

# VIRTUAL MOBILITY: AN ALTERNATIVE OR COMPLEMENT TO PHYSICAL MOBILITY?

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## ABSTRACT

*Virtual mobility, defined as “a set of ICT supported activities that realize or facilitate international, collaborative experiences in a context of teaching and/or learning”, has great potential to contribute to the internationalization of higher education. Different viewpoints exist on how virtual mobility can achieve these ambitions both as a valuable alternative for those who do not have the opportunity to go abroad and as a complement to enhance the traditional ‘physical’ exchange programmes such as Erasmus. This paper includes practical examples drawn from a wide range of EU-funded projects and pilots which have successfully shown the prospects of virtual or blended programmes, courses, seminars, exercises and even internships.*

## 1. INTRODUCTION

Internationalization has become one of the key issues in present day European Higher Education. The term refers to the integration of an international dimension into the research, teaching and services function of higher education and has as one of its main objectives the development of intercultural competences or sensitivity. Among the most beneficial tools to reach this goal are student mobility and inter-university exchange programmes. For those students not able to benefit from the existing face-to-face programmes, the concept of virtual mobility can be introduced. Virtual mobility has great potential to contribute to the internationalization of higher education, enabling international cooperation opportunities through the use of information and communication technologies. In this paper we will start from introducing and defining the concept of virtual mobility and presenting the different types that can be distinguished. This will be followed by a number of practical examples, drawn from a wide range of EU-

funded projects, and which can serve as a source of inspiration for those considering engaging in virtual mobility activities.

## 2. DEFINITION OF VIRTUAL MOBILITY

Since the second half of the 1990s the notion of virtual mobility has gained currency in the context of the internationalisation of higher education institutions. Many institutions and networks active in the field of distance education or networked e-learning have helped to build and refine the concept through various European funded projects or similar initiatives.

The most recent definition was proposed in the context of the Move-IT project and states that virtual mobility stands for “the set of ICT supported activities that realise or facilitate international, collaborative experiences in a context of teaching and/or learning”.

The definition indicates that virtual mobility is about ICT supported *activities in a context of teaching and/or learning*. The broad term activities was chosen over ‘a form of learning’, as virtual mobility can refer to learning, teaching and research but can also refer to the organisational, logistical or administrative issues related to international education.

Secondly, virtual mobility is about activities which can be either fully or partially *supported by ICT*. In the first case the environment where all activities take place is entirely at a distance and digital, while in the latter case educational technologies are used to facilitate a physical activity, such as a student exchange. When aspects of virtual and physical mobility are being combined in order to maximise the advantages of both, it is defined as blended mobility. ICT used in the framework of virtual mobility are particularly, but not exclusively, focused on communication or collaboration. They can support both synchronous and asynchronous interaction.

Finally, virtual mobility is also about *international, collaborative experiences*. Experiences are the active participation in events or activities, leading to the accumulation of knowledge, skills in or observation of something. The experiences should be international and specifically about cross-border activities between different educational institutions from different countries. Such activities are subsequently intercultural in nature. Virtual mobility activities should also enable collaborative learning, i.e. learning from and with each other. This form of interaction and cooperation is considered to be essential in relation to developing intercultural competences and/or sensitivity.

Recently the definition was slightly updated: “Virtual mobility stands for the set of ICT supported activities, *organized at institutional level*, that realise or facilitate international, collaborative experiences in a context of teaching and/or learning”. The notion ‘organized at institutional level’ emphasizes that the set of activities is not an ad hoc initiative by single teachers or individual students, but fully embedded in mainstream and core processes of the institution, and hence widely implemented throughout the organisation. Ideally it is part of the overall vision and strategy on teaching and learning.

### **3. TYPES OF VIRTUAL MOBILITY**

Based on the definition, virtual mobility activities can be categorised as follows:

- Related to international student or staff exchanges
  - Virtual mobility to facilitate a physical international exchange (blended)
  - Virtual mobility to realise an international exchange, i.e. the student follows substantial parts of a programme at a distance, supported via ICT (virtual)
- Related to international internships
  - Virtual mobility to facilitate physical international internships (blended)
  - Virtual mobility to realise international internships (virtual)
- Related to an internationalised curriculum
  - Virtual mobility as a scenario to internationalise a (part of a) course (chapter, exercise, task, project), programme, workshop, seminar, ... This can be either fully virtual or blended.

The typology shows that virtual mobility can be seen both as an alternative and as a complement to the traditional exchange programmes such as Erasmus. New technologies make it possible to support discussion, debate or collaboration at a distance between experts and students from different universities. As such virtual mobility could offer a valuable alternative for those students who do not have the opportunity to participate in exchange programmes for social, financial, or other reasons as it allows them to take part in courses at other universities without having to leave their home university. In addition ICT can also be used to enhance physical mobility, for example by supporting orientation and preparation before, or assessment and social networking after an exchange.

During the last decade, a wide range of EU-funded projects have successfully shown the prospects of virtual or blended programmes, courses, seminars, exercises and even internships. Each of these projects researched different aspects of virtual mobility for different groups of participants. In the following sections practical examples drawn from those projects and pilots will be presented as a source of inspiration for those considering engaging in virtual mobility activities.

### **4. VIRTUAL MOBILITY RELATED TO INTERNATIONAL STUDENT OR STAFF EXCHANGES**

In the context of international student or staff exchanges virtual mobility can both be used (1) to facilitate a physical international exchange (blended) or (2) to realise an international exchange, i.e. the student follows substantial parts of a programme at a distance, supported via ICT (virtual).

The VM-BASE project on “Virtual Mobility Before and After Student Exchanges” (2006–2008) focussed on the first type of virtual mobility and wanted to raise the

quality of student exchanges offering virtual support, both before, during and after the physical mobility. Particular attention was paid to supporting and coaching teachers and students at a distance. The major activity of the project consisted of the organisation of several pilots focusing on the orientation and selection of students, preliminary courses for students preparing for a physical exchange, examination facilities at the end or even after the exchange and the need for and feasibility of a virtual alumni associations. Two concrete examples of VM-BASE pilots are presented here.

### **Online education and Evaluation Tool of the Faculty of Kinesiology and Rehabilitations Sciences – University of Leuven, Belgium**

The International Master in Rehabilitation sciences and Physiotherapy is a two-year Master programme in English at KU Leuven, aimed at foreign physiotherapy students who already have a bachelor degree. Experiences from a previous international programme at the Faculty of Kinesiology and Rehabilitation Sciences showed the differences in level of statistical knowledge and knowledge in some domains of rehabilitation sciences between bachelor students from KU Leuven and bachelor students from institutions abroad. For this reason, the programme officer decided to develop a tool to test and improve the knowledge of foreign students on statistics and the rehabilitation domains prior to their arrival at the university.

Students are given access to the tool after their file is approved. At this point they are not yet enrolled at KU Leuven. This procedure allows for students to check out their abilities to succeed in the Master before making their final decision to enrol.

In a first stage, an online tool for statistics was developed. Two bachelor courses on statistics, taught at the faculty, were converted to an online version and integrated in Toledo, the Blackboard platform of KU Leuven, resulting in an online testing- and learning tool. The tests make use of Questionmark Perception. The learning platform is built up of learning units. After an initial test the user is being redirected. In case he has failed the test, he is advised to review the theory of the respective chapter, in case he passes the test he can move on to the next chapter. Further, all students are tested on statistics during a summer school.

In a second stage, action was taken to develop an online course for several domains of physiotherapy. Based on the existing tool for statistics, a similar platform was built. A website manual and a discussion board were integrated to offer support to users. An encouragement and guidance strategy was elaborated to positively influence the motivation of foreign students in using the platform.

In general the tool received positive reactions from all different stakeholders involved. It was considered by the students to be very useful as it helped them, both before the start of the programme (in understanding the expectations on prior knowledge of enrolling students and remediation of gaps in prior knowledge) and during the master programme (looking back into required prior knowledge). It also provided insight into the teaching methods and what was to be expected of the master programme.

### **Supporting oral exams at a distance for the Master of European Social Security – University of Leuven, Belgium**

The Master programme European Social Security provides a specialised, highly research based study of social security. This post-graduate programme combines distance learning from home with two short stays of ten days each at the University of Leuven. The Master programme blends regular with distance learning: students receive introductory courses in Leuven at the start of the academic year after which they study from their own campus or home supported by an (e-)coach. Assessment is also blended: open book exams take place online, written exams in a remote coordination centre and oral exams at the end of the year, back in Leuven. In the academic year 2007-2008 not all oral examinations however could be organised face-to-face in Leuven. Some of the enrolled students came from countries where there was no remote coordination centre while the oral defence of the paper at the end of the Master was made obligatory. A solution was found in the setup of oral examinations at a distance, supported by web conferencing. The Media and Learning Unit at KU Leuven guided the teaching team of the Master through the process of selecting the right tool, choosing a realistic scenario, and dealing with organisational issues. In January 2008, the exams were organised through FlashMeeting, a web-based conferencing tool.

Some positive feedback that stakeholders provided include that an exam through web conferencing is a solid alternative for a real live exam, offering the same quality. The possibility of watching a recording of the exam was also considered to be a plus: in case of doubt, the recording allows for the teacher to make a more correct evaluation. On the downside it was noted that it takes a considerable amount of time for both the student and the teacher to get used to the medium as both parties had no experience with oral distance exams. Students experienced the lack of facial expressions and body language (caused by low resolution webcams) as a limitation. Making the exam preparation in front of the webcam takes some time to get used to as well. The organisation of this oral exam was intensive in terms of time and staff, both in the preparatory phase (planning) as during the exam itself (support). Therefore it is most suited for small groups or for example only for those students who have to do a re-examination.

The above two VM-BASE pilots are examples on how to facilitate a physical international exchange (blended). But virtual mobility can also realise international exchanges in a completely virtual way.

The EPICS project (2008-2010) worked towards mainstream provision of this kind of virtual mobility by offering international courses clearly as integral part of the university study programmes. The main objective was to work from virtual mobility projects towards a Virtual Erasmus programme. To institutionalise mainstream provision of virtual mobility a supporting infrastructure of a “European Portal for International Courses and Services” was developed.

## **5. VIRTUAL MOBILITY RELATED TO INTERNATIONAL INTERNSHIPS**

In the context of international internships virtual mobility can both be used (1) to facilitate physical international internships (blended) or (2) to realise international internships (virtual).

In a global economy it is becoming more and more important to introduce students to an international working environment during their education. The EU-VIP project on “Enterprise-University Virtual Placements” (2009-2011) looked at the possibilities virtual mobility can offer to support or even enable international work placements. Any work placement involves three different stakeholders: the student, the higher education institution and the receiving company or organization. During a work placement these three stakeholders ideally interact with each other on a regular basis, although the main line of interaction will of course be between the student and the company/organization. Virtual mobility can be implemented to facilitate this interaction at a distance. This can happen on the three different lines of interaction between student, higher education institution and company/organization. The implementation of ICT to support interaction can also differ from very limited (when most of the interaction between the two stakeholders takes place face-to-face) to very far-reaching (when all of the interaction between the two stakeholders happens at a distance).

The possible integration of virtual mobility in international internships is illustrated here through two examples and experiences from participants in pilot projects, conducted within the framework of the EU-VIP project.

### **Fully virtual internship, University of Turku, Finland**

A master student in Political Science at the University of Turku did a fully virtual internship at the Turku-Southwest Finland European Office located in Brussels, Belgium. The student chose a virtual internship because her family situation didn't allow her to go abroad. Beforehand, the student was selected out of 5 candidates through an interview by the employer via Skype and a written task. A face-to-face meeting with all stakeholders was arranged in Turku to plan and define the internship in detail. Shortly before the internship, the student went on a three-day orientation trip to Brussels to get to know the office and its context, as well as her colleagues. During the internship the student's tasks were following EU news, producing news to current affairs reviews, following proposal requests, following parliamentary meetings online and reporting them, following and reporting commission events, compiling a financial aid guide of the EU's external aid programmes and supporting the preparation of slide shows. The student had a workspace in her home institution and met with a mentor twice a month to discuss and reflect on the progress of the internship. Next to Skype and e-mail, Adobe Connect Pro was used to keep in contact with the employer. After the internship,

another face-to-face meeting with all stakeholders took place in Turku for evaluating the internship. In general, all stakeholders were satisfied with the result of the virtual internship, because the student performed in an excellent manner and reached her learning goals. Good experiences with the pilot led the Career Services of the University of Turku to add virtual internships as part of their services and acknowledged them as a possibility for students to gain (international) work experience.

**Supporting international internships, Katholieke Hogeschool Leuven, Belgium**

Eleven bachelor students from Business Management and Office Management at the Katholieke Hogeschool Leuven undertook a work placement abroad. The internships took place in seven different countries around the world. As a preparatory measure, an information session was organized for the students and the academic mentors at the start of the work placements. They were briefed on the use of the virtual tools to ensure academic support during their stay abroad. Web conferencing was used frequently to discuss the students' experiences with the academic mentors but also with their peers who stayed in Belgium. E-mail was used to communicate with the individual students on a more personal basis. The SIS tool (a self-assessment system on competences during performance at the work place) was used to help students select, follow-up and evaluate their performance during their work placement. Finally, an e-portfolio tool allowed students to post and store all documents that related to their final report. These documents could be accessed and commented on by the academic mentors. The role of the company mentors in the work placements consisted of advising the students on their activities and evaluating their performance based on generic and professional competences. Evaluation was done during different stages during the pilot and was mainly positive. One particular positive element was related to the use of web conferencing to give support to the student abroad which resulted in an 'internationalisation@home' experience for their peers who undertook their internships at local companies. Hearing about and discussing the experiences of the students abroad also enlarged the local students' awareness of international differences between business cultures.

Those interested in the topic of virtual internships can find more detailed descriptions of the above and other examples in the final publication of the EU-VIP project or can find further information in the currently ongoing project I2AGORA ("International Internship Agora", 2011-2012). This project disseminates results of (past and running) European projects, focusing on virtual internships by analysing and synthesizing them on the basis of (1) the period of internship (pre-, implementation and post-internship activities); (2) the pedagogical patterns, technological tools and methodological models, as elements of the "educational" approach; and (3) the layers of actors/stakeholders (students, universities, enterprises and intermediaries/multipliers). I2AGORA also wants to create synergies between projects by organising events and a community of practice.

## **6. VIRTUAL MOBILITY RELATED TO AN INTERNATIONALISED CURRICULUM**

In the context of internationalising a curriculum, virtual mobility can be used as a scenario to internationalise a (part of a) course (chapter, exercise, task, project), programme, workshop, seminar, ... This can be either fully virtual or blended.

Again two examples are described: Film & Literature is an example of a virtualised course and was one of the pilots in the REVE project (“Real Virtual Erasmus, 2005-2006); the second example describes an international seminar series and is drawn from the VENUS project (“Virtual and E-mobility for Networking Universities in Society”, 2006-2008).

### **Film & Literature course**

The Film & Literature course is an initiative of two teachers at the University of Leuven, Belgium and the University of Granada, Spain. The course is taught at these two locations, by the two teachers to two groups of students. Students in Leuven and Granada follow the same syllabus, which has been made by the teacher in Leuven. The course is presented as a blend between class discussions, lectures, self-study of online material and library texts, film screenings, video conferencing and various forms of on-line communication. The virtual learning environment (the “Galatea” platform) includes a wiki, discussion forums and chat. Discussions initiated during the local contact hours can be continued on the online discussion forums afterwards. The students are assessed on the cooperation demonstrated during the local contact hours, the online discussions and mainly a group assignment (writing of paper) and an oral exam at the end of the year. The group assignment consists of collaboratively writing a paper on the wiki (each group consists of 3 to 4 persons, ideally with an equal number of students from Leuven and Granada). There are two videoconferencing sessions as well, one at the beginning of the semester to create the international student groups and one at the end of the semester for the presentation of the final papers. Besides the learning environment, students and teachers also use e-mail and chat for individual correspondence.

This course is characterized by multilingualism: the classes are given in the local language (Spanish in Granada and Dutch in Leuven). The course texts are in French, English and Spanish. Students are allowed to correspond in the language of their own choice. The group papers are also written in the language of choice. In the videoconference, students are asked to make an effort to speak another language than their mother tongue and to translate for each other. Some cultural differences are noticeable in the way students in Leuven and Granada approach the course activities. These mainly surface in practical issues such as timing of discussions, approaches to group work and students’ individual academic

backgrounds. However, these differences can be overcome to offer both students and teachers involved in this course a most rewarding cultural experience.

The Film and Literature course is a very good example of a (semi-)virtual course based on a collaborative arrangement. Parts of the course are organized by the partner university but the assessment and awarding of credits stays at the local university. This course is built on the good personal contacts that exist between the teachers. It is also important to keep a good mix of working methods: virtual teaching methods should exist alongside traditional teaching methods. In that sense, this is not a virtual course, but a virtualized course.

### **VENUS seminar series**

In the framework of the VENUS project, the partners implemented a virtual seminar series, focused on providing the audience (students as well as citizens) with access to otherwise unavailable knowledge of common interest given by high-level experts. In the seminars, the lecturer and participants were not necessarily at the same location. Communication between both largely took place synchronously. In each seminar a presentation from an internationally-recognised expert was delivered virtually (using videoconferencing and live streaming,) distributed to 8 different locations in Europe and backed up with interaction possibilities (chat). The topic was presented from a European perspective. In addition, the topic was discussed locally by participants in each region. Then a debate took place between all partner sites based on the main conclusions of each region. The videoconferencing sessions were recorded and made available afterwards to all those interested. Before and after each seminar, interactive preparatory and follow-up activities were organised, run virtually following different instructional design models and supported by different technologies. People who attended the VENUS Seminars, though sometimes sceptic beforehand, returned very enthusiastic, both about the contact with the expert speaker and about the European feeling caused by an international audience.

## **7. LESSONS LEARNT & RECOMMENDATIONS**

Virtual and/or blended mobility are becoming increasingly popular as a complement to the traditional mobility programmes in order to maximise the advantages of both. Numerous practical examples and pilots have shown that a variety of technologies and tools can be used in one way or another to virtually support the exchange process from and at a distance. It is however important to realise that the success of an initiative is not so much dependent on the tool as such but more on the use of a tool that is carefully considered beforehand. Before engaging in virtual mobility, the right pedagogical scenario's and models first need to be chosen. The technology must be as transparent as possible and the way in which a tool is fit for an activity is crucial. In all cases technology should be an aid, not a barrier. Secondly, in most cases virtual activities have been combined with

face-to-face experiences. Explicit attention for this human factor stands out as being one of the most important aspects, and the success of activities very often depends on whether or not a coach is present, in real or virtually. Finally, virtual mobility requires good organisation, planning and timing: the roles of those involved need to be clear and it is recommended to draw up a protocol for communication amongst stakeholders that defines the practical conditions for the coaching process.

We hope the examples and recommendations will be of value and give inspiration to everybody who is considering engaging in similar virtual initiatives. It is only when all stakeholders recognise the benefits of organising virtual mobility activities that they really will be integrated in mainstream education and become sustainable in the long term.

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