



## Virtual Mobility Before and After Student Exchanges

Grant agreement number: 229616-CP-1-2006-1-BE-MINERVA-M

Document title: Researching student mobility in a digital world

Date of issue: June 2007

Version: 1

Author(s): Jeff Haywood & Denise Haywood, Edinburgh University, UK, Sue Timmis, Angela Joyce & Jasper Tredgold, Bristol University, UK, Aune Valk, Tartu University, Estonia, Cesare Zanca, Siena University, Italy, Anthony Baldry, Pavia University, Italy, Steven Verjans & Nicola Mrose, Catholic University of Leuven, Belgium, Isabel Perez, Granada University, Spain, Louwarnoud van der Duim, Groningen University, Netherlands, Matti Lappalainen, Turku University, Finland, Axelle Devaux, Coimbra Group, Brussels, Belgium.

Contributors to the document  
(incl. quality review):

Contact name: Jeff Haywood

Organisation:

Address:

Telephone:

Email:

Number of pages: 7

Abstract: Paper presented at the EDEN conference, 2007

Confidentiality status: Public



**Socrates**  
Minerva

VM-BASE is co-funded by the European Commission, Education, Audiovisual and Culture Executive Agency, Socrates – Minerva: ODL and ICT in EDUCATION. However, the sole responsibility of the information contained in these pages lies with the authors and the Commission is not responsible for any use that may be made of the information eLearning portal European Commission: <http://www.elearningeuropa.info/>

---

## RESEARCHING STUDENT MOBILITY IN A DIGITAL WORLD

*Jeff Haywood & Denise Haywood, Edinburgh University, UK, Sue Timmis, Angela Joyce & Jasper Tredgold, Bristol University, UK, Aune Valk, Tartu University, Estonia, Cesare Zanca, Siena University, Italy, Anthony Baldry, Pavia University, Italy, Steven Verjans & Nicola Mrose, Catholic University of Leuven, Belgium, Isabel Perez, Granada University, Spain, Louwarnoud van der Duim, Groningen University, Netherlands, Matti Lappaleinen, Turku University, Finland, Axelle Devaux, Coimbra Group, Brussels, Belgium.*

---

### Introduction

At the start of the 21st century, the higher education institutions of Europe are evolving new ways of working to continue to offer high quality advanced education, as some have done for several hundreds of years. They are adapting their courses and methods of teaching to remain in tune with the needs of diverse learners who seek to gain advanced education in high quality settings, wherever these are to be found. These universities are also in dialogue with their governments and with the European Union so that the needs of society as set out by these bodies can also be taken into account. At a European level, challenging targets have been set for higher education, with key roles in both research and education to help to build the knowledge economy and maintain global competitiveness [1]. To achieve these goals in higher education it was recognised in the second half of the 1990s that several processes needed to be put in train or given added momentum. These processes are:

- The Bologna Process;
- The European Higher Education Area (EHEA);
- A European Credit Transfer & Accumulation System (ECTS);
- Quality assurance in higher education;
- Mobility schemes, especially Erasmus and Erasmus Mundus;
- Increased deployment of e-learning/technology enhanced learning;
- Strengthening the higher education ICT infrastructure.

Simple explanations of several of these topics can be found at: <http://www.europeunit.ac.uk/home/index.cfm>

As the universities of Europe change to new ways of working, at the same time they continue to support some valuable traditions that are centuries old. Amongst these is an open-ness of each university to study visits and exchanges with students and staff of other universities, ensuring that the academic community is healthy and thriving, that ideas are exchanged and continue to flow freely in the public domain, and that cultural awareness is maintained at a high level.

Increasingly, universities are ‘sharing’ students between them, either sequentially under the Erasmus mobility or similar schemes, or concurrently on joint courses that now include those delivered entirely by e-learning (part of an area known as ‘virtual mobility’). These developments are supported by individual governments and through the enhanced Erasmus scheme and its Erasmus Mundus programme of international collaborative Masters degrees. On Erasmus, Ján Figel, European Commissioner in charge of Education, Training, Culture and Multilingualism said “*Encouraging mobility will remain a priority for the Commission in the coming years, as we expect to reach the target of 3-million Erasmus students by 2011 with almost 300,000 students per year.*” [2]. This figure does not take into account the very large number of ‘freemovers’ or those in other exchange schemes.

Several sources of information about student mobility exist, although no single source has comprehensive coverage of all students in all EHEA countries. Data gathered by the Eurostudent surveys [3] appear to be the most complete, with the caveat that data collection methods and data robustness vary by country.

The intended expansion of both numbers of students and study modes raises challenges for universities which involve both technical areas and academic business processes. To move to large scale physical and

virtual exchanges requires a move from bespoke and hand-crafted processes to automated and systematic processes, which will include enrolment (matriculation), password generation, authority to access restricted materials plus awareness of the need for advance information about digital resources that may be hidden behind authentication barriers. Students accustomed to working with efficient ICT systems in one university may find a less well-developed situation in the one they visit, which will impact upon their view of the quality of the experience. Those who have good experiences with technology whilst away may feel less satisfied on their return, and wish they could have continued access to the good resources they had whilst on their exchange visit.

These impacts of technology on the physical student exchange send warnings to universities that if they wish to venture into virtual exchanges, offering courses online to students at other universities, they need to address underpinning business processes. Such processes include: automatic digital library access to all online materials; good advance information and enrolment/matriculation online; preferably well in advance of the start of courses; a facility for students to see the credits they have gained and for these credits to be passed smoothly to their home university, and all will be the essentials for a successful virtual visit experience. Few universities at the present time are in a position to be fully confident that all this works well, and with little need for human intervention to problem-solve after the event. Few traditional universities have many fully online courses that can be joined as easily as on-campus, physical-presence, courses. Even those universities that do have a reasonable complement of courses tend to offer at post-first degree level, and so the business is separate from the main on-campus first degree programmes. For virtual mobility to become a significant component of the total mobility movement there will need to be a move from a 'boutique' to a mass model of operation.

Thus to explore the challenges and opportunities for student virtual mobility on a large scale presents problems of identifying sufficient exemplars where this is currently taking place, and such exemplars do not necessarily help in understanding the implications for current students at the majority of traditional European universities.

However, most traditional universities have significantly changed their business processes in recent years, from paper-based methods to heavy reliance on ICT to support and enable their main traditional academic and administrative work. Examples of these changed processes include:

- Learning and teaching with technology;
- Digital libraries (e-journals, e-books, online databases & help);
- Integration of digital databases holding staff, student and course records;
- Portals as single channels of access to digital resources;
- Email as the major/dominant channel of communications;
- Single/reduced sign-on to authenticated systems (portal, email, library);
- Secure off-campus access to restricted digital resources (VPN);
- Websites as the major/dominant channel for information provision.

Thus some of the main mechanisms needed to support student virtual mobility are already appearing or present in many universities. Across the whole of the enlarged EU there are significant variations in the pace at which different universities have been able to develop their ICT infrastructures, but for the frontrunners at least, much of the groundwork has been done. The rate of progress in any single university is influenced by both local, national and European contexts, and hence examining specifically those aspects of university infrastructure and services that are requirements for moving to mass virtual mobility enables us to see how ready universities are for taking this step. Even the concept of '*the university's readiness*' is not simple in practice. The high degree of autonomy and devolution of power to Faculties means that ICT-sophistication can vary across units of a single university. In addition, both the 'home' and 'host' universities have roles to play in preparing the student for the visit, supporting her during the visit and providing continuing services after the visit.

The question arises therefore of how well are European universities currently set up to handle physical mobility in which students become mobile learners. Are they prepared for virtual mobility on a large scale?

Are their digital services in a good condition to move smoothly to these new ways of working which have tensions with older methods and processes reliant on face-to-face interactions?

## Methodology

To explore this area we knew that we had to triangulate from several data sources to get an overall picture of what is a complex domain of activity. We established a collaboration between 9 universities in 7 countries (the EC-funded VICTORIOUS Project – [www.victorious-project.org](http://www.victorious-project.org)) so that we had a local knowledge of developments in more than one country. We reviewed the publications and information available, and developed case studies in our own universities so as to define the right questions to ask of both parts of the mobility domain – the students and the universities.

We then gathered data about the provision of digital services and resources by European universities by means of an email survey targeted through university networks, Erasmus coordinators and personal contacts. This was complemented by research into the student experience through a series of in-depth interviews with our own students who had recently been on an Erasmus-type study visit, followed up by an online survey for students across Europe. (A copy of the questionnaires can be found at [www.coimbra-group.be/victorious/](http://www.coimbra-group.be/victorious/)) We remained in touch with a group of students whilst they were away from our own universities so as to be able to track their experiences during the study visit and to request them to test remote access to services and information. These activities, plus our own university case studies, provided us with a rounded insight into mobile study and virtual mobility developments in European higher education.

## Results

### *The university provision*

The questions addressed to universities were of two major types: “*What range and access to digital services resources and support do you offer to incoming visiting students before, during and after their visit, and do they differ from services offered to your own students?*” and “*What range and access to digital services, resources and support do you offer to your own students before and during their study time away from your university?*” The services listed were in the areas of library, IT, e-learning, international office and student record/registry. A final question asked about the extent of development and delivery of virtual mobility courses in the university. We received 55 responses from universities in 21 countries.

The universities that responded to our survey had been asked to indicate whether centralised information was made available to visiting students through a single mechanism to ensure all relevant information about digital services was accessible together. It was clear from the responses that there was a considerable degree of variation in provision of this sort of information on International Office websites (27% had no mention of digital services or even links to other places where it could be found), not all Offices had websites, and several universities reported that they were updating them. Some universities reported that the Faculty websites were the places for such information, suggesting that the devolution does indeed have practical implications for intending visit students, and this is also a very likely area where divergences in quality of information will emerge. A few universities indicated that some or all of this information is only available after arrival at the university, which is not very supportive of advanced planning by students. Overall the impression was of substantial variations in practice, much of which would be in the local language.

It was also clear that by no means all universities have yet put online enrolment and course registration systems in place for visiting students (Table 1). This probably also reflects the level of service offered to their own students, as almost all universities responding to our survey indicated that the same digital services were available to both home and visiting students. Most universities report that they do manage to send information about the university matriculation process to students prior to their arrival, if given enough warning. This advance information sometimes includes logins/passwords to access digital services, but most commonly these are not issued until after arrival, via central services or via Faculties. In a few universities, visiting students had to request access to services through the appropriate person.

Table 1: availability of pre-arrival enrolment in European universities

Before they arrive at our university, most visiting students	Before they arrive at our university, most visiting students will generally	No matriculation/enrolment information is given to
--	---	--

will generally have received their matriculation information and be able to matriculate/enrol online	have received their matriculation information but there is no option to matriculate/enrol online	visiting students before they arrive in our university.
31%	63%	6%

Some of the European university heterogeneity in range and quality of ICT-based services could be detected in the responses to the university survey, partly through additional written comments but also in the extent to which ICT had not yet permeated key areas of academic business such enrolment / matriculation and management of ECTS credits (Table 2).

Table 2: Limited university provision of online access for students to key academic & business services

No access to online matriculation or enrolment	56%
Students have to request ECTS credits gained and cannot see these online	55%
Students cannot view online the ECTS credits associated with courses	24%
Digital library access less than if on-campus	33%
Library help via phone, email etc less than if on-campus	24%
Access to digital library not given before arrival at university (ie when off-campus)	92%

The contrast of these data with those on general ICT, library and e-learning provision reported by students (below) suggest a disparity of progress between the academic educational and the academic business areas of many universities. However, even the key academic service of the digital library is reduced in an important fraction of universities if studying at a distance, and the lack of routine access to digital library prior to arrival suggests a view of working that is very traditional and campus oriented. This will come as no surprise to many staff in European universities, and almost certainly contrasts starkly with practice in North America.

### *The student experience*

The questions addressed to students covered:

- their experiences of searching for online information about courses, universities and their provision of ICT-based services and resources prior to choosing where to study and in advance of their departure to that university
- their experiences of the extent and quality of these digital services and resources when at their host university
- the extent of their ability to reach back to digital services at their own university whilst away
- access to their host university services after their return home

We received almost 2400 responses from students in 370 universities in 30 countries. Most were young adults, two-thirds female, and were studying all in subject areas.

Most students must apply directly to the university of their choice for a study visit – there is at present no central database of courses and universities in Europe that they can search. The situation is better for Erasmus students than for freemovers, but even so is quite limited. Almost 100% of students had used the web to try to gather information about universities, and one of their choice in particular, prior to leaving for the study visit. In terms of information about digital services at their intended host university course information online was quite well-provided whereas advance login to secure materials was less well-provided (Table 3).

Table 3. Access to digital information & services before arrival at host university

Information available before arrival	% respondents
Check details of courses online	61.7
Check credits assigned to courses	58.3
Check language courses available	54.1

Check accommodation available online	43.5
Login to intranet, portal or similar system	11.2

We asked our student respondents about the timing of access to enrolment and online enrolment, and around one third indicated that they could enrol before arrival but far fewer reported being able to register online for courses (Table 4). Thus across Europe it does indeed seem likely that a minority of universities have yet managed to put effective digital services in place for students to register and choose courses in advance of arrival.

Table 4. Registry online services available to students before arrival at host university

Available before arrival	% able to access
Enrol with the university	35.1
Register for courses online	14.2

Not surprisingly, e-learning appears to be very widespread in all subjects in all European universities. The Table below (5) shows the percentage of students who reported online learning opportunities in their courses whilst on a study visit.

Table 5: Use of e-learning in courses taken by visiting student respondents

Course information	Learning materials	Tests or exams	Collaboration or discussions	Marks or grades
92%	77%	30%	36%	50%

Despite this high use of e-learning in courses, a surprising proportion of students were less certain of the digital services offered by their host university library, with 43% 'not sure' if the library had e-journals in their collections and 40% 'not sure' if their borrowing record could be accessed online. This may partly represent students unaccustomed to these services in their own universities, and be a proxy for limited development in higher education libraries and/or lack of promotion to students.

One area in which students consistently reported limitations in their ability to access sufficient or timely help and support for problems with digital services. Forty-three percent of survey respondents reported no help or support with problems (for whatever reason) with personal help being the most common for those who received help, email and webpages being a small minority.

These data are broadly supported by the information given to us by students in interviews. For many language still a major problem, especially acute for technical aspects of education, and some universities have slow response times to newly-arrived students with fragmented Faculty-based services compounding the other problems.

## Conclusions

The surveys and interviews gave us a good insight into the variety of issues that arise for students who are mobile in their place of study in a way that is more akin to the 'virtually mobile student' than to the 'mobile learner' in the usual sense of that term. They indicated the variety that exists across European higher education in digital services to learners, both in terms of what universities provide for learners on- and off-campus and also in the extent to which they reach out to students before they arrive and after they leave. It appears that some key services, such as course choice and enrolment and the library, are still very oriented towards physical presence as the way to provide registration and authentication information, which of course is not possible in virtual mobility as the student will never attend the university. Some universities do not view visiting students as equivalent to their own students in access to materials and services, and even for some of those that do, their provision of good information in a well-structured way and in accessible language is limited or non-existent.

This picture is not all negative. There are signs that the pathfinders in this area are not a small minority and that as most universities have well-developed ICT use in learning and teaching, this will be used to help

support its implementation of ICT in other business areas. Another hopeful sign is that of the universities that responded to the survey, 39% reported that they had virtual mobility in at least pilot form and 49% said that they were aware but had not yet acted. Only 12% said this was something they had not yet thought about or were unaware. Even allowing for some self-selection in the completion population, this suggests that there is a readiness in the universities of Europe to engage with the virtual mobility agenda.

The students themselves appear to be very ICT aware, a finding that substantiates earlier studies [ref seussis], and use ICT regularly in their social lives and studies. Nevertheless they are not fully proficient in learning with and from another university using technology, and require help and information to make their path smoother. Thus preparation of students by universities and support whilst they study with another university is a valuable service. Virtual mobility will further blur the boundaries of whose student is whose, and when, and who provides support, and for what. The lack of IT support reported by a significant number of students in surveys and interviews suggests that this area is in particular need of attention.

Finally, some of the problems reported by students could be addressed or simplified at national or European levels, through such initiatives as central databases of course information, digital identity sharing, roaming network access and mutual access to bibliographic resources through a virtual European digital library.

## References

1. EUROPEAN COMMISSION (2007), [http://ec.europa.eu/education/policies/2010/doc/compendium05\\_en.pdf](http://ec.europa.eu/education/policies/2010/doc/compendium05_en.pdf)
2. FIGEL, J. (2005) <http://europa.eu.int/rapid/pressReleasesAction.do?reference=IP/05/190&format=HTML&aged=0&language=EN&guiLanguage=en>
3. EUROSTUDENT SURVEY (2005) [http://www.his.de/Abt2/Auslandsstudium/Eurostudent/index\\_html](http://www.his.de/Abt2/Auslandsstudium/Eurostudent/index_html)

## Acknowledgements

We are grateful to the many staff and students who responded to our surveys, requests for interviews and email discussions, and colleagues at our own universities and at workshops who offered valuable advice. We also wish to thank the Directorate-General for Education and Culture, European Commission for its major contribution to the funding of the VICTORIOUS Project under the eLearning Programme.

## Author for contact

Professor Jeff Haywood  
University of Edinburgh, School of Education  
Holyrood Road, Edinburgh, EH8 8AQ, UK  
[jeff.haywood@ed.ac.uk](mailto:jeff.haywood@ed.ac.uk)