Student Mobility in European Higher Education

Fernando Cornet*

Department of Theoretical Physics and Physics of the Cosmos, University of Granada
and Institute for the Advancement of Higher Education, Hokkaido University

Abstract — We present different programmes set up by the European Union to promote international mobility among higher education students. These programmes include intra-European mobility as well as student exchanges with non-European countries. Particular attention is paid to the Erasmus programme because it has been extremely successful and it is now a model for current programmes. We also present some tools that facilitate mobility such as networking, the introduction of the ECTS and the process of quality assessment.

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INTRODUCTION

The advent of fast transportation and fast communication methods has dramatically changed modern society in the last decades. This is particularly the case in Europe where, at the same time, big efforts are being invested in order to build a common European nationality. In the past only unskilled people that had problems to find a job in their home countries were contemplating the idea of moving to another country looking for a better future. Nowadays, even though this kind of emigration still exists and is particularly important from developing countries to more developed ones, a new international work market for skilled people, for instance holding university degrees, has been opened. Large companies often operate in different countries and they need employees with the knowledge and expertise of working in international environments.

Universities could not stay aside of these developments, so a large variety of internationalization programmes and actions have been started in many universities over a large number of countries. These include:

• Professor mobility. There is a long tradition of professors visiting other universities for a period of time, including sabbatical years, but usually such professor mobility was research driven. This doesn’t mean that, university departments would not take advantage of those visits to invite the visiting professor to teach a course, although normally those courses were at an advanced level (postgraduate courses). In the last years new, teaching driven professor mobility is becoming more frequent. Professors move to another university for a semester or a whole academic year with the main objective of teaching a course.

* Correspondence: Department of Theoretical Physics and Physics of the Cosmos, University of Granada, E-18071 Granada, SPAIN
E-mail: cornet@ugr.es
• **Joint/Double degrees.** A large number of joint/ 
double degrees, at the bachelor, master and doctorate 
level, have been started in the last years. A double 
degree is set as a result of an agreement among two 
universities to offer a common programme and the 
students are usually required to take courses in both 
universities before getting their degrees. Professors 
may also move between the participant universities. 
There is a large variety in the way these double 
degrees are organized. However, one problem 
they very often face is the difference between the 
legislation in the countries of the participating 
universities.

• **Student mobility.** This is a wider action, involving 
many more students, than Double Degrees. There 
are two main types of student mobility:
  
  o **Horizontal mobility.** Students move from a 
    home university to a host university for a short 
    period of time, typically one semester or an 
    academic year. During this time students take 
    courses at the host university that are later on 
    recognized at their home university as part of 
    their curriculum to get their degree. Mobility 
    arising from double degrees belongs to this 
    category.
  
  o **Vertical mobility.** Students finish a degree in 
    one university (with or without a horizontal 
    mobility period) and they move to a different 
    university to continue with their studies at the 
    next level. This is the case when a student gets 
    a bachelor degree from one university and 
    moves to a different university to take his/her 
    master degree.

A common problem a student faces after 
participating in mobility programmes is lack of 
recognition of the work he/she has done at the 
host university. The ideal situation is that students 
participating in mobility programmes do not need a 
longer time to get their degree than students staying at 
their home university for the whole study programme. 
Unfortunately, this is not always achieved and after 
returning from a mobility period, students find that some 
of the courses they have taken abroad are not recognized 
at their home university and they need to take more 
courses often leading to longer study periods. A possible 
way to solve this problem, although not the only one is 
the introduction of “mobility windows.”

The term “mobility windows” has been used for 
long time without a proper definition. Recently the 
following definition has been proposed (Ferencz et al. 
2013): “A mobility window is a period of time reserved 
for international student mobility that is embedded into 
the curriculum of a study programme.” Since the student 
 mobility is foreseen in the study programme, it is clear 
that the recognition problems should disappear.

Double and joint degrees are a particular case 
of mobility windows. In order to get a double degree 
students have to take a significant number of courses 
in each one of the two universities that previously have 
designed a common study programme. Obviously, they 
require a high level of collaboration and understanding 
to prepare a proper programme. Double degrees meet 
two important problems. The first one is that national 
legislations are not always easily compatible and it might 
become very difficult to design a programme that fits 
the legislations in the two countries of the participating 
universities. Let me just illustrate this point with an 
example. Bachelor degrees in Spain are obtained after 
taking 240 ECTS (4 years of study), while in most of the 
rest of European countries only 180 ECTS (3 years of 
study) are needed (see below for a description of ECTS). 
It is not easy to walk around this problem. Another 
problem arises with the financial support for student 
 mobility. It is certainly more expensive to move between 
two universities than to stay for the whole degree at 
one university. This is commonly solved offering some 
financial support to the students but, of course, this also 
limits the number of students that can take these double 
degrees. So, very often, both universities offer the whole 
study program in parallel to a large number of students 
and only a few of them (usually the ones with better 
qualifications) actually take the double degree path.

**Mobility Programmes in Europe**

More than 30 years ago, the European Union 
realized the importance of promoting university student 
international mobility not only to improve the quality 
of the student education but also to make European 
universities much more attractive to non-European 
students. To this end a number of programmes were 
launched targeting different groups of students, from 
different countries. In addition to mobility some of
those programmes contained more actions aimed to improve higher education in Europe and participating countries. Here we will briefly describe a few of them: ERASMUS, TEMPUS and ERASMUS MUNDUS. All these programmes finished in December 2013. It is, however, interesting to discuss them because they are the origin of the new, current programme, ERASMUS+, that started in January 2014. This programme is based on the experience accumulated in the previous programmes.

**ERASMUS**

The European community Action Scheme for Mobility of University Students (ERASMUS) programme can be considered the jewel of the crown of mobility programmes in Europe. The name appropriately also refers to the figure of Desiderius Erasmus Roterdoramus, known as Erasmus of Rotterdam (1466-1536), who was a humanist, catholic priest, teacher and theologian that lived and worked in many places of Europe.

The ERASMUS programme was launched by the European Commission in 1987 (European Commission 2012). It was based on a pilot program that ran from 1981 to 1987. Even before, the first attempt to establish a mobility programme was the Joint Study Programmes (JSP) that started in 1976. The JSP provided financial support to networks of universities, however serious problems at the institutional level, together with the fact that students were not receiving any financial aid, led to the disappearance of the project three years later. The launching of Erasmus was not easy and met strong opposition from some European Community member countries. This opposition arrived to the European Court of Justice that introduced some changes in the way the programme was originally approved. Finally the programme was adopted and in the academic year 1986/87. In 1994 the ERASMUS programme, together with the Comenius (devoted to primary and secondary education), Grundtvig (devoted to adult education), Lingua (devoted to education in European languages) and Minerva (devoted to information and communication technology in education) programmes joined into the SOCRATES programme. This programme finished in December 1996 and was replaced by the SOCRATES II programme that lasted until 2006. In 2007 this program merged with the Leonardo da Vinci programme (devoted to vocational education and training) to give origin to the Life Long Learning Programme that finished in December 2013.

Since the programme was approved in June 1986 the European universities had very short time to prepare its implementation and, consequently, the total number of participants in the academic year 1986/87 was very low, only 3244. The number of participants rapidly increased and by the end of 2013 around 3 million European students have spent one semester or one year as an ERASMUS student. The evolution of the number of participants is shown in Fig. 1.

![Fig. 1 Evolution of the number of Erasmus students with academic year](image)

There are no data for 2012/13, the last year of the programme. An accumulated number of 1 million (2 million) students was reached in the years 2002/03 (2008/09). In the year 2012/13 it is expected to reach a total of 3 million students.
of students participating in the programme each year since 1987/88 to 2011/12 is shown in Fig. 1. From the figure one can see that it took 15 years to achieve a total accumulated number of students of 1 million, while only 7 years were needed to arrive to 2 million participants and, finally, only 4 more years were needed to arrive to 3 million. This figure shows the tremendous success and increasing popularity of the programme. Indeed, the number of participants has been increasing steadily, except in the year 1996/97 when it decreased to 79874 from 84642 in the previous year, but one year later the number was again up to 85999 students. It is also worthwhile mentioning that in the year 2011/2012 there were more than 250000 ERASMUS exchange students.

Before participating in the programme, universities (and higher education institutions in general) from the eligible countries (the member states of the European Union and Iceland, Liechtenstein, Norway, Former Yugoslavian Republic of Macedonia and Turkey) had to obtain an “Erasmus Charter.” This guaranteed the general quality framework for universities to participate in mobility programmes, as well in other cooperative activities to improve higher education in Europe. Once awarded the charter it lasted until the end of the programme so universities did not have to apply for it again. At the same time the implementation of the charter was periodically controlled in such a way that a failure in the commitments could imply a withdrawal of the charter.

With the Erasmus charter the higher education institutions agree to comply with the following principles (among others) (European Commission 2014a):

- No university fees for tuition, registration, examinations, access to laboratory and library facilities are to be charged to incoming Erasmus students.
- Full recognition shall be given to students for satisfactorily completed activities specified in the compulsory Learning Agreements.
- Mobility shall be carried out only within prior inter-institutional agreements.
- To ensure that an academic credit transfer system (ECTS or similar) gives transparency to the recognition procedures.
- To ensure equal academic treatment and services to home and Erasmus students.
- To support the integration of visiting Erasmus students in the Institution’s activities.

The third point in this list of commitments clearly states the next step that should be taken to organize a mobility programme, i.e. set bilateral agreements with other institutions that have also been awarded the charter. These agreements are usually specific for different levels (bachelor, master or doctorate) and/or subjects. Also, each university should have a general mobility coordinator and a subject specific coordinator.

The subject coordinator and the student wishing to participate in the programme had to sign an academic agreement before the student started his study period abroad. This agreement contained the courses the student was going to take at the host university and how were they going to be recognized at the home university. In order to be able to prepare the agreement an up to date information of the courses offered by the host university had to be public and easily accessible well before the beginning of the academic year, enough time to allow for the application procedure. With such a long time there were many cases where the host university, for unexpected reasons, had to change the courses they were offering in such a way that when the Erasmus student arrived to the host university he could find that the course he was going to take and was included in the academic agreement was no longer offered. In this case a lot of flexibility had to be applied. The student and coordinator were always allowed to modify the academic agreement for good reasons.

Indeed flexibility is a key word in mobility affairs. One should not expect that both, the home and host, universities, have the same teaching and learning methodology and the syllabus for courses with the same name could differ rather substantially. Actually, one of the advantages of mobility is to expose the student to different academic systems. The important point is that the student acquires the expected knowledge and competences and not how he gets them. Also, and this is particularly important for non-compulsory courses, students can also use mobility to go to a host university to take a course that is not offered at his home university and this should also be recognized in his degree.

The student registered at his home university and, according to the first point in the previous list, he could not be charged any extra fees at the host university, even if the fees were higher than the ones paid by the student. In the same way, if the fees at the host university
were lower than the ones at the home university the student did not get any refund. But in both cases, the participant in the Erasmus programme was entitled to get all the rights and benefits from the host university as a local student. Even more, it was expected that the host university helped the incoming student to accommodate: obtain residence permit (if needed), find an apartment, etc. Unfortunately, this was a point of concern for many students. Not all universities had an efficient office to help the incoming students.

When participating in the program, the students got a small financial support from, at least, two sources: the European Union and the government of the country where the home university was located. It should be stressed that this was not a full-fledged fellowship. The amount of money received by the student depended on the destination country but it was never meant to cover all the living expenses. The idea was that the financial help received could cover the extra expenses originated by the moving for a short period of time, typically a few months.

We have already stated that the Erasmus programme was a success. This is supported by two facts. First, the large numbers of students that have spent a period of time studying abroad. Second, a study (Janson 2009) has shown that former Erasmus students are employed more easily than the ones that take all the degree programme at their home university. Indeed, it has been shown that employers view former Erasmus students as better prepared from the personal point of view and may be not so much from the specific academic point of view.

**TEMPUS and ERASMUS MUNDUS**

The Erasmus programme presented above was only for intra-European mobility, but the European Commission also set up programmes to boost mobility with other regions. Examples of such programmes were TEMPUS and ERASMUS MUNDUS.

The Trans-European Mobility Programme for University Students (TEMPUS) is the European Union’s programme which supports the modernization of higher education in the Partner Countries of Eastern Europe, Central Asia, the Western Balkans and the Mediterranean region, mainly through university cooperation projects. TEMPUS started in 1990 and finished in December 2013, when it was integrated in the Erasmus+ programme, after going through different phases. The objectives of the programme were:

- To promote the reform and modernization of higher education in the Partner Countries;
- To enhance the quality and relevance of higher education to the world of work and society in the Partner Countries;
- To increase the capacity of higher education institutions in the Partner Countries and the EU, in particular their capacity to cooperate internationally and to continually modernize;
- To assist them in opening up to the world of work and the society at large in order to:
  - overcome inter-country fragmentation in the area of higher education and inter-institutional fragmentation in the countries themselves;
  - enhance inter-disciplinary thinking and working within and between faculties and universities and trans-disciplinarily between university faculties;
  - enhance the employability of university graduates;
  - make the European Higher Education Area more visible and attractive to the world;
- To foster the reciprocal development of human resources;
- To enhance mutual understanding between the peoples and cultures of the EU and the Partner Countries.

In order to achieve these objectives three actions were developed: joint projects, structural measures and accompanying measures. There is no action specific for mobility, however it could be included in the joint projects whenever it would fit into the topic and objectives of the project.

The Erasmus Mundus programme aimed to enhance the quality of higher education and promote dialogue and understanding between people and cultures through mobility and academic cooperation. The programme started in 2004 and finished, like the other programmes, in December 2013 when it was included in the Erasmus+ programme. The objectives of the programme were:

- The enhancement of quality in European higher education;
- The promotion of the European Union as a center of excellence in learning around the world;
- The promotion of intercultural understanding through cooperation with Third Countries as well as
for the development of Third Countries in the field of higher education.

In order to achieve these objectives three actions were designed:

- Development of joint programmes at the master and doctoral levels. This action included mobility both at the horizontal level as well as at the vertical level.
- Partnerships between European and Third country universities, including mobility for students and professors.
- Promotion of European universities to attract students from countries outside Europe.

The joint programmes were developed by consortia of universities that designed integrated courses which could lead to joint or multiple diplomas. These programmes included fellowships that covered participation costs, subsistence costs, medical insurances and, in some cases, travel costs. Students had to take courses in more than one of the participating universities. The number of universities they had to study in was fixed in each programme.

One difference between Tempus and Erasmus Mundus programmes with respect to Erasmus concerning mobility is that in the first two programmes mobility could be performed only between universities belonging to a consortium, while in Erasmus only bilateral agreements were allowed.

**Erasmus+**

It has already been mentioned that all the programmes that we have presented up to now finished on December 31\textsuperscript{st}, 2013. Since then, they were all integrated, together with sports and other programmes addressed to youth, in the new Erasmus+ programme (European Commission 2014b) that will be running until 2020. The available financing for the new programme amounts to 14700 million euro for the 7 years. This represents an increase of 40\% with respect to the financing of all programmes embedded into Erasmus+ together. This gives an idea of the importance that this programme has for the European Union.

The objectives of Erasmus+ include all the ones presented above and, in addition, to enhance the qualifications and employability for young people and to modernize the education, formation and work opportunities. It is expected that having all the programmes under the same umbrella will simplify administrative procedures and will open further opportunities of interaction between those programmes.

The actions included in the programme are:

- Mobility
- Cooperation
- Politics
- Jean Monet (for European Studies)
- Sports

The first action includes all types of mobility: horizontal and vertical as well as intra-European and mobility between European and non-European countries.

This action also includes financing for the organization of joint master programmes that lead to double or multiple degrees. The programmes should have 60, 90 or 120 ECTS and should be organized by at least 3 higher education institutions from at least 3 different countries. Students have to take courses in at least two different countries. The financing of these programmes include:

- 20000 euro for one year in order to prepare the programme
- 50000 euro per year during three years of running the programme
- 13 to 20 fellowships per year for students
- 4 fellowships per year for professor mobility.

Institutions from European countries willing to participate in Erasmus+ should obtain the Erasmus Charter (see above for a description of the charter), but non-European institutions are not required to get it. In all the cases there must be a bilateral or multilateral agreement, as it was the case in the Erasmus programme.

Since the programme started just one year ago, up to now there have only been some calls with a low number of participants, and the approved projects are still active. So no information about the results of the programme is yet available.

**The Bologna Process**

Strictly speaking the Bologna Process is not a mobility project, however in a somehow indirect way it is very relevant to easy mobility between European countries, and it is expected that its relevance will increase with time when it becomes more deeply rooted into the European Higher Education System. It is also
expected that the Bologna Process will make European universities more attractive to non-European students.

The main objective of the Bologna Process is to facilitate the movement from one European country to another to workers holding a university degree. Up to the beginning of the process nationals from countries belonging to the European Union could freely move and get jobs inside the European Union. However, it was very difficult to get university degrees recognized from one country to another. This really did not make much sense. Moving to another European country meant to somehow “loose” your degree requiring a lot of paperwork and, sometimes, even to take extra courses to get your degree recognized.

The Bologna Process started with the signature in Bologna in 1999 by 29 ministers for education of a declaration where it was stated that: “The Europe of knowledge is an important factor for social and human growth” and the ministers called for:

- The adoption of a system of easily readable and comparable degrees, also through the implementation of the Diploma Supplement, in order to promote European citizens employability and the international competitiveness of the European Higher Education System.
- Adoption of a system essentially based on two main cycles: undergraduate and graduate. Access to the second cycle shall require successful completion of the first cycle studies lasting a minimum of three years. The degree awarded after the first cycle shall also be relevant to the European labor market as an appropriate level of qualification. The second cycle should lead to the master and/or doctorate degree.
  (This was later changed dividing the second cycle in two levels: master and doctorate. So now there are a total of three levels: bachelor, master and doctorate.)
- Establishment of a system of credits (such as in the ECTS system) as a proper means of promoting the most widespread student mobility.
- Promotion of mobility by overcoming obstacles to the effective exercise of free movement.
- Promotion of European cooperation on quality assurance with a view to developing comparable criteria and methodologies.

This political declaration boosted the project “Tuning Educational Structures in Europe” (better known by the short name: Tuning) (Gonzalez 2008), financed by the European Union, that ran from 2000 to 2008. In this project a number of thematic areas were selected.

Among the objectives of this project were:

- Facilitate the transparency and mutual understanding of different educational structures.
- Create European networks in each thematic area.

The different subject areas participating in Tuning prepared and published some reference points for the design and implementation of bachelor and master degrees in Europe. These points became extremely helpful for the understanding degrees in different countries. You can find the example for the Physics subject area in Donà dalle Rose et al. (2009).

**Tools for Mobility**

Mobility requires the mutual understanding of the university systems involved. Whenever a university or higher education institution willing to start international mobility programmes it is very difficult to find partners with the same teaching and learning methods and even with the same curriculum in their degree programmes. So transparency, as it was worked out in the Tuning project and flexibility at the moment of recognizing the studies followed by the students abroad, are keywords for mobility to work. But there are a number of tools that help to develop mobility programmes in each university: Here we will briefly refer to three of them: Networking, the European Credit Transfer System (ECTS) and Quality assessment. The three of them were studied carefully in the Tuning project (Gonzalez and Wagenaar 2008).

**Networking**

It has been recognized that personal relations are crucial to facilitate the agreements needed to set up mobility programmes (Ferencz et al. 2013). In this respect to have a number of networks involving professors from many universities from different countries are very helpful in order to facilitate these personal relations. These networks can be either research oriented or devoted to the study of the Higher Education system and problems. We will not develop this point any further because a very nice description of a working network in Physics can be found in Ferdinande et al. (2013).
The European Credit Transfer System (ECTS)

The European Credit Transfer System (ECTS) was created at the beginning of the Erasmus programme. At that time there were in Europe many different ways to account for the length of a course or study programme. Some European countries had a credit system, but the way credits were defined changed very much from a country to another. Some other countries did not even have a credit system. The Erasmus programme had to address the problem of comparing course lengths in different countries in order to ascertain if they are comparable or not and the ECTS came as a solution. At that time the ECTS was only used for exchange programmes and ran in parallel with the different national systems.

The Bologna Process has promoted the ECTS to be the unique way to measure course lengths in all European universities. This requires a definition which should be as independent as possible of the different methods of teaching and learning used all over Europe. The solution is to use the student workload as a way to define the ECTS. The adopted definition is “One ECTS corresponds to 25 to 30 hours of work a normal student should devote in order to successfully pass a course.” It should be stressed that in the ECTS definition every activity the student must perform during the course should be taken into account when evaluating the number of hours. This includes: lecture hours, laboratory hours, solving exercises at the blackboard hours, seminars, solving assigned exercises, taking exams, study time at home, preparing exams, etc. In particular, the bachelor thesis and master thesis can also be assigned ECTS with this definition even they usually have a very low number of classroom hours. It is important to note that a student gets the assigned number of ECTS only when he/she passes the exams or gets a positive evaluation of the work done.

There are two ways one can assign ECTS to a course unit. The first one is to try to apply the above definition and try to assess the number of hours a student would need to pass the course. This is not an easy task. Usually professors and students have very different opinions about this subject. So a trial and error method is required to arrive to an agreement. In addition there is a problem with the total amount of workload that the student will support during an academic year. Assessing in an independent way the workload of each course unit in an academic year does not guarantee that the total workload will be reasonable, not too high nor too low.

It is interesting to realize that a Tuning follow up project, now devoted to Latin-American countries (Tuning Latinoamerica) (Beneitone et al. 2007), defined their reference credit, CLAR or Crédito Latinoamericano de Referencia (Latin-American Reference Credit in Spanish) in a very similar way. The CLAR is defined as 27 hours of work load for a normal student. The reason for this similarity is that the number of hours to be assigned to one credit is calculated in the same way. Both consider that an academic year has a total of 60 ECTS (30 ECTS each semester) and taking into account the number of weeks of an academic year and considering that a full time student devotes 40 hours a week to study, one arrives to the numbers given in the definitions. This provides another way of assigning ECTS credits to course units: divide the 60 ECTS of an academic year into the different course units contained in it. It is then up to the professors to design the syllabus and activities of the course unit to match the number ECTS assigned. Still, trial and error is required to achieve a perfect matching, but in this way the constrain of a reasonable total amount of student workload is easily achieved.

Quality assessment

It was mentioned before that personal relations are a powerful tool to establish mobility programmes. However, the Bologna Process is more ambitious and also aims to promote vertical mobility, where students can freely move from one university to another when changing levels, from bachelor to master or from master to doctorate with no need for any type or bilateral agreements nor the creation of any consortia. The question arising here is about the preparation of the student willing to register from another university or, equivalently. Is the quality of the degree programme taken by the incoming student good enough to guarantee that he/she is prepared to follow the courses he/she wants to take? The answer to this question is provided by the quality assessment agencies. All the European agencies are coordinated by ENQA (European Association for Quality Assurance in Higher Education). ENQA has 88 member organizations (full members and affiliates) in 40 countries (as of December 31, 2013). The number
of affiliated agencies is much larger than the number of countries because, depending on their political organization, some countries have more than one agency. This is the case when the university systems do not depend on the central government but are transferred to the regional governments. This is the case, for instance of Spain and Germany.

ENQA, in cooperation with the associated agencies, has published a booklet containing the Standards and Guidelines for Quality Assurance in the European Higher Education Area. In this document one can find, among others, the following requirements for universities:

- Set up a policy and procedures to have an internal quality control.
- To have a periodic evaluation of the degrees offered by the university. This will consist on first internal review and its conclusions will be part of an external evaluation.
- To make sure that the student evaluation procedures are appropriate and public.
- To guarantee that the staff involved in the teaching process are qualified and competent.
- Institutions should ensure that the resources available for the support of student learning are adequate and appropriate for each programme offered.
- Institutions should regularly publish up to date, impartial and objective information, both quantitative and qualitative, about the programmes and awards they are offering.

In this way it is expected to have a very transparent system that will facilitate the movement of students between different countries. It is also important to point out that the agencies themselves will be submitted to a quality control procedure.

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