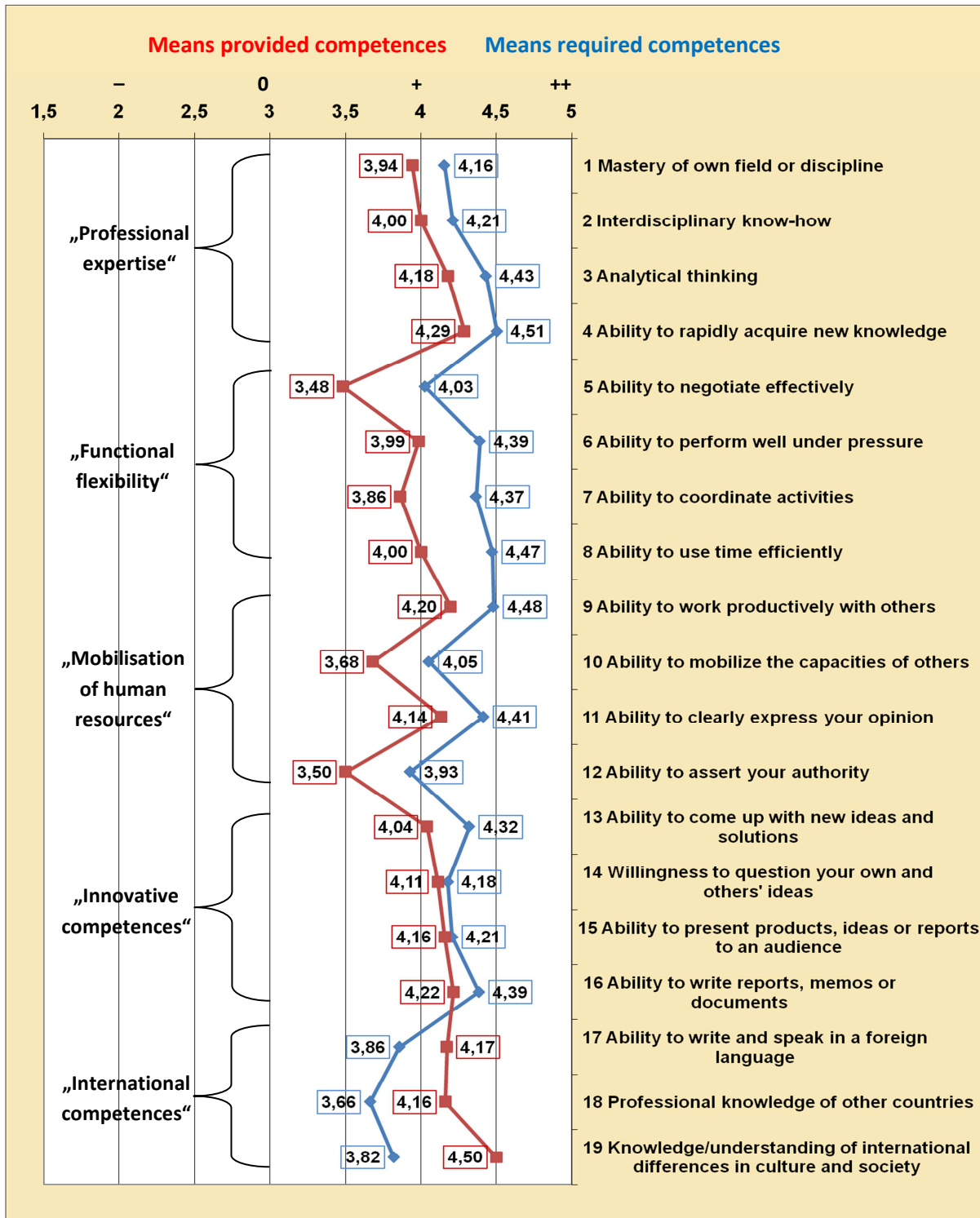


Figure 27: Comparison of competences (graduate population)

Source: Graduate Impact Survey 2011



The evaluation of the **provided competences** shows almost the same distribution as the one for students and non-employed graduates, except for an even more significant peak in the category of “Knowledge/understanding of international differences in culture and society” (mean value = 4.50). The “ability to rapidly acquire new knowledge” (4.29) and the “ability to work productively with others” are further competences that seem to be largely provided by the EMMCs.

As for **required competences**, the respondents put a very high average value on almost the entire set of items. The most relevant competences in the labour market, apparently, are the “ability to rapidly acquire new knowledge” (overall maximum with 4.51), the “ability to work productively with others” and the “ability to use time efficiently”.

Overall, the **gap between provided and required competences** is relatively constant (at about 0.3 points) – not so high to constitute a fundamental deficiency, but sufficient to determine some deficits. These deficits were indicated with regard to the ability to negotiate effectively (-0.54), the ability to coordinate activities (-0.50), the ability to use time efficiently (-0.47) and the ability to assert your authority (-0.43). Most of these capacities are part of the group “**functional flexibility**”, and all of them are indispensable skills for management positions.

In the group of “**innovative competences**”, the gap between acquired and de facto necessary competences is relatively narrow, while Erasmus Mundus provides graduates with a **surplus in the labour market requirements** in all subcategories related to “**international competences**”: knowledge/understanding of differences (+0.68), professional knowledge of other countries (+0.50) and ability to write and speak in a foreign language (+0.31). In this field of competence, we can conclude that graduates are **more prepared to work in an international environment**. Nonetheless, these last competences are regarded as less important “soft skills” by the employed graduates compared to the other groups.

Summarising, we can state that – in a retrospective view – the employed graduates assess the **provision of competences during their EMMC very positively**, while they evaluate **the requirements of their respective jobs even more highly**.

In order to put these results in **relation to the respective fields of study**, we concentrated on the 5 categories of competences, since the previous graph showed a relative coherence of estimation within these categories. Indeed, the difference between required and acquired competences shows the same tendency: EM students are (over-)equipped with “international competences”, but show a slight deficit in other areas.

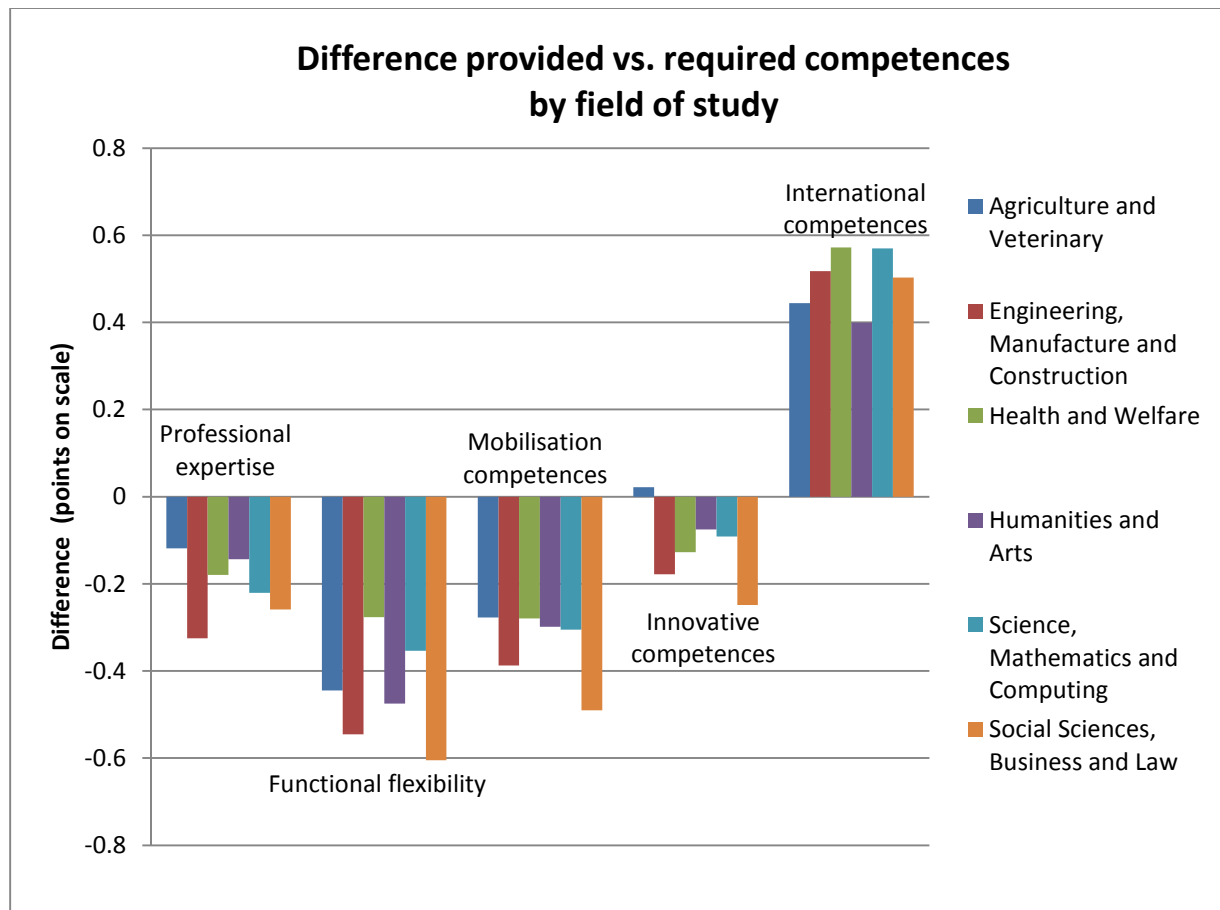


Figure 28: Difference of competences by field of study (graduate population) Source: Graduate Impact Survey 2011

- The previous finding that the discrepancy between the demand and provision of competences is most significant in **functional flexibility** can be affirmed for all fields of study.
- Employed graduates in the fields of Social Sciences, Business and Law and Engineering, Manufacture and Construction are confronted with the highest demand of competences in their jobs compared to the skills attained: in addition to functional flexibility, this is also the case for **mobilisation competences** and professional expertise.
- All fields of study display a **surplus of acquired competences** in the category of **international competences**.
- Overall, the employed graduates of **Agriculture and Veterinary** and **Health and Welfare** programmes seem to be best equipped by their EMMCs for work requirements.

Internationality is, as the survey results and the qualitative interviews have shown, one of the key competences that EM students acquire during their studies. In this regard, the assessment of their English language levels clearly reveals the proficiency that EM graduates have in language matters when leaving university.

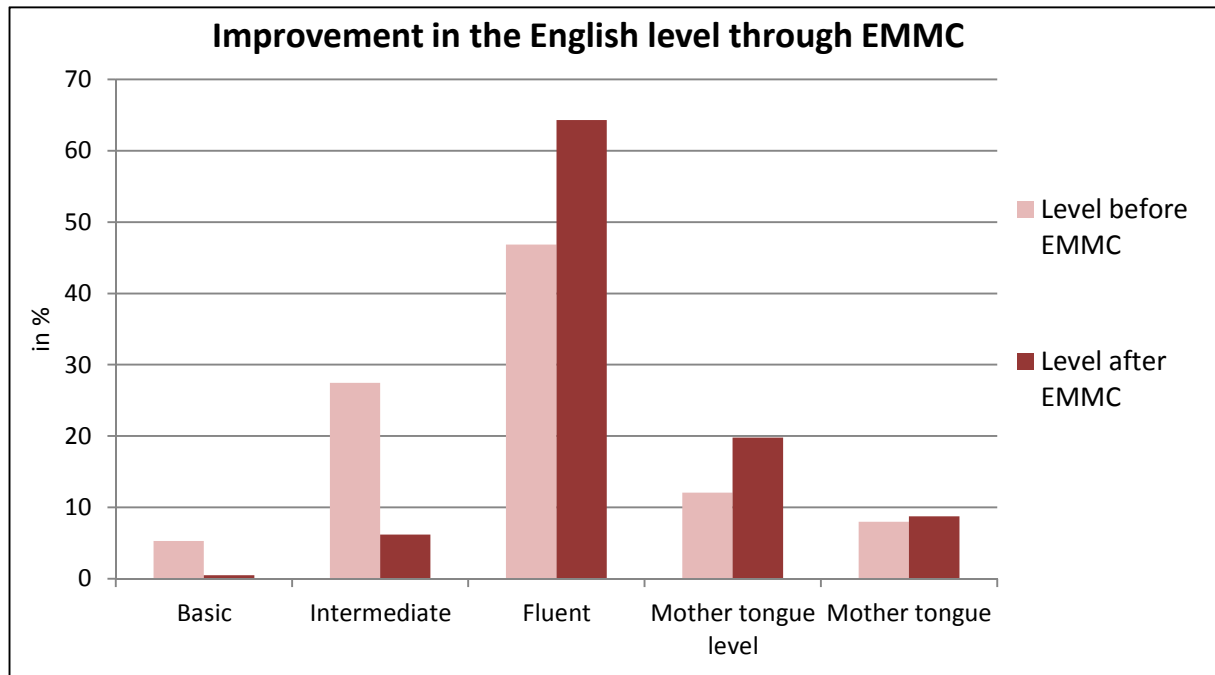


Figure 29: Improvement of English level (graduate population)

Source: Graduate Impact Survey 2011

Overall, we can identify a **significantly better knowledge of English than before** beginning the EMMC: over **90%** of the graduates are **at least fluent** in English, compared to 33% who did not exceed the intermediate level when they started their EM studies. Of those students with only basic knowledge of English when entering the EMMC, 52% progressed to an intermediate level and 40% progressed to a fluent level. As Chapter 5 will point out, this result can surely have an impact on the employability of the considerable number of EM students aspiring to a position in an international environment (academic or business organisations).

4.2. Coordinators' perspective

Whereas the list of competences in the online survey followed the theoretical principles and guidelines of the REFLEX and CHEERS framework (Allen & Van der Velden 2005a) and hence a deductive approach, the competences have also been measured by an **inductive approach**, via the **qualitative interviews with EMMC coordinators**. The fact that both approaches display an overall coherence as regards the categories of competences can be seen as an affirmation for their exhaustiveness and at the same time gives us the opportunity to establish a relation between them for the analysis of labour market requirements and the imparted skills and competences.



In the course of the interviews, all coordinators were asked to **address three key competences** rated most important for the future professional career of their students that are imparted during their EMMC. Consequently, the assessment of these competences can be considered a **combination of “requirement” and “provision”**. The named competences could be **regrouped into seven clusters** with the following distribution (assessed by field of study and type of Master):

- **Transferable skills, adaptability** (competence most mentioned, 63%): ability to apply the theoretical and practical knowledge to different settings, problem-solving skills, ability to develop creative solutions, inter-disciplinary competence

Repartition: rated important by 70% of the application-based EMMCs, with an especially high percentage of Health, Engineering and Humanities
- **Research / Methodology:** research competences necessary to one’s specific field, organisation of one’s own research process (selection of adequate methods, critical judgement), autonomy of learning, information management

Repartition: for 78% of strongly research-based EMMCs (among them a high share of Science, Mathematics and Computing), these skills are the most crucial
- **Multicultural competences:** knowledge and understanding of other cultures, open-mindedness, ability to work and interact in intercultural teams and different academic cultures

Repartition: 64%, especially programmes in Social Sciences, Business, Law
- **Subject-related knowledge:** firm knowledge of the discipline, technical expertise of specific tools/instruments, professionalism

Repartition: crucial background for EMMCs with application tendency (2/3 of the mentions)
- **Communication:** skills in (scientific) writing, rhetoric skills, ability to present contents to a general public (clients, colleagues, etc.), persuasive power, foreign language competence

Repartition: 4 of 5 EMMCs in Health, more mentioned when a research tendency was present
- **International orientation:** ability to judge and think beyond national systems, geographic flexibility, knowledge and experience of other countries (Europe), ability to manage global networks

Repartition: only slight tendencies, Agriculture and Social Sciences a little more highly represented
- **Project management:** ability for strategic planning, ability to accompany a project “from the beginning to the end”, ability to implement adequate measures, entrepreneurship skills, organisational competences

Repartition: clear correlation (73%) to application orientation, highest share in Social Science, Business, Law

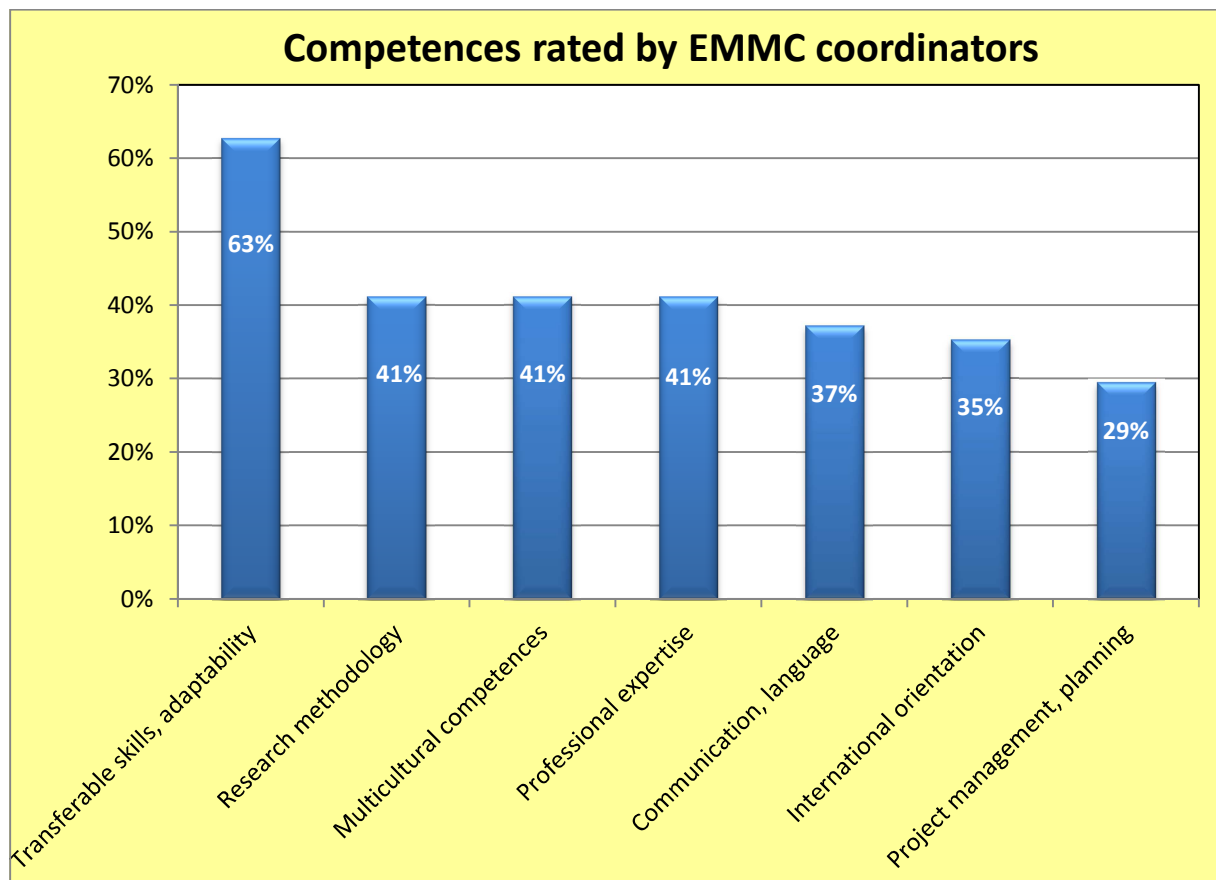


Figure 30: Clusters of competences assessed by EMMC coordinators

Source: Interview results

When combining the insights of coordinators and students/graduates, it can be stated that coordinators do not consider the imparting of pure knowledge as their main task, but rather they want to boost the **application and transfer competences** of the students, whereas graduates appraise “professional expertise” as the most important professional competence. In the following block of **secondary competences** that coordinators consider as relevant, **content-related competences** (research and subject knowledge) are at least balanced by **social skills** like intercultural communication and international competence. Moreover, only about 3 of 10 coordinators assess **planning and management competences** as central. As we have seen before, it is exactly in this field of management-related competences where employed graduates assess the largest deficit. Although both sides agree that the corresponding competence “Functional flexibility” is highly needed in professional life, students/graduates assess its provision during EMMC to be particularly lower than coordinators do. Concerning multicultural competence, communication/language and international orientation, the **good provision of “International competences”** that graduates claim is **affirmed by the coordinators**.



Perspectives and recommendations

In a nutshell, the assessment of the competences by students and coordinators gives us important insights to three relevant points of view on the provided and required skills and competences: students, coordinators and the labour market (in this case represented by employed graduates). All three agree on the high importance accorded to internationality, whereas in other categories, a mismatch between the provision of competences in the EMMCs and the requirements graduates face in the labour market can be observed. The following ideas and remarks may help as incentives for better adaption in the future:

- **Management skills** like leadership, working under pressure, coordination and negotiation are best learned **on the job**. However, Master Courses can **prepare for this**, e.g. by organising real-case projects, entrepreneurship classes and the high involvement of practitioners in classes.
- The **transfer of specialised knowledge** into **concrete matters for problem-solving** should be further strengthened by the EMMCs in future.
- For this purpose, one idea can be to **design course contents in accordance with requirements in the labour market**. A hearing of companies in the field, study results on required competences or an independent survey amongst employers can be appropriate sources for such feedback.
- As all coordinators stress the importance of **maintaining the autonomy of their course design and its contents**, a prominent strategy can be the involvement of companies as **external observers**, e.g. via an advisory board.



5. Current occupation of EM graduates and employment prospects

This chapter compiles a set of very concrete findings on the occupation of Erasmus Mundus graduates within the sample. It is thus the most extensive part within the analysis. The results are mainly of a quantitative nature, supplemented by qualitative results whenever possible in order to reassess or to summarize findings. Both qualitative and quantitative results give solid information on the following variables:

- the current occupation (employment status) of graduates,
- the type of organisation graduates work for,
- the job position/responsibility they hold,
- their level of salary,
- attributes that they consider most important for a job,
- their job satisfaction,
- reasons for those who have not found a permanent job yet,
- a summary of employment prospects.

General results

Summary of quantitative data on employment and occupation:

- **About 50%** of 2006 graduates have a permanent job after five years; only 3% are unemployed.
- The majority of 2010 graduates currently hold **PhD/Master positions** (30%); **Africans** are clearly the leading nationality (54%).
- **Most PhD students** are in “Science” and “Engineering”; the highest unemployment level is in “Agriculture and Veterinary”.
- 36% of all 2006 graduates still remain in **non-management positions**, while students from developing countries show a significantly higher probability of accessing higher positions.
- **32%** of the graduates rate their salary above average compared to other professionals with the same education. Only **5%** of all graduates have an **annual gross salary** of 51,000 EUR or more.
- “**Salary**” is the most important job attribute for both groups, students and graduates; “work autonomy” is lowest.
- The level of job satisfaction is rated as high by 72% of all employed graduates; graduates of “**Health and Welfare**” rate the highest and “**Humanities and Arts**” graduates rate the lowest.
- Graduates who have not yet found employment most often blame this on the **low demand in their national labour markets** or within their specific field.

Findings

5.1 Current occupation

The online survey contained a set of questions that give insight into the current occupational status of Erasmus Mundus graduates. In the following, they are presented by the most important determinant variables like nationality, field of study and year of graduation. Additionally, we focus on the type of organisation they work for and the job position they currently hold, which allows us to draw a clearer picture of the transition from university to work for the Erasmus Mundus students.

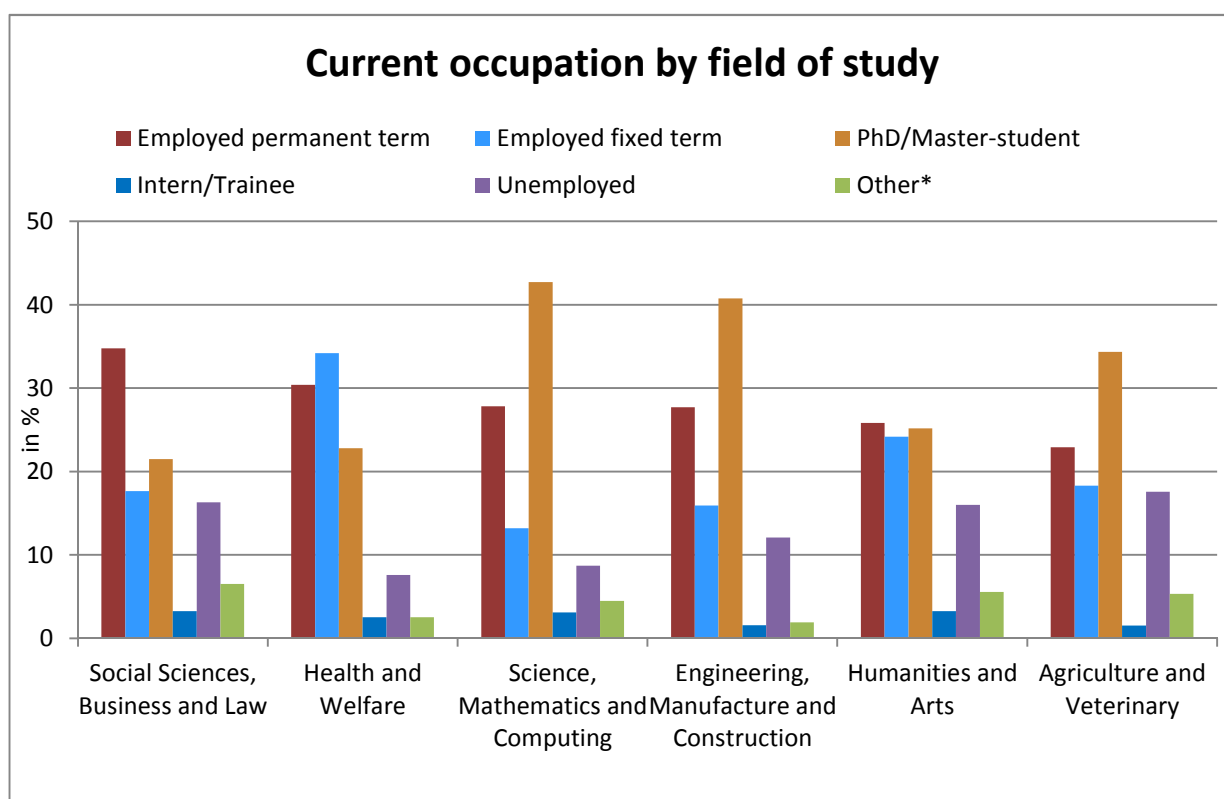


Figure 31: Current occupation by field of study (graduate population)

Source: Graduate Impact Survey 2011

* Self-employed, family care, other

The highest percentage of **employment (in the permanent term)** can be found for “Social Science, Business and Law” (35%), while it is lowest in “Agriculture and Veterinary” (23%). However, taking into account that the first years in the labour market are to be regarded as a transition period, we have to consider that the rate of **fixed-term employment** is relatively high, in particular for the sector of “Health and Welfare” (34%).



In contrast, the comparatively highest **unemployment rates**¹⁰ are shown in the disciplines “Agriculture and Veterinary” (18%), “Humanities and Arts” (16%) and “Social Sciences, Business and Law” (16%). They are notably lower in the more natural science oriented study programmes of “Health and Welfare”, “Science, Mathematics and Computing” and “Engineering, Manufacture and Construction”. At the same time, the latter two disciplines also show the highest share of **PhD/Master positions** (with 43% and 41%, respectively). This fact underpins the relatively high research orientation within the EMMCs in general. In total, 32% of all EM graduates continue after graduation with another academic programme (mostly PhD).

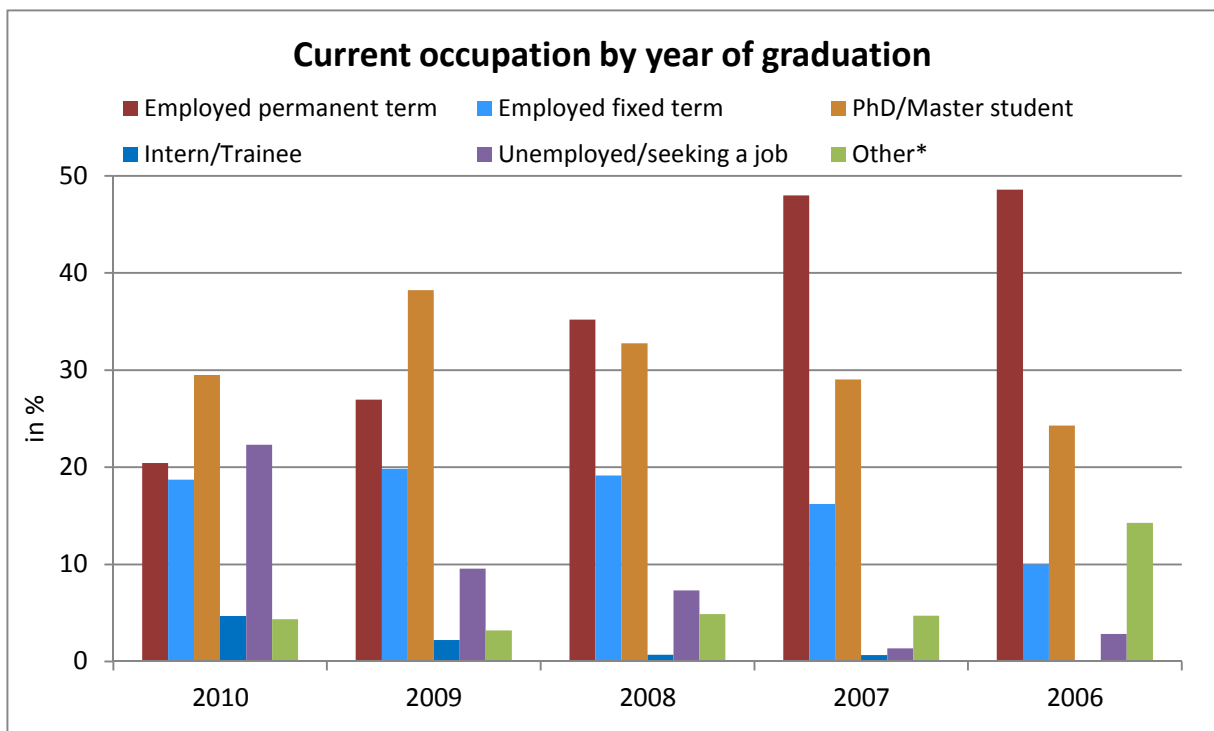


Figure 32: Current occupation by year of graduation (graduate population)

Source: Graduate Impact Survey 2011

* Self-employed, family care, other

The figure clearly reveals the **changes in the occupational status of Erasmus Mundus graduates** according to the **years after graduation**. While the current batch of graduates (in 2010) indicates a high share of unemployed or job-seeking persons and only a 20% level of permanent employment, this relation turns around within five years after the end of the studies. Some of the related features are:

- The number of **permanent job positions** increases continuously from 20% in 2010 to 49% for the 2006 graduates. About 50% of all graduates have a permanent job after five years.
- The level of **fixed-term positions** decreases in the same timeframe (19% for 2010 graduates, 10% for 2006 graduates).

¹⁰ Unemployment rate in this context does not refer to the econometric measure (taking into account the active population), but refers to the share of graduates that indicated “unemployed / seeking a job” as their occupation.



- A plurality of recent graduates is pursuing **PhD/Master degrees**; this figure reaches its peak for the 2009 batch (38%). Going further back, the share slowly decreases.
- The level of **unemployed / job-seekers** (in 2010: 22%) drops relatively quickly (within one year's batch to 10%) and decreases to 3% for those who graduated in 2006.
- **Intern/trainee** positions play a marginal role, while the high share of “others” among the 2006 graduates is due to a notable amount of self-employed persons (7%).

This first result on the distribution of occupation by nationality provides insight into the **diversity of “employment” with regards to internationality** within Erasmus Mundus. In order to depict a greater variety of the transition period, we focus on the **graduating class of 2010** – which was also the largest group of respondents in the survey.

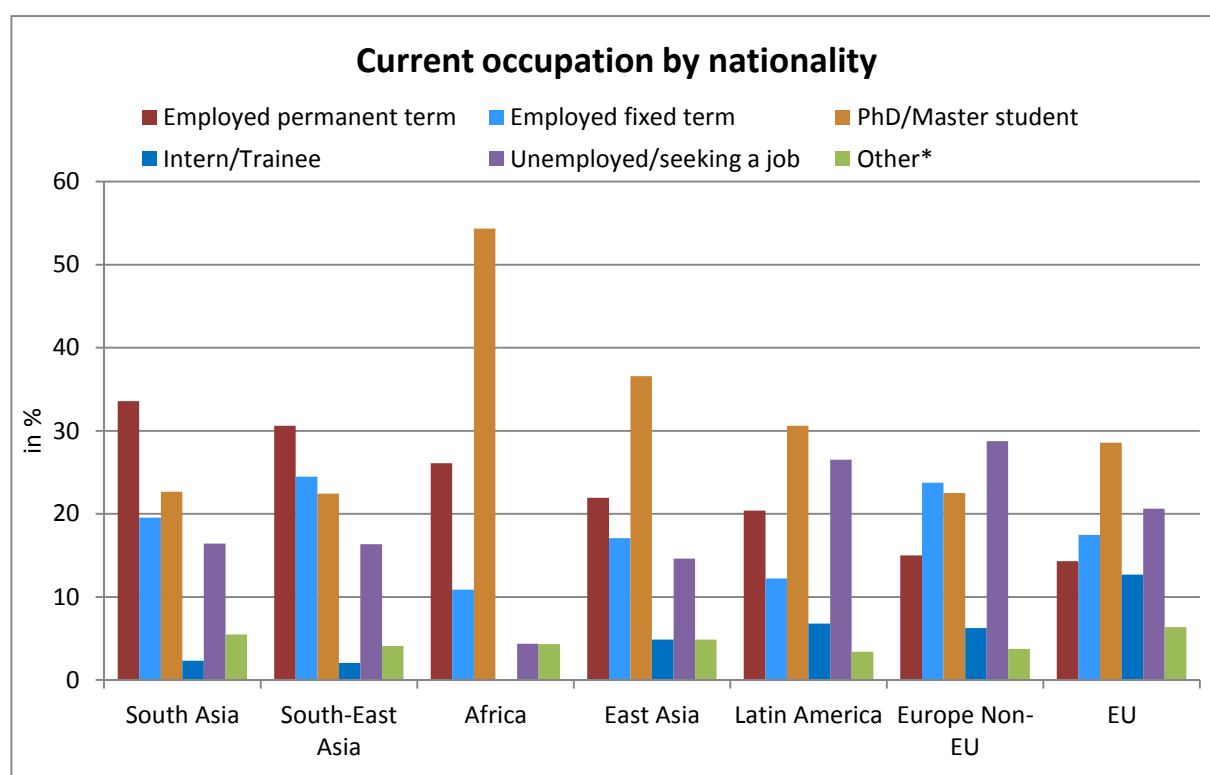


Figure 33: Current occupation by nationality** (graduates of 2010, n=580)

Source: Graduate Impact Survey 2011

* Self employed, family care, other

**Only nationalities with significant response rates

Focusing on **permanent-term employment**, graduates from South Asia (34%) and South-East Asia (31%) perform best, while EU graduates (14%) hold the bottom position. As indicated before, fixed-term employment still plays an important role, but it exceeds permanent positions only for the Europeans (both EU and non-EU). Africa is clearly leading the group of **PhD positions** with 54% of the graduates. The research positions also have the highest share of 2010 graduates from East Asia and Latin America. The percentage of graduates who are **self-employed** or in **family care** remains very low for graduates of all nationalities (on average less than 5%). As the comparison of **unemployment** rates shows, **access to the labour market** seems to be significantly more restricted for EM graduates from Europe and Latin America, while the transition is comparably quicker for Asian and especially African graduates.

Econometric models¹¹ (presented in detail in the Annexes) show that graduates from Africa and from South, West and Central Asia have a higher probability of pursuing PhDs at the time of the survey than other nationalities. There is an even stronger effect based on fields of study: graduates from Science, Mathematics and Computing, from Engineering, Manufacture and Construction and from Agriculture and Veterinary have a higher probability of continuing their studies. The age at the time of graduation is also a key factor: the older the respondents are at the time of graduation, the less likely they are to continue their studies.

Having gained insight into the distribution of occupations for Erasmus Mundus graduates, we will now take a closer look at the employed population within the sample, focusing on the type of **organisation** and the position they hold.

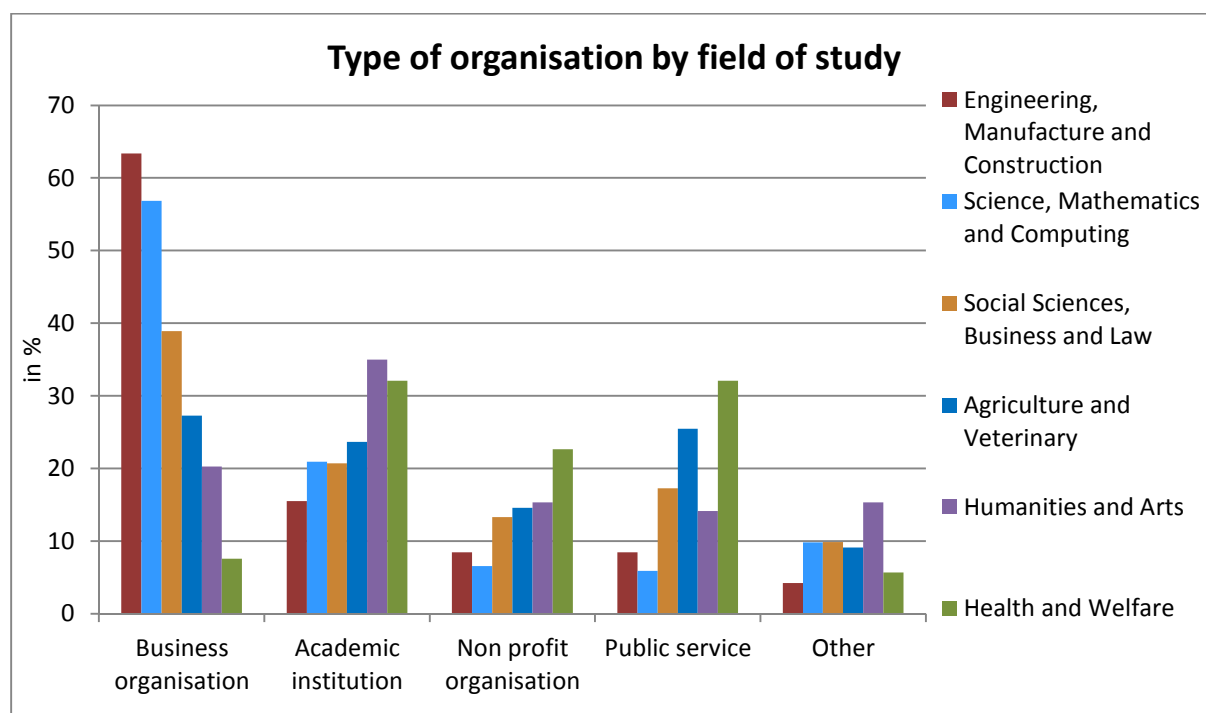


Figure 34: Type of organisation by discipline (employed graduates, n=769)

Source: Graduate Impact Survey 2011

Overall, the largest share of the graduates (40%) works for **business organisations**, followed by **academic institutions** (24%), public service (14%) and non-profit organisations (12%). 10% of the respondents indicated that they work in another category. The results show a relatively clear separation for **fields of study**:

¹¹ The Logit model was used to calculate correlations of different independent variables for a dependent variable (occupation-related) by comparison of those independent variables “all things being equal”. In particular, the following correlation coefficients have been calculated for the probability of **continuing studies**:
 - Nationality: Africa 0.66**, South West Central Asia 0.47* (reference: EU)
 - Field of study: Science/Math/Comp 0.89***, Engin/Manu/Constr 0.77***, Agric/Vet 0.66** (ref.: Social Sc./Busi/Law)
 - Age at time of graduation: “28-29” 0.60**, “30+” 0.69** (ref.: “24-25”)
 Significance levels: * p<0.05, **p<0.01, *** p<0.001



- The disciplines “Engineering, Manufacture and Construction” (63%) and “Science, Mathematics and Computing” (57%) show the highest number of graduates in business organisations and a low proportion in non-profit or public positions.
- “Health and Welfare” has the lowest share (8%) in business organisations; its employment profile is more oriented towards public service and academic institutions (both 32%).
- “Humanities and Arts” shows a similar profile, with the highest percentage of graduates in academic institutions (35%).
- “Social Sciences, Business and Law” and “Agriculture and Veterinary” graduates seem to be the most broadly oriented with regard to employing organisations.

The assessment of competences (see Chapter 4) has shown that EM graduates particularly stand out for their high international competences. Is this also reflected in their current occupation? The evaluation of the item “**international relations at work**” indeed shows that a large population (55%) of all employed graduates do (very) often deal with international colleagues or customers, 35% even “very frequently”. Workers in the fields “Health and Welfare” and “Agriculture and Veterinary” have less international contacts in their activities – possibly due to the local approach that jobs in those fields often have. Moreover, international relations at work are also more common for people from the EU than for employed graduates from other regions. The most important determinant of this factor, however, is the type of organisation.

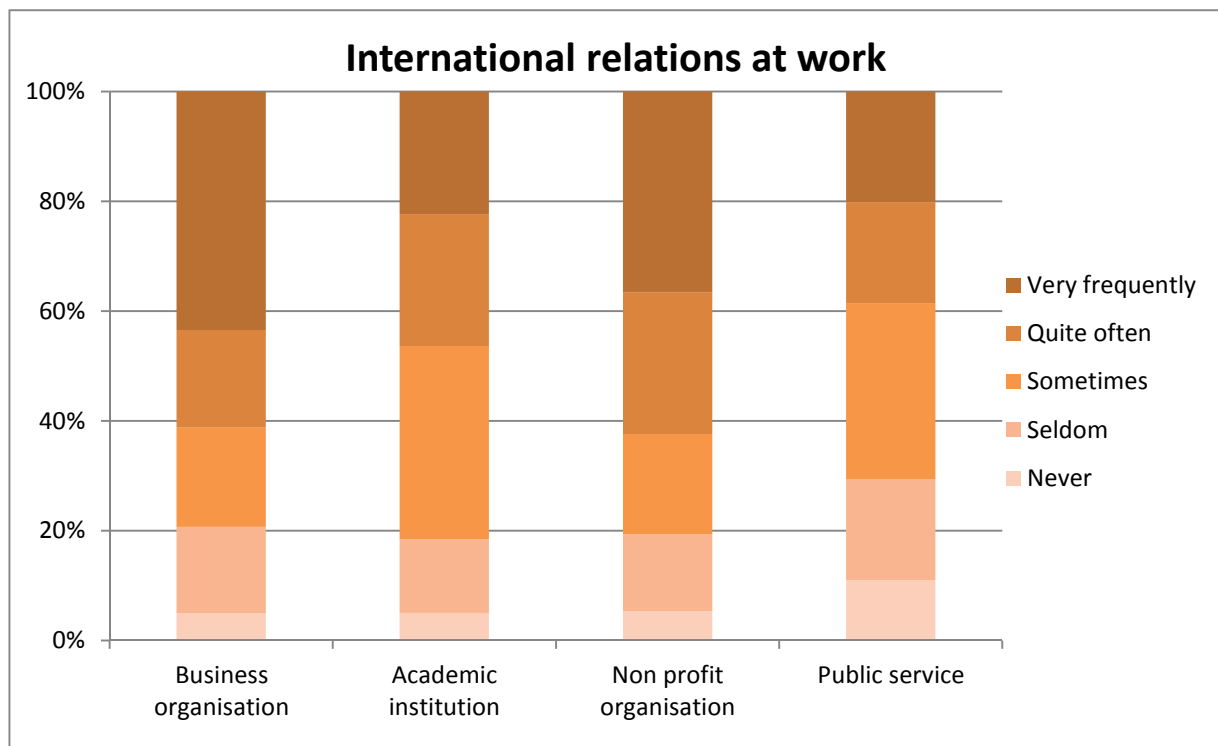


Figure 35: International relations by type of organisation (employed graduates working)
Source: Graduate Impact Survey 2011



Thus, more than 60% of those employed in **business and in non-profit organisations** do **(very) frequently cooperate at an international level**, while this share decreases to less than 40% for public servants. Academic institutions show a balanced level. From this point of view, the experience in an Erasmus Mundus Master Course seems to qualify especially for a career in a private or non-profit organisation, within which international competences are required.

To further clarify the occupational status, the graduates were also asked about their **current position** within their organisation.

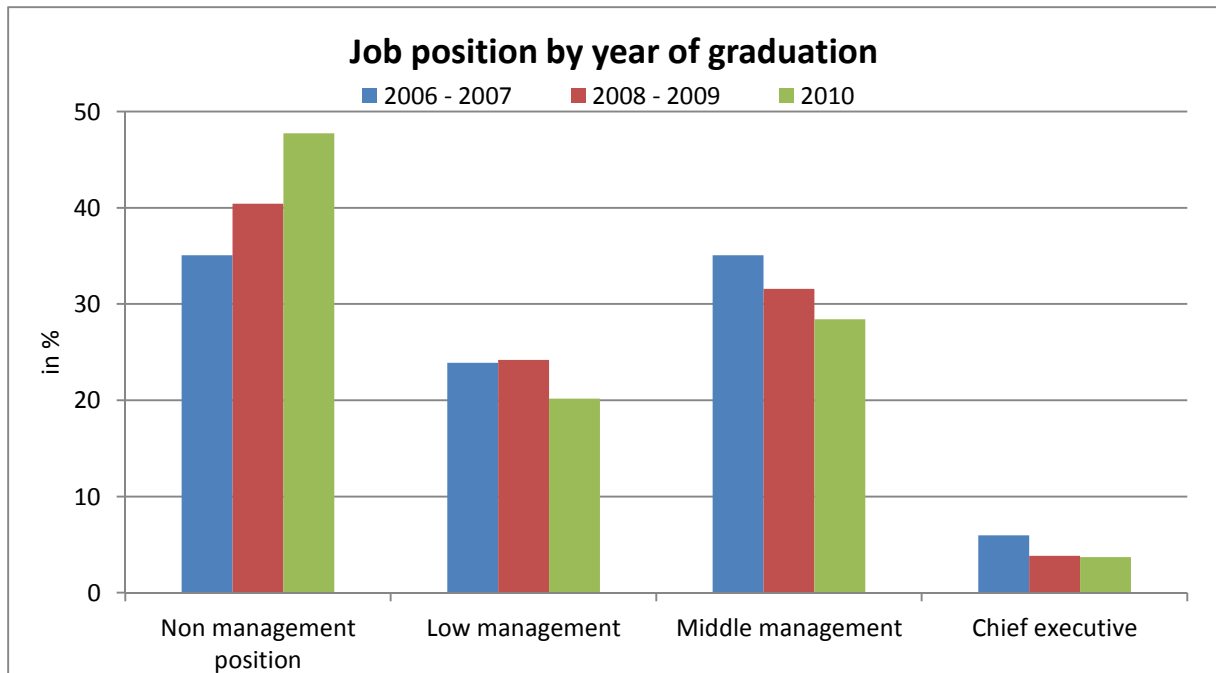


Figure 36: Job position by year of graduation (employed graduates)

Source: Graduate Impact Survey 2011

About 48% of the 2010 graduates hold jobs in **non-management** positions, and 36% of the 2006 graduates still remain in these positions. However, an average of about 30% of graduates across all years hold positions in **middle management**, and around 22% in low management. A minority of 6% of all graduates are in a position as **chief executive** – about 4% for graduating classes of 2006/07 and 2008/09.



A particularly interesting result comes to light when we assess the **job position by nationality** of the graduates. Here the categories were clustered into “high position” (chief executive and middle management) and “lower position” (low or non-management).

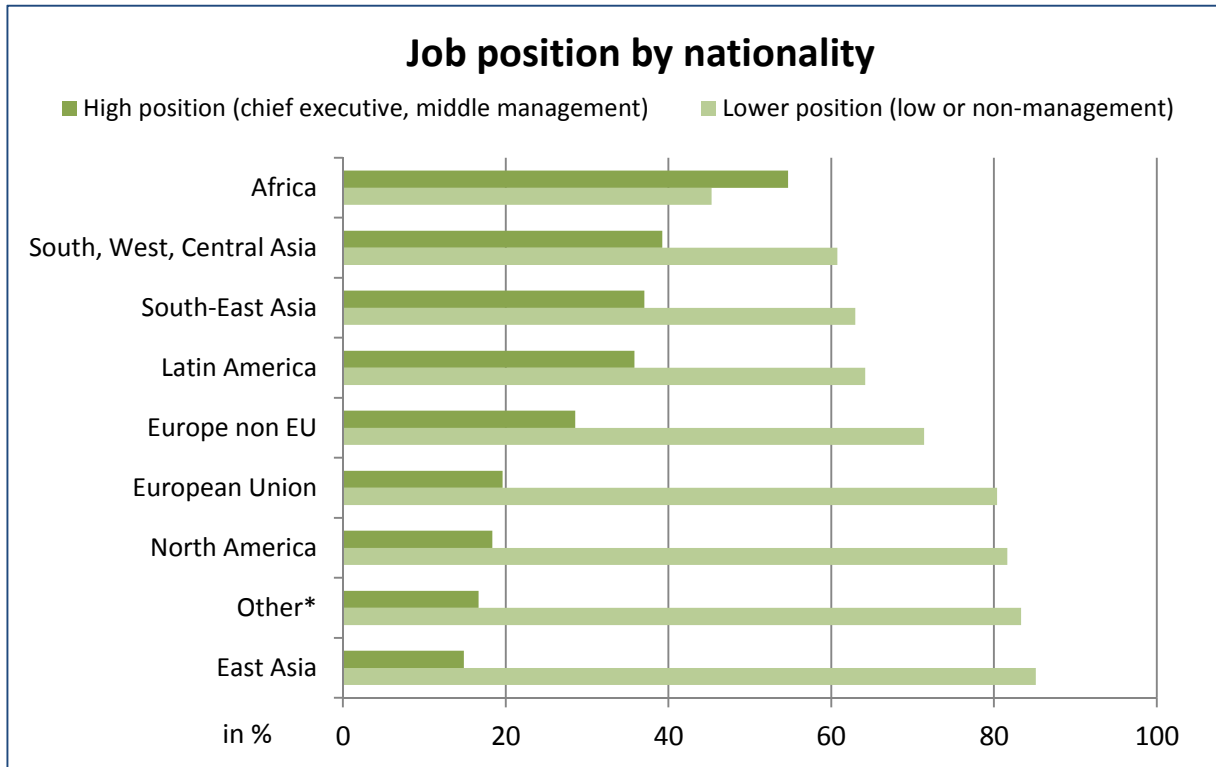


Figure 37: Job position by nationality (employed graduates)

Source: Graduate Impact Survey 2011

*Other: Oceania and undefined

It becomes evident that especially graduates from **Africa** (55%) and Asia are more likely to enter into **high positions** immediately following their studies. For graduate students from industrialised countries (EU, North America, China, Japan, Korea) with an Erasmus Mundus degree, accessing the labour market in a lower position is much more typical.

The econometric analysis¹² confirms this result. Moreover, it also shows the influence of the **field of study**. Graduates from Agriculture and Veterinary show a higher probability of being in a senior position at the time of the survey than employed graduates from Social Sciences, Business and Law (the reference category). On the contrary, graduates from Humanities and Arts and from Science, Mathematics and Computing have a lower probability of being in a senior position. Furthermore, graduates who already held a degree higher than Bachelor before entering the EMMC have a higher probability of being employed in a senior position after graduation.

¹² Correlation coefficients for the probability of being employed in a **high position**:

- Nationality: Africa 1.34***, South West Central Asia 0.94***, Latin America 0.76* (ref.: EU)

- Field of study: Agric/Vet 0.91**, Human/Arts -0.71**, Science/Math/Comp -0.52* (ref.: Social Sc/Busi/Law)

- Degree higher than Bachelor: 0.47*

Significance levels: * p<0.05, **p<0.01, *** p<0.001

Another important factor when assessing the quality of employment is of course the **level of income**. In order to be able to assess both a realistic image of the actual salary that Erasmus Mundus graduates earn and to incorporate the (sometimes enormous) differences that a specific salary means in diverse labour markets of the world, this variable was gathered both in absolute and relative terms.

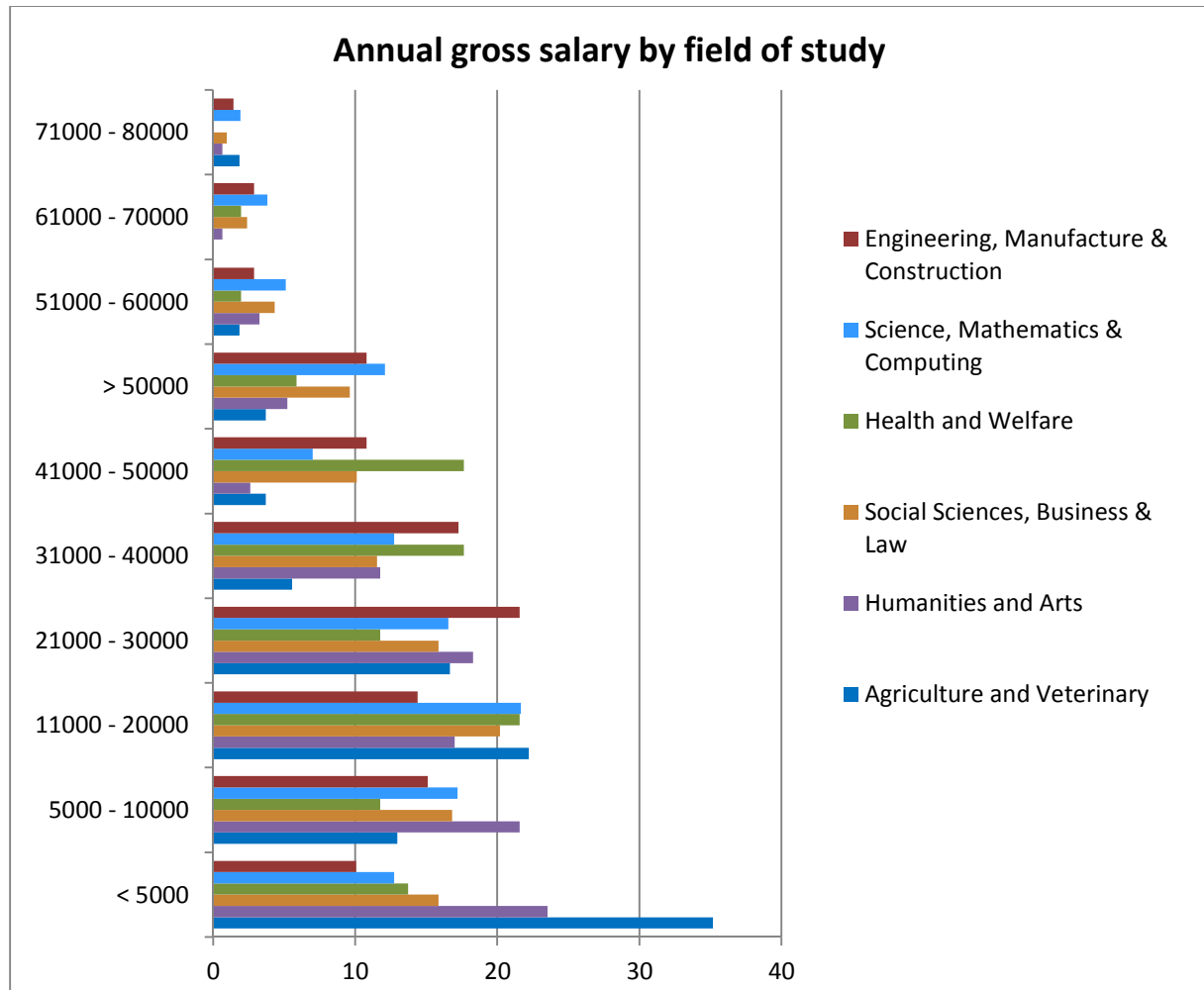


Figure 38: Approximate annual gross salary in EUR (employed graduates)

Source: Graduate Impact Survey 2011

The largest group of graduates from all disciplines (36%) is concentrated in the **annual gross salary** categories of 11,000 to 30,000 EUR. However, another large group (34%) earns less than 10,000 EUR. More than **35% of the graduates** in “Agriculture and Veterinary” earn less than 5,000€/year, and 45% of graduates from “Humanities and Arts” earn less than 10,000. Only **5%** of all graduates have an annual gross salary of more than 50,000 EUR. “Science, Mathematics and Computing” (24%) and “Engineering, Manufacture and Construction” (21%) perform best in this category.

In order to assess the relative value of the salary in the graduates' country of residence, the respondents were asked to rate their current salary "compared to other professionals in their field with the same level of education".

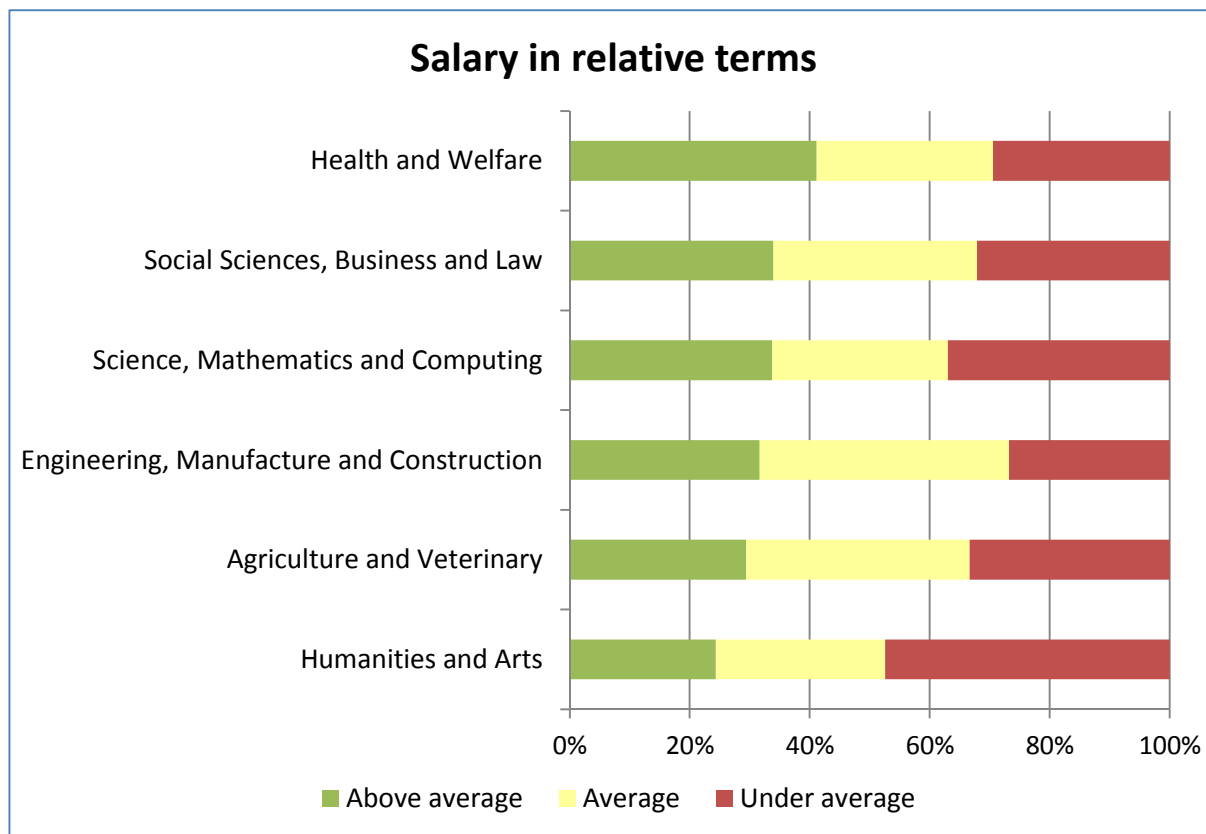


Figure 39: Salary in relative terms by field of study (employed graduates)

Source: Graduate Impact Survey 2011

Overall, the **distribution** is **almost balanced**: 32% of graduates rate their salary above average compared to other professionals in their field with the same level of education, 33% rate it as average and 35% below average. This relatively modest rating might be due to the graduates having just recently entered the labour market – which on the other hand was expected to be included in the respondents' subjective responses.

Considering the **different fields of study**, we can provide a solid assessment on salaries taking into account the results from Figure 38:

- **“Humanities and Arts”** is **most critical**, with an assessment of 54% “under average” and low rates for absolute salary.
- Employed EM graduates from “Agriculture and Veterinary” have the lowest earnings in absolute numbers, but 67% assess this salary as average or above.
- The disciplines with the highest incomes in absolute numbers – „Science, Mathematics and Computing“ and “Engineering, Manufacture and Construction” – are average in the self-assessment comparison with other professionals.
- EM graduates from **“Health and Welfare”** are the group that rate their salary best in this sample (41% “above average”).



5.2 Job attributes and satisfaction

In analysing the current occupation of Erasmus Mundus graduates, we have so far concentrated on objective employment data. However, the findings presented in this report draw a line from merely quantifying the occupational status to a valorisation of aspects of occupational quality (position, salary). In this next step, the focus is put on the **subjective aspects of employment**, as employability is not only a matter of having a job but should also reflect whether someone likes his or her current job or sees good prospects for career development in it. Therefore, the survey also analysed attributes regarded as important for a job and the level of satisfaction which employed graduates achieve through their current job.

In a first estimation, both students and graduates were asked to indicate three attributes that they judged most important for employment in general.

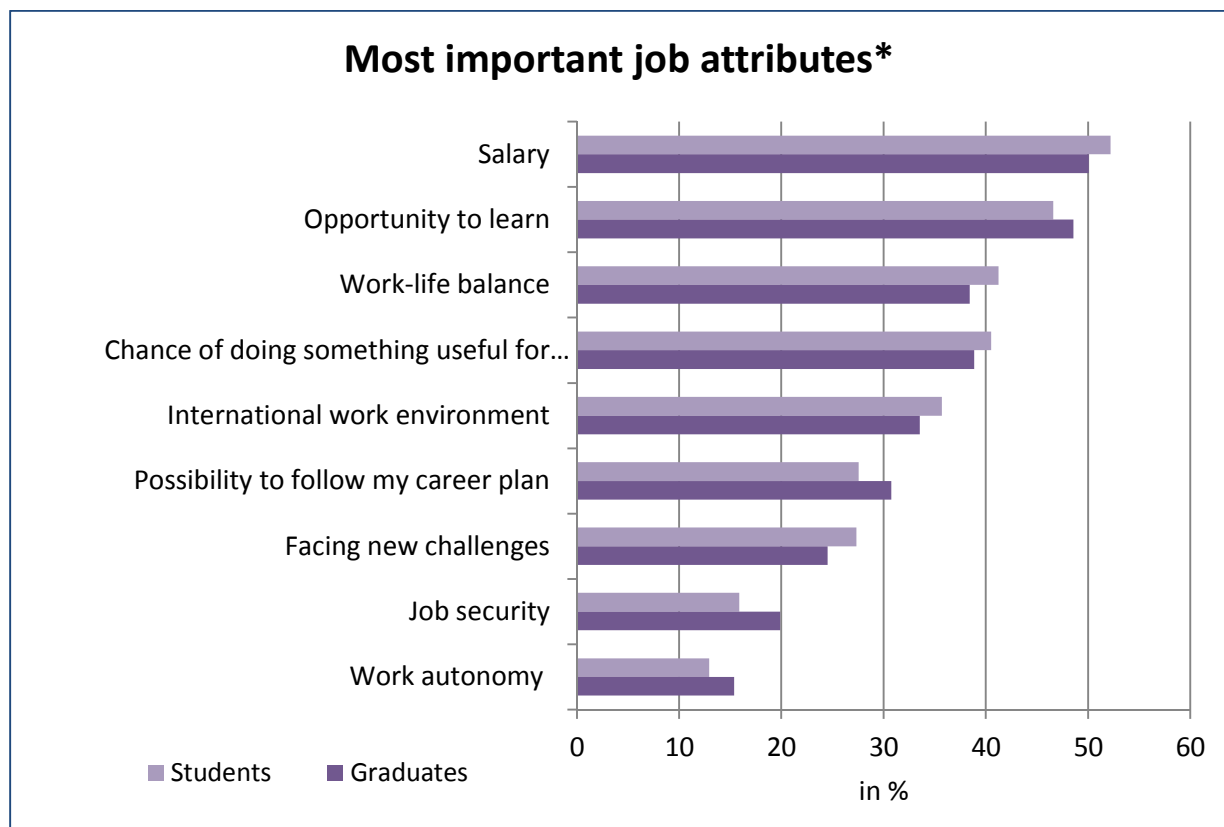


Figure 40: Most important job attributes

Source: Graduate Impact Survey 2011

* Respondents were to choose three out of nine attributes most important for a job

First, the **overall importance** of attributes is rated very similarly by graduates and students. "Salary" is the most important job attribute for both groups – students (53%) and graduates (50%) – closely followed by "opportunity to learn" (46% and 48%, respectively), while "work autonomy" has the lowest rating for both groups. There are characteristic differences. Attributes like "job security" and "possibility to follow my career plan" are considered slightly more important by graduates, while "facing new challenges" and "working in an international work environment" are rated slightly higher by students.

Based on this estimation, we asked employed graduates to give a **self-assessment of their current job satisfaction** on a scale from “--” to “++”.

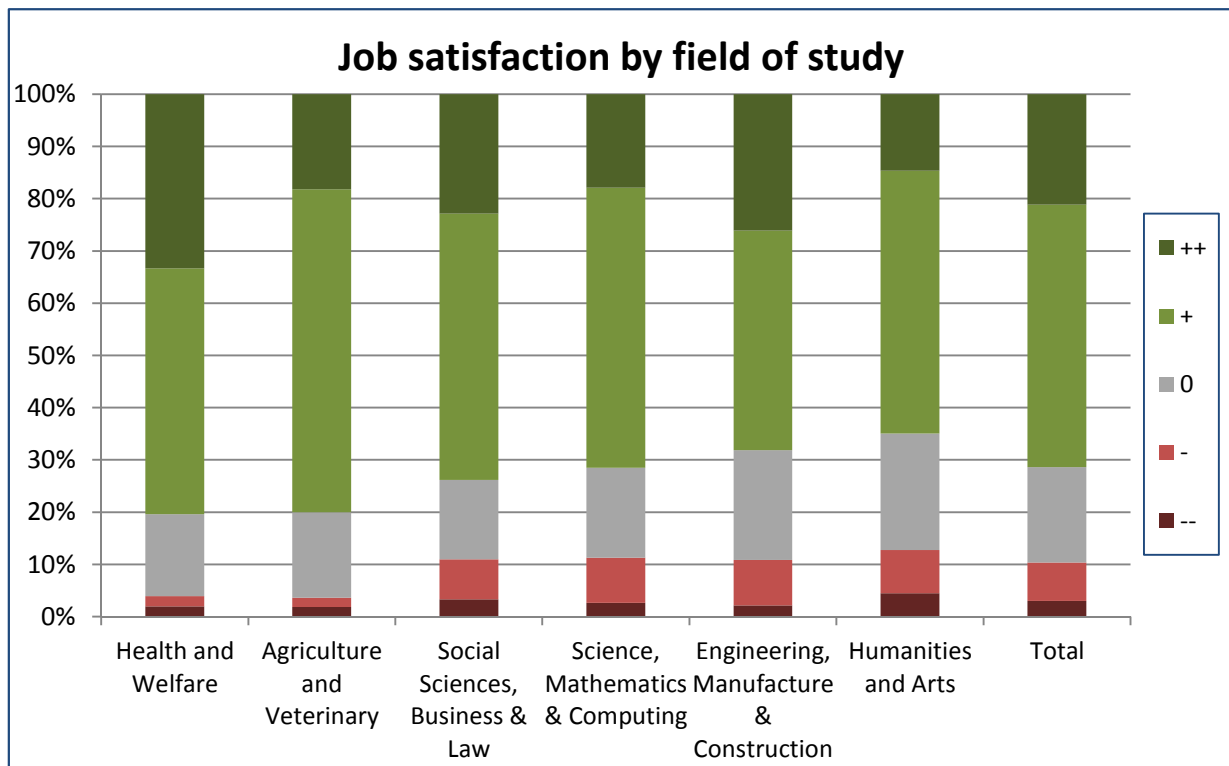


Figure 41: Level of job satisfaction by field of study (employed graduates)

Source: Graduate Impact Survey 2011

That analysis indicates a very high overall **job satisfaction** for employed graduates from Erasmus Mundus Masters Courses. Over all fields of study, **72%** are satisfied (top 2 items +, ++) with their current occupation. The level of job satisfaction is rated best (33% in “++”) by graduates from “**Health and Welfare**” (33%). Compared to a rather low level when assessing the salary, “Agriculture and Veterinary” performs good in this category, with a satisfaction level (“++” or “+”) of 70% of the graduates. A low level of job satisfaction (“-” and “--”) can be observed only for an average of 10% of all graduates. Again, “**Humanities and Arts**” is in last position regarding this evaluation.

Job satisfaction of course correlates with other variables:

- Satisfaction is only slightly higher for graduates with a permanent **contract** compared to those with a fixed-term contract but remarkably lower (“+/++” only 53%) for self-employed graduates.
- One’s satisfaction with one’s current job highly correlates with an above average **salary**.¹³
- As for types of **organisation**, the satisfaction level is highest for graduates employed in non-profit organisations.
- There is also a slight **gender** effect to observe. Employed male graduates indicate higher job satisfaction than their female cohorts¹⁴.
- When assessing the **country of residence** – i.e. the respective labour market for the respondent – we find a correlation among industrialised countries: the satisfaction for people working in North America and the European Union is highest.

¹³ Correlation: Salary above average 0.90*** (ref.: average)

¹⁴ Correlation: Gender -0.52**

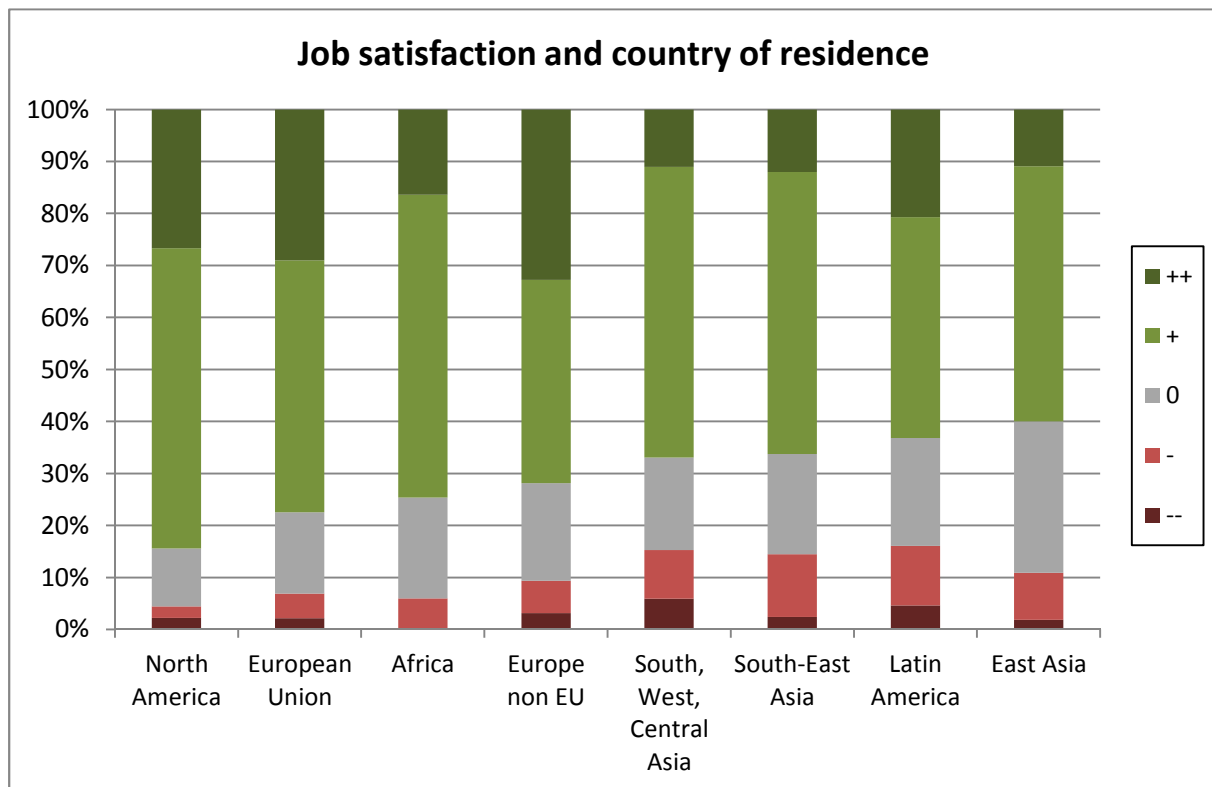


Figure 42: Level of job satisfaction by country of residence (employed graduates) Source: Graduate Impact Survey 2011

In addition to the high average level of job satisfaction, the survey allows those graduates not satisfied with their current jobs to assess their future prospects while at the same time returning to the attributes considered important in employment. Therefore, all graduates characterising their current job satisfaction with “0”, “-” or “- -” were asked about their **confidence “to find a job that meets their personal priority during the next 3-5 years”**. 57% of this group declared that they are (very) confident of finding a suitable job within the next 3-5 years, while only 14% are less or not confident. The distribution for fields of study is again consistent, with “Health and Welfare” and “Agriculture and Veterinary” performing best and “Humanities and Arts” in the bottom position. Furthermore, the level of confidence grows for students that have graduated earlier.

Summing up, these results show that graduates from EMMCs most likely obtain access to suitable and satisfying positions during the transition phase after their studies.

5.3 Reasons for not having found a permanent job

So far, extensive results have been delivered on the group of employed graduates. However, there is a group that consists of **13% of the graduates** who are **unemployed or job-seeking** after their Erasmus Mundus studies. Gathering their opinions helps to shed light on employability from a very different angle. It will put the focus on the absorption of specific markets and in specific countries but also helps us to identify shortcomings of the Erasmus Mundus Master’s programmes in order to tackle “typical” problems concerning the employability of graduates in the future.

All 207 graduates without a current form of employment (permanent, fixed-term, self-employed or internship) and not enrolled in an additional advanced degree or PhD programme were asked in an **open question** (250 characters) to indicate their **reasons “for not having found a permanent job yet”**. Almost all of them (197) answered the question – a remarkable share for a voluntary answer that further underlines the importance of evaluating this issue.

For this question, all open answers were clustered and re-grouped into characteristic items. The distribution of the items allows to survey the general reasoning, while in a second step every category is exemplified with characteristic statements.

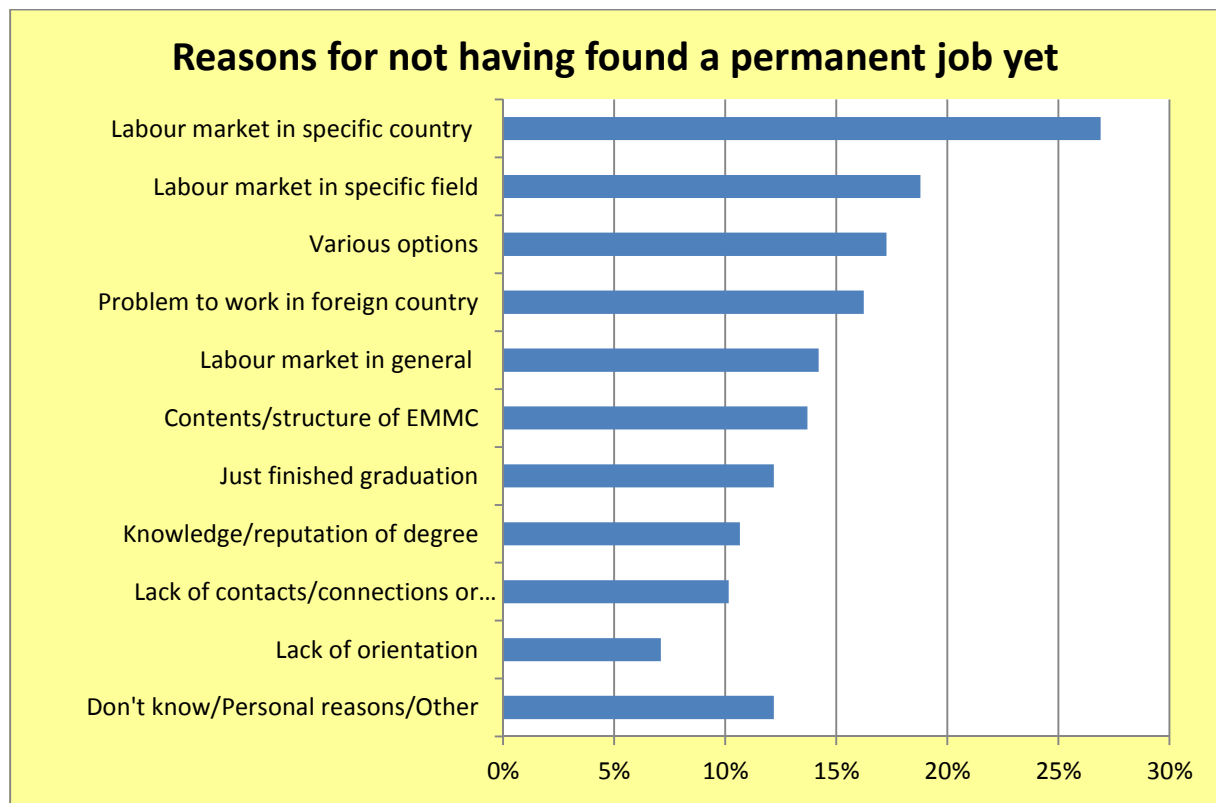


Figure 43: Clustered reasons for unemployment (graduates unemployed/seeking a job, n=197), multiple attribution possible Source: Graduate Impact Survey 2011



Labour market in a specific country (27%)

The labour demand is very different in the diverse countries in which EMMC graduates reside and search for employment. Some of the graduates – the highest share within this group – face the difficulty that their country is experiencing an economic recession or has generally bad conditions for the absorption of the labour force (e.g. corruption, lack of public funding). A particular discouragement for many of the concerned graduates is that their European university degree in particular is not sought after (over-qualification) or even regarded distrustfully by employers. Many of these bad preconditions apply to developing countries, but there are also graduates from certain industrialised countries who appear among the following statements:

- *“Unemployment rate is high in the country where I reside at the moment and it is difficult for those of us that have other country qualification/certificate.”*
- *“Because here in FYROM every job is based on the politics. No one cares about the qualifications.”*
- *“I could not find employment because of stagnation in economic development in the country, poor managerial skills of the local government, and reserved attitude towards people with higher (specialized) education.”*
- *“The job market is poor. I don’t think US employers particularly care for foreign education.”*
- *“There are very few organisations working in the area of my profession as it is not the development priority of the government of Ethiopia. Hence, there is very limited chance of securing a permanent job in my profession in Ethiopia.”*
- *“I’m almost 1 year ago looking for work. The current crisis in Spain for architects. (...)It is sad to be prepared and not finding a job.”*
- *“My country is collapsing and its officials feel threatened by the presence of well educated and self confident young professionals with international experience”*

Labour market in a specific field (19%):

Very often, the first reason goes along with the argumentation that the specific field in which the person has graduated has experienced a downturn or is generally not sought after. Despite the necessary relation to a regional market, it nevertheless becomes evident that there are specific disciplines and activities (e.g. humanitarian aid, NGOs, journalism) that face particular difficulties accessing jobs. Among this group, some statements also describe the difficulty for young university graduates to climb from ever-changing internships or trainee programmes to regular employment.

- *“Forestry and climate change is a field not very well known in Colombia. There are some other issues where companies prefer to invest.”*
- *“(…)a culture of abusing interns in Germany- strong competition amongst graduates from social and political sciences in the international development sector”*
- *“(…)general economic situation and bad job situation in the field of journalism / communications- difficulties for people seeking first permanent job (“graduate unemployment”)*
- *“The elitist nature of international organisations – need to “intern” or work for free in most of the cases, or have contacts.”*
- *“There are very few organisations working in the area of my profession as it is not the development priority of the government of Ethiopia. Hence, there is very limited chance of securing a permanent job in my profession in Ethiopia.”*



Various options (17%)

This group is to be regarded the “least critical” from the graduates seeking a job. The related statements all indicated that people have different options which they are currently considering: for instance pursuing a PhD, building up their own business or waiting for the right position. In that respect, they are characterised by self-confidence rather than by the desperate need to “get a job”:

- *“That it takes time to find a good job. I could be working on a low-paying job for which I am overqualified, but I'd rather hold on for a better opportunity while I can. I'll give it between six and nine months.”*
- *“I think I'm quite close to landing a job (I've been invited to interview with two universities), but I only started applying intensively in November, so I think this length of time is OK.”*
- *“Developing a project in the hope to create my own job, but currently not considered as a job as not getting salary.”*
- *“I am launching a consultancy company.”*
- *“I am looking for PhD before starting my career. I am not looking for a job for the moment.”*

Problem to work in a foreign country (16%)

In contrast to the previous category, this group expresses a desire to work in a country different from their own – in most cases Europe – but faces insurmountable obstacles: firstly the difficulty of obtaining a work visa, secondly language barriers and thirdly a lack of knowledge of the professional markets (e.g. personal relations, how and where to apply) in the respective countries.

- *“Job market is very tough in Sweden, Denmark and Norway for people without good language skills and contacts. My work over the past 18 months has been sporadic at best. I decided to give up on waiting any longer and will move back to Australia.”*
- *“Language barrier and a lack of guidance from university for international students to how to search for a job and how to contact employers”*
- *“Language barrier and unable to get visa or stay permit.”*
- *“Only big international companies are interested in having foreigners working there. Small to medium producers instead of finding it rewarding, they see it as a disadvantage.”*
- *“Work permit and visa issues. Being a non-European there are no opportunities for us to secure a job after our master studies in Europe due to work permit issues (we are not allowed to stay in Europe after the one year work finding visa...”*
- *“I didn't apply for a job in Europe because I know they very rarely consider foreigners for jobs when local people are available-I don't have the language skills required by the companies to work for them”*
- *“Danish language skills lacking. Unable to find suitable job with medium of communication English. Lack of confidence in myself because of no know-how of the field of Media in Denmark.”*

Labour market in general (14%)

The statements of this category refer to general bad conditions in the labour market, often related to the economic and financial crisis, and are not further specified to fields or countries.

- *“Economic crisis, high unemployment rate”*
- *“Tight Economy and so companies are not hiring as much as before...”*



Contents/structure of EMMC (14%)

Some respondents complained about the insignificance of their completed Master's Course for the job search. The most common reasoning is either an overly broad field of competences that makes it difficult to apply for concrete positions or an overly specific educational or research orientation that limits the range of the applicant. Another disadvantage mentioned is the lack of support by the university to find suitable jobs or prepare for a career.

- *"No assistance from the program in networking or searching job opportunities. No time was allowed to do internship during the Master"*
- *"My EMMC was too interdisciplinary so is it difficult to find the PhD I am looking for"*
- *"My Masters program was Research based and there aren't any research institutes or organization in my home country that require the kind of high-tech skills that I acquired during the 2-years. Also, the Masters program did not include exposure to the industry."*
- *"The program was theoretical oriented. Therefore, it has no value or impact on real world, especially when applying for a practical/administrative job, except for research based isolated work."*
- *"Poor networking opportunities with alumni and faculty. With such a diverse population of students, it is hard to network in a specific area."*

Just finished graduation (12%)

This group claims not to have put too much effort into the job search because of having just passed graduation¹⁵. Although this fact cannot be seriously controlled, the subjective statements reveal a transitional status that this group still assigns to itself instead of a self-description as "unemployed".

- *"Just graduated/returned from europe-contemplating on next career move"*
- *"Just came back from UK, need a rest, and finding a permanent job in Serbia may be a long process"*
- *"I just finished my graduation, so I came back home after 2 years, I have applied for few jobs and I am quite certain, I will find one soon."*

Knowledge/reputation of degree (11%)

This group of respondents makes explicit reference to the little knowledge or valorisation of their degree (in their respective countries or fields). Another problem typically faced for this group is that some countries do not recognize the multiple EM degrees as equivalent.

- *"Bad market, diploma not known in France (Human Resource have not idea of my Erasmus Mundus valour)."*
- *"In India, Masters from other countries are not considered equivalent to Indian Masters. The dual degree from two different institutions are not accepted. The overall grade calculatiuon is different."*
- *"Erasmus Mundus/higher education in continental Europe is virtually unrecognized in my home country. My EM degree adds little value to my curriculum vitae."*
- *"The degree was not awarded in time."*

¹⁵ At the time of the survey, those EMMCs of 18 months duration have been in the phase of or closely after the Master Thesis. Some were still waiting for their diploma to be issued.



Lack of contacts/connections or experience (10%)

A smaller group makes reference to the lack of professional networks and other connections (irrespective of Erasmus Mundus) relevant to or even decisive in gaining access to suitable jobs or sufficient experience required in the job advertisements.

- *“My country's condition is not so good and I lost the connection I had back when I was home after leaving for the master. And it is hard to find a job abroad now because of the economic crisis.”*
- *“The job market in this field depends on 'who-you-know' not 'what you know'. Without close interaction with professionals in the field during the master programme, I didn't make the right contacts in order to get a job.”*
- *“Any jobs offered in the related field require field experiences. my previous experiences in other field of work are not appreciated.”*

Lack of orientation (7%)

This specific cluster of reasons relates most to the graduate's individual perspective. People express a lack of interest, indecision regarding which direction to take or general self-criticism.

- *“(….)my personality is like this, take everything slow(…) most of my EM colleges are already settled down(…)”*
- *“(…)lack of job offers that interests me (….)”*
- *“(…)very general and broad area. It is no problem for students who already know in which field they are going to achieve. However, for students like me, who are looking for directions always feel even more confused.”*

Don't know / personal reasons / other (12%)

In this last category, we summarized statements that either express incomprehension of the current situation, indicate personal/private decisions or describe other aspects as reasons for not having found a job yet.

- *“I do not know really, but I tried all I could to get a job. I sent my CV on more than 200 adress, but any responce. I was trying in international organisations (UN offices, OECD, EU offices) but nothing yet.”*



5.4 Employment prospects by field of study

In order to sum up the central results of this chapter, we will draw a comparison between the quantitative data gained from the online survey and the information gathered in the qualitative interviews. This will allow us to make a statement on the employment prospects of Erasmus Mundus graduates. Therefore, we will focus on the central independent variable used throughout this analysis: the different **fields of study**.

During the interviews, all coordinators were asked about the **employment prospects and positions their graduates work in**. This – indirect – feedback on job attributes and positions was reassessed by the quantitative results. Besides the variable “field of study”, we find another influence to be meaningful: there is also a clear correlation between the **type of Masters** (see chapter III.2.3) and future positions. In application-oriented EMMCs students are more encouraged to work in different sectors of the private job market, while research oriented programmes prepare for PhD positions, which often provide perspectives for high level Research and Development or institute positions but import some insecurity due to the dependence on public funding.

The following table is the result of this compared assessment:

Field of Study	Character of Master	Careers: sectors/positions	Employment prospects
Agriculture and Veterinary	highly application oriented	<ul style="list-style-type: none"> employers mainly international organisations or public institutions 	<ul style="list-style-type: none"> highly dependent on regional perspectives quite strong international competition employment and income prospects worse than in other fields positions and satisfaction higher than in other fields
Engineering, Manufacture and Construction	more research oriented	<ul style="list-style-type: none"> either PhD or R&D positions in industry often large companies links already during course of studies 	<ul style="list-style-type: none"> good employment perspectives: high demand and low unemployment good prospects for salary also only moderate as for career promotion prospects and satisfaction
Health and Welfare	mix between research and application elements	<ul style="list-style-type: none"> high variety: hospitals, rehabilitation centres, institutes and laboratories public and private sector often based on previous experience 	<ul style="list-style-type: none"> good overall prospects, but not without difficulties (high responsibility, fixed-term contracts) good access to high positions leading in job satisfaction and relative salary



Humanities and Arts	stronger research orientation	<ul style="list-style-type: none"> researchers, university teachers, organisations 	<ul style="list-style-type: none"> unsteady, prospects often depending upon public funding or awareness of the topic relative to other fields: high unemployment, lowest income, lowest job satisfaction
Science, Mathematics and Computing	either clear research or clear application orientation	<ul style="list-style-type: none"> either positions in leading industries or at university/labs link between both spheres crucial point for employability 	<ul style="list-style-type: none"> generally very good employment prospects some problems due to emerging technologies or positions not matching qualification (research vs. practical orientation) quite good income expectations lowest share in management positions
Social Sciences, Business and Law	strong application orientation	<ul style="list-style-type: none"> wide-spread, depending on specialisation: consulting, finance, international organisations, journalism etc. 	<ul style="list-style-type: none"> quite good prospects, particularly better than in comparable study programmes of the field internationality and interdisciplinary often added value

Table 5: Employment prospect for field of study and type of Master

Source: Interview results

The further analysis will complement this descriptive summary with a quantitative indexation of the central employment categories and the verification of crucial correlations (see Chapter 9).

Perspectives and recommendations

- The Erasmus Mundus programmes enable their students to achieve rewarding and **highly satisfying positions**.
- Nevertheless, there are also – as in other HE careers – **insecurities in terms of contracts and salary** that **highly depend upon academic disciplines**. Overall, **Health and Welfare** performs best, while **Humanities and Arts** is the most unsteady sector.
- Therefore, EMMC representatives will highly rely upon **interdisciplinary exchange** and **intradisciplinary consulting** in order to accentuate their particular added value for employability.
- A particular feature of Erasmus Mundus is the **high percentage of PhD candidates**. Whether this high share of research can be considered an **additional boost for employability** will require further monitoring.



6. Residence issues / Mobility

6.1 Definition of “mobility” in the context of entry to the labour market

As we have seen in the previous chapters, employment and career opportunities are closely linked to which countries, i.e. target markets, graduate students access to apply for a job. For the Erasmus Mundus programme in general, the issue of mobility has extremely high relevance. Not only do Erasmus Mundus students have a mandatory mobility part during their studies, but after graduation, many of them can also expect to be mobile again for entry into the labour market. The latter of these situations is of interest here when we regard **graduates’ mobility in the context of transition to work**.

The examination of students’ mobility can give important insights into the impact of EM courses on students’ readiness to move for a job. For this purpose, graduates have been asked to indicate their **actual region of residence** and their **home region**. In case of a non-convergence of these two, graduates were considered to be in a **mobility situation**. In the following, these graduates are regarded as “mobile”, while the complementary group is referred to as “non-mobile”. The results within this chapter will deal with mobility in terms of “factual mobility”, i.e. taking into consideration only the graduates’ decision to live in a certain country.

Comparatively, we present preferences as reasons for mobility, also taking into account “desired mobility”, i.e. graduates’ or students’ wishes to work/live in certain countries. Simultaneously, coordinators were asked in the qualitative interviews to estimate the proportion of returning and remaining graduates and to offer their assumptions on possible reasons for their choices.

General results

Regarding the transition to work for all EM graduates of the sample, we find an **equilibrium** between a tendency to return to (or stay in) the home region (52%) and the tendency to remain in (or go to) another region (48%), the latter being overwhelmingly in the EU. Secondly, **EU graduates** are significantly **less mobile (11%)** than **non-EU nationals (over 50%)**. Thus, there is a notable mobility trend towards the European Union, for which characteristic reasons can be assessed.

The main reasons for mobility among students/graduates are **better job opportunities (career perspectives)**, while home and family issues act as the most important **pull factor** for the home countries. An **extended stay in Europe** for EM graduates is often **related to a PhD** or a further academic career, while Europeans tend toward mobility towards other continents, if at all, because of better job opportunities. A **general trend** can be depicted: many non-European graduates try to extend their stay in Europe to **gain years of work experience** or pursue a **PhD**, and many of them plan to **return to their home country** thereafter.



Findings

6.2 Actual mobility of EM graduates

All in all, no clear tendency towards staying in Europe or leaving after graduation can be revealed. Nevertheless, differences and specificities can be found in relation to the **nationality**, the **actual occupation** or the **field of study** of the mobile or non-mobile graduates.

The following result shows divergent mobility patterns with regard to the origin of the graduates:

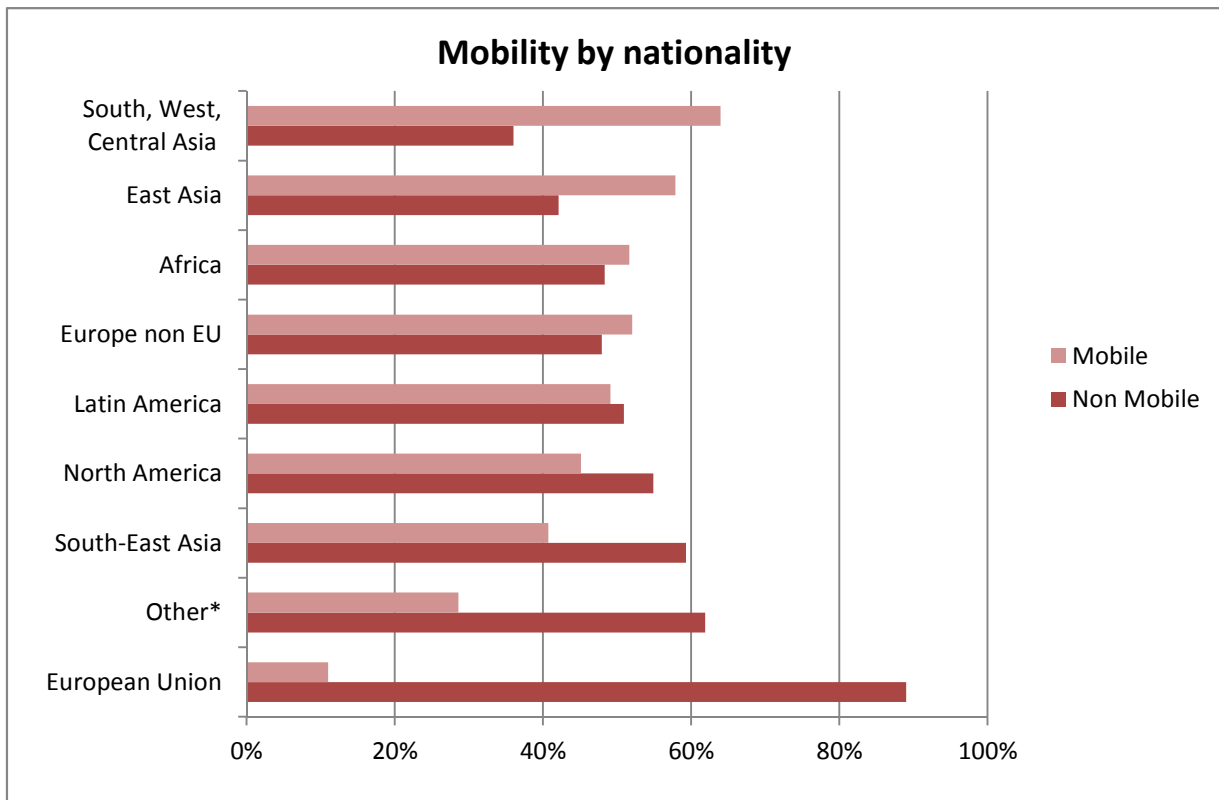


Figure 44: Mobility by nationality (graduate population)

Source: Graduate Impact Survey 2011

* Other: Oceania and undefined

- Among the **European Union graduates**, only **11% declare mobility**, whereas 53% of the non-EU graduates live in another than their home region.
- Among the non-EU nationals, especially **Asian** (South, South-East, West, Central and East Asia) EM graduates display the **highest readiness to change residence**: over 55% of them did not return to their home region.
- Among the Asian graduates, South-East Asians are most likely to return (59%).
- The percentage of **North Americans** (US and Canada) who don't return to their home countries to continue their career is at a notable 45%.



The comparison of mobility trends with current occupation will help us to understand the different nature of mobility. Regarding the **current occupation of mobile graduates**, the majority of **non-EU citizens** are continuing the training and study phase: over 50% are in PhD or Master’s programmes, while only 30% are employed. The **EU graduates** show exactly the **opposite result**: while almost 60% of mobile former EM students are employed, only 30% have changed their residence for study/education purposes. Although internships and traineeships have been rated as relevant job entry possibilities beforehand, very few (2-4%) of the mobile graduates (EU and non-EU) have moved to another region for it. Finally, we see that **mobility is apparently a more conscious decision to pursue a career step** than non-mobility: only about 10% of the mobile graduates (6% of EU citizens) are still job-seeking after “going abroad”.

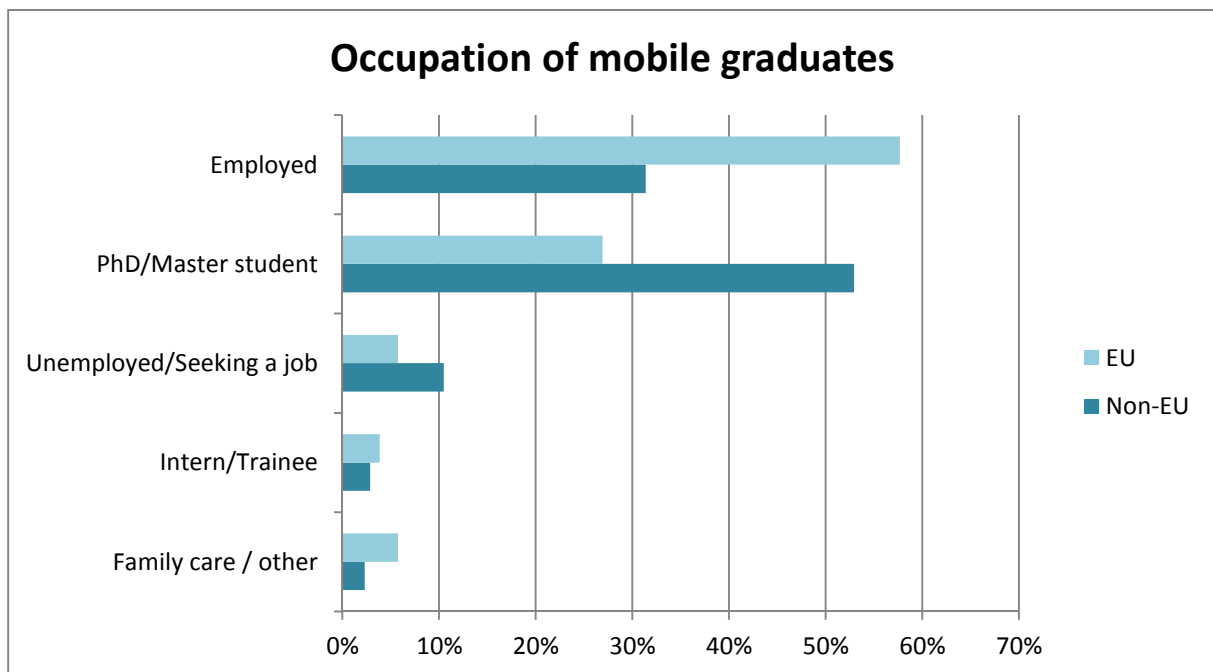


Figure 45: Current occupation of mobile graduates (mobile graduates, n=747) Source: Graduate Impact Survey 2011

Erasmus Mundus graduates are a particularly mobile population and this mobility can be an additional tool to preserve employability. Thus, if a graduate does not find a desired or suitable job, he or she might be more likely to move to another country to improve his/her prospects with a mobility background. Assessing occupation-related mobility, the EM graduates have also been asked in how many **different countries** they have worked since graduation. On average, they have worked in 1.34 different countries after graduation – which is a significant number given that 41% of the graduates have only just left the university. 21% have worked in two and 5.5% in 3 or more different countries.

In addition, mobility is also dependent on the **field of study**:

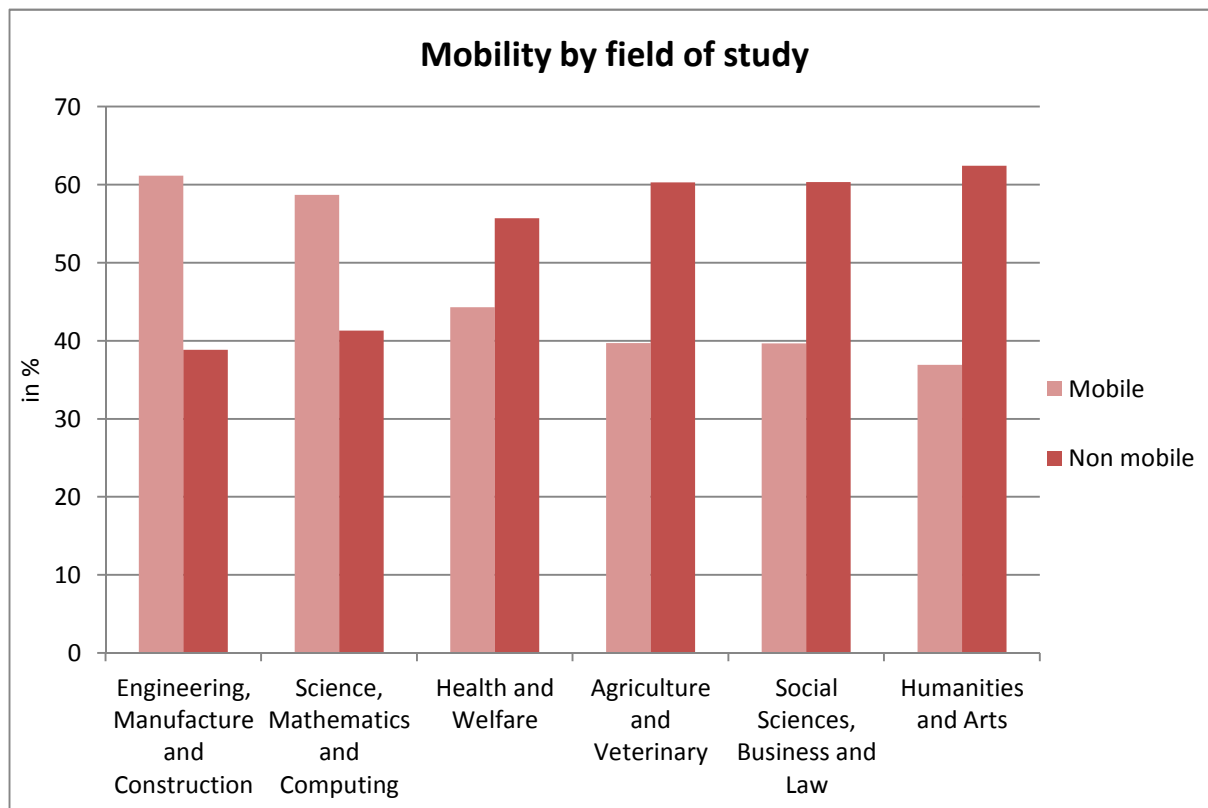


Figure 46: Mobility by field of study (graduate population)

Source: Graduate Impact Survey 2011

* Other: Oceania and undefined

- Graduates from **Engineering, Manufacture and Construction** and from **Science, Mathematics and Computing** are significantly more mobile (61% and 59%). This may be related to the higher amount of PhD students among the graduates of these disciplines.
- On the other hand, graduates from **Agriculture and Veterinary, Humanities and Arts** and **Social Sciences, Business and Law** display a clearly stronger tendency to return.

6.3 Preferred mobility (graduates and students)

However, we have to take into account that mobility is not always a voluntary decision. Referring back to the reasons for unemployment, we have already learned that a significant number of Erasmus Mundus students wish to work in a specific country (mostly EU) but have difficulties in accessing work permits or providing the respective “know-how” or “know-whom” for the job application. An analysis of employability should thus also reflect **mobility preferences** –these may also reflect future labour market trends or returning tendencies. The following assessment was made to find out about the desired mobility paths that not only graduates but also enrolled EM students would like to take. Thus, the respondents were not asked to provide verified “facts” but rather intentions or preferences.



The following scheme indicates the countries most preferred for a future professional activity. The students were asked to rank up to three individual countries.

	Graduates	Students
EU	<ol style="list-style-type: none"> 1. Germany 2. United Kingdom 3. France 	<ol style="list-style-type: none"> 1. Germany 2. France 3. United States
Non-EU	<ol style="list-style-type: none"> 1. Germany United Kingdom 3. United States 	<ol style="list-style-type: none"> 1. Germany 2. United Kingdom 3. France

Table 6: Preferred countries to work in (ranking)

Source: Graduate Impact Survey 2011

For graduates from the European Union, Germany is the most preferred country to work in. With its first place ranking by 15% of graduates and top three ranking by almost 36% of graduates, it leads the list. The United Kingdom is ranked as the first choice by only 9% of this population but is selected among the top three choices by almost 39%. France is selected by 27%, followed by a group of countries like Belgium, the Netherlands or the United States.

16% of the students from EU countries rank Germany in the top position as their desired country of work, and 36% name it as one of their three selected countries. France is named here by 25% of the students, and the United States is almost level. Spain is the next country in this selection (22%).

Apart from the US, the EU students and graduates show no significant tendency toward a country outside Europe.

Graduates from non-EU countries prefer to work in Germany, with 34% naming it among their top three and 13% as their first choice. The United Kingdom is almost equally preferred: 12% select it as first choice and 36% rank it among their top three. The US (23% top three) lies closely ahead of France (22%) in this category, followed again by Spain (17%).

For students from non-EU countries, Germany is again the most preferred country for future professional activities. About 35% name it among their top three choices, and more than 14% name it as their number one choice. The UK and France follow with 28% and 27% of the selections, respectively. The United States follows in 4th place.

For both non-EU populations, non-European countries besides the US also play a subordinate role. Canada and Brazil are the ones most mentioned in that respect, with naming rates at around 8-10%, while India or China only achieve 5-6%.

In summary, **Germany** is the most attractive country for all groups, in spite of the language problem. The stability of its labour market, the low level of unemployment and its particularly effective coping with the financial crisis seem to have made it most appealing for international students who come to Europe. The United Kingdom, France and the United States also display attractiveness.



Turning towards the **students** and their expectations concerning mobility, the majority of the EU students in an EMMC are not sure whether they will return or not. In contrast, **non-EU students** display a **clearer intention to return** to their home country, the largest percentage after one or several years of experience outside their home country (43%).

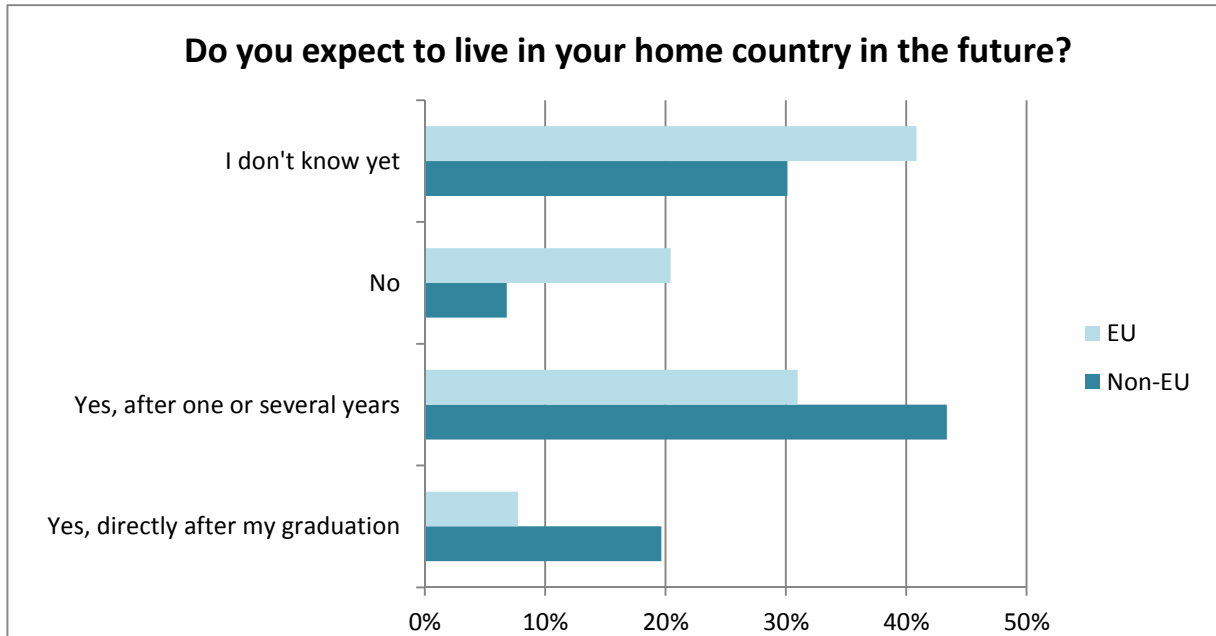


Figure 47: Expectations on mobility by nationalities (student population)

Source: Graduate Impact Survey 2011

6.4 Reasons for mobility

Within this last section of the chapter, a specific focus will be put on the **reasons graduates give for their decision to live and work in a specific country**. With this assessment, we intend to verify the indications already seen in this chapter and synthesize the set of reasons that go along with different patterns of mobility.

In the online survey, all graduates were given a selection of reasons to explain their decision to live/work in a specific country (later processed as “region”), from which a maximum of three items could be selected. The results were processed in a way that distinguishes between **mobile** and **non-mobile** graduates. Consequently, the analysis will unveil which reasons were actually important

- for the decision to live/work in the home region and
- for the decision to live/work in a country different from the home region.

	Social Life	Better job/career opportunity	Could not find a job elsewhere	Financial, social and political conditions	Home and family issues	Work permit and visa issues	Language issues	Study ¹⁶
European Union	52%	62%	19%	5%	24%	0%	0%	5%
North America	65%	46%	3%	11%	14%	5%	8%	11%
Latin America	42%	68%	6%	27%	11%	7%	7%	17%
Europe non EU	35%	75%	9%	42%	12%	9%	7%	8%
South, West, Central Asia	21%	65%	9%	23%	16%	14%	5%	22%
South-East Asia	26%	68%	0%	21%	11%	5%	0%	28%
East Asia	34%	55%	3%	25%	17%	14%	4%	22%
Africa	19%	49%	4%	17%	14%	8%	0%	44%

Table 7: Reasons for mobility by nationality (graduate population)

Source: Graduate Impact Survey 2011

	Social Life	Better job/career opportunity	Could not find a job elsewhere	Financial, social and political conditions	Home and family issues	Work permit and visa issues	Language issues	Study
European Union	62%	51%	12%	19%	39%	5%	5%	3%
North America	49%	56%	16%	9%	56%	29%	4%	2%
Latin America	46%	30%	31%	10%	60%	37%	4%	1%
Europe non EU	40%	17%	21%	13%	56%	37%	4%	1%
South, West, Central Asia	32%	27%	28%	14%	69%	28%	7%	1%
South-East Asia	48%	13%	20%	16%	80%	20%	13%	0%
East Asia	41%	52%	11%	11%	71%	25%	14%	2%
Africa	40%	26%	34%	12%	68%	33%	4%	3%

Table 8: Reasons for non-mobility by nationality (graduate population)

Source: Graduate Impact Survey 2011

¹⁶ The category “Study” was not a selectable item in the original question. Instead, it has been gathered through analysing the open answers that could be indicated in the category „Other“. Here, reasons like “further studies”, “PhD studies”, “making my PhD” were most mentioned. We can thus guess that the actual importance of that item is still higher than indicated here.



Comparing Table 7 to Table 8, important conclusions can be drawn in order to identify drivers of and obstacles to mobility:

- **Job and career opportunities** are the **most important reason for mobility** among all groups except for North Americans, who put a stronger focus on social life. For non-EU Europeans, this reason is the most relevant (75%).
- In contrast, job/career opportunities are a reason to **stay in the home region** for only North American, East Asian (China, Japan) and EU graduates.
- “Job opportunity” is **not only a positive “driver”**: a good 30% of the Latin American, South(-East) Asian and African graduates indicate that they are staying in their home countries because they **couldn’t find a job elsewhere**. This means that they have returned to their home regions despite having preferred to live and work in Europe (or the US).
- **Home and family issues** is the **most important reason to stay or return to the home country**, with particularly high numbers (70-80%) for **Asian and African graduates**. Europe lags clearly behind the other regions for this category.
- **Social life** (friends, leisure time, quality of life) is among the most important motives in general, but is to be generally regarded as a reason for **non-mobility**. Especially EU graduates prefer social life in their home region.
- **Study** (i.e. the interest to do further PhD studies) can be clearly considered as a **driver for mobility**, especially for graduates from **Africa** (44%) and Asia. This result corresponds with previous findings.
- **Work permit and visa issues** can be detected as an **obstacle to mobility** for all **non-EU nationals**. A notable share of around 30% of this group would like to work in the EU if it weren’t for the administrative permissions.
- **Financial, social and political conditions** are especially for non-EU Europeans (42%) an **incentive to leave the home region** for the EU.
- **Language issues** only play a marginal role in hindering mobility; if at all, then for Asian graduates.



The **qualitative interviews** largely affirm the quantitative findings: the tendencies to return to the home country and mobility balance each other. As coordinators could only provide an indication of whether students return to their home country or stay in Europe, assumptions on mobility towards third regions could not be made. However, employability aspects play an important role in both cases, as the following lists of reasons for either returning home or staying in Europe/elsewhere show.

Reasons to remain in Europe (at least for some years)

- Doing a **PhD** or other kind of further education
- Getting **access to European industries** (job opportunities)
- Facility to obtain a **working visa** in one European country (e.g. during one year after graduation)
- Academic field of **Science, Mathematics and Computing** and origin from **Africa**

Reasons to return to home country:

- **Growing industries/sectors** and **demand for qualified labour force** (European degree) in home countries
- **“Avoiding a brain-drain”**, students’ wish to benefit home countries
- **Former employment in home country** to which graduates return, generally in a higher position (work experience prior to studies)
- Academic field of Health and Welfare, Humanities and Arts and Social Sciences, Business and Law and origin from Asia

The following figure visualizes these characteristics, indicating also the percentage of each group:

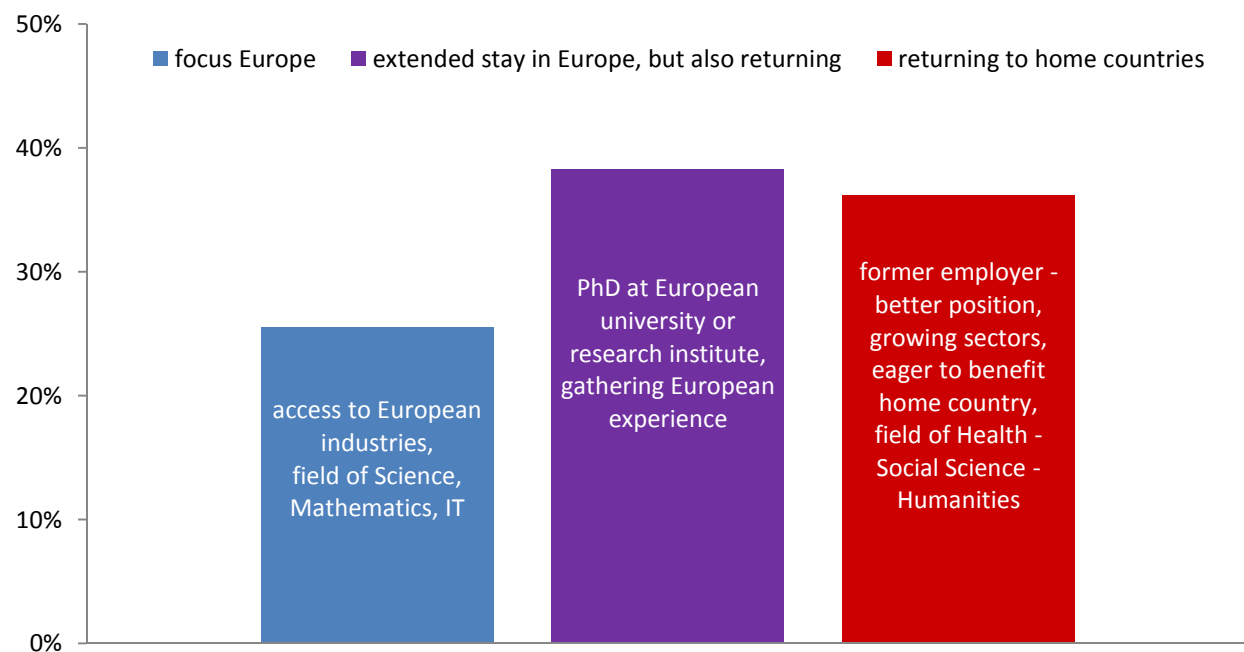


Figure 48: Distribution of graduates’ mobility patterns (coordinators’ assessment)

Source: Interview results



Perspectives and Recommendations

- **Mobility** of students and graduates is closely **linked to the employability aspects/incentives** of the target region.
- Keeping qualified graduates in Europe might also be subject to concrete **political decisions** in the future.
- Persistent **visa and residence permit difficulties** (particular for nationalities like Pakistani, Iranian and Iraqi) may influence graduates' freedom of movement.



7. Erasmus Mundus – an asset for the job search?

In this section, we will shed particular light on the job search phase and investigate if the Erasmus Mundus programme provides a good basis to enter the labour market and to find a job. Therefore, this chapter will highlight the general impact assessment of the EMMC programme, the graduates' success in the job search and the identification of factors that can serve as assets for employers to hire Erasmus Mundus graduates.

General results

The **impact of Erasmus Mundus on careers** and the job search is **positively assessed** by students and graduates. Compared to fellow students who graduate at home, their **job search takes less time**.

As a consistent result of methodologies, **international experiences and intercultural competence** can be regarded as the **most important assets** that distinguish EM students from other graduates.

The **degree** or the mere **label or brand** of **Erasmus Mundus** itself cannot (yet) be regarded as an asset for the Mundus students when applying for a job outside the university. **Employers' awareness** of the quality of the programme is still **marginal**.

Findings

7.1 General impact evaluation

In order to delineate the significance that career and employment generally have when assessing the Erasmus Mundus Masters Courses, the online survey included a section on "impact evaluation". In the central question for that issue, the respondents were asked to select two out of six categories where they personally see (students: expect) the greatest impact of Erasmus Mundus. This self-assessment also allows a comparison of expectations and retrospective views of the programmes.

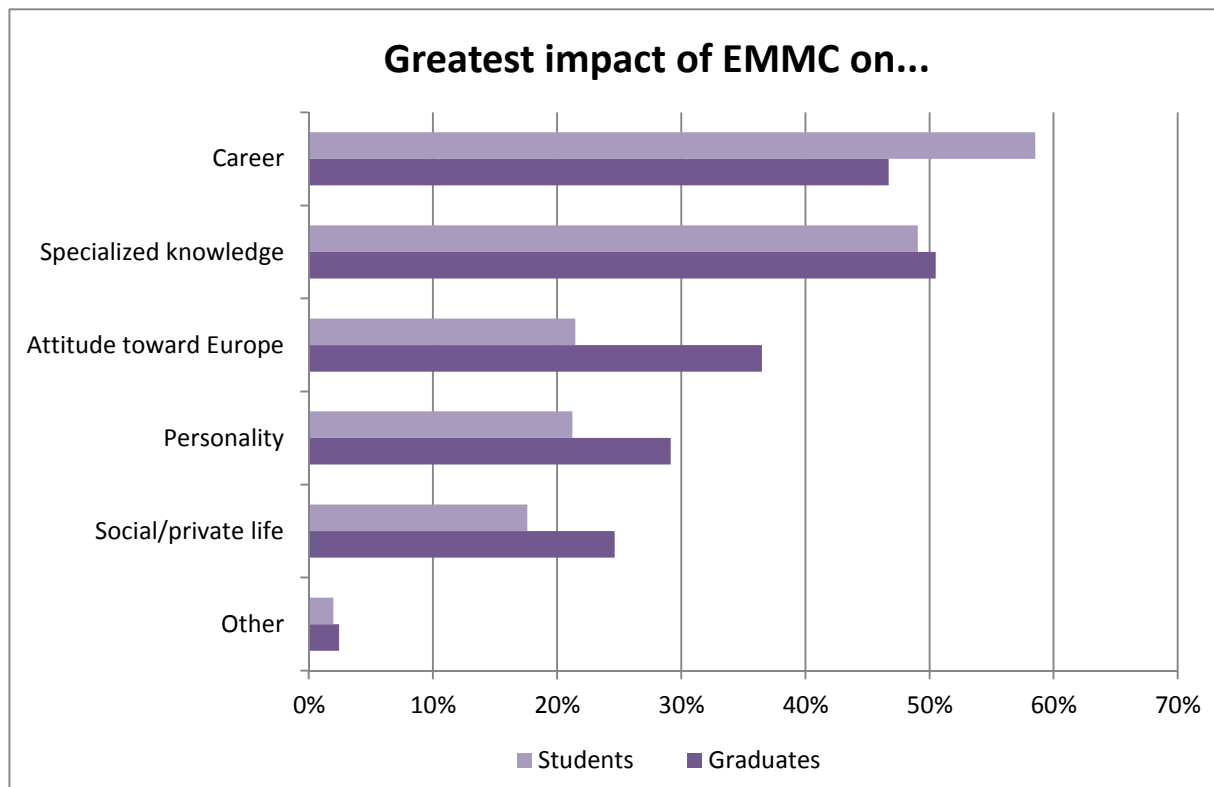


Figure 49: Impact evaluation of Erasmus Mundus

Source: Graduate Impact Survey 2011

The evaluation shows that there is a clear predominance of those items related to **employability**: **career** and **specialized knowledge** have the most important impact across all groups (52% and 50%, respectively). The respondents seem to basically agree that they receive the greatest profit from the programme through the imparting of specialized knowledge – useable for different kinds of future activities – but at the same time assess the profit for their future career as high. The large amount of knowledge gained is therefore considered highly transferable to professional activities.

Secondly, we can observe a **difference in the evaluation of careers** between graduates (47%) and students (59%). This means that the EMMC students expect an even higher impact on their careers than their fellow graduates attach to the programmes in retrospect – a gap that should potentially be narrowed by the programme representatives. Across all items it becomes evident that this distribution of impacts is clearer for the student population. The **graduates**, who evaluate the programme from a more detached perspective, attach a **higher impact to cultural and social concepts** like the attitude towards Europe (36%) or impact on personality (29%).

While the expectations for the EMMC are obviously very clearly oriented on an “outcome” in terms of knowledge and career opportunities, the students who have completed the programme experience a more differentiated impact – albeit one with know-how and employment still in the foreground.



7.2 Length of job search

Furthermore, the survey was designed to gather data on the circumstances of the graduates' job search itself, in particular the length of their job search and the number of job interviews they have had. This objective information helps to conclude – at least to some extent – how successfully Erasmus Mundus graduate students develop their transitions to the labour market.

All employed graduates were asked how much time they spent searching for their current job and how they estimate the length of their job search compared to the time fellow graduates from other programmes took.

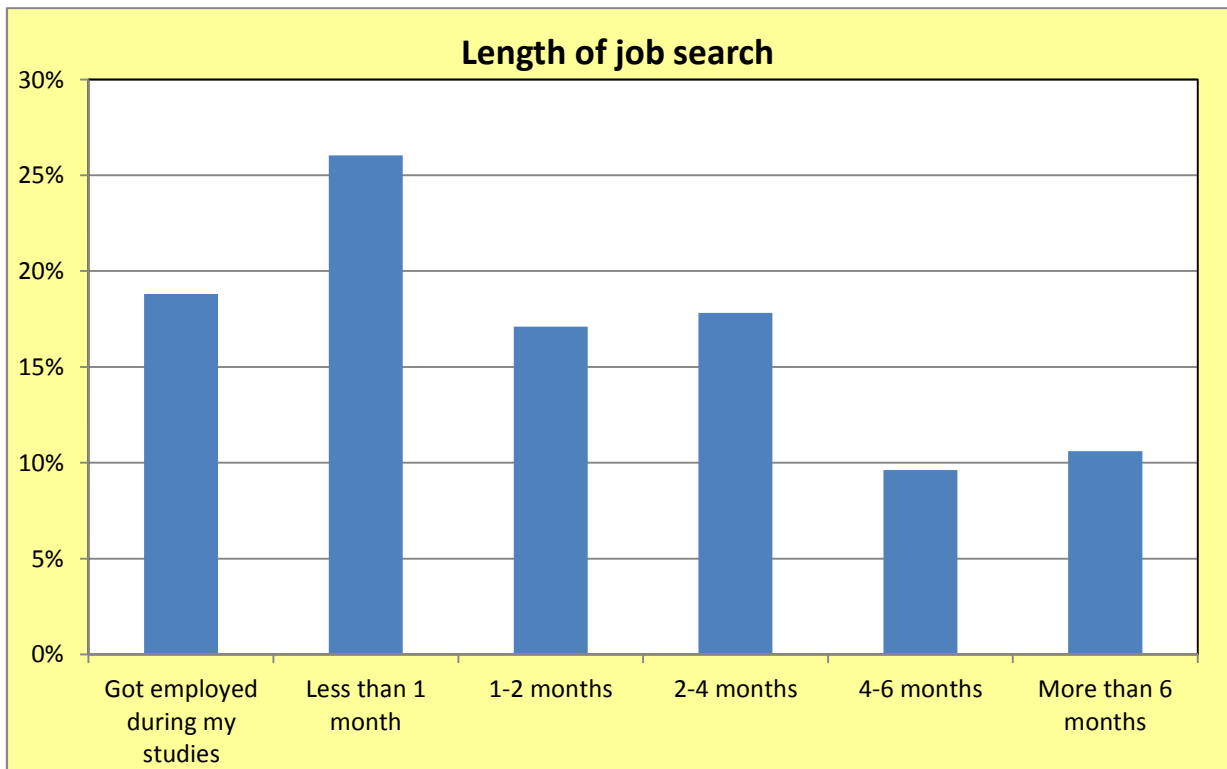


Figure 50: Length of job search (employed graduates)

Source: Graduate Impact Survey 2011

The analysis of these questions offers quite positive feedback:

- **Almost 62% of the graduates who are working in 2011 found their job within two months of graduating** and about 80% within four months. Of these, 19% found (or had) their job during their studies, and 26% found it in less than one month. Only for 10% of this population the job search took longer than six months.
- Graduates from **Agriculture and Veterinary** find their employment comparably quicker. On the other side, the job search takes more than 6 months for one-fourth of the graduates in **Humanities and Arts** and in **Social Sciences, Business and Law**.
- Compared to fellow graduates who studied/graduated at home, almost 57% of our population think that they **found their job in less time**. We find no differences in terms of fields of studies for this question.



The number of job interviews only gives us indications up to a certain point on how successful the job search is. For instance, a particularly low number of job interviews could either signify that someone has not been selected in all applications or that he or she has been hired right after graduation or after an internship. At the same time, a very high number of invitations is both a sign of a good application and evidence of being “not yet successful”.

Summing up, Erasmus Mundus graduates seem to have **quite a high number of job interviews** after their graduation. 18.6% indicate that they have had more than five interviews and another 17% have had between four and five invitations. For the disciplines “Engineering, Manufacture and Construction”, “Science, Mathematics and Computing” and “Social Sciences, Business and Law”, we can report particularly high numbers. On the other hand, 13.5% of the graduates have not had any job interviews, and another 18% have had only one. These rates are above average for the fields “Agriculture and Veterinary” and “Humanities and Arts”.

7.3 Reputation of Erasmus Mundus during the job search

In this following section, we investigate the direct relation between the degree that the graduates from EMMCs hold and their success in job search. It thus addresses the reputation of the programme at employers and help to answer the question whether the label itself is already to be regarded as an asset when applying for a job.

The employed graduates were asked about the **factors their current employer declared most important when hiring them**. From the selection, graduates could pick up to three items.

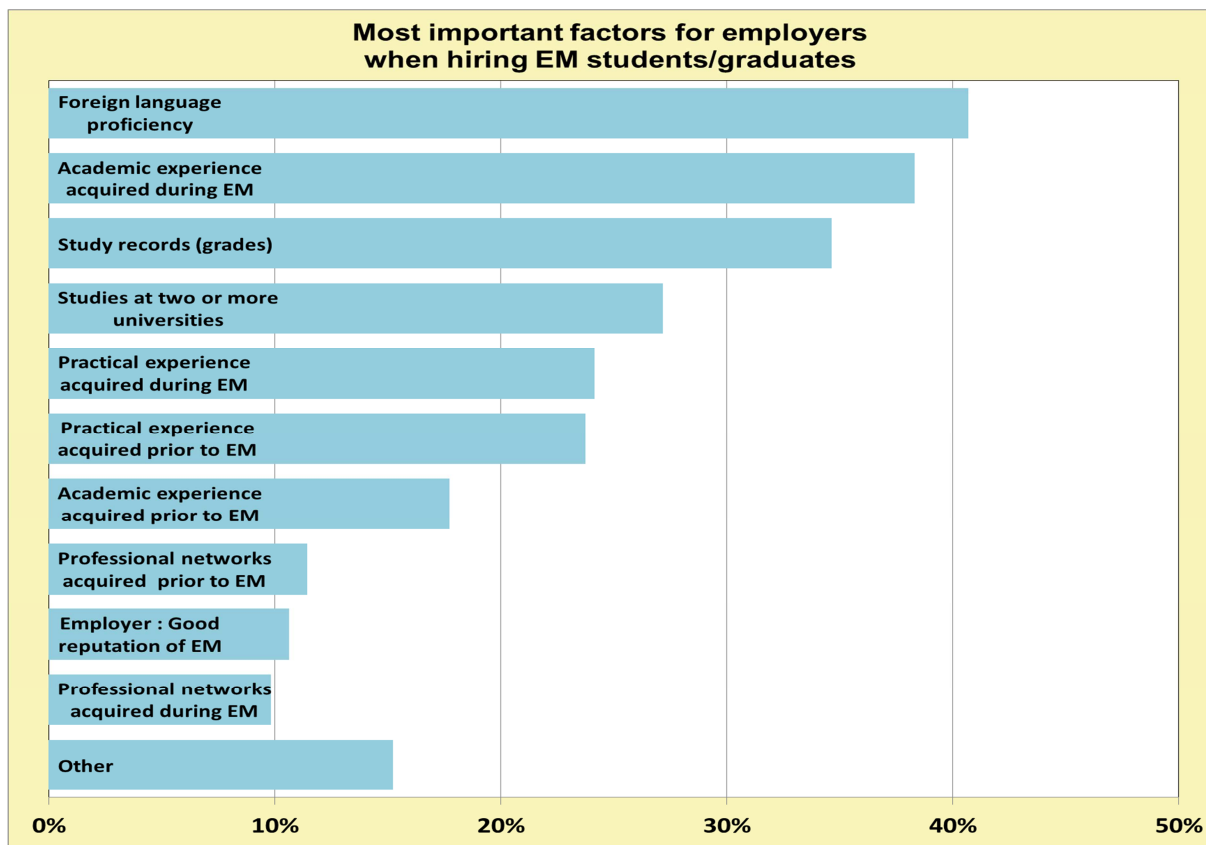


Figure 51: Most important factors for employers when hiring EM graduates (employed graduates, self-assessment)
Source: Graduate Impact Survey 2011

Graduates who are employed in 2011 declare that the most important factors for their employer in hiring them are **foreign language proficiency** (41%), **academic experience** (38%) and their **study records** (35%). This is a set of items very broadly related to any kind of study programme, not necessarily to the kind of study Erasmus Mundus provides. On the other hand, we can state that for at least the two top ranked items – foreign languages and academic experience – Erasmus Mundus provides a solid background, as the results on the assessment of competences (see Chapter 4) show. The fact that the applicants have studied at two or more universities is cited as helpful by 27% of the respondents.

Compared to the other factors, the **good reputation of EM** and **professional networks acquired during EM** have been less important assets for graduates during their job search. Somewhat alarming is the fact that even professional networks acquired prior to EM still are of higher importance than those acquired during the course. In summary, the factors most directly related to establishing professional relations between EMMCs and potential employers are those which apparently have the least influence on employers when hiring those graduates. This result is a first indicator that the reputation of the programme needs to be improved when we talk about enhancing employability.

Subsequently, the graduates were also asked **how much their current employer knows about Erasmus Mundus**.

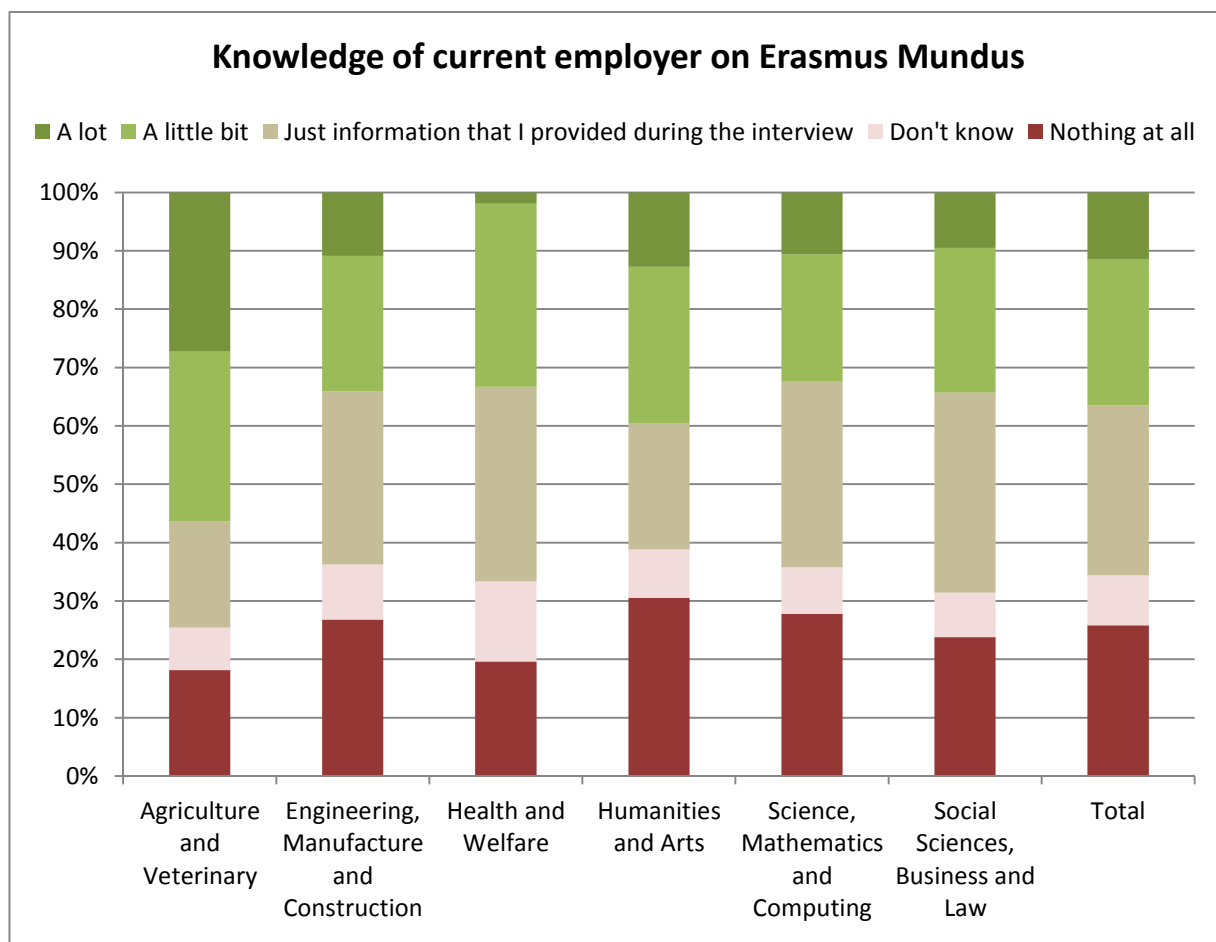


Figure 52: Employers' knowledge of Erasmus Mundus (employed graduates)

Source: Graduate Impact Survey 2011



Many employers seem to have **limited knowledge about Erasmus Mundus**. Just 11% of the graduates declare that their employers knew of the EM programme where they hired them, while one in four employers knows nothing at all about the programme. A plurality of the graduates (30%) declare that their employer knew **just information that they provided during their interview**. This fact is somewhat alarming, as it implies that a large percentage of the employers do not even review information on the programme when preparing for the interview.

On the other hand, it is surely illusory to expect that a majority of employers know about the study programmes of their applicants in detail. Mostly, they will concentrate on their academic achievements, practical experience and references. Thus, the fact that in the field of **Agriculture and Veterinary**, 27% of employers know a lot and 31% at least a bit about Erasmus Mundus can be considered a clear success for the programme. The networks in this field seem to be quite intensive. This example should thus serve as the general benchmark for other EMMCs and programme representatives in order to raise overall awareness of the label/brand, in the sense that a lot of employers know at least “a bit” (current overall average 25%) about its identity.

During the **qualitative interviews** with EMMC coordinators, we could **verify the previously presented trends**. The coordinators were asked whether Erasmus Mundus can be an **asset for their students when searching a job**.

- 46% of the coordinators rate **internationality** and related aspects like mobility, intercultural competences and language skills as the most central assets of the EM degree when students seek a job. The mere **status as “Erasmus Mundus” graduate** is surely **less important than students’ experiences**.
→ *“There is no such thing like an ‘Erasmus Mundus diploma’. Our students have attended some of the best European universities in our field and this is what employers should know.”*
(coordinator, France, Science, Mathematics and Computing)
- Nevertheless, in order to advertise their excellence regarding contents and requirements, many EMMC coordinators still use the **diploma supplement** or **recommendation letters**. Surely, the Erasmus Mundus representatives should work towards making such add-ons superfluous.
- In the **academic dimension**, having **graduated from an EM programme is more recognised as a quality label itself** than in companies: 14% of the coordinators consider it an asset for students for an academic career.
- About 10% **do not see any relation between the degree and the chances of finding a job**. The reasons for this are varied: some consider the joint degree more confusing than helpful and others state the fact that EM is not well-known among employers.
- 10% of coordinators emphasise the **high potential of EM as quality feature** as a career booster.



Perspectives and recommendations

Bringing together all three chosen aspects of the question of whether Erasmus Mundus is an asset for the job search, we can firstly conclude that students rate their degree highly (in terms of career and knowledge) and that a majority of the employed EM graduates found a job within two months of the end of their studies. Turning towards the employers' side, graduates see their proficiency in foreign languages as even more decisive than the academic skills they can offer, whereas the limited knowledge of the EM programme and its features among their employers indicates that the EMMCs do not yet function as a quality label, at least not as regards the non-academic employment field.

- To **exploit the full potential of Erasmus Mundus** for employability, the **label should also be officially promoted** to employers, pointing out the internationality and academic excellence.
- As Erasmus Mundus is on the way to becoming a respected **brand in the academic context**, this task can also be assumed by **universities** in ways that go beyond issuing recommendation letters and diploma supplements, e.g. via **university-business cooperation, start-up possibilities and placement opportunities**.



8. Sustainability of the EM programme as regards employability

Sustainability is an aspect that at first glance is only partially related to employability. Apart from that, among the Erasmus Mundus Clustering Projects there is a specified Cluster “Sustainability” that will investigate this issue in detail. But when we concentrate on activities to enhance employability within individual EMMCs, the representatives are often charged with encouraging activities designed to guarantee sustainable benefits. For instance, the creation of an interactive event to bring students in current research projects together with employers in the field is a measure that can have only limited short-term success. The consortium works towards hosting a regular event every year, attracting more employers or having alumni participate. After some years, the meeting will probably be established as an important venue for making initial recruiting steps and thus contribute directly to employment.

Examples of this nature illustrate the fact that enhancing employability and taking care of sustainability often go hand in hand. One part of the **qualitative interviews** was thus dedicated to this topic. These answers have been assessed as regards their relation to employability.

Summary of the findings

- A large majority of coordinators report on the **high benefits** drawn from the programme. These include e.g. the reformation of curricula; an increase in the overall academic quality; the establishment of links to partner universities, associated partners and scholars; and new input for research.
- For this purpose, all EMMCs undertake measures of **quality control**, asking for feedback among their students through surveys and interviews. 42% of coordinators indicate that these methods have led to significant changes in the course structure or even **involve students in the steering committee or quality board**. Some EMMCs extend these measures to **external evaluations** or **employment-related feedback** (e.g. comparing the current positions of graduates with initial assessments or integrating employers’ points of view).
- Regarding a **future self-financing** of the programme out of this cooperation, the number of non-EU students is becoming noticeably rare. Some coordinators also fear that **unique features of EM** (e.g. mobility, internationality of students) may be reduced **without EM scholarships**.
- This particular fact would threaten one of the major impacts gained through Erasmus Mundus: its **internationality**. Many coordinators state that the international group of students functions as a quality booster for the entire university.
- 28% of coordinators have already successfully organised methods to **guarantee sustainability** or are on their way to it:
 - High percentage of “**self-funders**” (autonomy from EM scholarship)



- **Alternative, local Master's programmes** of the same quality, partially with mobility opportunities (bilateral agreements) or **comparable Master's programmes outside Europe**
- Third-party funded projects, national or institutional grants
- First steps to private funding (grants for research projects, Master Thesis or PhDs)
- Some EMMCs are unable to **allocate resources** to employability enhancing measures, as their resources are dedicated to other activities (administration, curriculum development). Those who seem to be more successful in providing strategies for long-term success do not negate this fact but stress that the **additional effort is often compensated** by profitable repercussions.
→ *"Employability is one element that underpins all things that you are thinking about. Our main idea is to maximize all the resources that we have for it."*
(coordinator, UK, Social Sciences, Business and Law)
- Programmes that focus on **employment in public/international institutions** have more difficulties in finding a path towards corporate funding (no obvious/compulsory relation between employment prospects and corporate funding).
- 18% of the coordinators can imagine a **full self-funding** of the programme under certain conditions, such as the maintaining of the EM label and a **sufficient time span** (more than five years) in which to promote the programme.

The following best practice model exemplifies some of the above presented outcomes by one Erasmus Masters Course from Science, Mathematics and Computing that combines a variety of the mentioned aspects. By integrating different networks and deploying various ways of guaranteeing sustainability from the academic and the professional point of view, this example is presented here as representative for other EMMCs undertaking steps towards sustainability.

VIBOT – Erasmus Mundus Master Courses in Vision and Robotics (launched in 2006)

<http://www.vibot.org>

Partners:

Université de Bourgogne (France),
 Universitat de Girona (Spain),
 Heriot-Watt University (UK)



Coordinator: David Fofi, Université de Bourgogne

Recommendable elements:

- Master was founded from the **urgency to create a high level European Master** combining computer vision and robotics and to provide research topics easily transferable to technology.
- Regular yearly event to bring together students, graduates and private partners that work in the area of computer vision and robotics on the latest research: **the VIBOT-days**
- Mobilisation of **corporate financing/grants**, e.g. for European students during the (entirely practical) 4th semester
- The lump sum provided by EM can only cover administrative and coordinative costs. But with a little individual initiative there are different ways of **“pay-back”**:
 - very successful **research labs** that are closely linked and cover large parts of infrastructure
 - **excellent students** that receive their own funds from external grants: national PhD grants, institutional grants (Burgundy council)
 - high profit for research (PhD positions), visibility and reputation

“It’s a lot of work, but it helps a lot.”

- **Creation of additional Master’s programmes** covering the same contents as VIBOT (→ Masters in Computer Vision), through **international agreements and mobility exchanges** also with mobility: VICOT, Master Courses with Malaysia and Indonesia
- Follow-up **Erasmus Mundus Action 3 project**: EACOVIOE – Enhance the Attractiveness of Computer Vision and Robotics in Europe



Perspectives and recommendations

- In terms of sustainability, the Erasmus Mundus funding is foreseen as **initial financing** and only covers operating expenses. In order to achieve **long-term effects**, including on employability, **it is necessary that universities invest**, and not only administer, financial resources and manpower: a broad academic and management board, events, contacts and research cooperation. It also takes an **active coordinator** with good links to research and the private sector.
- As the **internationality of students** is a) the biggest asset for graduates in their job searches and b) an important resource for EMMC coordinators to attract partners/sponsors, future employability will **largely depend upon the ability to maintain the internationality** of students.
- In order to build quality Master Courses of enduring effect and to further promote the programme, it is highly recommended to assign the **Erasmus Mundus brand name for longer** than just a predefined period – while ensuring it is bound to quality criteria.
- One of these could be the provision of **elaborate quality control systems** that enable EMMC coordinators to precisely assess and enhance the **employability** of their students and alumni.



9. Most important factors for employment

We could see in the previous chapters that employability in the context of the Erasmus Mundus Masters Courses is a **multifaceted issue**. The online survey, foremost the part that was done with graduates from EMMCs, revealed several factors that could serve as indicators for employment: their current occupation, contract duration, the position they hold in their organisation, their salary and their job satisfaction. In order to measure employability, this report has furthermore proposed a number of cross-variables and correlations that each show a specific influence on those individual factors.

The main objective of this chapter is to use econometric and statistical tools in order to strengthen the descriptive results presented in the previous chapter by bringing together different variables on employment into one index. This **index** will serve as **one consistent measure** for the quality of employment, which allows us to analyse the influence of individual variables in a structured manner.

9.1 Index on the quality of employment

The intention of this part is to create an indicator for the quality of employment that can also be used to measure employability by relating it to different independent variables. For the construction of the index we decided to consider **five crucial variables** related to employment. These variables are:

The % of active graduates currently employed¹⁷ (active);

The % of graduates who are employed in permanent terms (contr);

The % of graduates who claim to earn above average (goodsal);

The % of graduates who are employed in medium or senior positions¹⁸ (highpos);

The % of graduates who claim to be satisfied with their job¹⁹ (satis).

The economic literature contains sophisticated models in order to evaluate the quality of jobs, on which this indexation is oriented. However, these take into account a whole set of variables on employment, using surveys specifically designed for that purpose. Since the Graduate Impact Survey is very diverse in terms of target groups and topics, the index was constructed on a smaller number of variables that for the purpose of this survey are the most solid indicators for the quality of employment.

In order to create the index, we gave a **weight or a coefficient** to each of the above five variables. The table below displays our choices. Given the fact that being employed is the strongest signal of employability, the highest weight was assigned to the first variable, which is the percentage of

¹⁷ “active” = % of graduates currently employed / (graduates currently employed + graduates seeking a job).

¹⁸ middle management or chief executive

¹⁹ “satisfied”: group of very satisfied (“++”) and satisfied (“+“)

graduates currently employed. At this stage, it is difficult to say which of the four remaining variables would be more important than others; therefore we decided to give them the same weight. Finally we assigned a weight of 0.4 to the variable “active” and 0.15 to each of the others.

Name of the variable	Definition of the variable	Weight in the index
active	% active persons in employment	0.4
contr	% permanent contract	0.15
goodsal	% salary above average	0.15
highpos	% medium and senior position	0.15
satis	% satisfied and very satisfied	0.15
Index	composite/all	1

Table 9: Selection and definition of index variables

This index allows us to assign a value to the quality of jobs and to work out relative scores to a mean. In order to illustrate this procedure, we take the calculation for the variable “field of study” as an example. In all the following tables, each of the five variables is depicted by its mean value and its indexed value in the columns. The final calculation of the “Index composite”, which takes into account the five indexed values, gives us the best and the worst index in relative terms by chosen dimension (in this case: field of study). The best index is coloured in green and the worst in red.

Field of studies	active	Ind active	contr	Ind contr	good sal	Ind goodsal	highpos	Ind highpos	satis	Ind satis	Index composite
Agriculture & Veterinary	71	90	56	91	27	85	66	197	80	112	109
Engineering, Manufacture, Construction	78	100	64	102	33	102	28	83	68	95	97
Health & Welfare	90	114	47	76	41	129	45	136	80	113	113
Humanities & Arts	76	97	53	85	24	76	26	79	65	91	88
Science, Mathematics, Computing	83	106	69	111	35	110	23	70	72	100	101
Social Sciences, Business, Law	78	99	69	111	34	107	38	115	74	103	105
All	79	100	62	100	32	100	33	100	71	100	100

Table 10: Index of employability by field of study

Source: Graduate Impact Survey 2011



To facilitate the understanding of our methodology, we detail the calculation of the index using the case of Health and Welfare. For **each variable which is considered in the calculation of our index**, we estimate the **relative position to the mean**. For example, the figure 76 circled above (related variable: permanent contract) is calculated in this way:

$$\frac{\% \text{ of the graduates from health \& welfare who are in permanent contract}}{\% \text{ of all graduates who are employed and have a permanent contract}} * 100$$

$$= (47/62) * 100 = 76$$

This figure can be interpreted thusly: there are 24% (100-76) fewer graduates in Health and Welfare who have a permanent contract compared to the mean (which is 62). This is the relative position of Health and Welfare to the mean **for the variable “contr”**. As for the calculation of the “Index composite”, which gives the final score and takes into account **all five variables**, we continue the example with Health and Welfare, the index of which is 113.

$$\text{Ind active} * 0.4 + \text{Ind contr} * 0.15 + \text{Ind goodsal} * 0.15 + \text{Ind highpos} * 0.15 + \text{Ind satis} * 0.15 = \text{Index compos.}$$

$$= 114 * 0.4 + 76 * 0.15 + 129 * 0.15 + 136 * 0.15 + 113 * 0.15 = 113$$

This “Index composite” is the relative position of the group Health and Welfare compared to the mean of all fields of study, taking into account all five dimensions of employment.

The qualitative interpretation of the above cross-table concerning fields of study is that graduates from the **Health and Welfare** discipline have the best relative position and thus the **best expectations of finding high quality employment** within our sample. On the contrary, graduates from Humanities and Arts (Index = 88) have the worst expectations. The other fields of study are distributed quite evenly within this spectrum, in which graduates from Agriculture and Veterinary and from Social Sciences, Business and Law also belong to the positive side. Altogether, this distribution corresponds very well with the results gained in the analyses on occupation (see Chapter 5) – for which reason we can suppose that the index delivers a very realistic roundup of the central indicators of employment.



9.2 Measuring employability by different variables

Having thus constructed the index, we will run **several audits of variables** that are expected to have a major influence on the quality of employment. The strength of this influence will be readable by the degree of statistical spread that each indexation causes. This procedure will in the end allow us to judge the relative impact that each of the presented factors has on the probability of obtaining quality employment – in short: contribute to measure employability.

The performance of the index can be best verified by taking into account the variable “**year of graduation**”. We have seen that the quality of employment is closely linked with the time and experience on the labour market. A strong correlation between “year of graduation” and the index would thus meet our expectations.

Year of graduation	active		contr		goodsal		highpos		satis		Index
2006-2007	97.3	124	78.5	126	34	106	38.2	115	70.1	98	116
2008-2009	85.6	109	61.9	99	33.9	106	33.6	101	73.9	104	105
2010	64.6	82	54	87	28.4	89	29.9	90	68.6	96	87
Total	78.6	100	62.3	100	32	100	33.2	100	71.4	100	100

Table 11: Index of employability by year of graduation

Source: Graduate Impact Survey 2011

The results do indeed show a large spread of the index between 87 and 116. Graduates who finished their Erasmus Mundus Masters Course in 2006-2007 have a clearly better position in relative terms than the graduates who finished in 2010 and who have been in the labour market for eight months at the most (June to March). We can see that these graduates are in the bottom position in relative terms across all the dimensions of our index. They are less likely to have permanent-term contracts and also less likely to be in a high position in their job. The level of job satisfaction, however, shows no large differences and even favours the “medium” classes of 2008 and 2009.

When analysing the employability of young graduates, **gender** is a crucial issue. Although the system of higher education in Europe in recent years reveals slight advances for female students, integration in the labour market is not equal. Economic literature substantiates that young women have more difficulties gaining access to good jobs (Epiphane 2002). The fact that our sample deals with international markets, where gender differences often are more relevant than for Europe, should lead to a better position for male students.

Gender	active		contr		goodsal		highpos		satis		Index
Female	75.7	96	56	90	28.7	90	32	96	76.9	108	96
Male	81.4	104	68	109	35	109	34.2	103	66.5	93	104
Total	78.6	100	62.3	100	32	100	33.2	100	71.4	100	100

Table 12: Index of employability by gender

Source: Graduate Impact Survey 2011

As expected, male graduates have better scores in relative terms than females, but the difference is very small. In fact, women have a lower score across all the categories of our index – particularly in **permanent contracts** and **salary** – except for job satisfaction, where they lie clearly ahead.



The same calculation was conducted for **mobility**²⁰. In this case the result is hard to project as there is no handy argumentation in favour or disfavour of mobility as regards the quality of jobs.

Mobility	active		contr		goodsal		highpos		satis		Index
Non mobile	79.8	102	63.7	102	33.3	104	36.5	110	68.2	96	102
Mobile	76.5	97	59.7	96	29.4	92	26.2	79	77.8	109	95
Total	78.6	100	62.3	100	32	100	33.2	100	71.4	100	100

Table 13: Index of employability by mobility

Source: Graduate Impact Survey 2011

Graduates who are mobile have a lower score in relative terms than those who are not mobile. This might be caused by the large difference in mobility patterns for EU and non-EU graduates. Mobility is a feature almost exclusively relevant for non-EU graduates who often extend their stay in the EU for the purpose of pursuing a PhD instead of a working position. Moreover, graduates face more difficulties or a lack of knowledge when applying for a job outside their home region. The category “highpos” makes this difference most evident. Ultimately, however, the difference is not very great. The high score of mobile graduates in particular regarding their job satisfaction offers evidence that the move to another country may also be worthwhile in terms of employability.

Social background is a key factor when we analyse the employability or job quality of young graduates. In the present survey, social background was measured in terms of **family income**. This issue is a recurrent theme in social sciences. Since the 1970s, young people from lower social background have had increased access to higher education, but as we can see in France, this process has not yielded benefits in terms of the transition from school to work (Goux & Martin 1997). Youth from lower social backgrounds still have lower chances to access jobs and to attain higher positions in the labour market.

Level of family income	active		contr		goodsal		highpos		satis		Index
Above my country average	81.7	104	67.2	108	39.2	123	36.8	111	72	101	108
Country average	78.7	100	58.9	95	30	94	30.7	92	72.1	101	97
Below my country average	69.9	89	65.8	106	20.3	63	35.4	107	65.8	92	91
Total	78.6	100	62.3	100	32	100	33.2	100	71.4	100	100

Table 14: Index of employability by family income

Source: Graduate Impact Survey 2011

Our results largely confirm this hypothesis. The difference is actually very small if we examine the percentage of permanent contracts and the access to high positions. However, the difference becomes striking for the **access to jobs** in general and especially the **salary** that graduates with a lower family income earn compared to others. Finally, graduates with higher social backgrounds have a higher score in relative terms than graduates with lower social backgrounds. For the target group of Erasmus Mundus graduates, this is a slight discouragement, as the existence of the EM scholarship would have been expected to outweigh this influence.

²⁰ Mobility : a graduate is considered mobile when he/she lives in a region which is different than his/her region of origin.



Another variable which we expected to influence employment is whether the graduates had completed internships during their studies. **Internships** are a good indicator for the degree of vocational orientation of an EMMC, as they provide further work experience.

Internship during EMMC	active		contr		goodsal		highpos		satis		Index
Yes	78.4	100	62	100	31	97	33.2	100	77	108	101
No	78.8	100	62.6	100	32.7	102	33.2	100	67.5	95	100
Total	78.6	100	62.3	100	32	100	33.2	100	71.4	100	100

Table 15: Index of employability by internship experience

Source: Graduate Impact Survey 2011

It appears that there is almost no difference in terms of job quality between graduates who have done an internship and those who have not. Those graduates who did not complete an internship during their EMMC may have gained work experience previously or in other activities during their studies. If at all, the completion of an internship during the EMMC may be a determinant for future job satisfaction.

Finally, we will present in more detail the two variables **most influential for the quality of employment**. Both factors deal with the aspect of mobility, which further justifies its extensive observation throughout this survey. These two variables are:

- **nationality** (region) of the graduates; and
- region of **residence** (= regional labour market).

As for **nationality**, graduates from South-East Asia and from Africa achieve the highest scores over all five categories, followed by graduates from South, West and Central Asia. This group boasts a higher share of graduates who have successfully entered the labour market and, most notably, have attained higher positions. At the other end of the spectrum we find the graduates from Europe non-EU, who clearly lag behind the other groups as regards their access to permanent contracts and good salaries. However, the graduates from the EU, North America and East Asia also seem to have much more restricted access to responsible positions.

Nationality	active		contr		goodsal		highpos		satis		Index
European Union	79	100	56	90	28	88	21	63	76	106	92
North America	77	98	75	120	26	80	19	58	85	119	96
Latin America	73	93	67	107	37	116	37	112	66	92	101
Europe non EU	72	92	54	87	22	69	30	89	70	99	88
South, West, Central Asia	82	104	60	97	33	102	40	121	72	101	105
South-East Asia	89	113	66	106	35	111	38	114	72	101	110
East Asia	90	115	64	102	31	97	15	45	64	89	96
Africa	71	90	67	107	37	114	56	167	73	102	110
All	79	100	62	100	32	100	33	100	71	100	100

Table 16: Index of employability by nationality

Source: Graduate Impact Survey 2011

If we regard the current **residence** of the employed graduates, we of course have to consider that we are dealing with very different **labour markets**. Therefore, the large divide is not surprising. The most striking result is the very positive performance of graduates who live in **Africa**. This group is clearly the one with the highest employability compared to other regions. In second and third places we find South-East Asia and South, West and Central Asia, comparable to the distribution on origin. On the other hand, throughout **Europe**, EMMC graduates do not enjoy a higher level of employability (yet). One reason for this is surely the greater competitiveness of the labour markets. Again, the percentage of graduates that enter into high-level positions is the one factor that introduces the largest difference.

Where do you currently live?	active		contr		goodsal		highpos		satis		Index
European Union	76	96	62	99	25	77	20	59	78	109	90
North America	71	91	71	114	36	111	20	60	84	118	97
Latin America	70	89	68	109	41	129	41	125	63	89	103
Europe non EU	69	88	48	78	33	103	28	85	72	101	90
South, West, Central Asia	83	106	64	102	33	103	48	145	67	94	109
South-East Asia	87	111	69	110	31	98	45	134	66	93	110
East Asia	98	125	60	96	36	114	16	49	60	84	101
Africa	86	109	60	96	37	117	60	180	75	104	118
All	79	100	62	100	32	100	33	100	71	100	100

Table 17: Index of employability by region of residence

Source: Graduate Impact Survey 2011

Summarising these insights, some interesting conclusions come to the fore. Both in regards to origin and residence, **Africa** and emerging or developing regions such as **South-East Asia** or **South, West and Central Asia** show the highest employability, while developed regions such as Europe and North America (but also East Asia, i.e. China and Japan) have the worst position in relative terms. Those two results provide comfort for a major concern of this study – the value of Erasmus Mundus in the labour market. Based on our investigations, we come to the conclusion that a **degree in an Erasmus Mundus Masters Course is less rewarded in the European labour market compared to developing countries**. This fact cannot be explained solely by the higher competition between higher education graduates in Europe or North America.

When we go a bit deeper into the results of the tables above, we also find that the decisive difference in employability does not primarily stem from the problem to simply “find a job”; in the table on nationality, the indicator “active” is close to the mean. The differences occur, as both tables show, through the **differing pace in progressing to well-remunerated and, most notably, highly influential positions** in the different regions. At the same time, the European Union and North America perform greatly above average regarding the probability of obtaining a satisfying job. This appraisal, in our opinion, puts the first conclusion into a different perspective. Bringing to mind that a majority of this graduate population has only been in the labour market for a few years (85% not much longer than two years), we would suggest that these **large differences are most likely to moderate over time** and that Erasmus Mundus graduates will be a highly employable labour force in the labour markets of developed regions as well.



V. Conclusion

The present survey has introduced a very widespread field of topics and results, given the multitude of factors that have to be taken into account when targeting employability within Erasmus Mundus Masters Courses. Therefore, this final chapter synthesises the analysis done within this survey and points out its central statements. This forms a good basis from which to derive future challenges and recommendations – which of course are “global” in the sense that they characterise overall trends of a large empiric survey. More specific practical recommendations can be found in the individual chapters of the main part of this report and in another compact publication elaborated within this project, the Practical Guidelines of the Cluster on Employability. Lastly, the present study is in great measure conceptualised as grassroots research on employability within the target group of EMMCs. For that reason, the following conclusions shall be understood as clearly identified trends and challenges, serving as a suggestion for Erasmus Mundus programme representatives to derive political actions and initiate further monitoring in this important area.

1. The core element of the survey was to measure the **competences** that EMMCs provide and compare them to the labour markets’ requirements. Summarising, the EMMCs are quite successful in equipping young people with the skills required in the labour market. Their performance is outstanding as regards international competences; also with regard to innovative competences and professional expertise, the “gaps” to the requirements needed in a specific job are very narrow. Considerable deficits can only be detected for competences that are more related to the cooperation and functionality within a workplace (e.g. performance under pressure, coordinating activities, asserting authority, negotiating). These are abilities that are primarily learned “on the job” – which again emphasises the need for practical learning.
2. Erasmus Mundus students, thus, seem to be best equipped for positions that require high **internationality and extended intercultural competences**. This is additionally affirmed by the high valuation that employers assign to foreign language proficiency and the significant English level improvements during the EMMC. The results in graduates’ current occupations also show that former EM students are more inclined to assume positions that require high collaboration with international colleagues or customers. Consequently, this profile might enable Erasmus Mundus graduates to work for international business or non-profit organisations more so than in public service. We can further conclude that it is exactly this set of soft skills that may become an asset compared to graduates from similar non-EM programmes. This tendency might be more accentuated in the field of natural sciences where such competences are often neglected, whereas social sciences and humanities have identified them as key capabilities.



3. Considerable differences become evident when we regard the results on employment across the **fields of study**. This is not generally surprising, as scientific literature has often referred to the fact that employability can only be examined in the context and traditions of the respective discipline (Pavlin 2010). These characteristics become evident in the consistency of the results of the present survey. Health and Welfare is the field of study with clearly the best performance in an overview across all aspects; the largest deficits, meanwhile, are evident in Humanities and Arts. Graduates from Agriculture and Veterinary have lower employment and income perspectives but are more likely to accede quickly to higher positions and satisfying work. In fields like Engineering and Science/Mathematics, this trend is exactly the inverse. The field of Social Sciences, Business and Law – probably the most multifaceted in the study – in this sample often educates versatile graduates who, after a (sometimes longer) period of job searching, often find suitable positions. Thus, when further monitoring the progress in the area of employability, these different basic positions will have to be taken into account.
4. Another strong trend that can be observed is that the Erasmus Mundus programme unfolds its **greatest potential** with regard to **employability for developing regions** of the world like Africa, South-East Asia and South, West and Central Asia (but not so much for Latin America). This fact becomes evident in many respects. Not only is the knowledge of the programme much higher in these countries than in the rest of the world (including Europe) – which implies a pool of talented young people to succeed as applicants – but the graduates also derive more advantage from their degree in the local labour market. They gain access to higher and better-paid positions more quickly than their fellow graduates in Europe, and they are less often affected by unemployment.

Basically, this is a positive result, as one of the aims of the programme has always been to better the employability of students from developing countries. An overview of the absolute numbers of Erasmus Mundus students reflects this emphasis. The – comparatively – lower success in the labour markets of Europe or North America is nothing discouraging, taking into account their largely different structure: greater competition for qualified positions and above all a larger timeframe in a career to be promoted. At the same time, however, the finding shows the **potential** that Erasmus Mundus still may unfold, provided that employers **in Europe** become more aware of it.

5. Shedding a light on employability from the perspective of the **international mobility** of higher education graduates, we can conclude that Erasmus Mundus seems to meet its goals as a highly efficient training programme for skilled workers and researchers from non-European countries. The acquirement of a (or multiple) European degree(s) is generally rewarded in the national labour markets for those who return after their EMMC. Those who extend their stay in Europe in most cases do this to continue their studies, thus contributing to making Europe competitive in the area of cutting-edge research. However, we should not neglect the fact that a considerable part of the non-European students are also looking for at least temporary work experience in Europe. This factor can contribute to both tackling skill shortages in economic sectors here and to building up and strengthening links to sectors in developing countries, which greatly rely on a qualified and experienced labour force.

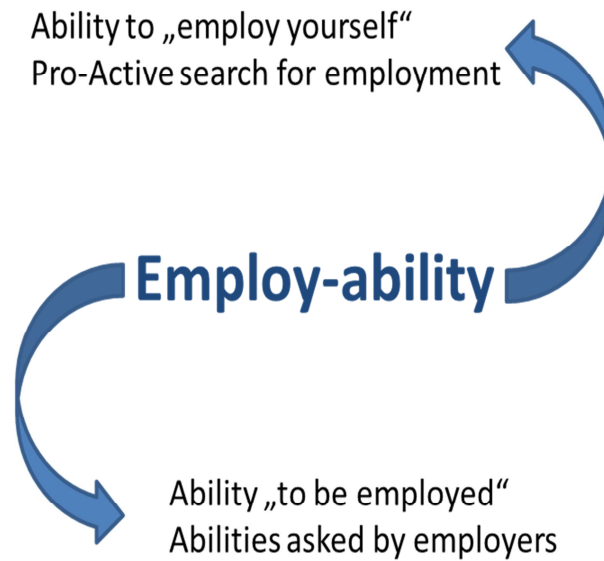


6. The majority of the EMMCs provide a very good education in terms of their **academic contents**. In all questions that referred to the academic quality of the programme or the knowledge gathered in the specific subject, the assessment is above average (e.g. compared to similar Master's programmes). This fact is reflected in a very **strong orientation towards research**. One-third of the graduates who responded to this survey were currently PhD candidates, about 30% of the students declared their intention to continue their studies after the EMMC and the largest group of those students who want to seek a job want to work in the academic sector. Thus, we can draw from this that Erasmus Mundus lays the foundation for state-of-the-art research in many fields. For the future, it will be interesting to monitor the further professional paths of the PhD candidates from Erasmus Mundus to get a clearer view of their employability as well.

7. On the other hand, there is still **room for improvement of the vocational orientation** within some EMMC programmes. The corresponding results are ambiguous. About one-half of the interviewed Erasmus Mundus Masters Courses feature the high involvement of practical elements with a lot of interesting examples such as real case studies, life cycle projects with employers, company visits or field trips. Furthermore, the input from representatives of the world of work seems to be a widespread element. But we could also detect a certain lack of guidance regarding future career paths in some EMMCs – notably when it comes to positions outside the university. In order to improve employability and to avoid discouragement on the side of the applicants, it would surely be advantageous if some EMMCs carved out their profile more clearly.

8. A very unique feature of the Erasmus Mundus is the **strong intergroup relation** that develops during the Course, since students from diverse backgrounds come together in one new project. We can state that a very high share of EMMCs already employ these networks in a very goal-oriented way. For instance, it could be demonstrated that an alumni network is a very valuable resource both for establishing new links in research and Course development as well as for maintaining professional contacts and mediating job opportunities. Further exchange and learning from good examples could contribute to a more comprehensive and smart utilisation of this resource.

9. Finally, when we conclude by returning to the pragmatic question of what it is that we are dealing with, a **basic view on the meaning of employability** helps to clarify the central recommendation. In that sense, “employ-ability” denominates an ability, which is of a double-sided nature:



On the one hand, it signifies the not passive but **relational ability** “to be employed”, i.e. a range of abilities or competences asked for by employers, a set of competences and practical experience. On the other hand, however, a genuinely **(pro-)active ability** comes to the fore that emphasises the ability to make use of (and open up) job opportunities, the use of professional networks and a clear view regarding career paths. Both aspects are of complementary importance, and the EMMCs should continue working on both of them. However, as we can conclude from the assessment of competences, for the first aspect only slight deficits are affirmed; the general level of competences within Erasmus Mundus is high. The latter aspect is the one where we find more occasion for improvement, e.g. when we consider the results on career orientation. Strategies to enhance employability within Erasmus Mundus Masters Courses should thus continue to foster knowledge and competences but not neglect to expand their students’ own activity in their search for employment, their **ability to “employ themselves”**.



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