

# SKILLS GAINED THROUGH ERASMUS+ MOBILITY

ErasmusJobs literature review

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#### Title: Skills gained through mobility: a literature review

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# Preface

The first output of the Erasmus Jobs project is devoted to defining which skills are provided by an Erasmus+ mobility abroad. This literature review will lead to a comprehensive competence profile that will help map the skills employers seek and make a comparative analysis between acquired by graduates and desired skills by employers.

This work will highlight the curricula benefits that Erasmus+ experience brings for participants. Furthermore, the project provides a competence booklet, a comprehensive report, and policy recommendations on how to support Erasmus+ Alumni. Transnational learning mobility is one of the major objectives of the European Education Area.

To achieve these goals, the consortium members involved in the project have done an extensive literature study (this report). The literature study of the ErasmusJobs project has been complemented and validated with qualitative field research among employers, students, and university staff. This includes different interviews with representatives from the various stakeholder groups to provide relevant data for the development of the competence profile that an international mobility brings.

Additionally, a mapping between the identified skills will be developed to facilitate dialogue between the various stakeholders. This mapping will serve as a benchmark measuring the different competences gained and identify where efforts need to be made to bridge the skills gap.

This literature review tried to answer the following questions:

- What transversal competences do employers need?
- What transversal competences do universities teach?
- What transversal competences do Erasmus+ students have?
- How do competences from Erasmus+ students translate into competences employers need?

By answering these questions, the research will identify where competences differ and where the different actors can work together to bridge this competence gap, specifically looking at the Erasmus+ students' competences. This mapping and competence profile will provide a starting point for discussions and joint work, closing the skills gap between higher education students and the labour market.

The research will be concluded with the development of a comprehensive competence profile and a competence booklet for students and career offices.

A report of the research results together with the competence booklet will form a solid base for further discussions and allow the project to increase the impact and sustainability of the website development named "The Job Platform for the Erasmus Generation".

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# Introduction

It is commonly agreed that mobility activities during university studies, as well as any active engagement in student branches or other similar student associations, are of significant benefit when it is time to find a job. Nevertheless, it is equally known that the labour market remains challenging for recent graduates, mainly due to their apparent lack of skills and working experience. Acknowledging this situation, the Erasmus Jobs project "Mobility ErasmusJobs-Bridging the skills gap of the Erasmus Generation" tries to give answers to these questions:

- Why are the skills gained through a mobility experience not clear?
- Why does this lack of recognition still exist?

A precise data analysis of the needs of the parties involved (students, universities, and employers) is later provided. The ErasmusJobs project seeks to identify the transversal skills of the students, the needs of employers, and map both sides with a common understanding.

As a final and global outcome, the project will produce an online platform to manage practically all the exchanges, exposing additional training and best practice material as supporting resources. The ultimate goal is that the project develops different outcomes, suggesting solutions to overcome the obstacles for the success of mobility competence recognition.

In this report our aim is to review all the relationships among international mobility & employability, considering the skills gained while learning abroad. The limitation of the report is to offer data and insights from different points of view with particular attention to Erasmus+ mobility. In the following we will make no distinction between skills and competences, and we will use both terms indistinctly.

#### **Document outline**

In this report we present a desk research review for the Erasmus+ skills gained that are related to the labour market. The following chapter gives the reader some context, a general analysis with related and past Erasmus+ projects, background initiatives and global European data and reports about Erasmus+ mobility. Chapter 2 provides global information, reports and data. Chapter 3 presents several classifications for skills/competences, reviewing the European skills, competences, qualifications and occupations (ESCO) and European Skills Index (ESI). Chapter 4 reviews the expectations for better employment and future earnings considering ISM graduates. A global transnational analysis is presented together with a sampling of country-specific information related to the section topic. Chapter 5 presents multiple literature references that support the skills gained with an Erasmus+ mobility. After the initial general discussion about transversal skills, 2 groups classification is analysed. Finally, other related papers and relevant data and a conclusions section are presented.

# 1 General analysis and context

In this section we dive into the theme of the report by presenting the general idea of the analysis, related works, projects, studies. To start off, we reviewed other related Erasmus+ projects and past initiatives that explored the topic followed by official studies based on data from the European Commission.

## 1.1 Related and past Erasmus+ projects

The Erasmus+ program has previously funded projects with similar goals and aims. For example, the project <u>EmploySkills</u> (Strengthening students' employability through enhanced skills formation) promotes the acquisition and development of transversal skills to meet job market's needs. With similar objectives to the Erasmusjobs project, they reported several skills mismatches with a specific focus on transversal skills (EmploySkills, 2021). As a result, the project consortium designed different training modules to enhance the following transversal skills:

- 1. Solution-oriented thinking
- 2. Critical thinking
- 3. Taking initiative
- 4. Information/Media Literacy
- 5. (Self) leadership
- 6. Social skills

As an outcome of the Erasmus project <u>KeyStart2Work</u> the partners have produced a catalogue of transversal competences key for employability (KeySTART2Work, 2016) which presents the definition of 12 transferable skills that might be considered relevant competences to labour market:

- 1. Intercultural skills & global awareness
- 2. Flexibility & adaptability
- 3. Strategical & innovative thinking
- 4. Organization & time management
- 5. Decision making
- 6. Teamwork
- 7. Empathy / ability to build relationship
- 8. Problem solving

- 9. Learning orientation
- 10. Negotiation skills
- 11. Leadership
- 12. Collecting and processing information.

Additionally, the report of transversal key competences for employability presents the definition of how the factual and theoretical knowledge of the competence would be attained, which are the skills that each competence includes, and different attitudes that one person with such a transversal competence will show. As Erasmus mobilities generally present new situations and real-life problems to students, the successful resolution of them can be transferred to different work contexts easily. Additional to International Student Mobility, many of these competences may have been acquired through non-work, leisure activities opposed to through participation in formal education or training.

The project <u>TA-VIE</u> "Tools for Enhancing and Assessing the Value of International Experience for Engineers" is devoted to developing strategies and tools for enhancing, assessing and valorising global competence for engineering students and graduates. They produced an interesting <u>guidebook</u> to outline how to improve the employability of engineering graduates with international experience through international forums, job fairs and job networking sessions.

Other Erasmus+ project (<u>INTENSE</u>) changed the point of view and focuses on the needs for internationalisation of Small and Medium Sized Enterprises (SME), the needs of students to gain international, entrepreneurial, and innovation competences and HEIs' needs to stimulate these competencies (Hänti et al., 2018).

The project <u>Talented Europe</u> developed a <u>website</u> and a mobile application to facilitate transnational job movements of young people in the context of more successful labour market integration and more mobility within the EU. They offer a job platform focused on the transnational employment of vocational education and training alumni.

The ErasmusJobs project is also related to other projects as the ongoing project <u>ErasmusSkills</u> (project reference number 2018-1-ES01-KA203-050439), sharing several partners. The ErasmusSkills project lets former Erasmus students reflect on the Knowledge, Skills and Attitudes (KSA) that they developed during their stay abroad. Additionally, ErasmusJobs project considers a holistic approach and focuses on identifying the skills obtained on the mobility, taught by universities and the skills requested by employers. Both projects have different outcomes, but the output of ErasmusSkills will provide a stepping-stone to the

ErasmusJobs project, where the target will be on providing a place for students to present the skills gained during their stay abroad to employers.

Furthermore, there are additional synergies with projects that foster international employability such as the <u>Elene4project</u>. Pertinent objectives of the project were to overcome skills mismatches with respect to soft skills and develop new innovative curricula through novel educational methods. They have analysed the transnational state-of-the-art of innovative methodologies and activities which foster the acquisition of transversal skills in Higher Education.

#### 1.2 Background initiatives

In this subsection it is worth mentioning the past initiative called #MyESNCareer that was run by ESN (Erasmus Student Network). In this successful campaign, ESN volunteers highlighted the skills they gained while volunteering. The ultimate goal was to raise awareness of the recognition of skills gained through non-formal learning, in particular the recognition of competences from an international experience such as Erasmus+ mobilities. Several online articles were published with an emphasis of gained competences such as:

- Passionate attitude
- Organisational and time management expertise
- Leadership and public speaking skills
- Ability to work in cross-cultural and cross-functional team
- Networking

In fact, ESN offers international mobilities working with people from different countries. While the hurdles for European labour mobility have been gradually lowered, in particular in terms of legal obstacles, moving to a different country remains difficult. In this sense, European student mobility can substantially contribute to lower such obstacles. The insecurities of moving to a different country and culture are much lower once somebody has already experienced such a change.

To retrieve data and analyse the relationship between Erasmus+ experience and later work mobility, ESN also conducted a survey entitled "Exchange, employment and added value" (Alfranseder et al., 2012). From the conclusions of the survey, several findings can be highlighted:

- More than 97% of all respondents considered having studied abroad an advantage on the labour market.
- Students who studied abroad evaluate many professional and study-related skills consistently higher than the peer group without a mobility experience.
- Studying abroad helps widening individual career opportunities by enlarging networks, improving knowledge of foreign languages and boosting self-confidence.

Another important aspect retrieved from the survey was the student attitude towards their future labour mobility. Figure 1 shows that most students, regardless of their actual mobility status, consider that international student mobility will have an impact on their future prospects of working abroad.



#### Figure 1. Attitudes towards future labour mobility (source: (Alfranseder et al., 2012))

Another initiative was a joint research project from the Centre for International Mobility with DEMOS Helsinki investigating the importance of international experiences to a changing society and the future of working life. In their report (Centre for International Mobility, 2014) besides the learning outcomes recognized by the foreign HEI, it is highlighted that international mobility provides some hidden competences and skills to be considered for future employment. Besides the skills traditionally linked to international mobility (language skills, intercultural competences, tolerance and broad-mindedness) they added three new areas to highlight several hidden aspects of international competences to consider in the future labour market: productivity, resilience and curiosity. The idea behind these efforts is that

international experiences should be re-evaluated to include not only the recognized certified competences but other new sets of extended competences. The competences gained through mobility were outlined in three categories; productivity, curiosity and resilience.

The results of this work showed that the competences most related with "productivity" are:

- efficiency
- analytical competences
- problem-solving
- reliability

Related to the concept of "**curiosity**" or the way graduates will acquire competences; the following skills were highlighted:

- tolerance
- interest towards new issues
- cultural knowledge
- cooperation
- adaptability
- networking

Finally, related to "**resilience**", 3 more factors arose:

- self-awareness
- persistence
- the ability to problem-solving

## **1.3 European Commission data and reports**

This subsection brings some relevant data published by the European Commision. Below we present the latest information extracted from the latest Eurostat database related to learning mobility statistics (Eurostat, 2020) relevant to put into context the figures of full degree students that were mobile internationally at European level:

- Up to 1.7 million foreign students were undertaking tertiary level studies across the EU-28 in 2017. Considering the withdrawal process of the United Kingdom (UK) from the European Union, in 2018 the number of foreign students at EU-27 was 1.3 million.
- Across the EU-28 in 2017, 436 000 students from abroad (25.5 % of the total) were studying in the United Kingdom, far more than in any other EU Member State. In 2018, within the scope of the EU-27, 23% (312.000) of the total of students from abroad were studying in Germany, 17 % in France and 8 % in Italy and the Netherlands.
- More than one third (37.8 %) of the students from abroad who were undertaking tertiary level studies across the EU in 2017 were from Europe, 30.1 % were from Asia, and 13.0 % were from Africa. In 2018, the corresponding figures were 44%, 25% and 15%.

Considering credit mobility under EU programmes (i.e. ERASMUS or other EU programmes) the map from Figure 2 shows the mobility flows of international credit mobility students in the tertiary sector.



Figure 2. Credit mobility map under EU programmes (source: (Eurostat, 2020)))

The European Commission, Directorate-General for Employment, Social Affairs and Inclusion have compiled a handbook (European Commission et al., 2018) with the European skills, competences, qualifications and occupations (ESCO) which gives a general overview of the different aspects of a classification designed to connect people to jobs. This publication provides the terminology that should be used to support job matching, job searching, career management or labour market analysis. However, at the same time, young people in Europe are facing important challenges to find a job right after graduation due to the challenging labour market, the lack of skills and working experience (European Commission et al, 2019). Respondents to the online survey done in (European Commission et al, 2019) regard as most important challenges the lack of job-specific (vocational) skills (73%) and experience (42%). Additionally, a mismatch between the supply and demand of skills for the available jobs is identified as the second most important current challenge (64%).

One of the goals of ESCO classification is to set up a common framework for competences needed in the labour market. As stated by Monteiro et a., the impact of globalisation leads to a new type of work requiring the update of competences (Monteiro et al. 2019). In the above context, the authors evaluate the existence of (mis)matches between the perceptions of mastery and utilisation of graduates' competences, taking graduates' and employers' perspectives. Globalisation and internationalisation go hand in hand with each other. The proposed questions on this study are very similar to those questions faced within the ErasmusJobs project:

- How do students perceive their curricula and utilisation of their competences during professional activities?
- How do employers perceive graduates' skills and use of their competences?
- Are there gaps and mismatches in the use of competences?

Additionally, another relevant publication is the "The Education and Training Monitor" (European Commission et al, 2020) which is an annual publication of the European Commission which captures the evolution of Europe's education and training systems by bringing together a wide range of evidence in a concise manner.

The review has been focused on graduate employability and learning mobility. In 2017, 11.6% of higher education graduates were mobile, meaning that they studied abroad partially or entirely during their time spent obtaining their degree. As an average for Europe, 8% of students took part in a temporary experience abroad (so called 'credit mobility'), and 3.6% of them graduated in a country which was different from the

one where they received their upper secondary diploma, which is considered 'degree mobility'. Different EU countries show different ratios between credit mobility and degree mobility, reflecting the availability of different funding schemes or geographical factors, as well as network effects. Erasmus+ mobility programmes are responsible for approximately half of curricula mobility stays occurring in the EU.

Finally, the report contains a set of draft proposals for indicators of conditions for learner mobility in higher education. This mobility scoreboard might be of large interest to convert those 'marks' as comparative indicators for skills that are enhanced/improved with transnational educational mobility (TEM) such as Erasmus+ mobilities (European Commission, 2014).

In the following chapter we will outline multiple concepts, collecting reasons and solutions about why the skills gained through a mobility experience are not clear, which impacts their lack of recognition.

# 2 Skills/competences classification

In this chapter, we will review the main sources related to skills/competences classification and definition. Multiple data information provided by institutional entities are provided together with some excerpts and analysis from relevant authors.

## 2.1 ESCO classification

The ESCO handbook (European Commission et al., 2018) is the main reference book for European Skills, Competences, and Occupations for all European Qualification levels, defined in the European Quality Framework (EQF) defined by the Bologna Working Group in 2005.

ESCO provides a common, interoperable reference terminology that can be used across Europe, both in the labour market and in education and training. In our domain, it allows us to classify relevant competences and qualifications. By using the same terms, standardised semantic web information can be shared in both the labour market and the education sector. Employers are increasingly concerned with what graduates know, understand and are able to do in practice, rather than focusing on formal qualifications. The standardisation of competences offers the opportunity to bridge the gap from education to the labour market. Currently, <u>ESCO</u> includes 13.890 competences grouped in four categories:

- 1. Knowledge
- 2. Skills
- 3. Attitudes and values
- 4. Language skills

The first group of competences are related to the concept of "knowledge" where multiple knowledge fields are listed (e.g. engineering, arts and humanities, social sciences, natural sciences, etc.). These knowledge competences are related to the different field of HEI students and a priori, the international mobility should not make a difference in the learning outcomes of the knowledge of the graduates.

The last group named "Language skills" enumerates the different languages together with the proficiency and is not further evaluated as for an Erasmus+ student the language skills is inherently considered.

Next, we review the competences included in the second and third level of the classification: Skills and Attitudes/values, in order to select the items that might be gained differently when a ISM is considered.

Under the category labelled as "Skills" the following items are included:

- assisting and caring
- communication, collaboration, and creativity
- constructing
- handling and moving
- information skills
- management skills
- working with computers
- working with machinery and specialised equipment

From the presented list we outline "Communication, collaboration and creativity skills" that an Erasmus+ mobility might bring to students. The different competences/skills included are the following.

• **Communication, collaboration and creativity**: designing systems and products; performing and entertaining; writing and composing; presenting information; promoting, selling and purchasing; advising and consulting; teaching and training; creating artistic, visual or instructive materials; working with others; solving problems; liaising and networking; obtaining information; verbally negotiating; using more than one language; communication, collaboration and creativity.

The category "transversal competences" is the one most relevant to the mobility experience and includes the following skills:

- social and communication skills
- life skills
- thinking skills
- core skills
- self-management skills
- physical and manual skills

In bold, we have highlighted those skills that an Erasmus+ mobility might bring to. Let us refine the different skills included in each category.

- **Social and communication skills:** communicating; leading others; following ethical code of conduct; supporting others; collaborating in teams and networks.
- Life skills: applying cultural skills; applying entrepreneurial and financial skills; applying environmental skills; applying general knowledge; applying civic skills; and applying health-related skills.
- **Thinking skills:** processing information, ideas, and concepts; thinking creatively and innovatively; planning and organising; dealing with problems
- **Core skills:** mastering languages; working with numbers and measures; working with digital devices and applications.
- **Self-management skills:** working efficiently; maintaining a positive attitude; taking a proactive approach; demonstrating willingness to learn.

#### 2.2 European Skills Index

Another related skill classification is the European Skills Index (ESI) compiled by CEDEFOP - European Centre for the Development of Vocational Training (Cedefop, 2018). ESI measures the performance of a country's skills indexation, taking into account its multiple facets from continually developing skills of the population, to activating and effectively matching these skills to the needs of employers in the labour market. ESI is targeted towards Vocational Education and Training (VET) studies, providing occupational skills, whereas university courses are more known for focusing on theory and professional career paths.

The European Skills Index is built on three pillars: skills development, skills activation, and skills matching. These pillars are used to organise and aggregate 15 individual indicators into a single consolidated measure. The first pillar considers that skills development goes beyond formal education, and includes non-formal education, training and lifelong learning activities to gain and develop skills. This can be similarly applied to international student mobility of Erasmus+ students, as skills can be gained through the different experiences during the mobility for which it can be difficult to discern if these skills were obtained in formal or informal settings.

The second pillar that ESI considers is the skill activation which reflects on the transition from education to the labour market. Finally, the third pillar evaluates how well the competences gained through education and training, match with those needed in the labour market. The ErasmusJobs project addresses these 3 pillars but focuses its attention to higher-education students with an international mobility.

Relevant questions such as "**how fast do graduates find a job?**" and **"do the skills obtained match those required at work?**" are of great interest in our investigation to evaluate if international mobility improves these indicators.

# 3 Employment and earnings expectations of International Student Mobility (ISM).

In this chapter we review the literature and reports that relate employment and earning expectations for students with an international student mobility experience such as Erasmus+ mobility. First, we provide a general discussion with a transnational analysis about how international student mobility (ISM) or transnational education mobility (TEM), affect employment prospects to later focus in several specific European countries to have particularised data. We do not intend to have a complete review across Europe but to sample different EU countries to present facts and background about the motivation and prospects for Erasmus+ mobilities.

## 3.1 Transnational analysis

The reasons that Erasmus students consider as important to go abroad:

- Opportunity to live abroad
- Meet new people
- Learn/improve a foreign language
- Opportunity to develop soft skills, adaptability, taking initiative, proactivity
- Improve and widen the career prospects.

Therefore, as it can be seen from the list, having a better future on the labour market is an important issue that leads students to do an international student mobility. While the original Erasmus Impact Study (Brandenburg, 2014) looked at aggregated data at the European level, in 2016 a report with a regional analysis was carried out (Brandenburg, 2016). This new study analysed the regional trends in the effects of student mobility under the Erasmus programme on employability, skills, careers and social lives. The analysis divided Europe in four regions, showing a comparative analysis of the effects of Erasmus on the personality, skills, and career of students for each region. The main results are shown in Table 1.

	Northern Europe	Southern Europe	Eastern Europe	Central Europe
Higher Motivation to go abroad	Meet new people and broaden career prospects in home country	Develop language and soft skills and broaden career prospects abroad	Develop language skills and broaden career prospects in home country	Live abroad and meet new people
Long-term unemployment of Erasmus alumni	2%	3%	1%	2%
Long-term unemployment of non-mobile alumni	3%	6%	6%	3%
Level of personality traits before Erasmus	69,8%	70%	69,7%	67,8%
Level of personality traits after Erasmus	69,3%	70,8%	71,2%	69,3%

Table 1. Effects of student mobility under the Erasmus programme on employability, skills, careers and social lives

In Southern Europe, 9% more students saw mobility as a way to improve and broaden their career prospects than in Western Europe. Similarly, 9% more students in Southern Europe than in Northern Europe considered the opportunity to improve their language skills a compelling reason to go abroad. For 93% of students from Southern Europe, improved career prospects are an important reason.

Additionally, it was shown that while undertaking an Erasmus student exchange significantly improves young people's chances of securing high quality managerial jobs, this is especially true for students coming from Southern and Eastern Europe.

There are various research works that evaluate the effects of student mobility during higher education not only on the transition from education to employment but on future mobility and earnings five years after graduation. The report (Rodriges, 2013) analyses the data from 16 different European countries. The findings point to a positive association between mobility and future mobility and earnings, while the transition to employment seems to be slightly delayed. In fact, the positive effect presented for earnings is only found in few countries: Poland (16%), Italy (12%), Czech Republic (8%), Spain (8%) and France (7%), while in The Netherlands, this effect is negative: mobile graduates earn less 3.5% than their non-mobile counterparts.

Other research works such as (Favero and Fucci, 2017; Kratz and Netz, 2018) confirms the fact that formerly mobile graduates receive higher wages in their country of origin compared with those who did not

go abroad and that they also experience steeper wage growth in their early careers. The link between international student mobility and the first salary has been confirmed in several European countries: Germany (Kratz and Netz, 2018), Italy (Favero and Fucci, 2017), Poland (Liwiński, 2019) and France (Calmand et al., 2018).

The comprehensive research review done by Waibel et al. presents the career consequences of transnational educational mobility (TEM) (Waibel et al. 2017). They mention some findings of existing empirical studies on the potential career benefits of educational mobility. The authors present an extensive search procedure through 65 documents that were reviewed concerning three vertical career outcomes: career planning skills, transition into employment, and professional status or income. Results revealed that there exists a moderate positive effect of educational mobility on income after graduation. While individuals themselves perceive a connection between their transnational mobility practices and subsequent job search success, they also mention that from an objective/unbiased point of view, the assumptions about the faster school to work transitions are not conclusive despite the individuals perceive a positive impact of TEM on career planning (Waibel et al. 2017).

Gabor et al. presented a transnational research study of the perception of the heterogeneous sample of employers regarding a sustainable and experimental innovative tool for the assessment of competences to support employability (Gabor et al. 2019). The study has been conducted with employers from Austria, Romania and Sweden, from five different sectors of activity. In the study, a quantitative analysis was carried out using data based on Eurostat indicators for quality of employment and a qualitative analysis using face-to-face interviews. The results show that even if there are significant statistical differences, regarding the quality of employment according to the Eurostat indicators, all these three countries have a good, equal and strong perception with an innovative and sustainable tool for continuous assessment of skills to support employability.

Hedvig and Caperna, (2018) shows how the increased worldwide connectivity, pushed forward by novel technological development, changes in work organisation and demographic trends have profound effects on the future of work and workplaces. These reasons supported the idea that TEM improves the possibility for a better job in the future (Hedvig and Caperna, 2018).

The Erasmus Impact Study done in 2014 (Brandenburg, 2014) stated that for employers, a mobility experience generally looks nice as 64% believe international experience is important, but eventually, the obtained transversal skills and knowledge are the aspects that matter the most (92%). The study reflects that participating in a mobility experience increases the long-term employability of students.

On the other hand, according to Van Mol (2017) few employers consider international experience in their recruitment criteria. From the data included in this paper, learning mobility is associated with future mobility, higher earnings, and lower unemployment. It also correlates with improved mutual understanding, openness, and citizenship skills (Van Mol, 2017).

Clearly, many times there are mismatches in the skills graduates have, or present in their CV, compared to the skills employers need (Hernández-March, 2009). There is a need to create synergies and find ways to bridge the skills gap between graduation and employment. However, in order to further elaborate on the needs, an extensive requirements assessment for the three different stakeholders (students, career officers and employers) linked to an Erasmus+ mobility will be done in a later stage of the ErasmusJobs project.

Acquisition of transversal skills, including those gathered through mobility, are not the prerogative of the students enrolled in higher education programmes. Many other education levels as VET and adult education deal with similar issues, therefore the solutions developed within this project can be equally relevant.

There are other non-EU articles and studies related to mobility and skills for the labour market. For example, the article (Fischer, 2010) discusses study abroad programs, students who participate in them, and the perception that employers hold from an American university point of view. The relevance of the report is the conclusion about market job skills that students learned while studying abroad and valued by employers. The author mentions that managers might value the importance of hiring employees with international experience, but recruiters typically have more focused goals. In America, the perception problem for ISM is that it has historically been seen as an add-on, a perk for wealthy students at selective colleges. Relationships between career placement offices and study abroad programs are highlighted, pushing forward to help students translate their study-abroad experience into terms employers can understand. Similarly, the paper (Eaton and Kleshinski, 2013) evaluates how ISM increases the employability of university graduates (in this case business graduates) considering the new skill needs of workers in a globalised work environment. The authors found that several American universities have adapted students' learning experiences to incorporate global exposure in order to ensure that graduates possess the internationalisation skills necessary for employability.

In the next subsection we present the information from different report analyses and studies performed with data specific to certain European countries.

## 3.2 Finland

Hyvärinen, (2019) presented a study to outline whether or not international studies and training experiences are commonly thought to increase graduate employability, specifically viewed by Finnish employers. The paper concluded the following key findings from the Finnish case study (Hyvärinen, 2019):

- Some of the most desired competences of graduates are reliability, problem-solving skills and cooperation.
- International competences and experiences are strongly associated with competences such as the understanding of other cultures, language skills and communication skills.
- Employers perceive international competences as different types of twenty-first-century skills that can be grouped into three categories: "Ways of Working", "Living in the World" and "Ways of Thinking".
- A majority of employers regard international study and work experiences as a positive thing. However, international experience is not considered an important recruitment criterion.

#### 3.3 France

From the analysis done in (Calmand et al., 2018) it is shown that for more than 65% of the graduates from "Grand Ecoles" who went abroad during their last course of study, this experience was compulsory. This research also states that labour mobility of HE graduates leads to a wage gain compared to students who remain in their region. This effect is stronger if there is an ISM or work experience abroad. Additionally, they mention the strong correlation among all types of ISM done while studying or on a later stage. An interesting result of this paper is that only the "long duration" experiences abroad have a significant impact on the wage differential, with an estimated gain relatively small, only 4%. Besides, for the less-skilled students, mobility abroad can help greatly to boost their career paths and improve employment prospects upon return to France.

#### 3.4 Germany

The strategic marketing of the German higher education system first gained traction in the 1990s when the focus of internationalisation efforts shifted from academic and cultural benefits to a more utilitarian approach. One relevant aspect was the concern from the German government about graduates "brain drain"

to anglo-saxon/English-speaking countries and, instead, transform the trend into a "brain gain", attracting ISM students to Germany.

The analysis done by (Kratz and Netz, 2018) focused on wage differences among graduates from German universities with and without ISM experiences. Their results confirm that graduates who spent part of their studies abroad receive slightly higher starting salaries, with a steeper wage growth, with an enhancement of 7.7% five years after graduation. Additionally, the data shows that better earnings for ISM graduates may partly be attributable to favourable self-selection as students from high social backgrounds are more likely to go abroad than students from low social backgrounds, but other reasons apply as ISM graduates are more active about their working prospects, searching for better job opportunities and work in large companies and multinational companies.

The article (Petzold and Bucher 2018) refers to the concept of the 'academic mobility regime' to gain a deeper understanding of the interrelations between internationalisation of higher education and individual perceptions of members of the academic system in Germany. Several indicators were analysed for the mobility regime dimensions of normalisation, rationalisation and time-space compression are structured particularly in the academic system.

#### 3.5 Italy

The article (Favero and Fucci, 2017) examines the impact on salaries of Erasmus participation for graduates from the University of Siena. Specifically, it investigates whether mobile alumni experience an increase in terms of net monthly salaries, using panel data for 2010 graduates from the University of Siena who were interviewed again each 2 years till 2015, to track the Erasmus impact. The results show the existence of a wage premium of around 7-9%.

In (Cammelli et al., 2010) the analysis of data on graduates of Italian universities found that the wage premium from participation in ISM reached 4% one year after graduation and 11% after five years. In another study for Italy based on the data from the AlmaLaurea questionnaire, (Caroleo and Pastore, 2017) also report similar results with an enhancement of 6-7% five years after graduation.

Additionally, the paper (Crescenzi et al. 2016) looks at the geographical mobility of graduate students and their skill matching in the labour market in Sardinia (Italy). The scheme aims to foster regional human capital and increase the employability of local graduates by covering the cost of post-graduate studies in other

regions or countries. The results suggest that learning mobility grants can reinforce skill matching only if the problem of self-selection of the beneficiaries are properly addressed.

### 3.6 Poland

In the article (Liwiński, 2019), the authors identify the impact of international student mobility on the first wages of tertiary education graduates focused on Poland. It is interesting how they have designed the methodology/approach to make the analysis. In order to reduce the bias due to selection to international student mobility, the author includes a set of variables representing abilities and skills, characteristics of studies, and international experience as control variables. The findings were that studying abroad brings a wage premium only if it is followed by working abroad. Additionally, it is worth noting the conclusion that studying abroad for at least one semester brings a slightly higher wage premium than studying for at least one month which states that there is a minimum period of learning abroad to be considered.

Other interesting work developed by (Bryła, 2015) analyses the impact of international student mobility on employment and professional career focus on Polish students. With more than 2450 questionnaires this work studies the benefits for students in terms of gained skills for the job market. First conclusion to watch over is the percentage of Erasmus alumni developing white-collar jobs. More than  $\frac{2}{3}$  of responses assert that they are covering one of these relevant positions. The article concludes that there is a link between international students and the skills to work abroad gained through Erasmus mobility, as these are the expected skills from international companies with multinational teams.

## 3.7 Spain

In the article (Iriondo 2019), the author states that little empirical literature assessing the impact of Erasmus study program on graduate career prospects exists. In an attempt to obtain less biased evidence on the effect of Erasmus+ students' mobility on career and salary prospects, a propensity score matching approach was used. The presented study has been carried out in Spain through the analysis of two graduate surveys. The main conclusion reached was that in the medium term, Erasmus programs do in effect have a positive impact on the prospects of recent graduates, who in terms of income, were able to command salaries that were 10 to 12 percent higher than their counterparts.

### 3.8 United Kingdom

The motivation of the article (Brooks et al. 2012), is to study those students that go abroad to 'distinguish themselves' from other graduates: paying increased attention to university status; engaging in a range of extra-curricular activities; and pursuing postgraduate qualifications. This article explores the extent to which an overseas education can be seen as part of a broader strategy on the part of British students to seek distinction within the labour market and whether such an education does indeed offer tangible employment benefits.

Once we have reviewed the different opportunities for the ISM across Europe considering several advantages for the students to go abroad, we focus our attention on the skills gained through an ISM such as Erasmus+.

# 4 Skills gained with Erasmus+ mobility

## 4.1 General discussion

The Erasmus Impact Study (Brandenburg, 2014) analyses the effects of mobility on the skills and employability of students related to the internationalisation of higher education institutions within the Erasmus+ mobilities. As it was stated in the previous chapter, this study shows that participating in a mobility experience increases the long-term employability of students. Building on this for the Erasmus Impact Study for Higher Education (Brandenburg et al. 2016); new conclusions are presented considering the data of the Erasmus impact study. The authors state that Erasmus+ mobility has an impact on the students' career by impacting transversal skills such as confidence or tolerance that are not only predictors for studying abroad but also relevant for employability. Therefore better employability is largely related with the gained skills and competences while studying abroad. This study analyses six factors:

- Tolerance of Ambiguity (adaptability, flexibility, acceptance of other people's culture and attitudes),
- Curiosity (motivation, openness to new experiences),
- Confidence (trust in own competence),
- Serenity (awareness of own strengths and weaknesses),
- Decisiveness (ability to make decisions, proactivity)
- Vigour (ability to solve problems, creativity).

The Erasmus+ program (European Commission, 2019) has listed these expected effects of student mobility as follows:

- 1. improved learning performance
- 2. enhanced employability and improved career prospects
- 3. increased sense of initiative and entrepreneurship
- 4. increased self-empowerment and self-esteem
- 5. improved foreign language competences
- 6. enhanced intercultural awareness
- 7. more active participation in society
- 8. better awareness of the European project and the EU values
- 9. increased motivation for taking part in future (formal/non-formal) education or training after the mobility period abroad

Item #5 of the above list is clearly gained through the daily exposure to the foreign language, considering that the Erasmus+ mobility lasts more than 3 months, therefore, we will not include in our research the evaluation of the foreign language competence.

Additionally, the learning outcomes specific to the field of university studies of the Erasmus+ learning agreement will not be considered as they usually are already presented in the graduates' curricula. Depending on the host university, it will be more or less relevant to stay abroad. In this way, the article (González-Baixauli et al.m 2018), focuses on the outcomes of mobility, related to the improvement in the academic performance of the students who participate. The results highlight that students participating in a mobility programme improve their scores at the host university, but this upgrading: a) is not homogeneous across the mobility programs or geographical areas considered; and b) partially vanishes off when the students come back to their home university.

In the study done by (Soares and Mosquera 2019) through a sample of 196 students who participated in the Erasmus program between 2013 and 2017, the authors analyse the relationship between perceptions of employability and the development of skills. The aim of this study is to measure to which extent former Erasmus students perceived that this experience enhances their employability.

From the literature review, four motivational factors to study abroad related to better future employability are revealed:

- 1. Achieving distinction from national peers
- 2. Meeting employers 'requirements: they value qualifications obtained abroad
- 3. Having an international career or finding a job abroad: ISM brings skills requested to obtain an international job
- 4. Developing career-oriented skills: having an international experience leads to more job opportunities

First, Soares and Mosquera measure the perception of employability by proposing six items related to the literature review above (2019).

- 1. I have more job opportunities than my colleagues who did not do Erasmus
- 2. Employers in my country value CVs with an Erasmus experience when recruiting young graduates
- 3. Employers in Europe value CVs with an Erasmus experience when recruiting young graduates
- 4. I have more job opportunities than I would have if I had not done Erasmus

- 5. It is easier to find a job in my field if you have an Erasmus
- 6. I believe doing Erasmus had a positive effect on my employability

Considering the 33 skills identified by (Martínez-Usarralde et al., 2017), they measure the development of skills before and after the Erasmus international mobility taking into account some demographic data. Their results allow them to conclude that "students clearly perceive that the exchange has a positive effect on their employability" (Soares and Mosquera, 2019).

They proposed a set of skills developed during Erasmus, identifying five groups. Their results highlight that Erasmus students perceive a positive impact on all those groups of skills. They also subtracted ratings "before Erasmus" to ratings "after Erasmus" to discover positive means.

From the above information, we can excerpt those two combinations of skills are perceived as enhancing employability:

- 1. Adaptability skills and Teamwork skills
- 2. Career-orientation skills, Managerial skills and Personal skills

These two combinations can be linked with the two main motivations for choosing an international exchange as a strategy to enhance employability: pursuing an international career and pursuing distinction from peers. In our research, we will consider these different 5 skills to analyse the data retrieved from MobilityTool questionnaires, the survey done to Erasmus+ students once they end the stay abroad.

#### 4.2 Adaptability and Teamwork skills

The Erasmus Impact Study (Brandenburg, 2014) states that over 90% of the mobile students wished to experience living abroad, to develop skills such as adaptability, and to improve their language abilities. Adaptability is well-positioned in the ideas that Erasmus+ students face. Besides, teamwork skills and attributes such as self-confidence and resilience were felt to have improved significantly after an exchange abroad. Interpersonal skills, such as communication and teamwork skills, became more and more important for graduates' employability.

In the report about professional value of Erasmus mobility (Bracht et al. 2006), former Erasmus students associated their experience of mobility with improved competences and gained soft / key skills such as

adaptability, flexibility, innovativeness, motivation, endurance, problem solving abilities and being able to work productively in a team. Bracht found that formerly mobile students perceive international experiences beneficial, for example, for communication and interpersonal and teamwork skills (Potts, 2015).

According to (Janson et al. 2009) international experienced young graduates have an improvement in adaptability (81% versus 57%), planning abilities (67% versus 50%) and assertiveness, decisiveness and persistence (79% versus 62%), compared to their non-mobile peers.

Additionally, Martínez-Usarralde et al., (2017) found evidence of the "capacitating potential" regarding "adaptive capabilities" for Erasmus+ students. They mention especially the relation to the possibilities of these graduates for adaptation to an environment and to an expansion in the diversity of potential environments (Martínez-Usarralde et al., 2017).

Another research paper (Engel, 2010) confirms that the former Erasmus students assess their competences upon graduation very positively, and this is especially true regarding competences which could be attributed directly to the study abroad period such as adaptability.

#### 4.3 Career-orientation, Managerial and Personal skills.

As we are moving in a new era of globalisation, contemporary employers active on the international market require cooperation between multidisciplinary stakeholders and international customers. According to former Erasmus+ students' feedback, skills related to understanding and tolerance of international differences in culture, self-autonomy, and initiative or written communication skill were improved thanks to international experience. These factors are key when ISM graduates apply to job positions and for their posterior professional career. The acquisition of these skills enabled them to upgrade or improve their jobs. An international exchange is seen as improving skills like intercultural knowledge, language proficiency, etc.

According to Janson et al. (2009) international experience can be embedded in the curricula for a given university degree syllabus (Janson et al. 2009). In fact, Janson et al. go further and declare that foreign language, international law or European studies should be accomplished with this type of experience to acquire the full set of expected skills and learning outcomes of these studies. For other fields of study, there are also other benefits to consider international experience in terms of gained skills. Janson et al. (2009) analysed four different and widespread disciplines to analyse the impact of Erasmus mobility in the students enrolled: Mechanical engineering, Chemistry, Sociology and Business. The study asked employers to rate separately the competences of young graduates with and without international experiences. It is

worth noting that multiple sources of information considers that intercultural skills, and communicative competence are a competitive advantage for global employability (Jones, 2013; Ilie, O., 2019).

In (Phuong 2019), the author states that during the recruitment process, the employers will examine/require different transversal skills, like intercultural skills. It also presents useful recommendations for actively enhancing the graduates' employability with transversal skills. The author uses a deductive approach using a mixed-research method, both qualitative and quantitative data for answering different research questions, such as: "Is there a lack of critical transversal skills that can enhance their employability and become useful for their working life?".

Concerning career orientation, the article (Engel 2010) "The impact of Erasmus mobility on the professional career: Empirical results of international studies on temporary student and teaching staff mobility" shows the impact of an Erasmus study period abroad for mobile students. Temporary study abroad is expected to have a positive impact on personal and academic development, but also to be conducive to transition to employment and career development.

The article (Di Pietro, 2015) investigates the extent to which participation in study abroad programs during university studies impacts subsequent employment likelihood It shows that studying abroad has a relatively large and statistically meaningful effect on the probability of being in employment three years after graduation.

On the contrary, the article (Van Mol 2017) reduces the impact of international student mobility. The author shows several empirical evidence where there is a limited enhancing graduates' employability in globalised labour markets. Van Mol states that the perspectives of employers remain understudied. It should be taken into account whether European employers value study abroad; which are the specific skills employers seek when evaluating international experience; and whether 'signalling effects' of employing international graduates exist. Even if not many employers consider international experience when making recruitment decisions, others might value/require graduates with decision-making skills or international experience to expand the company abroad.

# 5 Additional related papers and data

In this section, we include several related works that seem to be relevant to the final goal of the ErasmusJobs project to go further in recognition of the skills and abilities that ISM provides.

The article (Yarosh et al. 2018) reports on the study focused on the identification of intercultural competence (IC) related learning needs of students enrolled in Erasmus Mundus Joint Master Degrees. International joint master programmes pose multiple intercultural challenges for students (and those working with them).

Other work, (Velliaris and Coleman-George 2016), shows how the internationalisation of higher education has become mandatory in the largely globalised workforce. This outbound mobility has the potential to contribute to greater understanding between cultures, countries, and individuals. The authors offer a comprehensive look into motivations for and opportunities through all forms of outbound mobility programs. As many higher education institutions (HEI) are sending their students to study abroad programs, they state the requirement for the HEI to establish the benefits, difficulties, and rewards of such an internationalisation program.

The book *Structural Indicators for Monitoring Education and Training Systems in Europe 2019 (EACEA et al., 2019)* includes a report that contains more than 35 updated structural indicators that focus on country progress and key policy developments in six areas: early childhood education and care, achievement in basic skills, early leaving from education and training, higher education, graduate employability and learning mobility. These data might be of interest to relate to the skills gained by Erasmus mobilities differentiating the gains according to distinct grouping and selection process of the data.

The article (Lörz et al., 2016) shows how it becomes more important for students' labour market success to spend part of their studies abroad. However, only a fraction of students have an experience abroad, in particular, students from underprivileged families refrain from doing so. Related to their previous educational decisions and experiences, underprivileged students generally have worse performance-related preconditions for studying abroad. Furthermore, their higher cost sensitivity and lower benefit expectation explain their reluctance to study abroad. This is named in the literature as the self-selection problem of ISM. Socio-economic backgrounds, training choices, learning experiences, and other related aspects all contribute to the propensity of doing an ISM abroad. The author (Marconi, 2013) provides one possible solution to the self-selection problem, making the exchange period compulsory for the HEI.

# 6 Conclusions

Considering the objectives of the project about studying abroad and gaining skills relevant for the labour market, it is particularly clear that the transnational dimension is a prerequisite to be considered in our work. Many skills considered here embed indeed a European dimension which can only be fully addressed within an international perspective.

A wide range of competences and skills are increasingly valued by employers in Europe. This comprises skills such as interdisciplinary knowledge, foreign languages, adaptability, flexibility, resilience, greater intercultural awareness, the ability to assess one's own strengths and weaknesses, to make decisions and to be a problem-solver. Next tasks of the Erasmus Jobs project will be devoted to get information about particular competencies that employers require when hiring young graduates and later mapping and filling-in gaps mismatching for these relevant skills and personal attitudes.

The Erasmusjobs project addresses the lack of empirical evidence, directing the quizzes of data toward the analysis of the relationship between Erasmus+ mobility, skills acquired and required by the employers.

Depending on the author or reference, the grouping of skills and competences are somewhat interrelated, mixed, then we will try to distinct and group them into the 5 categories of skills and competences that might be gained through the ISM shown in Table 2.

ID	Skill group
1	Adaptability
2	Teamwork
3	Organisation & Planning
4	Personal Development
5	Leadership
6	Intercultural Communication

Table 2. Categories of skills	groups gained with a ISM	(Fracmus+ mobility)
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# 7 Abbreviations and terminology used

EACEA	European Education and Culture Executive Agency
ECTS	European Credit Transfer and Accumulation System
EHEA	European Higher Education Area
EQF	European Quality Framework
HEI	Higher Education Institution
IC	Intercultural competence
ICT	information and communication technology
ISM	International student mobility
KSA	Knowledge, skills and attitudes
SME	Small and Medium Sized Enterprises
TEM	Transnational educational mobility
VET	Vocational education and training

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