



VIRQUAL

Virtual Mobility and European Qualification Framework

WP5/SIG 1

Virtual Mobility, ECTS and e-Learning

Preliminary Report

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1. INTRODUCTION

The present report intends to present a general overview on the current state of affairs in Europe regarding Virtual Mobility, ECTS and e-Learning. Our aim is to start establishing some common understanding on possible organizational, pedagogical and technical approaches to the implementation of Virtual Mobility within the European Qualification Framework.

In the first part of this report (section 2) we start by addressing the broad guidelines issued by the EHEA implementation process, both in terms of the importance awarded to mobility and to qualifications certification and validation within Europe. In fact, although many meetings between Government representatives have been held and important contribution issued, the fact remains there hasn't been enough attention given specifically to virtual mobility. Mostly for political motives, it seems only physical mobility has been so far on top of politicians agendas. In spite of this, there also some recent and significant signs of change in this respect.

In the second part, we start by trying to position in the scenario of the ongoing European research being conducted on the topic of Virtual Mobility (section 3). A basic definition of the concept is also put forward. After, we describe how are HEI dealing both with the EHEA implementation and the development of e-learning, especially in connection with institutional strategies (sections 4 & 5). Finally, we analyze the main difficulties virtual mobility has been facing and also how HEI have been adopting the ECTS system in sync with a new competence-based curricula (sections 6 & 7).

2. EHEA – MOBILITY AND QUALIFICATION FRAMEWORKS

The Bologna Process proposes to reform Higher Education in Europe and creating the European Higher Education Area, based on international cooperation and academic exchange. One of the main visions of Bologna for Higher Education is to facilitate the mobility of students and workers across Europe and the rest of the World.

Starting with the Sorbonne Declaration in 1998 [4], the Ministers of the four countries involved considered of great importance the mobility of students and academics and the consequent dissemination of knowledge:

An open European area for higher learning carries a wealth of positive perspectives, of course respecting our diversities, but requires on the other hand continuous efforts to remove barriers and to develop a framework for teaching and learning, which would enhance mobility and an ever closer cooperation. (...) The fast growing support of the European Union, for the mobility of students and teachers should be employed to the full. We hereby commit ourselves to encouraging a common frame of reference, aimed at improving external recognition and facilitating student mobility as well as employability.

The Bologna Declaration [5] signed by several Ministers responsible for HE reinforces the main ideas of Sorbonne. Mobility and removal of barriers is crucial for the new challenges in Higher Education, in particular the need for Education and Training throughout life. Flexibility, recognition, compatibility, comparability and readability are key words of the Bologna Process as they are essential to achieve the desired mobility.

Bologna takes Sorbonne one step further and proposes concrete objectives and measures to establish the EHEA. These measures include the implementation of tools like the Diploma Supplement and ECTS as means to promote mobility and employability.

European Higher Education Institutions give their formal support to the Bologna Process as a result of the Salamanca Convention held in 2001 [6]. Quality is referred as a “building stone” for the creation of the EHEA:

Quality is the basic underlying condition for trust, relevance, mobility, compatibility and attractiveness in the European Higher Education Area.

The Salamanca Convention refers Virtual Mobility as a no good substitute for physical mobility:

The free mobility of students, staff and graduates is an essential dimension of the European Higher Education Area. European universities want to foster more mobility both of the "horizontal" and the "vertical" type - and do not see virtual mobility as a substitute to physical mobility. (...) However, a common European approach to virtual mobility and transnational education is also needed.

In the Bologna meeting that was held in Prague [7], Ministers reinforced their commitment to the EHEA and to promote mobility. Related with the aims of VIRQUAL, it is also of relevance the importance given to the establishment of a system of comparable degrees, through the recognition of awards and establishing a common framework of qualifications:

Ministers strongly encouraged universities and other higher education institutions to take full advantage of existing national legislation and European tools aimed at facilitating academic and professional recognition of course units, degrees and other awards, so that citizens can effectively use their qualifications, competencies and skills throughout the European Higher Education Area.

(...)

Ministers agreed on the importance of enhancing attractiveness of European higher education to students from Europe and other parts of the world. The readability and comparability of European higher education degrees world-wide should be enhanced by the development of a common framework of qualifications, as well as by coherent quality assurance and accreditation/certification mechanisms and by increased information efforts.

The Bologna meeting that was held in Berlin in 2003 [8], defines as priorities Quality Assurance and the cycle structure of HE. But still, reinforces once again the importance of Mobility and the need of improving the quality of statistical data on this subject. The development and implementation of ECTS as system for transferability and accumulation of credits is seen as a critical tool for mobility and flexibility.

In 2005, the meeting held in Bergen [9] refers for the first time EQF and the compatibility between both qualification frameworks:

We underline the importance of ensuring complementarity between the overarching framework for the EHEA and the proposed broader framework for qualifications for lifelong learning encompassing general education as well as



vocational education and training as now being developed within the European Union as well as among participating countries.

Mobility is once again referred as one of the key objectives of Bologna and was given particular importance to the collection of comparable data on Mobility.

In 2007, the Bologna meeting was held in London [10]. Mobility was once again recognized as key issue for achieving the EHEA. Although there was some evolution in the first eight years of Bologna, the aims were still not accomplished. Focus was put on the national challenges.

Concerning data collection, the information is scarce and it is not comparable. There is not a single definition of mobility for statistical purposes and there is no data available that covers all Bologna countries.

Finally, the last Bologna meeting was held in Leuven and Louvain-la-Neuve in 2009 [11]. This communiqué sums up the achievements of the Bologna Process and sets up the challenges and objectives for the next decade.

Faced with the challenge of an ageing population Europe can only succeed in this endeavor if it maximizes the talents and capacities of all its citizens and fully engages in lifelong learning as well as in widening participation in higher education.

European higher education also faces the major challenge and the ensuing opportunities of globalization and accelerated technological developments with new providers, new learners and new types of learning. Student-centered learning and mobility will help students develop the competences they need in a changing labour market and will empower them to become active and responsible citizens.

Again, mobility is in the centre of the EHEA, and a quantified aim for mobility is defined: at least 20% of those graduating in the EHEA should have had a study or training period abroad. But this issue is mainly concerned with physical mobility, and there is a lack of references about virtual mobility.

Concerning EQF, the references are even scarcer than with VM. However, the creation of the overarching framework of EHEA based on ECTS and Learning Outcomes may provide some common ground for the convergence of both frameworks.



VIRQUAL

Virtual Mobility and European Qualification Framework

In the context of VIRQUAL, the analysis of the different stages of the Bologna Process may give some indication of opportunities for the network.

Mobility is one of the action lines of the Bologna Process where there is still a lot of work to be done. Even though Virtual Mobility is hardly ever referred in the documentation, the definition of mobility of students proposed by the Working Groups does not exclude this type of mobility. The recommendations included in both reports, 2007 and 2009, open opportunities for the growth of this type of mobility. Virtual mobility may help to overcome some of the obstacles referred in these reports like funding, visa, flexible learning and curricula, diversity of students, etc.



3. VIRQUAL IN THE CONTEXT OF THE EUROPEAN RESEARCH ON VIRTUAL MOBILITY

In the last few years a number of EU-funded projects have been dealing with the topic of virtual mobility. This is notably the case of the *European Portal of International Courses and Services (EPICS)*, coordinated by the European Association of Distance Teaching Universities (EADTU) and the Open University (UK) [1], and the *Net Active* project (*AIESAD-EADTU Credit Transfer in Virtual and Distance Education*) [2]. The work carried out in this projects and also others complement in many ways the one being developed in VIRQUAL.

However, VIRQUAL's approach is unique and far more complex than any other European project developed so far, since its scope is much wider. In fact, the basic theme of VIRQUAL in what relates to WP5/SIG1 research, focus on the possibility of any student being able to enroll in a given programme or certified course offered within a programme on a virtual mode. In this much broader approach, student mobility isn't confined to dedicated distance learning or fully virtual Higher Education Institutions (HEI) alone, as it is the case with the Net Active project and partly with EPICS. Thus, the research focus in every virtual course offered by any HEI in the European Higher Education Area (EHEA).

In our research we've adopted as a basis for our own developing definition of virtual mobility what has been submitted on that by EADTU's Task Force on Virtual Mobility *Position Paper* [3]:

Virtual mobility [VM] does not require a physical stay abroad nor face-to-face activities and may not have restrictions in length of time spent studying. Students stay at their home university or even at home or at their workplace. VM offers access to courses and study schemes in a foreign country and allows for communication activities with teachers and fellow students abroad via the new information and communication technologies. For the student it is merely an educational experience, although through the interaction with others intercultural competences can be acquired. For the student, it is time and cost effective.

From our research we've found there are only still a few number of HEI already fully implementing virtual mobility and ECTS. This limitation prevented us off course from using a selection of best practices, as intended at first. However, we're able to analyze in more detail some important and rich experiences being carried out. These are notably the cases of Universidade Aberta and University of Porto, but also the Open University (UK), the Open Universiteit (NL), the Fern University in Hagen (D), the Universidad Nacional de Educación a Distancia (E) and Universitat Oberta de Catalunya (E). Although in different stages of implementation, the experience of these seven HEI can help us understand the major

achievements and difficulties regarding ECTS implementation and the fostering of Virtual Mobility. This is of course why we've selected them as case studies.

The present report is therefore only a first approach at the subject of our research. Further research is underway to which the cooperation with the other ongoing EU-funded projects and HEI already implementing virtual mobility is of outmost importance. We expect the input from those colleagues could help develop our knowledge on the issues at stake. If so, we believe given the more broader scope of VIRQUAL we'll be able to lead the establishment in the near future of a European hub for expertise in international virtual mobility. The potential future involvement of other major organizations in Europe as the European Distance and E-learning Network (EDEN), should indeed be instrumental to broaden the impact of our research and help achieve that goal.

4. HOW ARE INSTITUTIONS DEALING WITH EHEA?

From a global perspective, the European Higher Education Area (EHEA) is in an advanced state of implementation throughout Europe. Nevertheless, European countries vary substantially in respect to the very different stages of implementation they are in. According to the Information about the implementation of EHEA (a.k.a. the Bologna process), extracted from the *Stocktaking Report 2009* [12], we should note the following:

- Regarding the three cycle structure, in some countries the proportion of students studying in the Bologna three-cycle system is still low.
- Regarding access to the next cycle, in a number of countries graduates have to meet additional requirements to actually gain admission to the next cycle. This might suggest that HEI s do not fully recognise qualifications, even in the same field, issued by other HEI s in their own country.
- Some countries have two levels of bachelor degrees, which do not actually offer the same access to the second cycle.
- Some other countries have introduced two levels of master degrees with different rights in the labour market and admission to the third cycle.
- the deadline to have completed the implementation of NQFs for higher education by 2010 appears to have been too ambitious. Only six countries - some of which already had qualifications frameworks in place before 2005- have completed self-certification of their NQF with the EHEA overarching qualifications framework. Some more are close to completion, while many are still at the early stages of



development. There are still a large number of countries that are just beginning or have not yet started the implementation at institutional level, therefore the full implementation of national qualifications frameworks will take some time.

- There is still not enough integration at national level between the qualifications framework, learning outcomes and ECTS , as was suggested in the 2007 stocktaking report.
- Only half of the countries have managed to implement the Diploma Supplement fully by 2009.
- Regarding the implementation of European Credit Transfer System some countries shifted downwards compared to 2007, because of the recent link to Learning Outcomes. Thus, it is still not fully implemented across all the countries.
- ECTS credits are widely used for both credit accumulation and transfer, but there are two main challenges in fully implementing ECTS: Measuring credits in terms of student workload and linking them with learning outcomes.
- As for the recognition of prior learning, it will not be possible to overcome the demographic and economic challenges through lifelong learning until RPL is systematically implemented in all countries. This requires firstly a change of culture in HEI s and secondly that credits are linked with learning outcomes, with appropriate methods developed to assess the full range of learning outcomes.

We show next the table of indicators referring the development stage of each country as to the implementation stage of the EHEA:

Graphics and tables of the indicators

Table 1. Number of countries* in each colour category for indicators 1-3

DEGREE SYSTEM	Green	Light green	Yellow	Orange	Red
1. Stage of implementation of the first and second cycle	31	10	3	3	1
2. Access to the next cycle	42	2	4	0	0
3. Implementation of national qualifications framework	6	6	21	6	9



Indicator 2: Access to the next cycle

Number of countries in each score category for Indicator 2.	42	2	4	0	0
Green (5)	All first cycle qualifications give access to several second cycle programmes and all second cycle qualifications give access to at least one third cycle programme without major transitional problems				
Light green (4)	All first cycle qualifications give access to at least one second cycle programme and all second cycle qualifications give access to at least one third cycle programme without major transitional problems				
Yellow (3)	There are some (less than 25%) first cycle qualifications that do not give access to the second cycle and/or some second cycle qualifications that do not give access to the third cycle				
Orange (2)	A significant number (25-50%) of first and/or second cycle qualifications do not give access to the next cycle				
Red (1)	Most (more than 50%) first and/or second cycle qualifications do not give access to the next cycle OR there are no arrangements for access to the next cycle				

Indicator 3: Implementation of national qualifications framework

Number of countries in each score category for Indicator 3	6	6	21	6	9
Green (5)	A NQF compatible with the overarching framework of qualifications of the EHEA has been developed, and all national qualifications are visibly linked with learning outcomes. National qualifications have been included in the NQF through a quality assurance procedure. The agreed self-certification procedure with participation of international experts has been completed, including publication of a final report.				
Light green (4)	A NQF compatible with the overarching framework of qualifications of the EHEA has been developed and: <ul style="list-style-type: none"> · all necessary the necessary formal decisions for establishing the framework have been taken · implementation of the NQF has started · the agreed self-certification procedure has started 				
Yellow (3)	A proposal for a NQF compatible with the overarching framework of qualifications of the EHEA has been discussed at the national level but the necessary formal decisions for establishing the framework have not yet been taken				
Orange (2)	A proposal for a NQF compatible with the overarching framework of qualifications of the EHEA has been prepared and <ul style="list-style-type: none"> · includes generic cycle descriptors based on learning outcomes · includes ECTS credit ranges in the first and second cycles and a timetable for consulting relevant stakeholders has been drawn up but the consultation process has not yet been completed 				
Red (1)	The development process leading to a NQF compatible with the overarching framework of qualifications of the EHEA has been completed but no timetable for consultation or adoption has been established or the development process leading to a NQF compatible with the overarching framework of qualifications of the EHEA has been launched but has not been completed or work on the development process leading to a NQF compatible with the overarching framework of qualifications of the EHEA has not been launched or is at a preliminary or exploratory stage.				



Table 2. Number of countries in each colour

Recognition of degrees and study periods	Green	Light green	Yellow	Orange	Red
7. Stage of implementation of diploma supplement (DS)	26	9	11	0	2
8. Implementation of the principles of the Lisbon Recognition Convention (LRC)	35	2	5	1	5
9. Stage of implementation of ECTS	21	18	7	2	0
10. Recognition of prior learning (RPL)	19	4	9	10	6

Indicator 7: Stage of implementation of diploma supplement

Number of countries in each score category for Indicator 7..	26	9	11	0	2
Green (5)	Every graduate receives a Diploma Supplement in the EU/CoE/UNESCO Diploma Supplement format and in a widely spoken European language - automatically - free of charge				
Light green (4)	Every graduate who requests it receives a Diploma Supplement in the EU/CoE/UNESCO Diploma Supplement format and in a widely spoken European language - free of charge				
Yellow (3)	A DS in the EU/CoE/UNESCO Diploma Supplement format and in a widely spoken European language is issued to some graduates OR in some programmes free of charge				
Orange (2)	A DS in the EU/CoE/UNESCO Diploma Supplement format and in a widely spoken European language is issued to some graduates OR in some programmes for a fee				
Red (1)	Systematic issuing of DS in the EU/CoE/UNESCO Diploma Supplement format and in a widely spoken European language has not yet started				



Indicator 9: Stage of implementation of the European Credit Transfer System (ECTS)

Number of countries in each score category for Indicator 9..	21	18	7	2	0
Green (5)	ECTS credits are allocated to all components of all HE programmes ¹⁹ , enabling credit transfer and accumulation, AND ECTS credits are demonstrably linked with learning outcomes ²⁰				
Light green (4)	ECTS credits are allocated to all components of more than 75% of HE programmes ¹⁵ , enabling credit transfer and accumulation, AND ECTS credits are demonstrably linked with learning outcomes OR Credits are allocated to all components of all HE programmes using a fully ECTS compatible credit system enabling credit transfer and accumulation ²¹ AND Credits are demonstrably linked with learning outcomes ¹⁶				
Yellow (3)	ECTS credits are allocated in 50-75% of all HE programmes, AND ECTS credits are demonstrably linked with learning outcomes OR ECTS credits are allocated to all components of more than 75% of HE programmes ¹¹ , enabling credit transfer and accumulation, but, ECTS credits are not yet linked with learning outcomes ¹⁶				
Orange (2)	ECTS credits are allocated in at least 49% of HE programmes OR a national credit system is used which is not fully compatible with ECTS				
Red (1)	ECTS credits are allocated in less than 49% of HE programmes ¹⁵ OR ECTS is used in all programmes but only for credit transfer				

Indicator 10: Recognition of prior learning

Number of countries in each score category for Indicator 10.	19	4	9	10	6
Green (5)	There are nationally established procedures, guidelines or policy for assessment and recognition of prior learning as a basis for 1) access to higher education programmes, and 2) allocation of credits towards a qualification and/or exemption from some programme requirements, AND these procedures are demonstrably applied in practice				
Light green (4)	There are nationally established procedures, guidelines or policy for assessment of prior learning but they are demonstrably used in practice for only one of the abovementioned purposes				
Yellow (3)	Procedures, national guidelines or policy for assessment of prior learning have been agreed or adopted and are awaiting implementation OR There are no specific procedures/national guidelines or policy for assessment of prior learning, but procedures for recognition of prior learning are demonstrably in operation at some higher education institutions or study programmes				
Orange (2)	Implementation of recognition of prior learning is in a pilot phase at some higher education institutions OR Work at drawing up procedures/national guidelines or policy for recognition of prior learning has started				
Red (1)	No procedures for recognition of prior learning are in place EITHER at the national OR at the institutional/programme level.				



COUNTRY	Degree System			Quality Assurance			Recognition			
	2 cycles	Access	NQF	External	Students	Internat	Dip. supp.	Lisbon	ECTS	RPL
Albania	Green	Yellow	Yellow	Green	Green	Orange	Green	Yellow	Green	Red
Andorra	Orange	Green	Orange	Green	Orange	Orange	Green	Orange	Orange	Red
Armenia	Green	Green	Yellow	Yellow	Green	Orange	Yellow	Green	Yellow	Yellow
Austria	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green
Azerbaijan	Green	Green	Red	Green	Green	Red	Red	Yellow	Green	Green
Belgium Flemish	Green	Green	Green	Green	Green	Green	Green	Red	Green	Green
Belgium French	Green	Green	Yellow	Green	Green	Green	Green	Red	Green	Green
Bosnia Herzegovina	Green	Green	Green	Orange	Green	Orange	Green	Yellow	Green	Orange
Bulgaria	Green	Green	Yellow	Green	Yellow	Orange	Green	Green	Green	Green
Croatia	Green	Yellow	Green	Green	Green	Green	Yellow	Green	Green	Yellow
Cyprus	Green	Green	Red	Yellow	Orange	Green	Green	Green	Green	Red
Czech Republic	Green	Green	Yellow	Green	Green	Green	Green	Green	Green	Orange
Denmark	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Estonia	Green	Green	Yellow	Green	Green	Yellow	Green	Green	Green	Green
Finland	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
France	Green	Green	Green	Green	Yellow	Green	Yellow	Green	Green	Green
Georgia	Green	Green	Green	Green	Green	Orange	Green	Green	Green	Green
Germany	Orange	Green	Green	Green	Green	Green	Yellow	Green	Orange	Green
Greere	Green	Green	Red	Green	Green	Green	Green	Red	Green	Orange
Holy See	Green	Yellow	Green	Green	Green	Green	Green	Green	Green	Yellow
Hungary	Yellow	Green	Green	Green	Green	Green	Green	Green	Yellow	Green
Iceland	Green	Green	Green	Yellow	Green	Yellow	Green	Green	Green	Green
Ireland	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Italy	Green	Green	Orange	Green	Orange	Orange	Green	Red	Green	Green
Latvia	Green	Green	Yellow	Green	Green	Green	Green	Green	Green	Yellow
Liechtenstein	Green	Green	Green	Green	Orange	Green	Green	Green	Green	Orange
Lithuania	Green	Green	Red	Green	Green	Green	Green	Green	Green	Orange
Luxembourg	Green	Green	Orange	Green	Green	Green	Green	Green	Green	Green
Malta	Green	Green	Green	Green	Red	Red	Yellow	Green	Yellow	Green
Moldova	Green	Green	Red	Green	Green	Green	Green	Yellow	Green	Red
Montenegro	Green	Green	Yellow	Green	Orange	Green	Green	Green	Green	Orange
Netherlands	Green	Green	Green	Green	Green	Green	Yellow	Green	Green	Green
Norway	Green	Green	Yellow	Green	Green	Green	Green	Green	Green	Green
Poland	Green	Green	Orange	Green	Green	Green	Green	Green	Green	Yellow
Portugal	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Romania	Green	Green	Yellow	Green	Green	Green	Green	Green	Green	Green
Russia	Red	Green	Red	Green	Yellow	Green	Yellow	Green	Yellow	Orange
Serbia	Green	Green	Green	Green	Orange	Orange	Green	Green	Green	Orange
Slovakia	Green	Green	Red	Green	Red	Orange	Yellow	Green	Yellow	Red
Slovenia	Orange	Green	Red	Green	Orange	Orange	Green	Green	Yellow	Green
Spain	Green	Green	Orange	Green	Green	Green	Yellow	Red	Green	Green
Sweden	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Switzerland	Green	Green	Green	Green	Yellow	Green	Green	Green	Green	Yellow
The FYROM	Yellow	Yellow	Green	Green	Green	Green	Yellow	Green	Green	Orange
Turkey	Green	Green	Yellow	Green	Green	Green	Green	Green	Yellow	Red
Ukraine	Green	Green	Red	Yellow	Green	Orange	Red	Yellow	Green	Orange
UK - EWNI	Green	Green	Green	Green	Green	Orange	Yellow	Green	Green	Green
UK - Scotland	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

In the following Table, we the indicators referring to the Virqual partner countries. They are as follows:



AUSTRIA	ESTONIA
DEGREE SYSTEM	DEGREE SYSTEM
1. Stage of implementation of the first and second cycle	1. Stage of implementation of the first and second cycle
2. Access to the next cycle	2. Access to the next cycle
3. Implementation of national qualifications framework	3. Implementation of national qualifications framework
QUALITY ASSURANCE, ESG	QUALITY ASSURANCE, ESG
4. Stage of development of external quality assurance system	4. Stage of development of external quality assurance system
5. Level of student participation in quality assurance	5. Level of student participation in quality assurance
6. Level of international participation in quality assurance	6. Level of international participation in quality assurance
RECOGNITION	RECOGNITION
7. Stage of implementation of diploma supplement	7. Stage of implementation of diploma supplement
8. National implementation of the principles of the Lisbon Recognition Convention	8. National implementation of the principles of the Lisbon Recognition Convention
9. Stage of implementation of ECTS	9. Stage of implementation of ECTS
10. Recognition of prior learning	10. Recognition of prior learning

Austria was a signatory of the Bologna Declaration. Since 2007, Austria has become a member of the European Quality Assurance Register for Higher Education. The budget for needs-based study grants was raised and study fees for most students have been abolished as of 2009. Grants are now portable for a whole study programme in an EEA country or Switzerland. Future challenges include making a paradigm shift from teacher- to student-centred-learning and from input to output orientation; description of learning outcomes; implementation of the Austrian Qualification Framework for all education sectors; correct implementation of the whole ECTS package, improvement of recognition practices in line with the spirit of the Lisbon Recognition Convention; making bachelor and master programmes modular, including the provision of "mobility windows".

Estonia was a signatory of the Bologna Declaration. Significant legislative amendments in 2008 included more strategic steering of HEI government, while protecting institutional autonomy; establishing an independent QA Agency for higher education; providing the legal basis for establishing joint programs and degrees; formally stipulating the students' rights for learning- and career-related counselling; requiring HEIs to change their programmes according to the learning outcomes approach by September 2009; adopting general principles for accreditation of prior learning and professional experience and allocating credits; implementing activities of the internationalization strategy of 2006; all of the above projects are supported by EU Structural funds. Future challenges include: limited funding for higher education; need to strengthen PhD training and support technology transfer; insufficient internationalisation of HE sector which may strengthen the image among young people that it is more interesting to study abroad; demographic decline in the age cohort of 15-17 will have a major impact on the number of students entering Estonian HEIs in the near future.



HUNGARY

DEGREE SYSTEM

1. Stage of implementation of the first and second cycle

2. Access to the next cycle

3. Implementation of national qualifications framework

QUALITY ASSURANCE, ESG

4. Stage of development of external quality assurance system

5. Level of student participation in quality assurance

6. Level of international participation in quality assurance

RECOGNITION

7. Stage of implementation of diploma supplement

8. National implementation of the principles of the Lisbon Recognition Convention

9. Stage of implementation of ECTS

10. Recognition of prior learning

Hungary was a signatory of the Bologna Declaration. Since 2007, performance based three-year financial agreements have been made with HEIs, thus strengthening their autonomy; performance-based student incentives have been separated from social support; second cycle programmes and admissions procedures have been established to accommodate graduates of the bachelors programmes introduced in 2006; NQF for HE has been approved but EQF will be fully implement by 2013; parliament abolished tuition fees. ECTS is being used for transfer and accumulation but further work is needed to link credits with learning outcomes in all HEIs. Future challenges include: revising training content and regulations with a view to promoting LLL; enhancing cooperation between HEIs and providers of practical training; implementation of competence-based teacher training; promoting the employability; strengthening the regional role of the HEIs; educating new generations of researchers; more programmes offered in foreign languages; ensuring funding for mobility and providing equal opportunities; working out quality strategies at institutional level and setting requirements for a research university.

PORTUGAL

DEGREE SYSTEM

1. Stage of implementation of the first and second cycle

2. Access to the next cycle

3. Implementation of national qualifications framework

QUALITY ASSURANCE, ESG

4. Stage of development of external quality assurance system

5. Level of student participation in quality assurance

6. Level of international participation in quality assurance

RECOGNITION

7. Stage of implementation of diploma supplement

8. National implementation of the principles of the Lisbon Recognition Convention

9. Stage of implementation of ECTS

10. Recognition of prior learning

Portugal was a signatory to the Bologna Declaration. Key developments since 2007 include: legal reform regarding the framework for quality assurance of tertiary education, for the recognition of foreign tertiary degrees; HE Evaluation and Accreditation Agency; Diploma Supplement; simplification of procedures and flexibility in access to tertiary education; additional requirements for HEIs to demonstrate the methods and practices in curriculum development; use of ECTS and cooperation with society with a view to extending the recruitment base and increasing the number of students; fostering the internationalization of research universities and their specialization; promoting the binary system, with polytechnic education concentrating on professionally-oriented and vocational training; a move has started towards universities as public foundations governed by private law, strengthening university autonomy under independent legal status; National Agency for Accreditation and Evaluation of HE has been established; introducing the Bologna three-cycle system is progressing and will be completed before the end of 2009; system of student loans with mutual guarantee underwritten by the State has been established, which improves access to tertiary education. Future challenges include: establishing policies considering long term approaches to changing environments; need to foster advanced human resources and knowledge-integrated communities; broadening the social basis of tertiary education.



SPAIN
DEGREE SYSTEM
1. Stage of implementation of the first and second cycle
2. Access to the next cycle
3. Implementation of national qualifications framework
QUALITY ASSURANCE, ESG
4. Stage of development of external quality assurance system
5. Level of student participation in quality assurance
6. Level of international participation in quality assurance
RECOGNITION
7. Stage of implementation of diploma supplement
8. National implementation of the principles of the Lisbon Recognition Convention
9. Stage of implementation of ECTS
10. Recognition of prior learning

Spain was a signatory of the Bologna Declaration. Key developments since 2007 include the introduction of several legislative changes which establish the national accreditation for access to university teaching and research posts; adapting official university education to the EHEA; regulating the access to official university studies at Bachelor degree level, but a major regulatory development process is currently underway. In 2009 Spain signed the Lisbon Recognition Convention. Future challenges include: promoting economic growth and social well-being; improving employability and adaptability of graduates; encouraging the independence of university institutions and promoting greater responsibility so that universities are able to meet the new global challenges; promoting the diversification of HE at local, regional, national and global level; adapting HE system to LLL, strengthening the scientific-technological skills in the university system as well as knowledge and technology transfer to the productive sector and to society in large; increasing the level of society's scientific culture, critical thinking; promoting creativity and spirit of entrepreneurship; strengthening the link between the knowledge-based EHEA and ERA and the Latin American Knowledge Area.

TURKEY
DEGREE SYSTEM
1. Stage of implementation of the first and second cycle
2. Access to the next cycle
3. Implementation of national qualifications framework
QUALITY ASSURANCE, ESG
4. Stage of development of external quality assurance system
5. Level of student participation in quality assurance
6. Level of international participation in quality assurance
RECOGNITION
7. Stage of implementation of diploma supplement
8. National implementation of the principles of the Lisbon Recognition Convention
9. Stage of implementation of ECTS
10. Recognition of prior learning

Turkey joined the Bologna Process in 2001. Key developments since 2007 include: internal QA processes in Turkish HEIs are well in place, and starting from 2007 all universities are preparing their annual strategic plans; several independent national QA agencies have started work on acquiring the status of accredited external QA agency; a commission and a working group have been formed to work on the establishment of a NQF for HE and they have determined a clear timetable for each step, pilot implementation is foreseen in 2010 and full implementation by the end of 2012; flexible learning paths have been promoted via distance education programmes; a detailed national strategy on the social dimension has been prepared. Future challenges include: demand for higher education which is much higher than supply; improvement of the quality of education and full implementation of an internationally accepted national QA system; redesigning the financing model to ensure the diversity of resources and equal opportunities; improvement of the quality of vocational higher schools in order to meet labour market needs and expectations.

In the research being carried out at VIRQUAL (WP5/SIG1), we've decided to select our sample from the HEIs with more expertise and experience in adapting ECTS and the EHEA Main Guiding Principles to e-Learning. In accordance we've chosen the most experienced ODL HEI, mainly universities. This selection comprised the open universities from the U.K., Germany, the Nederland, Spain, including Catalonia, and Portugal. These would be the standard European Open Universities. To that selection we've added also the University of Porto.

In the future additional research will be carried out focusing on other important ODL HEI, as the Anadolu University, with the largest student population in Europe (although located in the Asian part of Turkey – Eskisehir - is a member of EADTU), the Hellenic Open University, the French CNED, and non-ODL HEI.

The above mentioned selection although quite representative of the European expertise regarding e-Learning and also virtual mobility, shown us however a very different scenario regarding the implementation stages, strategies and attitudes towards EHEA. In fact, Portuguese and Dutch HEIs seemed the most advanced and experienced. All three have fully implemented the EHEA. Only Universidade Aberta is still in the process of finalizing the adaptation of ECTS to the 3rd cycle programmes (doctorate level). Fern and the OU (UK) followed, but with some ambiguity still in how they interpret Bologna. Finally, regarding Spanish HEI, after several years of debate and two years of actual preparation, the first programme and courses adapted to the EHEA are just starting this October.

In short, implementation of the EHEA is underway all over Europe and it's an unstoppable process. Nevertheless, European directives transplanted to national legislation have given some important ground for differentiation amongst national Higher Education Systems. This can be seen in many different ways. Most importantly to our research, it allowed noticeable variations in terms of ECTS implementation. For example, a course involving a certain average number of study work hours can be differently converted in ECTS credits according to each country and institution. Therefore, a 5 ECTS credits course in the Spanish UNED could in fact imply the same workload as another course by another HEI awarded 6 ECTS or higher. This is, of course, something quite normal within the framework of EHEA legislation. In fact, according to the ECTS Guide:

Credits are allocated to entire qualifications or study programmes as well as to their educational components (such as modules, course units, dissertation work, work placements and laboratory work). The number of credits ascribed to each component is based on its weight in terms of the workload students need in order to achieve the learning outcomes in a formal context.



If students have achieved learning outcomes in other learning contexts or timeframes (formal, non-formal or informal), the associated credits may be awarded after successful assessment, validation or recognition of these learning outcomes.

Therefore, in accordance with the *ECTS Guide*, updated in 2009, there has been mainly two different ways HEI have awarded ECTS credits (p.18):

- 1) The teaching staff define the learning outcomes of each programme component, describe the learning activities and estimate the workload typically needed for a student to complete these activities. Proposals are collected, analyzed and synthesized and the estimated workload is expressed in credits. Using this approach, all the teaching staff are involved in the process of credit allocation. They can put forward their proposals in terms of learning outcomes, and estimate the workload necessary to achieve them. Through discussion and defining of priorities they can come to a final decision on the basis of the credits available (60 for each year).

This procedure may result in different numbers of credits being attributed to single components (e.g. 3, 5, 8). By using this option, institutions allow for maximum freedom in designing each component with regard to the learning outcomes and related workload. On the other hand, components of different sizes may be problematic when it comes to multidisciplinary or joint programmes or mobility.

- 2) Alternatively, the higher education institution or the faculty may decide from the start to standardize the size of educational components, giving each one the same credit value (e.g. 5) or multiples of it (e.g. 5, 10, 15), and thus predefine the number of credits to be allocated per component. In this case, the course units are often called 'modules'. Within this predefined structure, the teaching staff define appropriate and feasible learning outcomes and describe the learning activities, on the basis of the standard size of the components. The estimated workload must be consistent with the number of credits allocated to that component.

By standardizing the size of components, institutions allow for more flexible, multidisciplinary and interdisciplinary pathways among programmes. On the other hand, the definition of learning outcomes within a component is constrained by the pre-defined number of credits that set a priori the workload for each component.



However, institutional culture in many HEI can and has been subverting this reality when dealing with virtual mobility. In our research we've detected several cases where HEI agree privately in recognizing the courses from other HEI but attributing it a different number of ECTS credits. This decision has been taken with the intention of making virtual mobility easier for students by making courses more compatible with different study programme structures within the frameworks of institutional networks.

Basically, these and other aspects of the implementation of EHEA derive from the expected and understandable difficulties institutional culture amongst European HEI have been facing in relation with this very important and structural change. The transformation of curricula have been carried out but with faculty focusing more on the time issue than on the competences issue. So, curricula now compel with the European standards as to the duration of cycles, even if faculty are still struggling with the notion of competence-based learning.

5. HOW ARE INSTITUTIONS DEALING WITH e-LEARNING?

Most European HEI have been experimenting with e-Learning in the last couple of years. Students now expect and demand this. However, still not many European HEI offer fully online courses, and even less deliver official programmes fully online. The scenario on this issue is clearly less developed in Europe than in the United States, although it seems the European HEI who work in this field try to focus more in the quality of learning outcomes.

Since in the coming years most of European Higher Education students will already be digital natives, a lot of adaptation should be expected from European HEI in response to that increasing demand. So far, however, the use of e-Learning in non-dedicated ODL HEI has been mostly restricted to a supplementary role. In spite of that, we must acknowledge faculty are increasingly improving their capability to use ICT tools and expertise on web-based learning. Recent studies have been showing the more active and enthusiastic teachers in using e-Learning are not the youngest generation ones and obviously not the oldest ones, but the ones who already have been able to accumulate some experience in real web-based teaching.

Nevertheless, most European HEI still have to launch integrated and comprehensive innovation strategies that will allow them to adjust institutional infrastructures but also structures to the intensive use of e-Learning. There aren't many HEI in Europe already exploring cross-border operations, apart from the conventional Erasmus Programme and some typical exchange student programmes. In this sense, e-Learning is mostly being used in Europe for the purpose of supporting the e-Learning experiences of conventional students.

6. MAIN OBSTACLES REGARDING VIRTUAL MOBILITY

It's a given fact, many institutions today and also the European Commission are starting to consider Virtual Mobility as a much valuable tool to improve students accessibility to the EHEA, thus enabling them to individualize and specialize their study programmes within a continuum virtual learning space. This goal is correlated with the EU Lifelong Learning Program objective of having three million individual participants in student mobility by 2012. In fact, only by supplementing the current physical mobility schemes with institutionalised virtual mobility ones the opportunities of achieving the European goals set in student mobility can be achieved.

Bearing this in mind, we should in fact be talking of Virtual Erasmus when referring to Virtual Mobility in the European Qualification Framework. Because, virtual mobility will be in fact contributing to the implementation and development of the original vision of the Erasmus programme. Obviously, Virtual mobility favours also more varied modes of study and provide different dimensions of mobility, including the creation of virtual learning communities, virtual projects, the involvement of many universities simultaneously in a project or course and the facilitation of international collaborative learning and teaching.

However, as already stated above, Virtual Mobility is still facing some important implementation problems. That is why only a few number of HEI and a restricted number of students have been able to experience it. Of the already mentioned isolated Eu-funded projects dealing with this subject until now, EPICS (<http://www.eadtu.nl/epics/?cld=home>) seems to be the most accomplished. The EPICS project builds itself from the contributions of the following previous developed projects:

Project	Coordinating organisation	Web site
e-move	EADTU	http://www.eadtu.nl/virtualmobility/
REVE	EuroPACE network	http://reve.europace.org
VM-base	EuroPACE network	http://vm-base.europace.org
Venus	EuroPACE network	http://www.venus-project.net/
Sputnic	EuroPACE network	http://sputnic.europace.org
NetACTIVE	UNED	http://www.net-active.info
CSVM	EADTU	http://www.eadtu.nl/csvm/
CBVE	EADTU	http://www.eadtu.nl/cbve
MORIL	EADTU	http://www.eadtu.nl/conference-2007/files/K5.pdf



EPICS share with VIRQUAL a common approach which is the one of trying to work towards mainstream provision of Virtual Mobility by offering international courses clearly as integral part of HEI study programmes. VIRQUAL and EPICS both share the ambition of addressing Virtual Mobility as a form of Virtual Erasmus.

*As already mentioned, Virtual Mobility still faces a number of difficulties. In short, we can identify as the main problems to be solved the issue of **credit transfer in relation to student workload, assessment, administrative procedures and the language.***

In our research, we've focused so far on the problem of credit transfer and student workload. In the following pages we'll present some data collected on this subject. As already stated, additional research will also focus on the remaining issues. In fact, regarding assessment, there's not a clear definition of how a student enrolled in a given HEI and wanting for a period, one semester for instance, to be a virtual student in a different university, if he/she should be subject to different assessment rules and procedures. Apparently, the answer should be positive. Someone enrolling in a different HEI should adapt to a different culture and also institutional cultures. That should be part of the all culture experience of mobility envisaged by the Erasmus programme.

Yet, this is very much arguable and experts have been favoring an entirely opposite approach. Apart from that, there's also the issue of exams. How can exams be conducted for students living abroad? Should the host HEI hire the services of the home institution to conduct the exam? Or, should the home institution do that in agreement with the host HEI? Some kind of formal agreement between the two HEI should be envisaged?

As for administrative procedures and the language, some consideration has also to be given. We'll just limit at this stage to point out that many students could feel comfortable enough to enroll in a course delivered in a non-native language, but not as much when refers to being assessed in a different language. Bearing in mind the results from previous virtual mobility projects, it's likely students would prefer to enroll on a course in a not-so-familiar language, but demanding to be examined in their native language or a more familiar one. This is not a minor issue if we do not want to restrict Virtual Mobility to English-speaking students.

It's interesting to complement this analyses with the main conclusions of the Net Active project regarding the obstacles or difficulties to Virtual Mobility. They were, as follows:

- Some Universities can deliver the courses in a virtual environment, but other institutions are less well equipped to do so. Many still have a blended learning approach, which would be an impediment to virtual mobility.

- The language of teaching and learning is normally in the language of the country offering the qualification, and will seriously impede the exchange possibilities without mastering the language.
- It cannot be assumed that every Masters degree awarded by a higher education institution represents an adequate level of competencies and skill, nor can the differences between Master level degree structures be taken for granted.
- The credit and qualification system differs depending upon an individual country's approach.
- Student outcomes, including the acquired level of academic and other competencies and skills differ by programme type, field of studies and the profile of the institution, in both regions.
- The courses in the same subject areas will differ in content, organization, focus, level and type.
- The balance between teaching hours per week/course/module and self-study, the nature of examinations and assessment and the support structures available to students vary between countries.

7. HOW IS ECTS BEING ADAPTED TO ONLINE COURSES

7.1. How are ECTS credits quantified in online courses

As we've stated above, an important degree of variation occurs regarding the calculation of ECTS credits. We'll present some examples of this variation. For Universidade Aberta, according to its *ECTS Application Regulation*, one academic year representing 60 ECTS implies an average student workload of 1560 hours. This means 26 hours per ECTS credit. This figure differs from the value attributed by the University of Porto (27 hours) or the Open Universiteit (NL) to which 1 ECTS credit an average 28 hours student workload is expected.

More importantly, a course in Universidade Aberta lasts for a semester and is attributed 6 ECTS. Each semester including 5 courses in every study programme. But, if a student from Universidade Aberta enrolls in the Open Universiteit (NL), all courses, assuming the format of a module, are only worth 4,3 ECTS credits. If the same student would enroll in the UNED, each course would be credited 5 ECTS credits. That same problem would increase as regards the Open University (UK) which is favoring now a policy of concentrating subjects. In accordance, most course are now worth 15 ECTS credits student workload. This, of course, could have some important impact, either good and bad, on the development of Virtual Mobility schemes.

7.2. How are competences developed

This is another very important issue where variation can occur. So far, we're unable to collect much data on this topic. In accordance, we'll focus on the two cases of the Portuguese partners (UAb and UP). In fact, how is the calculation of the average student workload made by each HEI in respect to competence development? For Universidade Aberta, an ECTS credit represents the average time spent in:

- communicating with the tutor and the fellow students either virtually or face-to-face;
- Individual study;
- Group or individual activities, papers, assignments, projects, documentation research and so on;
- Preparing and producing assessment activities.

The University of Porto uses an alternative scheme. According to the University's internal regulation which defines how ECTS credits should be attributed to online Continuing Education courses, 1/3 of the third of the total hours of the course must be contact hours between the learner and the teacher, synchronous or asynchronous. This document also recommends that at least one evaluation event takes place in a face-to-face session. Points 8 and 9 of the Regulation establishes that a CE course should have at least 27 hours of total workload so it can be credited, and can be incremented with 0.5 units of credits with the corresponding workload.

In order to calculate the student workload, the University uses the following elements:

- Expected time of exposure to content;
- Participation in different pedagogical activities:
 - Written assignments and activities based on wikis, portfolios, blogs;
 - Online testing;
 - E-mail / chat / forum;
- Reports of participation (Moodle):
 - **Statistics:** Course logs show activity within the course. It allows tutors to see what resources are being used and when, or check that an individual student has viewed the resource they claim to have read.



- **Activity report:** An activity report will show all activity in the course, sorted by topic. Each item will be shown with its type and name. In order of appearance, the fields are: resource/activity name, # of times viewed, date last viewed, and elapsed time since last view.
- **Participation report:** A participation report provides any easy way to monitor students' participation.
- **General statistics:** The statistics graphs and tables show how many hits there have been on various parts of the course site during various time frames. They do not show how many distinct users there have been.

8. NEXT STEPS

Throughout the report we've already pointed out that in order to allow for the development of Virtual Mobility some issues have to be addressed and some remaining obstacles overcome. This can only be achieved in a joint effort by several HEI, Governments and the European Commission. We believe thus some strong cooperation between organizations and projects could therefore be instrumental for that goal. That is why we're prepared at this stage to try to involve more HEI in our research as subjects and possibly to establish some information exchange with other running or past projects addressing virtual mobility in Europe and beyond.

The input from partners identifying other HEI potentially interested in cooperating in our research is critical. We could indeed consider extending our search to other continents as well. The experience from Net Active could be of interest on that regard.

As to the next steps in the research, we're aiming at exploring and discussing further the issues of assessment and language. To what extent should the virtual mobility student be exposed to cultural barriers? Does it make sense to try to simulate the same kind of experience students would have in a physical mobility scheme? Or, by the contrary, is Virtual Mobility a fundamentally different experience and therefore should aim at other types of cultural clash?



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