

NetCu handbook

Guidelines for organising networked curricula

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© 2012 EADTU / ISBN: 978-90-79730-11-7

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The NetCu project is carried out with the support of the European Commission, Directorate-General for Education and Culture, under the Lifelong Learning programme. 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 made of the information.



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1. Introduction

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The NetCU guidelines on Networked Curricula aim to offer a concise, “hands-on” handbook for all professionals who want to engage in setting up a networked curriculum for education mainly focusing on tertiary education.

The research that was carried out indicates that there are numerous reasons and opportunities to start such collaboration. It can emerge from a university/institutional policy and be implemented top-down, or could start from an initiative of two university professors who meet at a conference and want to collaborate on teaching activities.

For all these different starting points, the NetCU Handbook presents easy-to-use scenarios and provides examples of best practices. The Handbook will be available in various formats: the original, digital format, with two main navigation modes: *by topic*, to offer the reader a view on what aspects are relevant when undertaking a network curriculum, and *by audience*, where we start with the reader and his/hers questions arising from the particular situation in which they want to start a networked curriculum. Besides the online format the Handbook will be available in printable PDF format and in a format adaptable to a tablet environment.

2. General Model

Authors: Piet Henderikx and George Ubachs (EADTU)

2.1 Partnership schemes

This Handbook deals with three types of partnership schemes:

- *Exchange curricula with exchange mobility*: students choose a study abroad at a host university in a



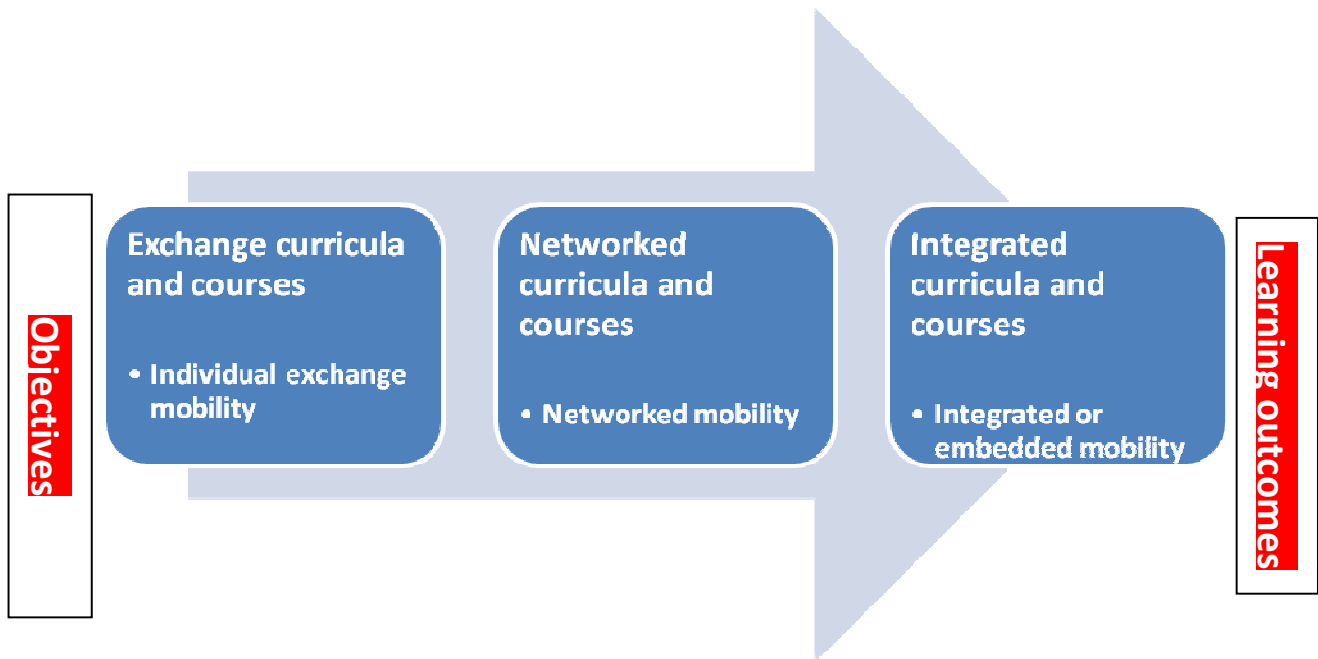


Figure 2.1 A continuum of three types of partnership schemes for international curricula and mobility, ranging: from less to more integration and structure, from more to less partners, from a weaker to a stronger collaboration, from small incidence on the curriculum to large incidence on the curriculum, from less to more mobility per class involved

2.1.1 Exchange curricula and exchange mobility

In Europe, exchange curricula and exchange mobility for tertiary education are best known as Erasmus mobility. Erasmus mobility allows for a study period abroad between 3-12 months, based on individual student flows, which can be reciprocal with more or less equal numbers of incoming and outgoing students.

The objective is an immersion in a partner's university and surrounding culture and society. Typically, students score this exchange high on personal development, learning foreign languages, developing cultural skills, social networking, but also in terms of academic aspects. In the case of Erasmus mobility, mobility is organized within large partner networks spread all over Europe. Institutions have an institutional contract with each of the partner universities concerned.

The two partner universities and the student agree on the student's program to be executed abroad, which is supposed to be equivalent to the home university's program, although not identical. In practice, the program (i.e. the learning agreement) is not oriented to a consistent package of courses leading to a specialization, but in many cases is a list of courses that satisfies some quality criteria of the home university.

Exchange has almost no essential effect on the curriculum of the host university. However, slight content adaptations are sometimes made for students who do not master the language of instruction. Host students can get an English handbook or a series of articles to discuss instead of the local lectures. Regularly, courses are taught for home students in English and not in the local language to allow foreign students to attend classes, although the Erasmus programme offers grants for short language courses as well.

Exchange programs are, to some degree, flexible: they are easy to organise in a very short term, even during a running academic year. They can be tailored to the needs or interests of students, since it is about individual mobility. However, academic recognition of mobility period abroad can be quite problematic. Overall exchange mobility is a good tool to improve cooperation in an existing partnership or can help to initiate a new collaboration.

Since it has no effect on the curriculum, it does not enrich it nor creates it new opportunities. This is more likely to occur when two or more institutions are cooperating on the curriculum aspects as well, as is the case in more structured collaborations.



The cost of exchange mobility is high for the home institution (in terms of organisational cost and administrative burden) and for the student (travel and subsistence cost that might not be covered in full by a grant). For the home institution, it does not provide additional income, except in terms of additional opportunities for home students, who are offered the opportunity to study for a period of time elsewhere. In the Erasmus scheme, this turns out to be a balanced situation, however only to the benefit of a small proportion of students.

Exchange mobility creates a unique opportunity for students, but if no networked or integrated mobility is put in practice yet the institutional gain is rather small.

2.1.2 Networked curricula and networked mobility

Networked curricula and networked mobility are developed within a framework whereby partner institutions agree on mobility flows of groups of students to consistent course packages, defined in advance. These course packages already pre-exist or are specially designed and integrated in the program of the partner university. They can consist of major or minor courses that are probably not organized in the home university, or can entail specialization courses, internships or projects and thesis work.

The course packages reflect complementary research and innovation strengths to the home university. The scheme creates opportunities for the students that participate more actively to research and innovation networks. Because networked courses are shared, the institutional cost to design and offer curricula can be reduced.

A networked scheme can also refer to smaller parts of a curriculum: to study units, a main subject/major/minor and subsequent modules, seminars, projects, etc.

Eventually, more than two universities can participate in a network, each delivering specialized and attractive courses, more specializations and hence more opportunities for students and for the institutions.

A networked program is more attractive for students from abroad since they benefit from more diversified opportunities and mobility schemes and probably a stay in more than one European country.

Networked curricula are not joint programs, the course packages are entirely owned by the host university. The position of the courses is not changed; they primarily belong to the curriculum of the host university. The ECTS system guarantees the credit transfer and the recognition of courses like in the case of Erasmus programmes. The position of the teaching staff is not changed; they only are accountable to their curriculum. Admission to the program is given by the host university in an agreement with the home university and the student.

The mobility of students is group mobility with incoming and outgoing students, hence more structured than the individual mobility in the exchange scheme, but less integrated than in joint programs. In principle, the home university delivers the degree/certificate and the diploma. In case of a substantial

stay at the other university, universities can opt for a dual degree/certificate, which would be more appropriate than a joint degree, since the program is not a common or joint program.

It is clear that a networked curriculum and mobility require a stronger engagement than in the case of exchange partnerships. Networked curricula are built with reliable, preferential partners, which already collaborate in research or innovation. The scheme allows for a broader range of complementarity of subjects and of specialisation opportunities for students. Of course, the success of this scheme is depending on the strength and actual involvement of each of the partners. Weak points are that students can be lost to other institutions, but there can also be a gain. Also, there can be a loss of identity of the curriculum if too many bits and pieces are allowed.

2.1.3 Integrated curricula and integrated mobility

Integrated curricula or courses are organised jointly by the partner universities, basically according to the Erasmus Mundus model. They must also be targeted to the students that belong to the partner universities themselves (which is less the case in the current Erasmus Mundus program that in a first phase was even only meant for third country students). It is a strong cooperation where universities co-organise the program that is managed by a consortium. This consortium is preferably small and it can include non-university institutions.

The curriculum is integrated with typically a common part (*truncus communis*) followed by complementary options, but also other structures are possible (for example a ring-shaped structure with consecutive parts). Mobility (physical, virtual) affects almost all students. At the end of their study, students receive a joint certificate or joint degree.

In such a cooperation, the position of courses and staff have been changed, because they have become a part of a trans-institutional program, and are part of that new structure and its rules. The objectives of an integrated program are defined as well as the learning outcomes, though the curriculum is constructed on existing courses and modules. It is a truly international, multi-partner and multi-campus program with embedded mobility flows. Students are shared and there are common admission and selection rules and procedures as well as common examination rules. Resources are shared as much as possible. In practice, these programs act as a common learning space, linked with research and innovation in the participating universities and led by one consortium consisting of the participating universities.

Integrated curricula require a strong partnership, with agreements for at least 5 years. Costs are saved by sharing staff and resources. Integrated curricula and courses provide a really international environment with mobility of all students involved. By the involvement of more institutions in one program, in principle high quality can be guaranteed. However, the overall quality is also depending on the strength and commitment of each partner.

2.2 Split-site doctorates and joint PhD's

During the past decade a lot of experience was gained by European universities in the field of split-site doctorates and joint doctorates, the first impetus coming from the French “co-tutelle de these” and since then from the Erasmus Mundus Joint Doctorate Program. Many universities have developed good practice in the field.

Good practice shows that this leads to:

- a structural cooperation with regard to the candidate's doctoral training with co-supervision and a jointly agreed research track ending with a joint doctoral degree
- a broader and more intensive cooperation between the research groups concerned
- access to seminars, conferences, specialized courses
- new research themes, resulting from the cooperation between two or more “schools”/faculties
- sharing of resources and research environments like unpublished reports, databases, labs, infrastructure, libraries in the partnership, etc.
- direct communication with relevant research staff in the partnership
- access to new networks at the national and international level
- earlier and more (co) publications, especially when research in the partnership is well coordinated

Both emerging practices in universities and recent European tendencies (doctoral schools; three i's: interdisciplinary, international, intersectoral; partnerships; mobility; quality;...) urge to reposition our current internationalisation policy and design a new framework challenged by a 2020 horizon on doctoral studies and partnerships.

Also at the doctoral level, three types of cooperation and the related mobility are relevant: exchange mobility in the Erasmus and Erasmus Mundus partnership mobility programs; networked mobility in the Marie Curie Initial Training Networks (ITN) program; and integrated mobility in the Erasmus Mundus Joint Doctorate program.

2.3 Mobility

2.3.1 Introduction

Section 2.3 intends to analyse the mobility structures used within the showcases of networked mobility. Before analysing the mobility structures represented by the NetCu consortium, we herewith want to give an introduction to the European trends in mobility. Firstly a distinction is made between physical and virtual mobility. Secondly the mobility for staff and non-staff members is outlined per example. Examples from practice will further demonstrate the mobility structures, funding models and success factors.

2.3.2 European trends

From 1987, the European Commission is running the Erasmus exchange program as one of its most successful programs. More than one million students have been in exchange schemes since then. Consequently, exchange mobility has become probably the main feature of the internationalisation policy of most European universities.

Since 2004, Erasmus Mundus master programs, followed by joint doctorates were created, successfully as well, leading to the integration of curricula in partnerships delivering joint (or dual) degrees. This includes a strong academic cooperation with a strong pooling of staff and resources and mobility schemes with a worldwide outreach.

The Europe 2020 Strategy and its Flagships (in particular the Innovation Union, Youth on the Move, New Skills for new Jobs, the Digital Agenda) have strong implications on higher education, including the integration of research-innovation-education in the knowledge triangle and mobility.

In the Modernisation Agenda for Higher Education (2006, 2011), the European Commission is launching innovative approaches to higher education. It refers to the substantial increase of geographical and intersectoral mobility, the reward of excellence at the highest level, the enhancement of interdisciplinarity, structured partnerships with the business community, more structured international cooperation, the sharing of knowledge with society, the right mix of skills for the labor market, etc.

In a nutshell, from a European Union's perspective basic trends to align with in the internationalisation of higher education include the following (see also Figure 2.2):

- Increase substantially geographical and intersectoral mobility
- Create structured partnerships with the business community
- Include the right mix of skills for the labor market
- Enhance interdisciplinarity and transdisciplinarity
- Share knowledge with society by reinforcing dialogue with stakeholders
- Reward excellence at the highest level
- Establish a more structured international cooperation

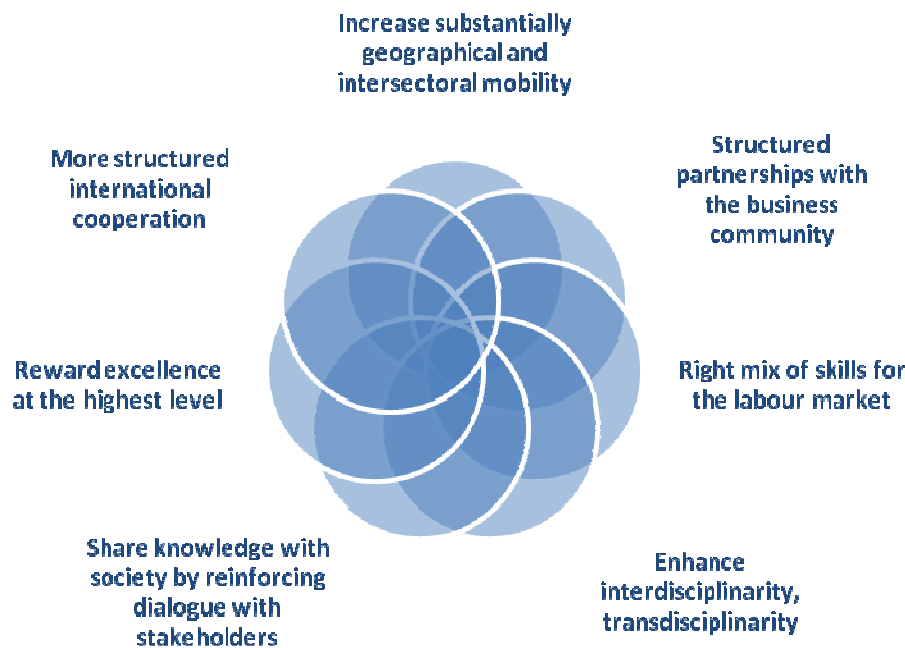


Figure 2.2 European concepts for the internationalisation in higher education

Besides these trends built up by the European Commission, current practice in European higher education shows important developments. Attracting foreign students in international degree programs and some forms of transnational education (TNE) are core elements in the internationalisation policy of universities in most European countries.

Transnational education refers to education provision that is available in more than one country and includes a wide variety of delivery modes, for example¹:

- *Branch campuses*: often high profile initiatives as a natural extension of universities' aspirations to international excellence with a global reach, often with involvement of government agencies; others are supporting the educational agenda of developing countries. Some branch campuses deliver programs in collaboration with local universities. A variety of types of cooperation is in use.
- *Joint and dual degrees*: two or more institutions provide a single (integrated) program of study that leads to a single award of both or all institutions. A dual or multiple award is delivered when institutions provide a jointly-delivered (networked) program that leads to separate qualifications by each of the institutions. In the latter case, students follow curriculum components (courses, majors, minors) at a partner institution delivering different, often more specialised content in a domain. However, where in the case of joint degrees curricula of

¹ See: Steve Baskerville, Fiona MacLeod, Nicholas Saunders, *A guide to UK Higher Education and Partnerships for Overseas Universities*, UK Higher Education International and Europe Unit, Research Series/9, July 2011, p. 27-32; Most definitions below refer (partially) to it.

different partners are integrated in one single program, in the networked case curricula are separately run by the partners.

- *Split-site PhDs and joint doctorates*: this has been an emerging and innovative mechanism since the past few years, as it allows students to access facilities or to participate in programs at a host university, while remaining the largest part of their time in the home institution. It is to the benefit of both institutions and the student concerned, if the students' program is well designed and supervised, depending on the collaboration and trust between the both universities. Some universities and the U21 network ("U21 Jointly-Awarded PhD project") developed special schemes for it. A minimum of 6 or 12 months (not necessarily continuous) has to be spent at the other university. These schemes can lead to a joint doctoral degree. This is also the case in the Erasmus Mundus Joint Doctorate program.
- *Program articulation*: a university evaluates a partner's program of study, or parts thereof, as an equivalent content, level and standard to components of its own programme. It facilitates direct entry into the programs concerned or at some stage of the program (Year 2, Year 3, Year 4,...). Credits are transferred. Such programs may be pre-existing or specifically designed to facilitate the progression of students between the collaborating universities.
- *Franchising*: in this case programs are not mixed, like in the examples thus far. In franchising schemes, a university authorizes another institution to deliver and sometimes to assess all or parts of a program it is teaching on its own campus. The franchising university will retain direct responsibility for the content of the program, the teaching and assessment strategy and its implementation, the quality assurance schemes, etc. It will also deliver its awards/degrees. In particular, franchising is a useful scheme in case a university has no degree-awarding power or lacks the expertise to organise a program of study on its own right.
- *Validation*: in this case, a university sends assessors to evaluate a program that will be delivered by a partner institution and will evaluate if it is of an appropriate standard and quality to legitimate an award delivered by the partner university. The validating university will monitor the delivery and quality to ensure that standards are maintained. Validation schemes in some cases might be an alternative for franchising.
- *Corporate involvement*: This can occur when a university or its international partner brings to the consortium a corporate partner. This is increasingly the case in Erasmus Mundus master or joint doctorate to reflect the knowledge triangle. It is essential in the European Institute of Technology's Knowledge and Innovation Communities (EIT-KIC's).
- *Flexible and distributed learning (FDL)*: this includes both online and distance learning, in this case for international students. The study is flexible in terms of place (students can be located in any part of the world), time (students can combine programs or modules with their work or other study tracks), content (can be personalised according to students' specific interests or localised according to local needs), media (can be differentiated according to local facilities), assessment (can take place locally). As tutoring and guidance as well as learning communities are suitable, these can be organised by the delivering university. However, in many cases, collaborative partnerships with universities abroad can facilitate this in many ways (see practice in the University of London, the Open University).

- *Study abroad*: this has a long history with foreign language and area studies, where students spent a year abroad. But also the Erasmus program is considered as a study abroad at a host university, typically ranging from 3 to 12 months.
- *International volunteering*: Some universities stimulate students to participate in volunteering in organisations and placements abroad, for instance in developing countries or in the welfare or health sector throughout Europe. They make sure that they have a broad range of opportunities to the benefit of the individual student and the organisation concerned.

With a *frog leap*, these developments bring us to a new era of international universities, to be designed by each university and collaboratively in domain or curriculum specific networks



Figure 2.3 Examples of Transnational Education (TNE) or provisions made available in more than one country. Blue boxes are open for next developments.

The British Council predicted that by 2010, “it is likely that the demand for TNE for the UK will be greater than for international students seeking an overseas campus-based experience”. This effectively has become true. Also it has stated that in TNE, there is a tendency towards “more cooperation” and “real” partnerships, which according to them is a typically European approach.

2.6.3 Focus: curriculum partnerships and related mobility schemes

This Handbook is about networked curricula. In essence, they are specific forms of Transnational Education (TNE), bringing together many elements described in figure 2.3 above.

Two problems concerning current practice in internationalisation have led to the need to engage in this research project and review of best practices for networked curricula and university collaborations:

- issues related to Erasmus exchange and other mobility, which in many cases are not serving enough students or do not adequately meet their needs and demands;
- issues with regard to Erasmus Mundus, which is almost completely focusing on incoming students and does not apply to home students.

Issues in the Erasmus and Erasmus Mundus (action2) programs

Although the Erasmus program creates undeniable opportunities and benefits to more than 200.000 students every year, there are still some mobility issues related to:

- The size of the demand from the students' side for a stay abroad of three months or longer: does it reach 20%, which is the EC benchmark, or even go beyond that?
- If this demand would be reached, how can it then be organised in terms of university facilities and cost (to students and universities)?
- Does university staff (both at academic and administrative level) see the benefits of mobility exchange at a larger scale and in all faculties?
- How to deal with an international experience for the vast majority of students (80% or more) that cannot be mobile, while curriculum objectives increasingly relate to international competencies or working in an international environment?

Similar issues are related to the current Erasmus Mundus, action 2 mobility program for third countries. The benefits for third country students are clear as well as the strategic importance for European universities, but the actual participation of our (i.e. EU) students is below expectations, except in some areas of specialisation (area studies,...).

Issues in the Erasmus Mundus (action 1) program

The Erasmus Mundus, action 1 program for master courses and joint doctorates has boosted curriculum cooperation between European universities and between European universities and third-country ones. Although this has led to great innovation, there are still some issues that are problematic:

- Erasmus Mundus Masters and Joint Doctorates mainly aim to attract incoming students, not to involve (outgoing) home students.
- Huge institutional and staff efforts go into the development of high quality Erasmus Mundus proposals and fail with the application to European funding (more than 90% every year). In most cases, these efforts are lost, since rejected programs are not implemented, even not partially.
- Erasmus Mundus proposals encompass an entire master or doctoral program, while collaboration at a smaller scale in many cases already can result in appropriate outcomes.

New ways forward

As an answer to the abovementioned issues, universities should reconsider their practices and develop solutions that can potentially serve their entire student population. Some suggested best practices are:

- organising shorter international experiences, like summer schools, seminars, joint projects, joint thesis work, intensive programs, both for own students and for students from abroad.

- breakdown physical barriers to mobility by opening their home learning environment to partners' environments using online or blended/hybrid modus, capitalizing on the potential of both the physical and online proximity surrounding students and the university walls today. Therefore, focus on virtual mobility as well.
- optimizing and enriching the curriculum by collaborating in sound and efficient partnerships, developing synergies and complementarities, to reach a better educational quality and to offer more and better opportunities for students by a complementary mobility. This mobility is balanced in such a way that basically it is within reach for all students, combining physical and online participation and collaboration schemes. Staff and students should belong to a joint teaching and learning space, where articulation of major and minor subjects or even of module units is a natural process.

Hence, the major goal in partnership schemes is to get high quality collaborative curricula and from that new position serving better own students and attracting more and better students from abroad.

2.6.4 Benefits for students: the international experience

Students are the most important stakeholders for international curricula and courses. Benefits are summarized:

- getting an intercultural experience by learning in an international environment, with cultural and languages differences, that enlarge their mindset, stimulate thinking from different scopes and taking into account different views and sensitivities in their communication
- having access to the programs of partner institutions, learning complementary subjects, taking options for different competence profiles (which eventually are not taught at the home university), and get related to complementary research areas
- learning to cooperate with other students in international joint projects, seminars, courses, learning communities, joint thesis work or in internships, physically and/or on line, which both are current working modes in real life jobs of researchers and professionals
- having access to resources at the partner institution, including libraries, databases, special infrastructure, labs, research reports and facilities and staff
- doing research at partner institutions in the framework of a master or PhD program
- learning in innovation contexts, through internships and have access to R&D environments at partner universities, connected R&D institutes and companies or to field work organised by them
- in the case of physical mobility, personal development by living independently in a different environment and benefiting from a real immersion in another culture and linguistic environment.

This international experience will lead to learning outcomes/competencies like:

- competencies with regard to specific content and skill domains or specialisations which are not taught (in the same way) in the home university

- cooperate with researchers and professionals in international projects or other international settings
- communicate in international groups both verbally and in writing
- being sensitive to and cope with different cultures and languages
- cooperate with staff and peers in online work settings
- seeking access to resources and facilities in a borderless environment
- international networking, balancing between face to face and online contacts

2.6.5 Benefits for universities

Both international curriculum and mobility have clear institutional benefits:

- The curricula mirror directly the international cooperation in research and innovation. Hence, by the partnerships the curricula are better integrating international research and innovation and realizing the knowledge triangle. That integration can work out in a pragmatic way, using all face to face and on line means to borderless involvement, but always showing the university's ambitions in quality teaching. Also international R&D institutes, companies and organisations can be involved, as they are in research and innovation.
- Curriculum components can be shared, which ultimately will lead to a more complete and richer range of courses in a time where single universities have to reduce that range. In many cases, multidisciplinary and problem-oriented teaching is better offered by a partnership of universities
- Students are taught and learn in an international environment, which in essence is an extension of the home university's environment, aiming at its own high quality curriculum objectives and learning outcomes. Students get more opportunities, notably with regard to international involvement and international competencies.
- Curricula become more cost-effective, especially when staff and resources are pooled and shared, especially in areas of specialisation and expensive infrastructure.
- Partnership curricula become more attractive for international students by the enriched curriculum and by the possibility to participate in pre-designed mobility flows. Hence, these curricula can have even more international impact through an increased participation of students from outside the partnership.

2.6.6 Mobility in networked curricula: Lessons learned from practice

The NetCu consortium partners submitted valuable information on the actual role of mobility in networked curricula and the distribution of physical and virtual mobility. Important additional reference is given to funding structures and success factors related to setting up mobility schemes.

Student, teacher and staff mobility schemes

Referring to student mobility usually means referring to the highly successful mobility programs under the EU Erasmus scheme. To use the full potential of university's proximity, universities can also use their

virtual proximity next to physical proximity. This means that any university nowadays can offer access to programs, knowledge and even interaction with fellow students and staff within a virtual mobility scheme. Although not common practice for all universities, only by the combination of a physical mobility (PM) and virtual mobility (VM) programs, universities use the full potential of giving access to international students and staff.

As is shown in Figure 2.4 mobility and especially the combination of PM and VM are important factors in networked curricula. Only three out of the fifteen NetCu showcases operate without any form of mobility. These are programs that solely operate at a national level. Three showcases operate with only PM and two with only VM. The majority of showcases - seven - operate in a combined scheme of PM and VM.

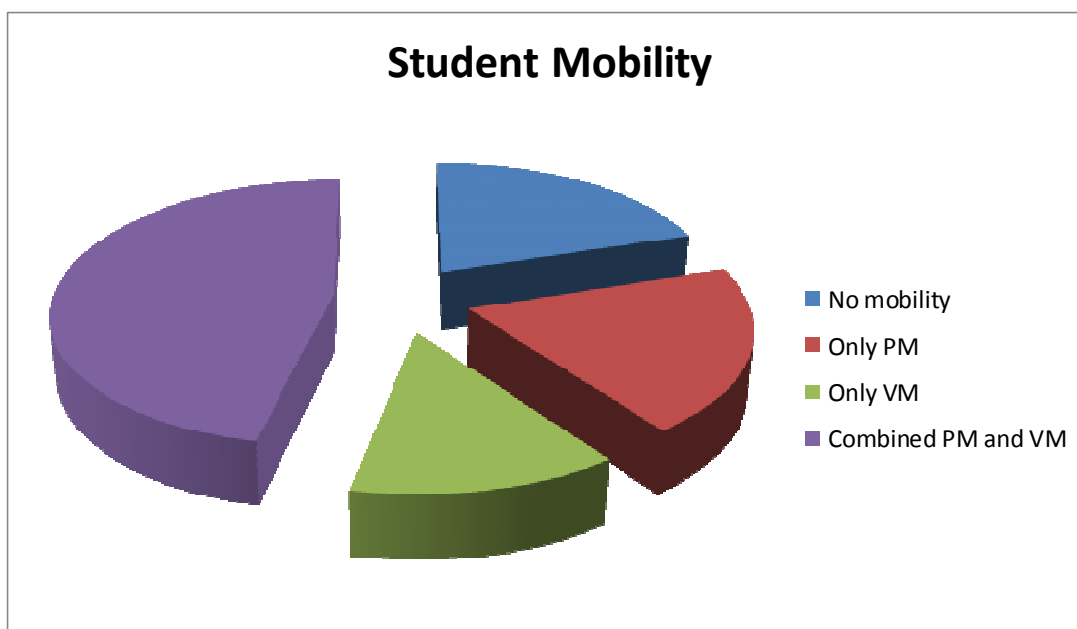


Figure 2.4 Number of (combined) PM and VM models used for staff and students

The components of student mobility include activities, such as:

- on the job training
- Spending terms at different universities
- Students are taught by different tutors (on-line)
- Practical training
- Internships
- Collaboration with other students
- face to face exams

Staff activities within mobility have more to do with:

- Meetings and seminars
- Sharing experiences and training
- Teaching different groups of students

Mobility brings diversity in disciplinary, socio cultural and geographical perspectives. It is therefore considered to be an essential part of organizing networked curricula. From the data received from our consortium it is evident that ten out of twelve examples of international networked curricula offer mobility for the staff and teachers.

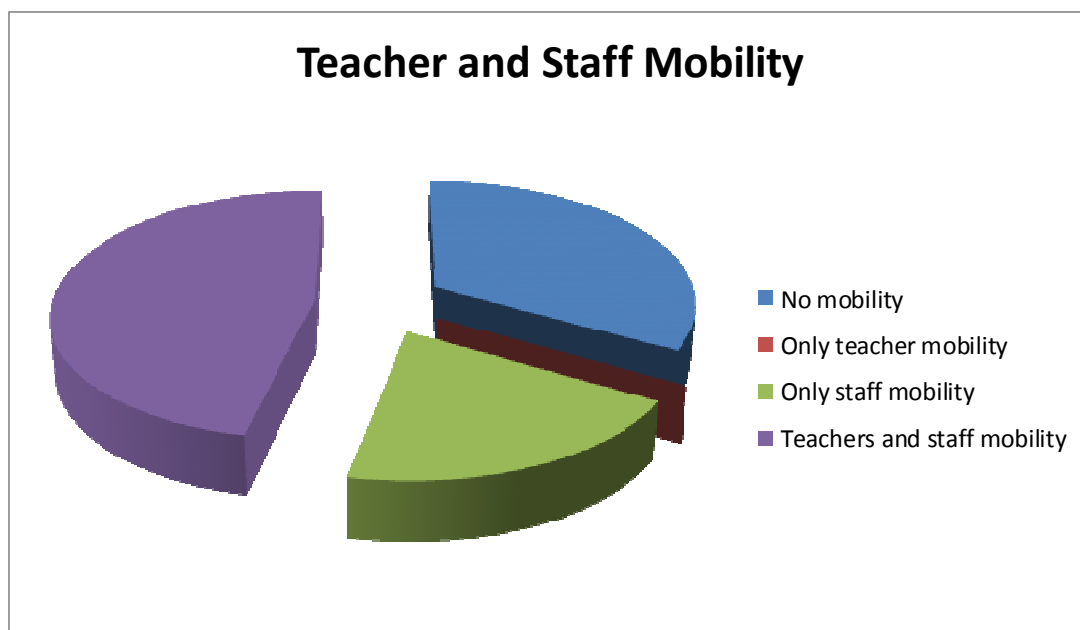


Figure 2.5 Number of (combined) teacher and staff mobility

Success factors

The reason for (spontaneously) setting up networked curricula and investing in international mobility schemes are to be found in the direct added value that universities can gain from international cooperation. Networked curricula are clearly in the direct interest of an academic program as well as for the participation of students and staff.

Benefits indicated by the NetCu consortium for mobility include the following:

- Sharing common didactic methodology and exchanging best practices
- International internships: added value and increased placement possibilities for students
- Sharing content and procedures
- International and cultural experience
- Mobility needed to support the networked curriculum
- Improve personal relationships within the networked curriculum

- Learning new skills of virtual collaboration
- Mobility creates an inspiring environment for new ideas and innovations

It is therefore that (co-)funding is always found by the participating universities. The most common funding schemes are:

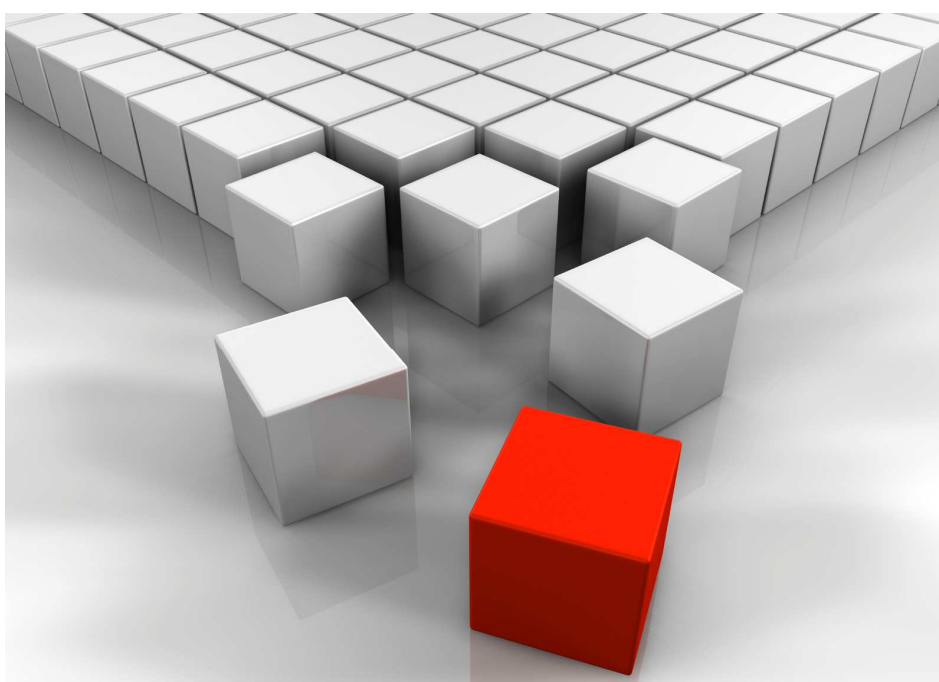
- Project funding
- Self-financed by the students
- University funding
- Erasmus and Erasmus Mundus

3. Goals

Authors: Patricia Mata, Beatriz Malik and María Luz Cacheiro (UNED)

3.1 Global aims of networked curricula

Networked curricula have been defined in Chapter 2, and the different formats adopted are described in Chapter 6. In this chapter, we deal with the aims, key objectives and motivations to set up such programs, despite their evident complexity, the benefits derived for the various stakeholders and their added value in comparison to non-networked curricula. In the first section we include a general overview of the reasons that provoke institutions to collaborate with each other, both at national or international level, so as to create a networked curriculum in any of its formats (see Chapter 9), based on different projects / sources. The second section focuses on the information gathered from the NetCu consortium and the survey that was carried out using specially-designed questionnaires. The data collected are structured, for the purpose of this chapter, around three main headings: *Background and Motivations*, *Proposed Aims and Benefits of networked curricula*. We finish with some decisions that are important to make when engaged in networked curricula and with lessons learned from practice (problems and solutions).



3.1.1 Why networked curricula?

Networked curricula can be quite complex and challenging to implement, nevertheless, they provide many benefits to the partner institutions and to the different stakeholders involved. The stakeholders are not only the students but also the academic and administrative personnel involved in NetCu, the institutions as a whole, as well as the wider society, due to the outcomes and benefits derived from the strengthening of collaborative teaching and research. As Heusser and Dittrich (2010) point out, joint programmes are at the core of the Bologna reform as they stimulate trans-border cooperation, stimulate the mobility of students and staff in Europe, and are therefore on the top of the European higher education agenda.

But this is not a European issue alone: all over the world institutions are aiming at collaboration and internationalization and the European Commission funds projects that include trans-national cooperation between European and non-European countries. In the needs assessment carried out in the Inter-Alfa project² (Mata & Avila, 2008; Malik et al, 2012), one of the main reasons to be involved in a joint program, as pointed out by one of the Latin-American institutions in the project was *“to establish agreements with international higher education institutions in order to deliver high quality graduate programs and allow an exchange of knowledge and experience that will ensure high level specialized training.”*

As part of a Mexican institution’s internationalization process, the “establishment of networks and collaboration with institutions in other countries, access to some of their courses and programs, mobility of our professors and students to these institutions, and reciprocal inter-institutional accreditation” were considered primary goals aimed at the country’s participation in the global increasingly competitive arena. Some of the benefits considered were the following:

- Sharing experiences with other institutions.
- To strengthen each institution and make its achievements
- To create a network of universities, and increase cooperation between Europe and Latin-America

As stated in the Bologna Process website (2007-2010)³, good joint degree programs offer a series of interrelated benefits for students, staff and institutions alike:

- Institutions are able to combine their strengths in a collective endeavour in which one unified program becomes more valuable than the sum of its parts.
- Joint programs offer the potential to develop more internationalised, multi-dimensional curricula, in addition to opportunities for developing and practising language and cultural skills.

² INTER-Euro-Latin-American Postgraduate Program in Intercultural Education (2007-2009) that was funded by the Alfa Program.

³ http://www.ond.vlaanderen.be/hogeronderwijs/bologna/actionlines/joint_degrees_benefits.htm

- Students experience the intellectual stimulation of viewing their chosen subject through more windows, developing new learning methods and ways of thinking.
- University staff can be exposed to unfamiliar approaches to their subject through more sustained contact with partner colleagues.
- They may also explore how different methods of teaching and learning in their areas of specialisation can complement and enrich each other.

In the same way, soundly implemented joint-degrees provide a clear added-value to the European Higher Education Area (and we can say that to other continents' higher education areas as well), due to the following characteristics (Bologna Process website):

- Mobility is integral to the course content and design rather than an 'add on'. Students are thus required and assisted to study in a partner institution in a different country.
- The preparation of integrated joint degree study programs encourages more transparent academic recognition procedures. The correct use of ECTS and the Diploma Supplement (DS) can greatly help.
- Quality enhancement of programs is encouraged through teaching staff devising curricula that are open to scrutiny from partner colleagues abroad.
- Students who experience high quality joint programs have a greater chance of becoming internationally employable graduates.
- Teaching staff in joint programs have opportunities for professional development outside their home country. Within joint degree networks, they can thus establish links that build a firm foundation for further international cooperation including transnational research.
- Joint degree programs, particularly at Master and doctorate levels, are of great potential interest to students from outside Europe, and opportunities for such students have been extended by the Erasmus Mundus program. Institutions can thus use these programs to position themselves strategically in an international market.

Other benefits or aspects which add value to networked curricula:

- Attractiveness of achieving degrees which are easily recognized in more than one country
- Educational value of studying in another institution and another country within a clear pre-planned agreement on recognition and integration in the curriculum.
- Increased employability prospects and improve career options for students that are awarded a joint or double degree. The social competencies developed, as well as a broader worldview are usually appreciated by employers.
- Acquisition of new knowledge, enhanced by a richer curriculum derived from the cooperation of different academics and institutions.
- The experiences lived with students from different origins.

Salvaterra (2010, Joiman project) highlights the following elements:

1. Integrated international approach to teaching and research
2. International educational offer
3. Multi-national teaching faculty
4. International student environment
5. Structuring mobility
6. Enhancing visibility and international recruitment
7. Attracting external funding

In the following section we analyse the aims of the NetCu consortium institutions, and the benefits they have found.

3.1.2 Analysis from practice based on questionnaires

Background and motivations

Most of the networked curricula programs start from a previous collaboration and trust building among partners: most partners declare to have known each other through their common participation in a former project, often in a pilot aimed at developing the networked curriculum, but many times in any other kind of international project or event. This way, **to maintain, extend and strengthen fruitful and encouraging collaboration with other people/institutions** that share common interests or goals, seems to be a kind of “motivation” to start a joint program:

The idea for a European Virtual Seminar on Sustainable Development (EVS) originated in 2000 at the Open Universiteit in the Netherlands. At that time, the Open Universiteit was a partner in a worldwide alliance of universities offering the Global Seminar on Environment and Sustainable Systems. In the Global Seminar, students from different parts of the world engage in ‘live’ discussions about sustainable development issues, during frequent video sessions. The encouraging experiences gained during the Global Seminar were used to develop a European version (excerpt from EVS questionnaire)

From the beginning, the project was founded on a strong personal acquaintance and understanding amongst the participating members, later we wanted more geographical spreading in Europe (excerpt from LACE questionnaire)

Another important source of motivation is usually related with the **identification of academic, social or professional needs that can be better fulfilled by means of international joint collaboration**. Complex subjects and challenges as those which we currently face are better understood from an international and multidisciplinary approach; at the same time, the adoption of an international and multidisciplinary perspective has become a basic requirement to study, work and/or research in any field of knowledge. Finally, professional and institutional needs emerging from the process of implementation of the European Higher Education Area underlie the intentionality of these programs.

The objectives of the EVS course are aimed to fulfil different needs:

- 1. Scientific: discussing sustainable development in an international, multidisciplinary context is an important requirement for a good understanding of this complex concept*
- 2. Professional: working in an international and multidisciplinary environment will be an important characteristic of the professional life of the students*
- 3. Social: the societal process towards sustainable development in Europe is a challenging task for students who will become experts or policy makers in their professional life (excerpt from EVS questionnaire)*

A background characterized by the **gained knowledge and experience of the institutions in virtual environments and distance learning processes** constitutes an advantage that plays a crucial role in the success of the development of networked curricula programmes, and can act sometimes as a secondary source of motivation, on facilitating international communication and sharing in permanent basis.

Distance education and e-learning have become more and more popular. So it was a demand for professionals who have skills to implement advanced information communication principles and tools in the system of education, can do research, programming and instructional designing work and are able to teach and tutor in distance learning area (excerpt from KTU)

Proposed aims

The analysis of NetCU partners' questionnaires shows two main groups of aims: The first one includes more general objectives, shared by all programs and projects; a second group of aims is more specific, focused on the identification of precise needs in a concrete field of knowledge or in a particular country or region. Finally, we find some outstanding aims that go beyond the academic area and add a social concern.

a) General aims

To meet the requirements of the European Higher Education Area (EHEA), combining **quality and effectiveness in distance learning**, is a general aim shared by most partners: to do so, they propose to design recognized curricula according to this aim, and also contribute to the development of the EHEA by creating an academic community:

To design common curricula according to the European models (and) recognized at international level (excerpt from Med Net'U)

To enhance European university cooperation in distance learning (excerpt from LEChE)

To contribute to the development of the European Higher Education area (excerpt from FernSchweiz)

A second general aim refers to the **integration of different approaches and perspectives**, by creating learning communities, in order to enrich the academic discussion and consequently the quality and value of the curricula.

To offer different approaches to the key professional and research areas (Euromime)

To integrate the best expertise of the different partners institutions in the field (and) to support high levels of discussions with remote experts (Digital Library Learning)

To enhance European university and students' cooperation (...) Designing innovative teaching modules and a virtual learning space, this aims to create a European community of scholars, students and citizens (LEChE)

To create a dialogue between a learning community of geographically dispersed students (EVS)

Finally, to **improve the international experience of the whole academic community**, adding value to the different degrees, is also one of the general objectives of a networked curriculum program.

To improve the international experience of master students and staff of the participating institutions (LACE)

Students who successfully satisfy the requirements for the Anadolu University-Empire State College, State University of New York e-MBA earn both an MBA diploma approved by the Turkish Council of Higher Education and provided by Anadolu University Graduate School of Social Sciences, and a second MBA degree granted by the Empire State College, State University of New York. This could be a benefit. (Anadolu University-Empire State College, State University of New York)

To create an additional value for Swiss students (FernSchweiz)

b) Specific aims

The specific aims proposed by NetCU partners' programs are related, in the first place, with particular needs in some countries and regions: some of their objectives intend to promote educational reforms, enhance bilingual studies, assist in the development of other world regions by sharing good practices or establish academic relations with neighbouring countries.

The partners decided to start such an experience so that the full program of Educational Studies could be offered also in English, in addition to the Greek language. This dual promotion of programs of studies in 2 different languages is expected to contribute highly to the transformation of Cyprus into a peripheral educational centre. The aim is to promote the English language programs to the neighbouring Middle Eastern countries. The program of Educational Studies aspires to develop, implement and promote educational reforms in the areas of

Educational Leadership and Curriculum and Instruction Development in the countries of the region around Cyprus (OUC-SLU Educational Studies)

Create ICT engineers in Egypt, allowing them to study in Egypt and in the meanwhile give them qualified skills and titles recognized in Egypt and in Europe, to allow a faster and better access to the business world in Egypt and eventually in Europe too (Information and Communication Technologies Engineering)

The course aims at helping Latin American universities' international offices managers to design and implement more effective and efficient university cooperation models fully integrated in the university organization charter and in the university development strategy, based on European best practices (El Gate University International Department Management)

Development of relations in education and science with Germany (FernSchweiz)

There is a strong interest in involving a variety of agents in the networked curricula programs, so there are several aims related with the inclusion of traditional on-site universities together with the distance learning institutions, as well as the engagement of companies or stakeholders in the development of the programs.

To manage complementarities among conventional (brick and mortar) and distance universities in the consortium (...) to know the main stakeholders in each sector of the institutions involved in the partnership (Euromime)

To allow the companies to be involved in an international cooperation program (Information and Communication Technologies Engineering)

Finally, another group of specific aims is related with research and/or innovation in a particular field of knowledge.

A new interdisciplinary concept called the lived experiences of climate change will be introduced and complement other work already done in the area (LEChE)

The course presented here adopts an approach that is intended to be balanced with respect to the areas of technology and of art and communication, combined with the art-intervention dimension in the domains of communication, education, culture and entertainment (...)by functioning primarily in online distance education mode, this doctorate adopts a pioneering role worldwide (DMAD)

c) Social aims

Some programmes consider goals and aims that go beyond education and training and intend to respond to social needs and concerns.

To create a more democratic access to knowledge in areas where the availability of qualified higher education is restricted to a small part of the population (...) to create a figure capable to face technical problems and to contribute to the development of the socio-economical system (Med Net'U)

To contribute to an informed and active European citizenry and to inform EU policy on the issue of climate change (LEChE)

Benefits from networked curricula

Global aims of networked curricula are intrinsically related with the benefits which are expected to be obtained after its implementation. The benefits of these programs affect academics and students involved, but also institutions and the wider society. Some of the benefits perceived by the NetCU partners are the following:

a) Benefits for academics

- High quality of curriculum resources due to the international and multidisciplinary approaches
- Innovation in their respective fields
- High level of academic discussion with the participation of experts from all over the world
- Developing intercultural communication skills
- Developing skills in advanced information and communication systems
- Developing skills in distance teaching and tutoring
- Gaining international experience
- Mobility and capacity to operate in a wider context
- Sharing of knowledge and resources
- Better exploitation of research results
- Open possibilities for further cooperation

b) Benefits for students

- Mobility and capacity to operate in a wider context
- Development of intercultural communication skills
- Sharing of knowledge and resources
- Learning from different approaches and through a variety of methodologies in an emerging environment
- Meet, interact and participate together with people from all over the world
- Improve the value of their respective Degrees

c) Benefits for institutions

- Improve technical infrastructure
- Enhance academic potential
- Easier implementation of the EHEA
- Offer internationally recognized curricula

- Establish relationships with other institutions
- Integrate best expertises
- Develop more efficient and effective cooperation models
- Innovation
- Opportunity to take a pioneer role in an emerging field
- Increase their autonomy

d) Benefits for the wider society

- More democratic access to knowledge
- Promote educational reforms in peripheral countries and regions
- Development of socially important fields such as climate change or sustainable development

3.2 Decisions to make and steps to take

To engage in networked curricula, there are some key strategic decisions that need to be made and steps to follow:

- Carry out a thorough needs analysis process, in each partner institution and country, before designing the networked curriculum: this way you will be able to identify more accurately the goals to reach and the challenges to face.
- Involve, from the very beginning of the project, different actors and agents, in different levels, academic (authorities, colleagues), administration (technical and financial staff), stakeholders (government agencies, civil society) and potential students.

3.3 Problems and solutions

Table 3.1 Problems and suggested solutions

Problems	Suggestions
<ul style="list-style-type: none"> • Lack of clarity in the strategic goals within and among institutions 	<ul style="list-style-type: none"> • Be clear on the aims: is it just to set up the Joint program per se, or are there other goals? Make sure it is a sustainable program by setting up sound goals, and responding to real needs and demands.
<ul style="list-style-type: none"> • Lack of clarity on the approach model and tools that can be used 	<ul style="list-style-type: none"> • Plan in advance and refer to aims and goals. See also chapter 2 of this handbook on

	models and the NetCu toolbox
<ul style="list-style-type: none"> • Different norms, rules and academic requirements among countries and/or institutions 	<ul style="list-style-type: none"> • A previous analysis and comparison of these differences can help to foresee difficulties and adjust the programs to the specific contexts
<ul style="list-style-type: none"> • Diversity is made invisible by focusing on the development of “common” models and processes, and “unified” curricula 	<ul style="list-style-type: none"> • Be constantly aware of diversity and give space to differences (respecting aims and goals, indeed!)

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4. Partnerships

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4.1 Partnerships in a Networked Learning Context

This chapter explores the phenomenon of partnerships and is structured in four parts. The first section explores partnership issues based on the literature review. The second examines attributes, antecedents and consequences of *partnerships* and *collaborations*. The third section presents good practice approaches to partnership within the partner institutions of the NetCu project. The fourth identifies problems and proposes solutions for developing networked curricula in Europe.

Networks and partnerships have been of particular interest to the governance, management and organization of education for many years and are seen as critical elements in knowledge transfer systems (OECD, 2003). Partnership has burgeoned in higher education over the last decades and is a key characteristic of contemporary education. Intra-institutional and national partnerships and collaborative activities are reinforced, but there is also a



stronger emphasis on international cooperation. It is believed that international collaboration and partnership is a necessary strategy for the survival of the universities in our global world and will “inevitably broaden a person’s horizons, enrich their lives and provide them with both professional and personal networks for a lifetime” (Freshwater et al, 2006). According to Chan (2004, p.32), however, the most important reason why universities form linkages with each other is the necessity to compete in an increasingly competitive and global environment.

Partnerships offer a way to meet the new demands of the knowledge society. The main underlying premises are that, on the one hand, ‘doing it alone’ is increasingly difficult, time-consuming and demanding in monetary and other terms, and on the other hand, partnerships build capacity and

strength that few institutions can master on their own. In today's competitive and demanding world, universities "are recognizing the need to partner with one another, at home and abroad, and with corporations, non-governmental organizations and community groups to better serve students, enhance research and meet public needs. Cooperation can help institutions compete, enabling them to accomplish with others what they could not do alone" (Canada, 2009).

Partnerships can help institutions to share knowledge, good practices, undertake new activities or extend their current ones by combining resources, and achieve benefits such as advanced technology and quality curricula and pedagogy, in addition to enhanced market presence and lower costs.

Partnerships can include activities such as:

- building and/or sharing infrastructure;
- developing new or improving existing learning management systems and applications;
- creating and/or sharing e-learning materials;
- developing joint or double programs;
- joint-marketing and promotion;
- research collaboration;
- sharing best practices and
- sharing costs of hardware and software (OECD, 2003, p.16; Canada, 2009).

In this context several organizations and individuals have discussed the concepts and issues of partnerships. *The Power of Partnerships* (2009) explores five key issues:

- the motivation to initiate and maintain partnerships;
- the economics of cooperation;
- conflicts inherent in cooperation;
- the role of government and
- issues related to the special case of partnerships with the private sector.

All approaches to netbased education involve some form of partnership between different stakeholders. In the past fifteen years, a great deal has been learned about the particular challenges of distant collaboration or partnership. Overall, it has been recognized that even when advanced technologies are available, distance still matters (Olson and Olson, 2000). A number of reasons for these challenges are identified. For one, distance threatens context and common ground (Cramton, 2001). Second, trust is more difficult to establish and maintain when collaborators are separated from each other (Shrum et al., 2001; Kramer and Tyler, 1995). Third, poorly designed incentive systems can inhibit collaborations and prevent adoption of new collaboration technology (Orlikowski, 1992; Grudin, 1988). Finally, organizational structures and governance systems, along with the nature of the work, can either contribute to or inhibit collaboration (Larson, et al., 2002; Mazur and Boyko, 1981; Hesse et al., 1993; Sonnenwald, 2007). Even defining what is meant by success in remote collaboration is complicated (Olson, 2008).

Olson et al (2008) highlight five major clusters of components that are important to success:

1. The nature of work.
2. The amount of common ground among participants (for example, if previous collaboration with these people was successful, participants share a common vocabulary, participants share a common management or working style).
3. Partners' readiness to collaborate (e.g. participants have a motivation to work together that includes mix of skills required, greater productivity, they like working together, there is something in it for everyone, not a mandate from the funder, the only way to get the money, asymmetries in value, etc., participants trust each other to be reliable, produce with high quality and have their best interests at heart, participants have a sense of collective efficacy - able to complete tasks in spite of barriers).
4. The management style and leadership (e.g. the principals have time to do this work, the distributed players can communicate with each other in real time, there is critical mass at each location, there is a point person at each location, a management plan is in place; the project manager is respected, has real project management experience, exhibits strong leadership qualities; a communication plan is in place; the plan has room for reflection and redirection; no legal issues remain; no financial issues remain - e.g. money is distributed to fit the work, not politics; a knowledge management system is in place; decision-making is free of favoritism; decisions are based on fair and open criteria; everyone has an opportunity to influence or challenge decisions; leadership sets culture, management plan and makes the collaborator visible).
5. Technology readiness and availability (e.g. collaboration technologies provide the right functionality and are easy to use; participants are comfortable with the collaboration technologies; technologies give benefit to the participants; technologies are reliable; agreement exists among participants as to what platform to use; networking supports the work that needs to be done; technical support resides at each location; an overall technical coordinator is in place) (Olson et al., 2008).

4.2 Attributes, Antecedents and Consequences of Partnership

Within the literature, there is a significant amount of bibliographical references to the characteristics of a successful partnership. Defining attributes can be summarized as follows:

- Trust and confidence in accountability
- Respect for specialist expertise
- Joint working
- Teamwork
- Blurring of professional boundaries
- Members of partnerships share the same vested interests
- Appropriate governance structures
- Common goals
- Transparent lines of communication within and between partner agencies

- Agreement about objectives
- Reciprocity
- Empathy (Carnwell and Carson, 2008).

Attributes, antecedents and consequences of partnership and collaboration are presented in Table 4.1.

Table 4.1 Attributes, antecedents and consequences of partnership and collaboration (adapted from Carnwell and Carson, 2008).

	Partnership	Collaboration
Defining attributes	Trust and confidence in accountability	Trust and respect in collaborators
	Respect for specialist expertise	Joint venture
	Joint working	Teamwork
	Teamwork	Intellectual and cooperative endeavor
	Blurring of professional boundaries	Knowledge and expertise more important than role or title
	Members of partnerships share the same vested interests	Participation in planning and decision making
	Appropriate governance structures	Nonhierarchical relationship
	Common goals	Sharing of expertise
	Transparent lines of communication within and between partner agencies	Willingness to work together towards an agreed purpose
	Agreement about the objectives	Partnership
	Reciprocity	Inter-dependency
	Empathy	Highly connected network
		Low expectation of reciprocation
Antecedents		
	Individual, local and national initiatives	Educational preparation, maturity and experience to ensure readiness
	Commitment to shared vision about joint venture	Understanding and acceptance of role and expertise
	Willingness to sign up to creating a relationship that will support vision	Confidence in ability and recognition of disciplinary boundaries
	Value cooperation and respect what other partners bring to the relationship	Effective communication, respect for and understanding of other's roles

		Sharing of knowledge, values, responsibility, visions and outcomes
		Trust in collaborators
		Nonhierarchical organization with individual autonomy
		Willingness to participate in formal, structured joint working to the extent that they do not rely on reciprocation in order to ensure that each contributes to the shared vision
Consequences		
<i>Benefits:</i>		
	Social exclusion tackled more effectively through multi-disciplinary action	More effective use of staff due to cooperation rather than competition
	Less repetition of service provision from different organizations	Bridging of gaps between fragmented service provision
	Less dilution of activities by agencies	Sustained energy
	Less chance of agencies producing services that are counterproductive to each other	Cross-pollination of ideas
		Sharing of effort and ultimately sharing of organizational structure
<i>Barriers:</i>		
	Complexity of relationships	
	Representativeness of wider public	
	Tokenism and excessive influence of vocal groups	
	Role boundary conflicts	
	Inter-professional differences of perspective	
	Threats to professional identity	

There are many different types of partnerships. There are partnerships that rely more on informal mechanisms and employ unconventional governance styles and there are partnerships that are characterized by developmental stages, flux, and transformation. Leadership is a critical variable in partnership development (Carnwell and Carson, 2008). However, tensions between the formal and informal exist in every partnership relationship.

Powell and Glendinning (2002) categorize partnerships according to the involved sectors, as follows:

- public-private,
- public-public,
- public-voluntary, and
- public-community partnerships.

Partnerships often involve all these parties to make up what is referred to as *multi-sectoral partnerships* (Carnwell and Carson, 2008). Collaboration and partnership can also be sub-regional, regional, inter-regional and global. Partnership can be also seen as a relationship between individuals (e.g. lecturers, teachers, librarians) or between institutions (e.g. universities, schools, libraries).

In practice, developing a relationship characterized by a free and equal exchange of ideas is often challenging because of language diversity, geographical constraints and differences in terms of how the relationship/partnership is conceptualized and interpreted, especially in the networked environment. These include a resistance to sharing ownership and responsibility for the partnership: 'responsibility which needs to be shared in failure as well as success' (Mason, 2008 p.18, cited in Bailey and Dolan, 2011).

4.3 Analyses from Practice Based on Questionnaires

This section explores current netbased oriented partnership models and how they are understood and operationalized by the NetCu partners. These models were drawn from the survey data collected as part of the NetCu project. The work reported in this chapter involved an in-depth survey of practices in fourteen EADTU member institutions that operate across the e-learning development continuum. EADTU NetCu project undertook a survey of eighteen practices in 14 higher education institutions (HEIs) from 13 countries. Some of these HEIs are, internationally, at the leading edge of e-learning. The survey sought information on institutional strategies and activities in order to understand more precisely the rationales, stages of development, and the accelerators and inhibitors of development of netbased curricula. It addressed a wide range of questions for example: What types of partnerships are being formed? What kinds of activities are taken up by partnerships? How was the first initiative for cooperation taken? What is/are the binding factor(s)? How is the cooperation structured? How does the partnership respond to these needs (scientific content, complementarity, involvement, ...)?

This section will examine:

- types of partnerships;
- the rationale for engaging in partnerships;
- existing partnership models;
- the factors that contribute to and the characteristics of effective and sustainable partnerships (best practices);
- common issues that arise within partnership formation and partnering;
- Metrics that are used in the evaluation and monitoring of partnership activity and outcomes.

Types of Partnerships according to the Educational Level

Six successful partnership models that can be categorized based on educational levels were identified. Partnership occurred at the:

1. Bachelor level
2. Master level
3. PhD level
4. Vocational education level
5. Postgraduate level (not leading to the award of a full degree)
6. Master-PhD level (combined).

In most cases the successful partnership occurs at the Master level (9 cases, 48%), followed by partnerships that were established at a Bachelor (undergraduate) level (5 cases, 26%) and vocational education level (2 cases, 11%). One HEI (5%) noted that its partnership occurs on postgraduate level. Postgraduate education usually involves learning and studying for degrees or other qualifications for which a first or Bachelor's degree generally is required, and is normally considered to be part of higher education. Therefore it might include all types except 1 according to this categorization. One institution (5%) indicated that its partnership combines MA-PhD level.

Figure 4.1 presents the types of partnerships according to the educational level within the cases presented by the NetCu partners.

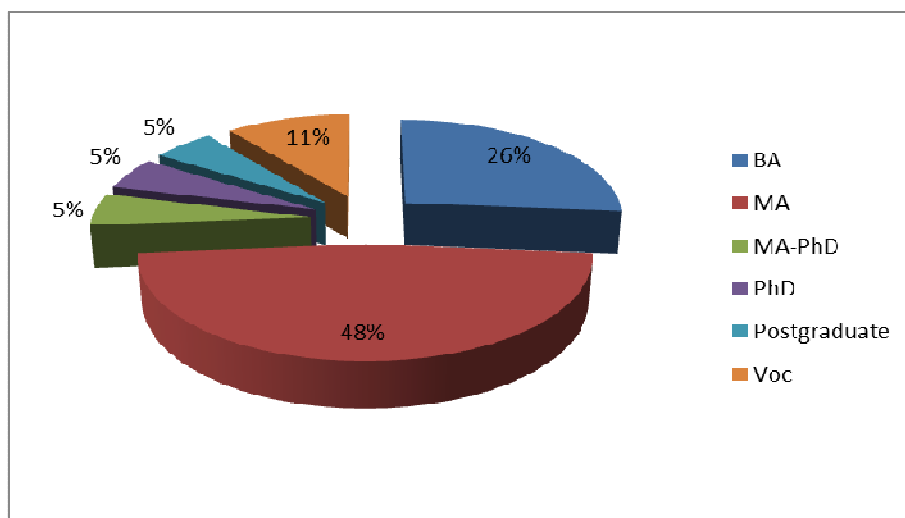


Figure 4.1: Types of Partnerships according to the Educational Level

Partnership Areas related to Curriculum

Partnership can also involve different areas of curricula: a single course, a group of courses, concern a complete curriculum or run within several curricula. The showcases of the NetCu project revealed that partnership that was established for a complete curriculum (8 cases, 42%) and partnership that concerns

single courses (7, 37%) dominate. There was only one case where partnership occurred within two entire curricula.

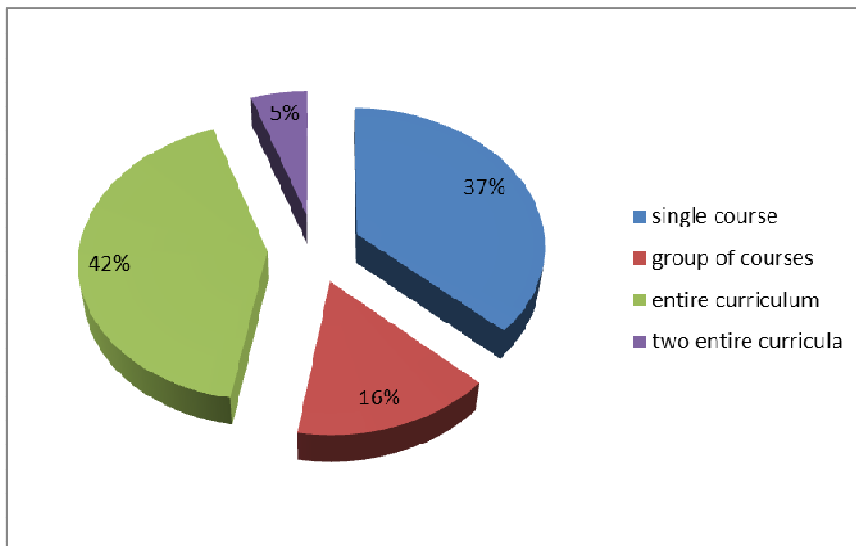


Figure 4.2: Partnership Areas related to Curriculum

The Number of Partners Involved

The most typical partnership scheme was with 1-4 partners (12 institutions, 62%), followed by 5-9 partners (3 institutions, 20%) and 10-14 partners (2 institutions, 17%). Only one institution was engaged in a partnership with 32 partners.

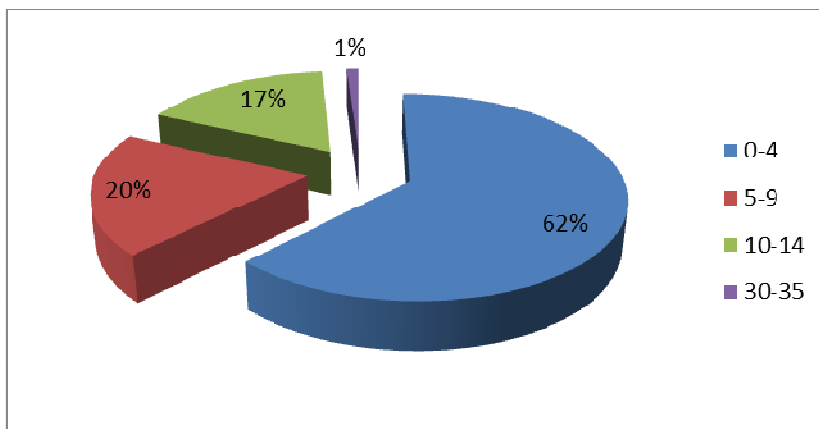


Figure 4.3: Number of Partners Involved

Partnership Domains

Most partnership models were international in their scope (13 institutions, 72%). Three institutions had national partnership models (17%) and two institutions (11%) had a mixed model that involved national and international partnerships.

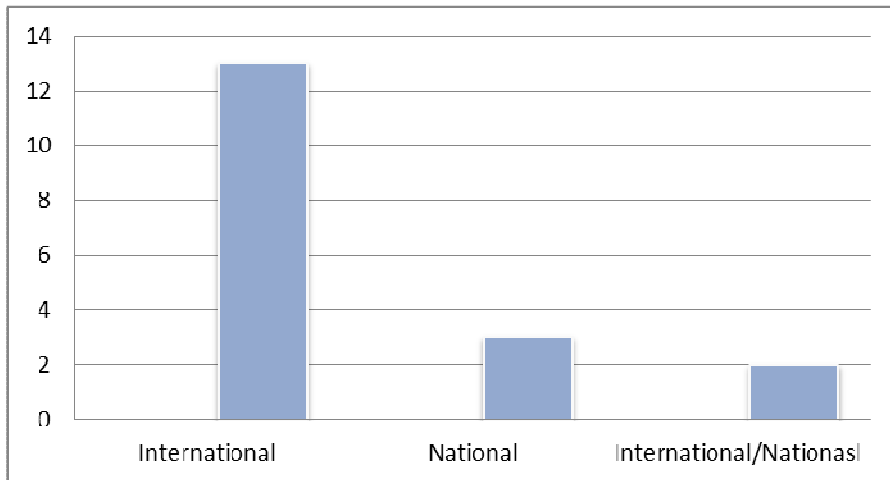


Figure 4.4: Domain of Partnership

Partnership Modality

The majority of collaboration and partnerships were arranged in blended mode (12 cases, 67%). 6 institutions (33%) presented successful cases which were arranged in the distance mode.

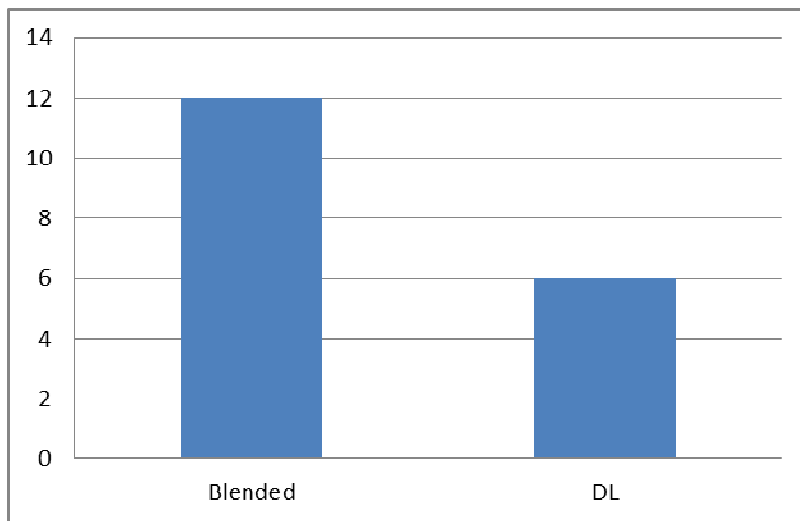


Figure 4.5: Modality of Partnership

Partnership Initiation

There are many reasons and opportunities to start a partnership. It can emerge from a university policy and be implemented top-down or can be a bottom-up initiative that is realized between two university

professors who meet at a conference and want to establish a close collaboration with respect to their teaching and/or research activities.

Half of the partnership initiatives were initiated at the institutional level by the partners involved in the process (9 cases, 50%). However, sometimes the initiative came from an association or consortium (5 cases, 28%) and in some cases the partnership was the result of academic or administrative personnel participating in conferences, meetings and project activities (see Figure 4.6).

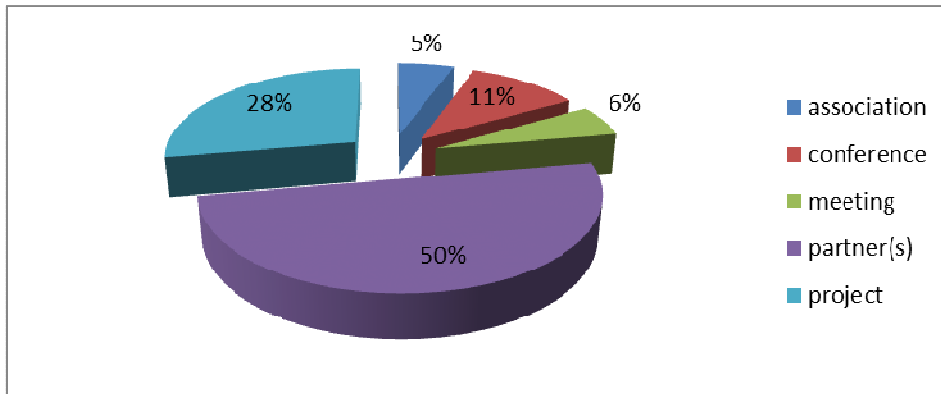


Figure 4.6: Initiation of the Partnership

Partnership Duration

The successful netbased curricula partnership models have a quite recent history. The earliest partnership within this survey started in 2001. Three institutions started collaboration in 2002 and two in 2005, and one institution in 2006 and 2007. Ten institutions started partnership in 2008 and later (see Figure 4.7).

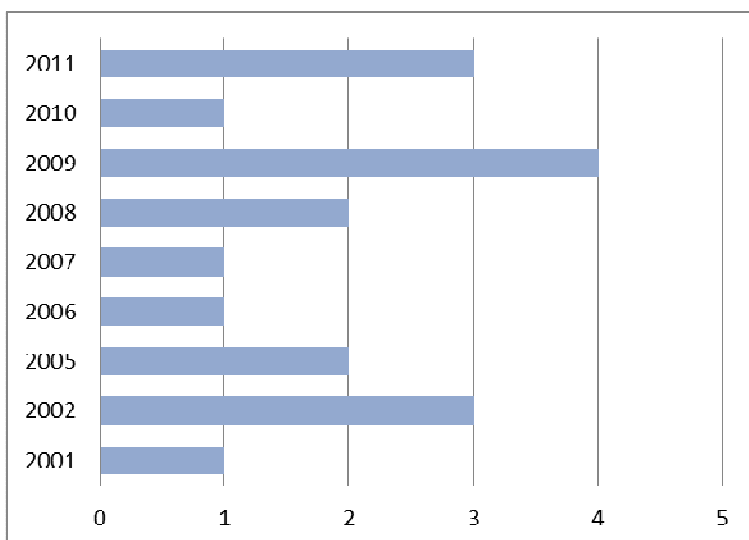


Figure 4.7: Duration of Partnership

Driving Forces for Partnership

Most partnerships (10 cases) have been realized with the support of international grants (such as EUMEDIS, Erasmus Mundus, Europe-Aid, Lifelong Learning Program) and/or national grants (e.g. Ministry of Education and Science of the Republic of Lithuania).

Partnership Management

Most of the existing networked curricula are organized as joint management. This is a more flexible form of interaction and collaboration that allows dividing roles to the various partners according to specific needs. The consortium is usually adopted when specific reasons require that (e.g. grant rules) or in the case of joint curricula, where the final diploma has to be awarded by a single entity (see Chapter 9).

The management of the administrative aspects (mainly, enrolment, certificate award, exams management) are organized in different ways: in some networked curricula each partner has an **independent** management of these aspects, in other cases all the services are **centralized** in one partner. Finally in some cases parts of the services are centralized and parts of them are independently managed (see Chapter 9).

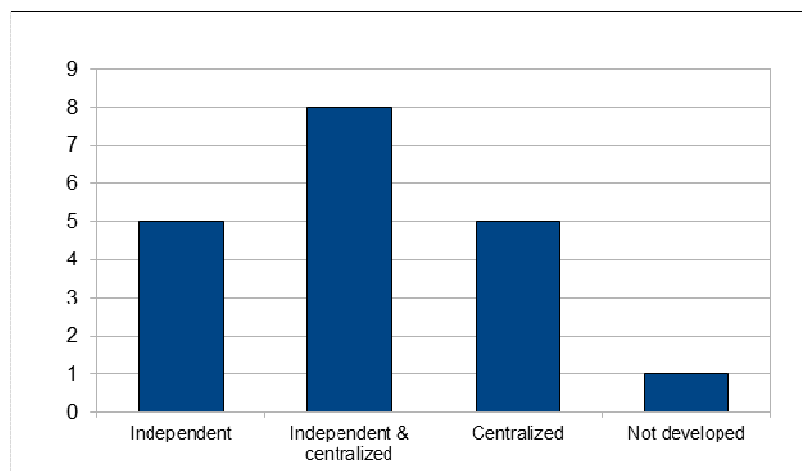


Figure 4.8: Administrative Management in the Partnership

Most of the examined networked curricula adopt a centralized student management. This means that one partner is responsible, for example, for the collection of the fees, which it then shares/distributes among the partners. This solution seems to be the preferred one as it simplifies money transfers, especially when partners are located in the same country. In some cases each partner collects the fees from its own local students, but this is mainly the case when there are specific rules of the curricula that narrow down the partners' options. Few analysed networked curricula do not fit in the previous categories since the students' benefit of grants are not charged (see Chapter 9 and Figure 4.9).

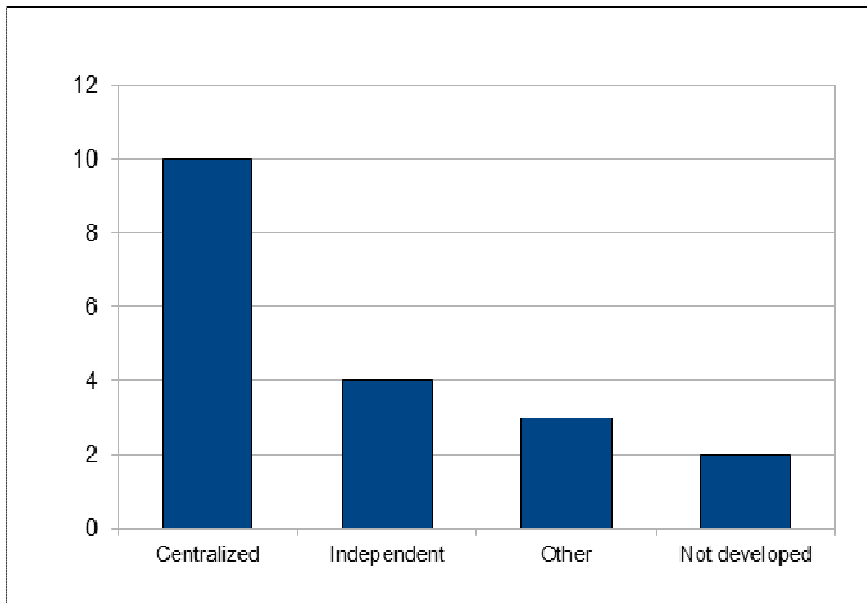


Figure 4.9: Student Management in the Partnership

How the Partnership is Born

Most of the networked curricula examined as part of this project were developed on the basis of a personal initiative (faculty members). The second popular practice was the establishment of a partnership as a management initiative by the university. It shows that most of the involved staff (68%) already know each other when the collaboration begins (See Figure 4.10 and Chapter 9).

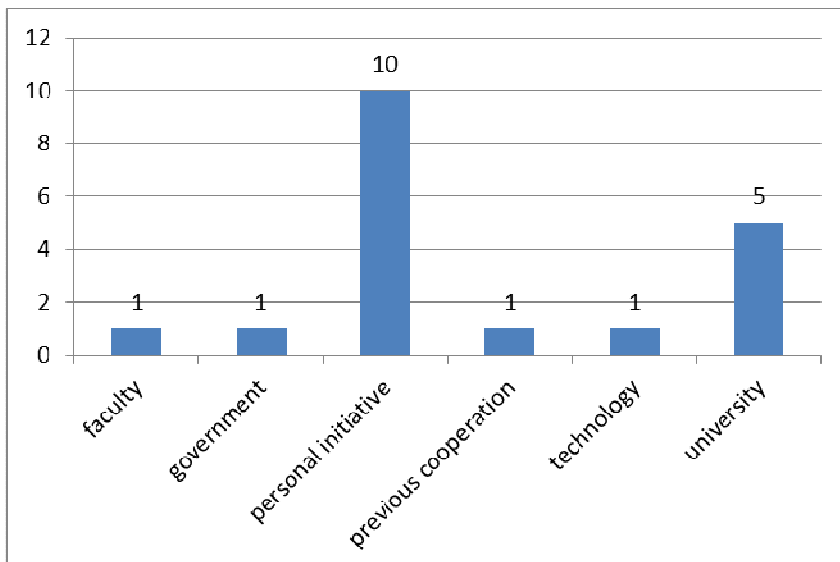


Figure 4.10: How Partnership is Born

Mobility schemes within the Partnership

Three types of mobility were identified in the networked curricula:

- Physical mobility
- Virtual mobility
- Mixed mobility (both physical and virtual mobility within the courses or the entire curricula).

The first option is supported by two key European programmes: the Erasmus and the Erasmus Mundus (see Chapter on Mobility).

Quality Assurance in the Partnership Model

There are various ways and methodologies that partner institutions can follow with respect to the establishment of a sound quality assurance process to carry out in the netbased curricula model. The quality assurance models are discussed in detail in Chapter 9.

4.4 Problems and Solutions

Networked curricula are not always straightforward to implement. NetCu often cause various problems in partnerships, especially when many partners are involved. Some key concerns are:

- Management problems (since every partner may have its own rules, see Chapter 9).
- Financial problems
- Communication and language problems
- Curriculum Design problems
- Mobility problems
- QA problems
- Technological problems

These problems and issues are discussed in detail in dedicated chapters in this Handbook.



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5. Students and students characteristics (target groups)

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In this chapter we address the profile of the key users of networked curriculum programs, that is, the students. As target groups, they must be at the center of the decision-making process and their needs and interest should be carefully taken into consideration throughout the whole process of design and offering networked curricula.

Obviously students are also the main stakeholders, along with the academics and administrative staff, during the implementation of a program. On the one hand, students must fulfill a series of pre-requisites before entering a program, and on the other hand, they are expected to develop a set of knowledge, skills and competencies as a result of their learning process. Thus, it is important to know which types of students enroll and follow the program, and also to clearly define what is offered to them (in most cases, in terms of Learning Outcomes).

We first refer to the profile of distance and blended education students in general, and then, based on the information drawn from the questionnaires used to collect data during the first phase of the NetCu project, we propose some categories that describe essential aspects concerning the students in the



networked curricula of the current consortium. The last two sections briefly point out some potential problems and suggested solutions or actions; as well as decisions to take in relation to students when planning a curriculum with other institutions.

5.1 Student profile

It is very important to be aware of the diversity of students: language, age profile, work context, employability prospects and other dimensions listed further ahead. Obviously, students must fulfil some entry requirements that will depend on local / national / European / international legislations and also on the institution's policy. Besides the administrative issues (qualifications required for entry to a certain level of studies, payment of fees, etc.) and specific academic demands, there are, some basic skills or previous knowledge that the students must master upon entry (specified in the entry requirements or in the study guide of each course), or that students are willing to acquire before completion of the study program.

But the programs must also fulfil certain conditions and take into account some basic features of potential students. According to García-Aretio (2001), when we refer to distance education student, we speak about “...an individual who is usually a mature person, with a life full of experiences, knowledge, capacities, habits, attitudes, behaviours and interests in his (her) own educational process, characteristics that condition, filter and predictably improve future learning” (p. 157). These students are also autonomous in their learning although also quite collaborative with other students. Even though the profile of distance education students has changed over the years, and there are increasingly younger students seeking studies based on this methodology, many recently graduated from secondary education, this description of an “archetypical” distance education student is still true, whether a mature adult learner or a young adult, and it also depicts students in blended learning. This does not mean that students in exclusively face to face environments do not have these attitudes and experiences, but those in distance and blended education are more likely to show this pattern.

In the case of postgraduate distance students (Alvarez & Lozada, 2009, pp. 20-21), these are mostly adult students who know what they want and sort it out, their study goals are clear and they value the importance of knowledge, of personal achievement and self-fulfilment. They are also usually self-aware about their needs and abilities, and have a good command of time management skills for study periods and for the delivery of their assignments, which makes them more successful in the pursuit of their studies.

Students in distance or blended education usually share the following characteristics, which must be taken into account in the planning and development of any program (Alvarez & Lozada, *op.cit.*):

- They are very *heterogeneous* in age, occupation, motivation, experiences and interests, to which we would add different abilities, languages, and learning styles.
- They usually have *professional, family and personal responsibilities*, in addition to their courses' demands.
- They generally maintain a *high level of motivation* for study and demand a high level of tutoring and quality throughout the educational process.
- They are seriously *concerned about the outcomes of their learning*, show great *responsibility for their studies*, and in many cases they develop a sense of guilt about unfulfilled expectations.
- They immediately *integrate their knowledge into their professional and daily environment*, which makes them very critical about all learning.

- They *place emphasis on learning being practical*⁴.
- Their learning experiences and their previous knowledge influence their attitude towards new studies.
- *Difficulties* in their study process such as: *shortage of time, tiredness, fear of failure* or not reaching expectations, may hinder their learning, and make it slower.

Among the main principles of student-centered learning considered by the European Students Union (Attard *et al.*, 2010), we can highlight the following:

- Students have Different Learning Styles
- Students have different needs and interests
- Choice is Central to Effective Learning (students like to learn different things and hence any offer should involve a reasonable amount of choice)
- Students should have Control Over their Learning
- Students have Different Experiences and Background Knowledge

In the design of a study program it is necessary to include the learning outcomes, which is what a learner is expected to know, understand and/or be able to demonstrate after completion of learning. They are defined by the academic staff, but this process should also involve student representatives.

Competencies are obtained or developed during the learning process by the student / learner. They represent a dynamic combination of knowledge, understanding, skills and abilities, and can be classified in three types (Tuning, 2006):

- Instrumental competencies: cognitive, methodological, technological and linguistic abilities.
- Interpersonal competencies: individual abilities such as social skills.
- Systemic competencies: abilities and skills concerning whole systems – combination of understanding, sensibility and knowledge.

These competencies cover both generic and specific skills. These will depend on whether the program is undergraduate or postgraduate (as skills will differ for a Master's or Bachelor's student), and in the case of specific skills, it will depend on the nature or scientific area of the program. The Tuning project has defined different competences according to the level of studies.

In order to promote good practices in higher education environments we share with UNESCO the following idea, which should form the basis of any program, besides the specific content of the studies, if this is the kind of society we want:

“Education for global citizenship embraces the ideas of peace, tolerance and mutual understanding, human rights education and related educational themes (...) promoting intercultural understanding, inter-faith dialogue, respect for diversity and empathy.”

(UNESCO, 2011, p. 23)

⁴ As evidenced also in the NetCu Project case studies: *“Students highlighted the need for more practical skills, and a good balance between theory and practice” (Digital Library Learning).*

As highlighted in the Anadolu University-Empire State College, State University of New York e-MBA Program Project: *“Some of the characteristics of successful candidates include a strong academic record, international awareness, strong interpersonal skills and self-awareness”*.

From the analysis carried out in the project (consortium examples), in the following section we describe several dimensions in relation to characteristics of students in networked curricula.

5.2 Examples from practice (questionnaire and analysis)

The students' characterization is based on the data obtained from questionnaires provided in the selected cases in the Net Cu project. Among the different aspects included in the questionnaires the following categories have emerged: mobility, intercultural competence/awareness, multilingualism, autonomous learning, employability, ICT skills & transferability of skills, among others.

Mobility

Student and staff (academic and administrative) mobility promotes excellence throughout the European Union and other third countries. Students' mobility can be analysed in relation to its added value and from the logistical requirements necessary to be carried out effectively. There is a full chapter in this Handbook on student mobility (Chapter 2), nevertheless, it is also included here due to its relevance regarding students, but also to emphasize the fact that students who enter networked curricula should be willing to engage in mobility at some stage of their study program. For those who have serious difficulties with moving to another city or country for a period of time, there is the possibility of engaging in virtual mobility. This option is not yet undertaken by many institutions and is not a common practice, but which is gradually being considered as a feasible and desirable option, especially for distance teaching universities and adult learners.

A) Mobility as an added-value

Mobility is one of the processes that enables an immersion in the cultural values of different institutions, promotes students' relationships with their teachers, raises awareness about the idiosyncrasies of institutions and countries where they operate and constitutes a strong experiential learning. Some examples of this characteristic are:

“Importance to improve personal relationship between students.” (Bachelor of Science Wirtschaftswissenschaft Project).

“Mobility certainly contributes to the success of the program, as it brings people (professors, students, administrative personnel) together. In this way, new ideas, new innovative solutions and new methodologies are transferred from one partner to another.” (OUC-SLU Educational Studies Project).

“The mobility is useful for the cultural growth of the student and to let him/her get the capability to operate in a wider (international) context.” (Information and Communication Technologies Engineering Project).

“A broad knowledge of different higher educational systems (...) giving students qualified skills and a title recognized in Europe and abroad, to allow a better access to an employment.” (Euromime 1 Project).

“Both students’ and staff’s virtual mobility are motivated by the need to bring a diversity of disciplinary, socio-cultural and geographical perspectives.” (LEChE-The Lived Experience of Climate Change e-learning Project).

“Students experience different national cultures as well as academic cultures and different ways of learning and teaching and remain at the same time the joint community of practice.” (Digital Library Learning (DILL) Project).

Part of the added-value of mobility is the networking opportunities for future personal and professional activities. As pointed out by the European Commission (2011, p. 10): *“Networking has become one of the central capabilities in mobile, knowledge-based societies”.*

B) Mobility logistics

When there is mobility involved in the offering of a programme, the logistics and administrative issues (such as visa, travel, accommodation, tuition fees, etc.) are very important and students must have explicit support starting from the time they are selected and all the way through their stay in a foreign country or university.

The implementation of international mobility requires partner institutions to be seriously aware of the logistics needed to facilitate the legalization and translation of the necessary documents (entry degrees), student visa (which must be renewed some cases during the stay or applied again if moving to a different country), travel, accommodation, opening bank account, etc., which implies a high commitment by students, tutors, administrative staff in the universities and the Ministries and Consulates involved. Some examples of the importance, given by the projects to this theme, are:

“Without good leadership and management even the program with high level content and reliable experts could fail.” (Digital Library Learning (DILL) Project).

“Need to develop an online unified system to manage the enrolments and some other administrative aspects (the exams scheduling, the student's career).” (Med Net'U – Mediterranean Network of Universities).

Intercultural awareness

One of the students' characteristics should be the "ability to understand and empathise with other cultures and a willingness and ability to appreciate the limitations of one's own national context – in short, the development of intercultural competencies" (European Commission, 2011, p. 15). They should have the disposition to interact with other students and academics, with different worldviews. But even if they do not have these abilities or attitudes at the start of the program, they can become intercultural competent, or at least aware of different perspectives, as a result of the program. It is thus very important to plan activities, besides the regular interaction among students and academics, and to give opportunities for reflection on diversity issues to promote this competence.

Students' stay in foreign universities (or through virtual contact), offers them the opportunity to obtain a broad knowledge on different approaches to learning, and to develop their Intercultural skills. In networked curriculum programs, they can share their understandings about each other's' cultures and envision solutions to questions and problems raised.

An example of these characteristic was mentioned in the LEChE project:

"Both students and staff's virtual mobility are motivated by the need to bring a diversity of disciplinary, socio-cultural and geographical perspective." (LEChE The Lived Experience of Climate Change e-learning Project).

Multilingual

Students participating in international and interuniversity programs are in close contact with different languages in personal and academic contexts. In Europe there is evidence that the external practices as part of academic curriculum encourage and facilitate learning a foreign language (European Commission, 2011, p. 68). An example of the importance of this issue is:

"The online tutoring system is available in four languages and tutors from several countries has been trained to perform the tutoring service in different languages (English, French, Italian, Spanish, Arabic)." (Med Net'U Mediterranean Network of Universities Project).

Employability

Firsthand knowledge of the work context through internships gives students the opportunity to develop qualified skills and to earn a degree recognized in Europe and abroad, allowing them for better access to employment and improved career prospects. Internships provide practical learning and additional knowledge from the experience of those responsible for the application of the training the students are receiving. An example of this issue:

"Students highlighted the need for more practical skills, and a good balance between theory and practice (...). Stakeholders have been invited to organize seminars and training activities

and they are mentoring students during their internship period.”(Digital Library Learning Project).

Participation in networked curriculum enhances employment opportunities, and can help graduates/post-graduates to find a better job or to promote in the current one, as it provides the students with a broader background of meaningful experiences, interaction with others, and it increases the network of professional contacts.

“The workbook for each module supports the interaction between students and the exchange of experiences.”(LEChE-The Lived Experience of Climate Change e-learning Project).

Autonomous

A key student characteristic for success in their study and career is to develop a positive attitude towards lifelong learning using different methodologies: autonomous, face to face, distance and blended learning.

Some examples of the importance of the different methodologies and the opportunities for students to contribute with their different experiences and expertise are:

“One important aspect which can be considered as very satisfactory is the maturity of students. Most of them are working as active teachers or school principals. An aspect which should be further improved is the poor attendance of these students in the various extra-curricular activities organized by the Open University.” (OUC-SLU Educational Studies Project).

“The program has been designed to offer ways that integrate traditional strategies with methods offered by the new technology for teaching and learning.” (Digital Library Learning (DILL) Project).

There is a great diversity of candidate’s profiles, from recent graduates to professionals. Some projects promote the combination of recent graduates along with working professionals (*Euromime 1 Project*). In other projects, candidates hold managerial positions or are responsible for teams of people in their institutions of origin, as for example the *Gate University International Department Management Project* in which candidates are Directors of External Relations Departments and/or Coordinators of international projects from Universities; or in the International Master in Heat Treatment and Surface Engineering (MINSE) project addressed to graduates wishing to obtain a Master’s qualification and individuals involved in the sector needing to upgrade their knowledge.

ICT Skills

Information and Communication skills are part of the general skills that students need to put in practice during all phases of the curriculum. The use of Learning Management Systems, web resources, communication tools (synchronous and asynchronous), etc. are general skills students must master in a networked curriculum. Some examples of the importance of student’s ICT skills are:

“The technological platform is important to implement easily all online open distance learning/teaching activities. It enhances a true sharing of resources of the partners.” (Doctor’s Degree in Digital Media-Arts (DMAD) Project).

“LMS is an important tool in the learning process used for the delivery of study material, communication tools, materials, student’s activities, additional resources, forums, quizzes, ...” (Konstruktivismus Project, Support Systems in Distance Education Project).

“A chat system was implemented in the web-platform as a synchronous tutoring online instrument, to be adopted by students to discuss about didactic aspects of the courses and to discuss in deep questions that may arise during the course delivery.” (Med Net’U – Mediterranean Network of Universities Project).

“Importance of the tool (Facebook) in the learning process: community building and teacher-students interaction.” (Digital Library Learning Project).

“The Community Portal gives students the opportunity to create their own profile, explain in what projects they are involved, discuss in groups, (...). The opinions of the learners with respect to the module are gathered using questionnaires after each run.” (Free Technology Academy Project).

“Use of interactive tools for students and professors. The main factor of success for students lies in the speed and effectiveness of responses to their questions and their problems. Particular organization of the mentoring support and tutors work.” (Science Économiques Project).

“Synchronous activities are organized using a blended model: video conferences and web lectures, student presentations, real life teacher exchanges.” (LACE - Literature And Change in Europe - Project).

“ Video lectures broadcasted.” (Distance Learning Systems and Theory Project).

“The idea for a European Virtual Seminar was based on the experience of the Open Universiteit in the Global Seminar, a worldwide seminar supported by video conferences enabling students from all over the world to engage in ‘live’ meetings.” (European Virtual Seminar on Sustainable Development (EVS) Project).

“Students present their individual works in personal e-portfolios.” (Digital Library Learning (DILL) Project).

Finally, the **transferability** of skills is also mentioned in some of the cases as important within networked curricula. Students must be able to transfer the skills and knowledge gained in the program

to other contexts, such as work or other areas of study. On the part of the institution, it is also important to guarantee the recognition of credits and contents in the knowledge area involved.

These key/core characteristics of the student profile are essential for success in international and inter-curriculum experiences.

5.3 Decisions to make and steps to take

There are some key decisions that need to be taken when designing networked curricula, especially when considering students' needs and profiles:

- When you plan or design a program for the first time, and if you have not done so already (i.e. as part of a project), you should conduct a needs analysis in all the institutions taking part in the networked curriculum, emphasizing on potential students and their interests/needs.
- Take into account all the aspects mentioned in this chapter (and throughout the Handbook) when planning the activities and methodology in general, as well as other recommendations and past experiences gained from similar endeavours.
- Carry out an evaluation both during the program and at its final stage (with the first promotions). Include the students as informants in this evaluation and carefully consider their feedback when renewing your networked curricula or when planning a new one.
- Conduct a survey with students each time the program starts, or ask them to send you and the rest of the students /academics a presentation with basic information. Bear in mind the evaluation results from the previous year /course.
- Elaborate the contents of the networked curriculum in cooperation with the partner institutions, and consult the student body through its representatives when setting up the program.
- Produce a detailed study guide of the whole networked curriculum, and if there are several subject courses or learning modules, one for each of them, so that students know what to expect, and to help them monitor their own progress.
Integrate extra-curricular activities in the curriculum to ensure attendance and social interaction among students, if there is the opportunity to set up such activities (i.e. face to face sessions). Provide for ample collaborative work and for activities that promote and facilitate participation in the virtual settings.
- Communication tools need to be developed to ease the flow of information between the partner institutions.

5.4 Lessons learned from practice

Problems and solutions

Table 5.1: Problems and suggested solutions

<i>Problems</i>	<i>Suggestions</i>
Course factors: inappropriate material, excessive content, or designed at inappropriate level, inappropriate support, poor tutorial care, etc.	Be very careful in the design of the course-work and make sure tutorial assistance is guaranteed.
Personal / professional factors: occupation, family responsibilities, which imply shortage of time. Fear of failure, low self-confidence	Make students aware (previous information and in the study guide) of the time commitments required, and allocate reasonable time for assignments. Use mentors (other peers, academics, a specific person) to motivate and encourage students
Lack of time management skills, study habits and other basic skills necessary to undertake the courses	Organize optional short courses / seminars for students who need to improve their skills
Not knowing the specific characteristics of our students (distance education programs). Homogeneous curricula with no optionality or possibility for students to discriminate contents according to their proficiency in certain subjects or aspects.	Conduct a survey before if possible or at the beginning of the academic year. During the pre-selection phase, ask students to send a motivation statement, in which they describe themselves and explain the reasons for selecting that particular program. Be constantly aware of diversity: Learning needs to be adapted to the life and professional experience of the individuals. If students have considerable experience in using ICT's, there is no need to provide training in that aspect; if they already have considerable research skills, it would be better to focus on theoretical knowledge
Focusing on the structure (building blocks, fitting national requirements, strengthening partnerships) rather than on the student experience.	Even though all aspects are important, the target group is the student, and they should be at the core of any decision.

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6. Models and Formats

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6.1 Formats in practice

In this section we explore the various networked curricula formats we meet in practice. We start with an overview of the different possible formats of a Networked Curriculum to choose from, and then look at what insights we learned from the questionnaires filled out by the NetCU consortium partners. Finally we discuss the decisions to take and steps to follow.

6.1.1 Different formats to implement a networked curriculum

When setting up a networked curriculum, there are different possibilities at hand. It often is tightly related, as we learned from the questionnaire, to how the initiative for the network was achieved. When it is initiated at the individual level, through acquaintance between university teachers, it is often natural to start at the course/module level, whereas an institutional approach normally targets the whole curriculum or a sizable part of it.

6.1.2 Course level formats

Within a networked curriculum, individual courses/modules may be networked or not. A networked curriculum could consist of courses that already pre-exist at different institutions and are taken unchanged to form part of a networked curriculum. This can be the case of a joint or a double degree, where two or more partners offer modules either established at their own institutions or developed at one of the partners. For example, a joint degree could involve two partners, one offering half of the modules and the other partner offering the rest. On the other hand, given their embedding in a networked curriculum, the courses could be taught jointly, or be composed out of modules delivered from different institutions.

- unchanged, regular courses from each institution
- courses in each institution, but with collaborative teaching
- courses in each institution, but with modular, shared content
- Joint courses

Of course, what often occurs is that not an entire curriculum, but part of it are networked, and so there is a series of courses that is being offered to the students in some joined effort.

6.1.3 Curriculum level formats

When the curriculum is networked, there are still many different formats available. It is important to note that the administrative burden will grow sharply when formal curricula are networked, since accreditation issues will become more central. This is compounded by the fact that an entirely networked curriculum, certainly when it amounts to a double degree, implies that there is some conformity at the entrance level. This might prove challenging when the preparatory studies are not sufficiently aligned in the different participating countries. We distinguish between formal formats, where a specific networked degree is issued, and informal formats, where the original degrees are not affected.

Formal

- a. Joint Degree
- b. Double Degree
- c. Erasmus Mundus

Informal

- d. complementary organized curricula
 - i. schedule /semester based
 - ii. content based
- e. equivalent curricula

Institutional Formats

Institutions as a whole can make networked agreements to collaborate on curricula and courses or to recognize each other's degrees. For example, an institution could accept bachelor students coming from partner institutions to enter its own master programmes. This approach can come in many flavors:

- student career oriented
- teacher oriented
- content / complementarity oriented
- market oriented

Given this overview of theoretical possibilities on how to setup a networked curriculum in practice, we will now discuss the information and data gathered from the questionnaires.

6.1.3 Lessons learned from the questionnaires

Size

We are working with **mixed sizes** of curricula as Figure 6.1 shows, since the group is divided in single course curricula, quite an amount of curricula with a group of courses and entire curricula as well. The learning modality is in most of the cases **blended**, a minority is only working employing the distance learning methodology.

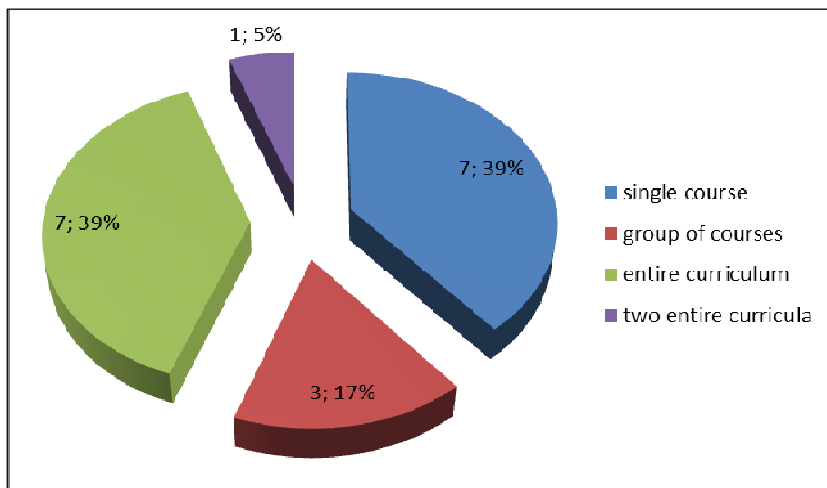


Figure 6.1 Size of the programme

Most of the curricula involve **25 to 50 students**, but all sizes of student groups are well represented with between less than 10 up to more than 75 students, as shown in figure 6.2.

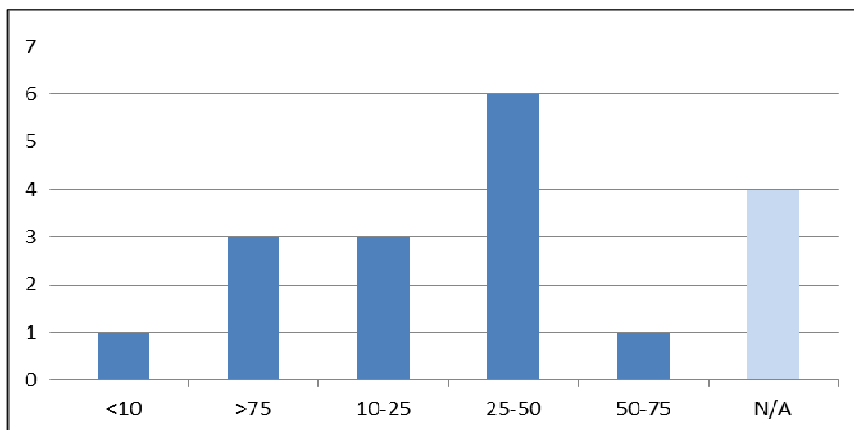


Figure 6.2 Number of Students

Obviously the number of professors (full-time and or part-time academic personnel) involved in one curriculum is smaller, most of the time **less than 25**. Almost all of the networked curricula are based on the **ECTS system**. When we look at the size of the curricula regarding the number of involved institutions the curricula are rather small, most of the time up to **4 institutions** (figure 6.3).

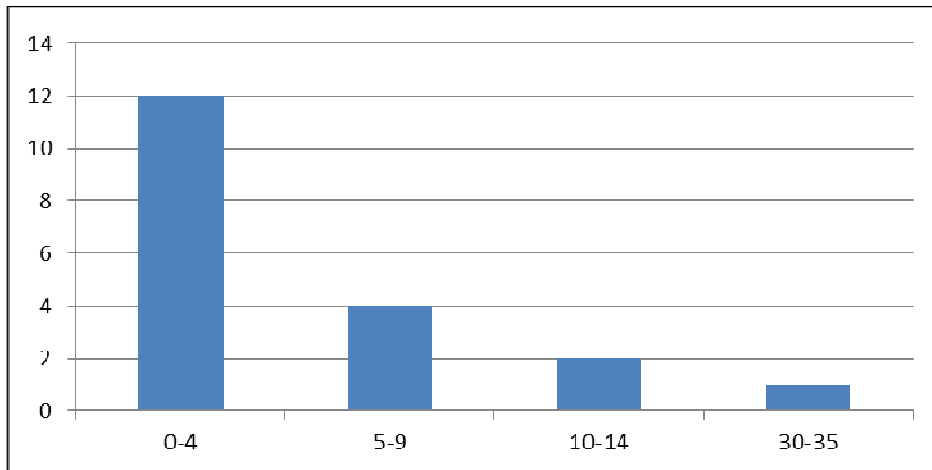


Figure 6.3 Involved Institutions

Subject

The showcases of the networked curricula are collaborating on different grounds. As figure 6.4 shows, most of them are collaborating on the basis of a **common subject**, but previous cooperation and complementarity of the study program are popular as well. It is striking that a couple of curricula are evolved out of a more informal way, like friendship between the partners.

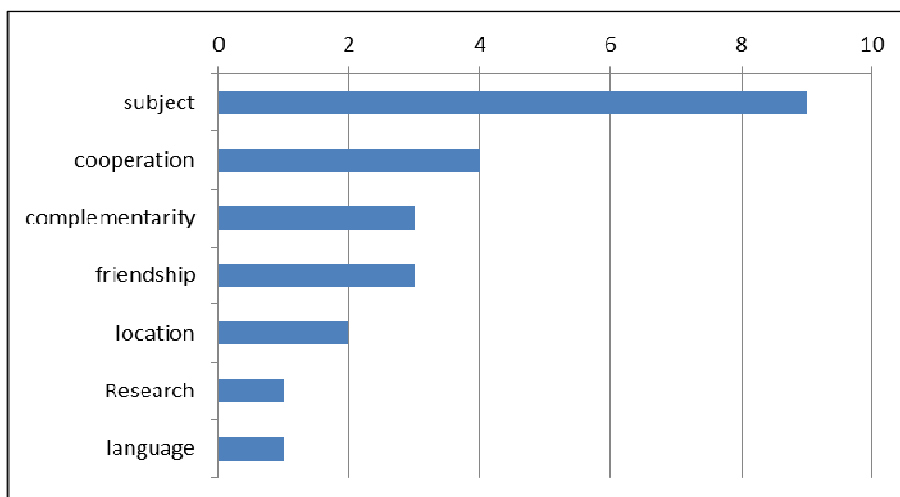
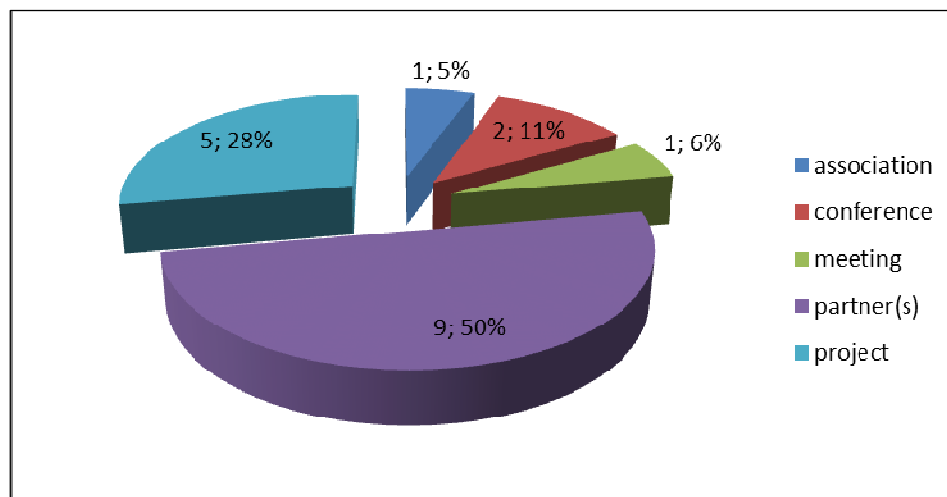


Figure 6.4 Binding Factor

Most of the time the first initiative for the collaboration is taken **by the partners**, but as fig. 8.5 shows projects and conferences are interesting for networking as well.



Legend	
Association	initiative came from an association or consortium
Conference	idea came about at a conference
meeting	results from a meeting between partners
partner(s)	one or more partners wanted to collaborate
project	a concrete project started it all

Figure 6.5 Initiative taken by ...

Organisation

The majority of the projects do not have a very long history; most were created and established **in 2008 or later**. The orientation of the participating curricula is mainly **international**; only three projects are orientated towards a national level. Most programs have been created with the support of national or international programmes and have received funding (**grant**).

The management of administrative and didactic affairs has a key role in the success of every programme. Networked curricula usually increase administrative and management burden, since each partner may have its own rules and procedures and the administrative staff is not usually involved in cooperation programs. A section of the NetCu questionnaire intended to investigate the different management strategies adopted in the networked curricula, in order to emphasize good and problematic practices.

The first analysed aspect is the level of interaction among the partners. Most of the answers can be grouped in two categories: **joint management** and **consortium**. A *joint management* means that the partners cooperate according to several academic agreements but they are separate legal entities, while a *consortium* is a legal independent entity that is constituted by the different partners. Since the

consortium is a more formalized and structured entity, most of the existing networked curricula are organized as joint management, as shown in Figure 6.6. This is a more flexible form of interaction and allows dividing roles in an easier way according to specific needs. The consortium is usually adopted when specific reasons require that (e.g. grant rules) or in case of joint curricula, where the final diploma has to be awarded by a single entity.

The interaction between the partners usually occurs at different levels: while the technical and didactic aspects are normally being managed at the department or faculty level, the university governance is generally involved in the formal agreements.

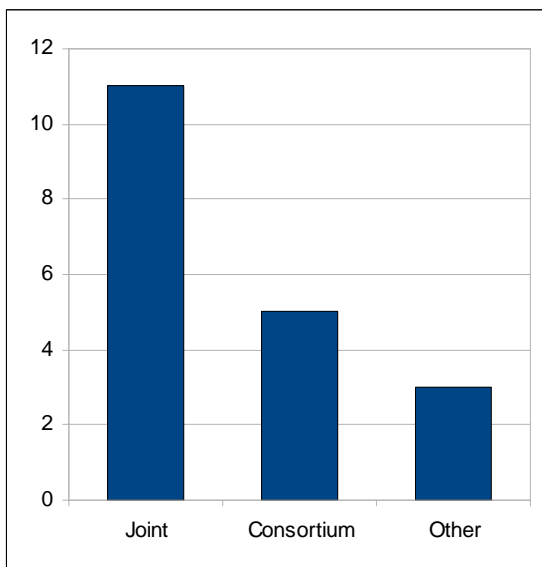


Figure 6.6 - Kind of cooperation

Examining the different kinds of management in detail, two aspects emerge as particularly relevant. The management of the administrative aspects (enrolment, certificates, exams management) are organized in different ways: in some networked curricula each partner has an **independent** management of these aspects, in other cases all the services are **centralized** in one partner, finally in some cases part of the services are centralized and part of them are independently managed. Figure 6.7 shows preference in the mixed system, but all three systems have their strong and weak points.

The service centralization has the positive effect to simplify administrative procedures and management of the networked curricula: only one partner has the responsibility to execute all programme related services, redundancy and effort are minimized and different local managements with diverse work procedures are avoided. Moreover, students and staff have a single point of reference; this simplifies the interaction and communication processes. But on the other hand, this kind of management requires that the administrative staff responsible for all the services must have excellent skills (to name but a few, interaction and communication capabilities, helpfulness and professionalism) to satisfy requests coming from all the partners, with different cultural backgrounds, sometimes adopting different languages and laws. It is important to remember that not always the administrative staff is open to

cooperation, especially at international level. This is a key aspect to ensure the efficiency of the centralized management and has to be taken into account when a new networked curriculum is designed.

The independent management of services simplifies the access of students and staff to administrative services and avoids cultural and eventually linguistic and legal barriers, since each administration has to take care of its own group of students and staff. This also means that each administrative team usually has to slightly adapt its normal work procedures to cover for any discrepancies that might result from the implementation of networked curricula. Finally, this kind of management produces a greater involvement of all the partners in the networked curriculum, charging each of them of responsibilities. The negative aspect of this kind of management style is the need for very efficient communication systems to share data and to interact within the partnership network. In the design of a networked curriculum with this kind of management the adoption of specific tools should be included to share administrative data (or the creation, since they are uncommon tools) and to ensure good communication between the administrations.

The mixed (joint) type of management style is the most common one, because it normally takes on the best practices of the two abovementioned management models. It depends on how the centralized and localized services are divided and organized. An optimal mix can create an efficient interdependency among the partners avoiding contrasts and strengthening the cooperation. A joint type administration could be organized by a centralized administration working closely with local administration antennas, providing procedure harmonization, common standards and a second-line helpdesk.

It is important to take care of the administrative aspects during the curriculum design phase, since the later modification of inefficient administrative procedures may be hard.

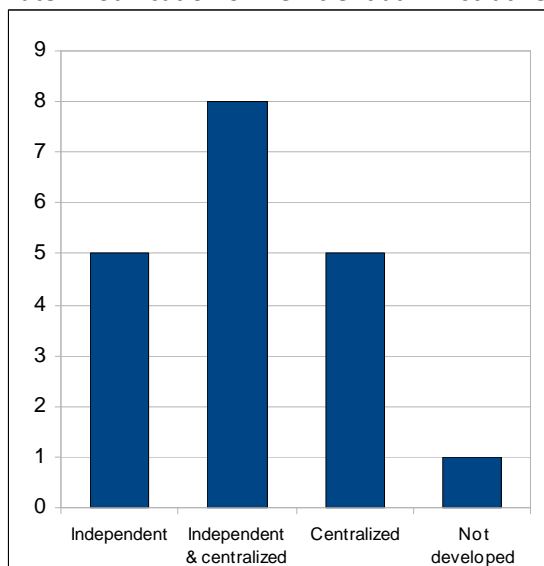


Figure 6.7 – Organization of the administrative aspects

Another interesting aspect emerging from the questionnaires is the students' management, essentially regarding the respective tuition and other fees. Most of the examined networked curricula adopt a centralized management of fee collection; this means one partner collects the fees and distributes them among the other partners based on the financial arrangements agreed upon at the design phase of the networked curricula. This solution seems to be the preferred one as it simplifies money transfers, but partners should keep in mind that diverse currencies might result in money being lost. In some cases each partner collects the fees of its own local students, but the main reason of this solution seems to be the specific rules of the curricula. Few analysed curricula do not fit in these two categories since the students benefit of grants or are not charged (there are no fees). The results of the analysis are shown in Figure 6.8.

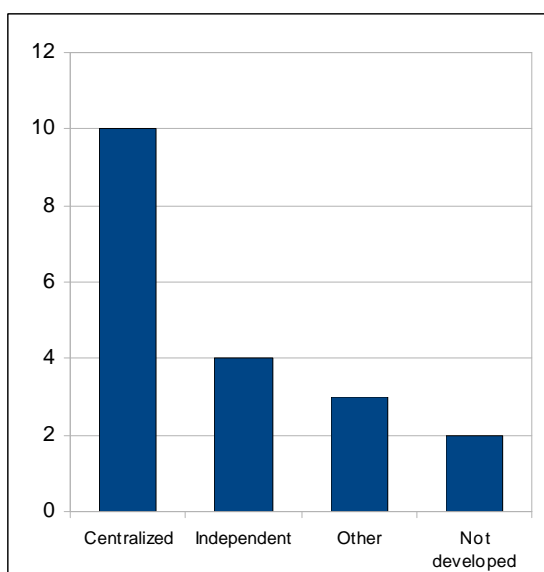


Figure 6.8 – Organization of the students' aspects

Apart from these specific aspects, some useful suggestions, for a successful design of the management aspects of a networked curriculum, came out from the analysis of the submitted questionnaires. Good communication is considered the most important aspect for a successful management, independently from the adopted system. Partners with communication problems (due to communication tools or very different time zone) highly suffer from that.

Another aspect that has to be properly considered is the different academic law that Universities may be subjected to in respect to international programs. This often creates administrative problems that can eventually be minimized, but not avoided, with a good initial planning. These kinds of problems should be taken into account when deciding to activate a new international networked curriculum, considering that several problems will require to be faced time by time with a lot of willingness and flexibility.

The first section shows us how the curricula are designed. As you can see in figure 6.9 most of the curricula find their existence in a **personal initiative** of the involved staff while the initiative of the university is the second popular start. This makes it obvious that most of the involved staff (68%) already

knows each other when the collaboration begins.

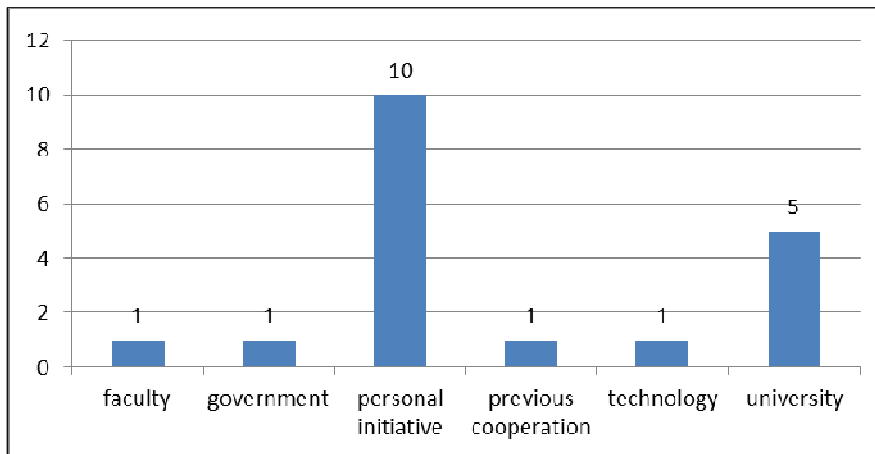


Figure 6.9 How the curriculum came about

Figure 6.10 indicates that all curricula have different needs that they want to solve with their curriculum. **In-service training** is the most popular. The respond to these needs is in the most cases 'complementarity', but 'content' and 'innovation' as well (Figure 6.11).

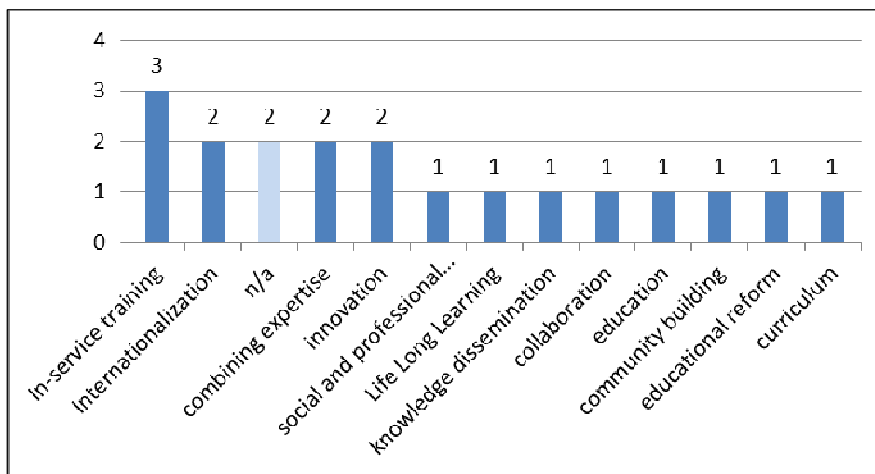


Fig. 6.10 Needs to be addressed by the curriculum

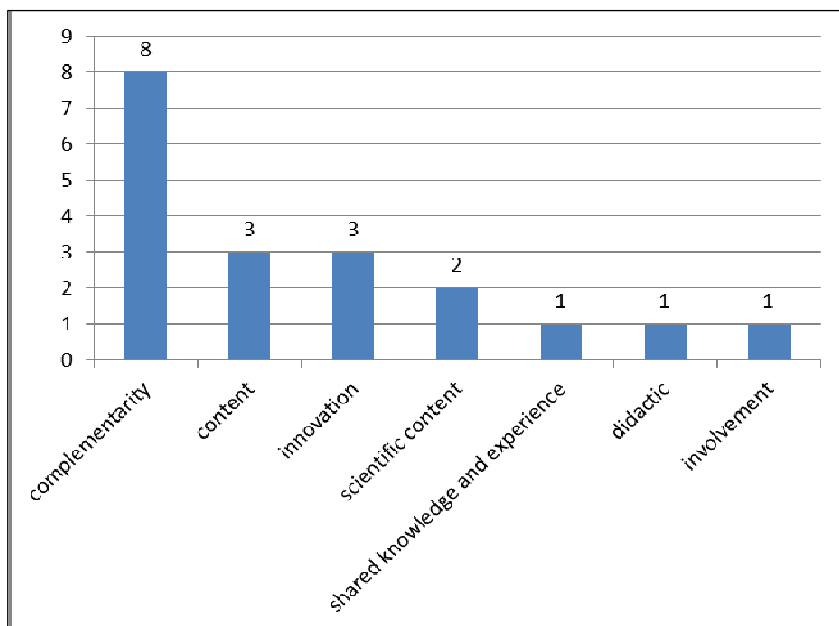


Fig. 6.11 Response to needs

Accreditation

When it comes to the accreditation of the networked curriculum, most of the partners (63%) have the same or similar university regulations, which makes collaborating easier. 63% is using the **ECTS** system. Further, 58% of the partners were required to **accredit the program as a whole**. For eleven (11) of the partners this accreditation process was different from the usual one. When it comes to the organization of didactic programs, the didactic materials are mainly available in **English**, and in many cases completed with materials in the own language of the university. Besides English, we find French, German, Spanish, Portuguese, Italian, Greek, Arabic and Lithuanian.

The didactic timetable of most of the curricula is divided into two (semesters, one year) or **four (semesters, two year)** periods. Most of the exams (53%) are organized **jointly** between the partners and in the most cases **in presence** between students and professors. Distance/remote exams are not so popular at this point of time. 63% of the curricula have a **common evaluation** system and common grading scale to work with.

When it comes to students who have passed their exams, the response is not so big because most curricula are very young. But 7 of the curricula do have **good results** (90 to 100% passing rate). The groups of graduated students are of a **mixed size**.

Figures 6.12 and 6.13 show that most curricula don't involve yet **stakeholders** in their management (79%), nor in there didactic activities 53%.

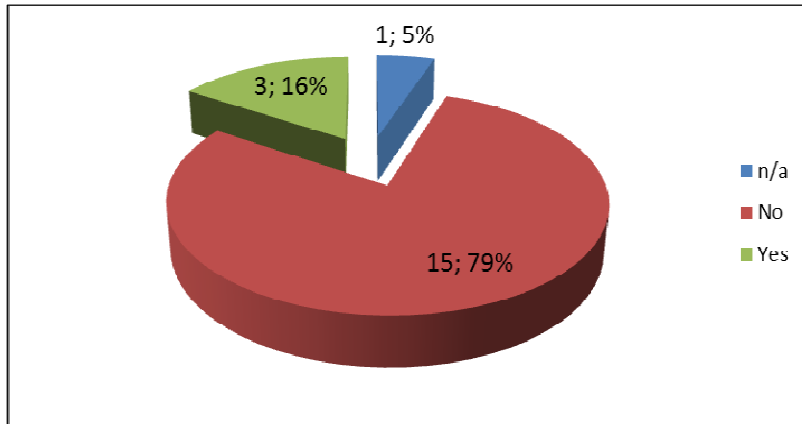


Fig. 6.12 Stakeholders involved in management

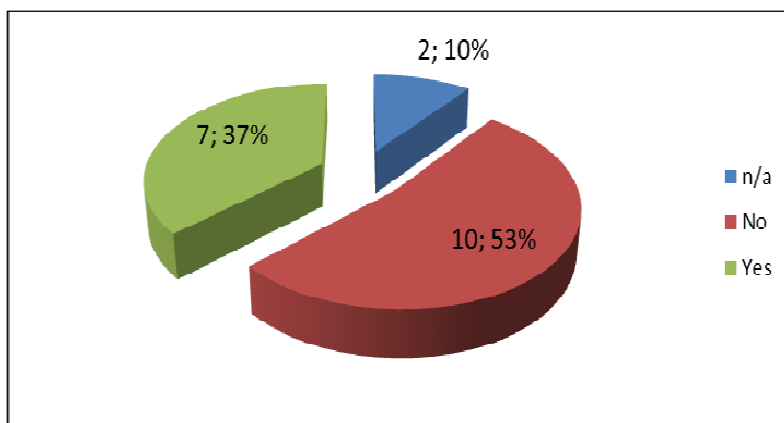


Fig. 6.13 Stakeholders involved in didactic activities

6.2 Decisions to make and steps to take

Decisions to make

The first important decision to make when engaging in a network is at what **level** you will take the initiative: at the course/module level, curriculum/programme level or institutional level.

Secondly, you need to decide right at the beginning the **management** structure: which partner will take the lead, if this is the case? Moreover, it is crucial – and this is particularly true for distance teaching universities - to decide on a **project management platform** and on an **e-learning support platform**.

Steps to follow when it comes to the design and management of networked curricula:

- Form a **working group** with people involved from all partner institutions
- Look for **institutional support at the top-level**
- Assign an **administrative support** point of reference
- Start an inventory of **funding** possibilities
- Set up a **project management platform**
- **Content design**, commonly recognized as much more important than any other aspect. A joint content design is essential to satisfy all the specific needs of the program respecting the cultural and didactic differences of the partners, and to create a strong cooperation.
- **Management**, often undervalued, if properly designed in advance it allows to simplify the cooperation and interactions during the program delivery.
- **Implementing interactive tools**, important to make distance learning effective and to quickly satisfy the students' didactic and technical needs.
- **Setting up a shared technological platform**, essential for an efficient delivery of all the contents and services at distance and for the management

6.3 Problems and suggestions

Problem: Curriculum layout

Different partners (especially at international level) may operate under different academic rules and adopt different curriculum layouts (inside or outside Bologna process, different number of years needed for the award of a degree, different credit system and/or ECTS credit units, different number of mandatory exams and other forms of formative and summative assessment needs, possible constraints on the maximum number of credits per exam).

Suggestion: A committee of professors from all the partner institutions has to investigate to find out a curriculum layout that can fulfill all the partners' demands and potential constraints. If all the partners adopt the Bologna process, usually it is possible to find a common solution. If it is not possible to find a common curriculum layout, partners can design different curricula respecting their national laws and then agree on correspondences between the curricula.

Problem: Management

Managing the consortium that supports the networked curriculum is not an easy task. Not only the academic calendar can vary amongst partner institutions, but getting the whole information flow up and running can be a time consuming task.

Suggestion: Experience from the NetCU partners shows that a single, central administration point for the consortium at one of the partners is the best solution. This way, coordination will become efficient, and sustainability efforts can focus on one location.

Problem: Accreditation hurdles

Getting a joint or double degree on track can prove very laborious, especially regarding to getting the program approved and accredited in each partner institution or country. This can slow down the startup considerably.

Suggestion: It is important to have a fast start with real experience, since this, as our questionnaires has shown, bolsters support for the program and works as a catalyst for institutional support. Therefore, our advice would be to start within the existing programs at each university, and start by exchanging modules and lectures between existing courses. Here, Open Educational Resources (OERs) are an ideal solution to get this going. Once the collaboration is on track in the field, the administrative hurdles will be overcome in due time.

Problem: Language diversity

Both for the students and the teachers the fact that English might not be their native language and that different language might exist in the consortium can pose problems. It could have a negative impact on the depth of understanding and the quality of teaching.

Suggestion: Try to exploit the language diversity as an asset rather than as an impediment. Use the interactive, both asynchronous and synchronous tools to set up easy-to-use environments like forums and wiki's where teachers as well as students can help each other on language and language-related interpretation differences.



7. NetCu Design

Author: Dario Assante (Uninettuno)

Curriculum design is a complex process. Due to the different possible goals, partnerships, formats and models chosen for the new curriculum, it is hard to define a standard procedure.

Discussing is the core of the design process. Partners have to discuss and agree about as many aspects as possible from early start, from the general layout of the program to the smallest details. Several problems will arise during the program delivery, due to the interaction between partners that may have different rules and procedures, different institutional backgrounds and didactic habits and eventually different teaching languages. The best way to overcome these problems is to prevent them, discussing them in the preliminary design phase and finding a mutual understanding on agreement on the NetCu didactic and management aspects.

Flexibility is key for the design process success. Especially at international level, the organization of a networked curriculum has to satisfy different legal constraints. In addition, each University has its own procedures and practices. Partners have to be open to change their working practices, to find joint procedures and joint communication systems in order to arrange a successful management system.

Transparency and trust in partners are the bases that underlie the design process. Starting a networked curriculum implies that some activities are performed locally and are not directly controlled by all partners. Lack of trust doesn't allow such kind of cooperation. Anyway trust in partners is kept in time only if supported by transparency in the local activities, in local decisions and in communications.

7.1 The design process

A proper design process of a networked curriculum is a key aspect for the success of the program. For this reason the activity has to be properly planned, scheduled and executed.



Before starting the practical curriculum design, the promoting group should check that:

- the *program topics, goals and objectives* have been identified;
- the set-up *partnership* has adequate and complementary competences to be able to reach the identified goals;
- the *target groups* have been identified, taking into account their characteristics and needs, also in connection with the *admission requirements*;
- the *legal framework* of each partner has been considered, especially related to the Bologna process and to the ECTS system;

These aspects are pre-requirements for the design process and have to be discussed and evaluated in advance having an impact on several decisions of the design activities.

7.1.1 The initial academic committee

Before embarking on the design of a networked curriculum, it is essential to organize an academic committee that will include representatives from all the partners. This Committee is responsible for organizing and formally scheduling the NetCu design process. It can be the same Committee that will be in charge to manage the curriculum during its delivery, but this depends on the partners' agreements.

The composition of the promoting committee reflects how the curriculum is born. Experiences from practice show examples of curricula born at different levels. If the decision to create the curriculum starts at high levels (academic governance), strategies have to be adopted to ensure a good and live involvement of professors and staff at lower levels. If the program is born at lower levels (professors from different Universities agree to start a new networked curriculum), involved professors must have the necessary authorizations or capabilities and the top-management level support to enable the approval and activation of the networked curriculum in their own Universities. In particular the legal framework of the different partners, also connected to the level of innovation introduced by the program has a strong impact on the authorizations and administrative steps to pass for the program activation (if the program is a networked extension of a program that already exists at local level or if it is a completely new one). This aspect has to be carefully taken into account.

7.1.2 Design meetings

It is essential to make the curriculum design as a joint process among the partners. The promoting committee has to organize meetings in order to discuss several aspects, with a proper scheduling and involving the right groups of people.

A basic list of topics to be discussed includes:

- academic aspects
- technological aspects
- management
- quality control and students' follow-up
- marketing and promotion

Different aspects need the involvement of different groups of people, for this reason a meeting work schedule is required.

Academic aspects usually cover most of the meetings, since several aspects have to be agreed, from the general layout to the smallest details. It may be useful to arrange specific committees to discuss about the contents of each exam. This takes more time and involves more people but will help clearness and transparency in the didactic activities.

Involvement of administrative staff is be useful, especially regarding the management planning. In any case not all partners have an administrative staff skilled in (international) cooperation activities.

Involvement of stakeholders can be useful to help better design the goals of the curriculum, but stakeholders are not used to take part of long discussions on academic bureaucracy. So their involvement has to be well considered and possibly restricted to a few meetings.

7.1.3 Scheduling of activities

In addition to the design of the curriculum that enables the activation and start of problem solving, the promoting committee has to also design the procedures for the program's upkeep.

A good scheduling of the periodical activities and a clear sharing of responsibilities is essential for the progress of the program. Activities such as courses and exams' scheduling, quality assessment, upkeep of the web-platform and of the contents, have to be jointly organized matching all the partner's wishes. This scheduling usually takes more time than in the case of "normal" programs – not networked ones - also, because formal approvals among all the partners are usually required. For this reason, specific procedures for the organization and scheduling of periodical activities have to be established.

7.1.4 Change management approach and changing procedures

The program management and organization should be designed according to the change management approach, in order to have an efficient and flexible structure of the program. This structured approach enables the management board to faster adapt the program to changes in the goals and students' requirements, in the organization, the legal framework and in internal and external shifting factors. This approach combined with the use of ICT technologies can be the aspect that makes this program flexible and smart to quickly respond to the fast changes in the targets' needs and to the job market requirements.

Procedures have to be defined in order to face partnership changes too and in order to take decisions if a partner enters or exits the program or needs to change his role.

7.2 Design in practice: problems and suggestions

Several difficulties arise in the networked curricula delivery, usually more than in traditional curricula. In most of the cases these are structural problems. A previous knowledge of these problems can be very useful, in order to plan solutions in the design phase.

Hereafter there is a list of several problems, divided in categories, that could arise in the delivery process and that should be discussed and faced in the design process, with some useful suggestions to overcome them.

Note that the following list aims to be as much complete as possible. So, on the basis of the kind of networked curricula the partners want to create, some of the listed problems may not be applicable. The following considerations have to be read keeping that in mind.

7.2.1 Curriculum outline

The curriculum layout is one of the first decisions to take; it influences many of the successive steps. Different partners (especially at international level) may be under different academic rules and adopt different curriculum layouts (inside or outside Bologna process, different number of years, different number of ECTS, different number of exams per year, possible constraints on the maximum number of credits per exam). Partners have to investigate a curriculum layout that can satisfy all the partners' constraints. If all the partners adopt the Bologna process, usually it is possible to find a common solution. If it is not possible to find a common curriculum layout, partners can design different curricula respecting their national laws and then agree on correspondences between the curricula.

Despite of all the above, the Bologna process guidelines should always be adopted in such a way even working with non-EU partners, since the ECTS system allows the mutual recognizing of studies among Universities and facilitates lifelong learning.

Problem: Exams' contents and way of teaching

The same exams can be taught in different Universities including different contents, adopting different didactic approaches and instruments, and eventually based on the local cultures and embedding. To be included in a networked curriculum, the partners have to agree on each exam about common contents, organization and way of teaching.

Suggestion: Partners have to find an agreement for each specific exam. Depending on the kind of curriculum and on the cultural and didactic distances between the partners, the question can be faced in different ways. Partners have to evaluate if it is possible:

- to agree about this aspects in the general design discussion
- to create round-table discussions for each didactic area
- to institute a specific committee for each exam.

Moving from the first to the last solution the efficiency of the result increases, the required effort increases as well.

Problem: Contents' production

Usually there are several people, from the different partner institutions, responsible for the contents' production. This requires a stricter management of this procedure, to avoid delays in the contents' delivery or that the products are not satisfying the established standards.

Suggestion: It is absolutely not recommendable to charge one partner of the production of all the didactic contents. This reduces the involvement of the other partners and the contents may not fulfill their expectations.

In any case, the content production process, being shared among the partners, has to be accurately planned. Partners have to agree at first on the kind of contents (e.g. printed and/or digital books, exercises, videos, slides, notes, virtual labs, etc.) they want to produce and on the formats to adopt for each kind of content. Then they have to agree on who is responsible for the production of each kind of

contents and on a production timetable, requiring its stricter or softer respect on the basis of the importance of the different contents.

Partners also have to take into account that several contents may require a periodical upkeep, so they also have to plan when to realize it and who is responsible for the upkeep (not necessarily the same authors of the original contents).

Problem: Language of contents

The language adopted for the networked curriculum (especially at international level) may be different from the one used in the single partner Universities.

Suggestion: Professors have to agree on the language(s) to be adopted for the contents' productions. Decisions have to be taken considering the students' habits and skill, the goals of the program and the employment opportunities that a language may offer.

The use of working languages instead of national allows graduated students to access a wider labor market but may reduce the number of students able to apply for the program.

7.2.2 Professors

Activities in a networked curriculum can be different in several aspects with respect to a traditional program. Some activities are specific for networked curricula, others have to be shared or split among the partners. This requires a new organization of several aspects to avoid inefficiencies or even conflicts, mainly regarding (not only):

- didactic activities: if professors from different partners are involved in the didactic activities of *the same courses in the same time*, the role of each partner has to be defined exactly to avoid overlaps of roles and confusion in the students;
- exams: if more professors from different partners take part in an exam, the role of each professor, the way to arrange the exam and the way to finalize the grade have to be decided (to avoid misunderstanding) and *communicated with the students in advance* (to avoid complains);
- graduation project: if professors from different partners are the advisors for the same graduation project (this may also be required by law), they have to clearly agree in advance on all the aspects of the graduation project and report (feasibility, goals of the project, schedule of the activities, role of each professor as advisor, layout of the report) to avoid that some misunderstandings affects the student work;
- interface with the administration: networked curricula usually bring an additional workload for the administration and it is usually required to appoint a professor in each partner University to face some administrative aspects that requires a solution from the teaching staff;
- exploitation and dissemination: networked curricula usually require a different and more laborious activity of exploitation and dissemination of the achieved results. In this case the coordination of the activities among professors of different Universities can produce positive synergies.

Problem: Payment of the professors

Different partner Universities may adopt different internal and/or external rules on the payment of professors. This question has to be discussed in the networked curriculum.

Suggestion: Discussing about payment of professor can appear as a trivial question, but leaving the issue open may result in frustrating the involved professors.

Note that Universities may decide not to pay an extra budget for the activities, but this has a negative effect on the professors' motivations.

7.2.3 Enrollment

Enrollment procedures and constraints are often different among partners, both from the legal and didactic point of view. Usually it is not a great problem to find an agreement on these aspects. Anyway the enrollment system represents the first interaction of the students with the program, so it has to be designed clearly and efficiently in order to give a positive first impression. This is relevant for the success of the program.

Problem: Legal admission requirements

Each country has some legal constraints for the admission to University programs of students coming from foreign secondary schools. Moreover, several countries don't have a specific legal framework for networked curricula. If the networked curriculum is designed at international level, partners may have problems in the enrollment of foreign students with some kinds of instruction.

Suggestion: If the networked curriculum is organized at international level, and if the students have to be formally registered in all the partner Universities (e.g. double/multi degree programs), it is essential to know the legal admission requirements of each country.

A solution to overcome legal admission problems is to formally enroll students only in their national University. Depending on the kind of networked curriculum, it is not always possible to adopt this solution.

Problem: Didactic admission requirements

The newcomers instruction level may not be adequate to the professors' expectations and this reduces the possibility to reach the program goals. This aspect can be more evident in networked curricula, especially at international level, if newcomers come from very heterogeneous secondary level schools.

Suggestion: In the design phase, professors have to estimate the possible targets of the program and their scholastic origin. They have to foresee possible problems connected to the students instruction level and may decide to establish some didactic admission requirements.

A method to restrict the access to the program is to allow the enrolment of students coming only from some kind of secondary schools, or requiring a minimum secondary school grade. In several cases this is a simple filtering method, anyway it could be difficult to list all the acceptable kind of secondary schools, and the criteria can be too restrictive in some cases.

Another solution is to introduce an evaluation test (may be selective or not) at the beginning of the program. This method requires a higher effort but produces a more efficient result.

Finally, consider that the introduction of didactic admission constraints can increase the quality of the graduate students and the success level of the program in general, but reduces the number of potential targets. So these constraints have to be considered properly.

7.2.4 Exams

Since exams have to be mutually recognized in different Universities, some additional didactic and legal aspects have to be discussed and agreed. Different solutions have to be adopted depending on the curriculum organization.

If the exam is performed by one partner and recognized by the other ones, professors from the different Universities have to agree on the kind of exam (typology, length, difficulty) and on the scoring system. Partners have to verify in advance eventual legal constraints for the exams' recognition and find solutions to overcome them.

If the exam is jointly performed, partners have to agree on each one's role in the different aspects of the exam (exam's preparation, students' testing, grading). National academic law may require the presence (physical or in videoconference) of professors from each partner during the exam, this aspect has to be investigated and organized in advance. Consider that, in case of jointly performed exams, not well balanced roles of professors from different Universities may create unfriendliness among them and may not be appreciated by the students, too.

Problem: Exam admission

Each partner may require some admission criteria, due to its internal roles or to national legal frameworks.

Suggestion: different solutions can be adopted, depending on the curriculum model. If the students attend groups of exams in each partner University, based on a virtual mobility model, each University can eventually keep its own admission criteria. This may be confusing for the students. A unified admission criterion would be preferable but not mandatory.

If different students attend the same exams in different partner Universities, a unified admission criterion should be adopted, in order not to create disparities. It has to be discussed and agreed among the partnership. Adopting as criterion, the sum of the constraints from all the partners, is the fastest solution, but this can lead to overly restrictive rules.

Problem: Grades

Different countries may have different grading systems. This can be a problem, especially if exams have to be mutually recognized in different Universities.

Suggestion: A correspondence among different grading systems has to be agreed. The easiest and more efficient solution is to compute a direct proportion among different grading scales. Anyway in some (rare) cases partners may decide to adopt nonlinear correspondences if they give a different weight to different parts of exams.

7.2.5 Technical aspects

ICT is a relevant added value for distance and blended programs. But a networked curriculum adopting this learning approach introduces additional issues to be agreed regarding the technological platform.

Usually each distance University already has its own web platform. This is usually a strategic choice for a distance University, arising from several motivations (didactic, pedagogical, commercial reasons, etc.). Contents and services are designed for the specific web-platform, and professors and students are used to work with it.

Although there isn't a strict requirement, partners have to decide if they implement the program on a unique web-platform or not. This decision has to be taken at the beginning of the design process, since it influences several technological, didactic and management choices. Practice shows that partners adopt a *unique* web platform in most of the cases, but there are also examples of the opposite. This aspect can create some problems.

If all the partners adopt the same web platform, the problem is trivial. Contents and services can be shared easily and all the professors can continue to work in the same environment. Partners have to agree if they create a unique web environment for the program (on one partners' web platform, sharing the access, or in a new independent domain) or implement the program in all their web platforms. The second choice implies a duplication of some part of the web platform, but gives a higher independence to the partners. This choice also requires a very good synchronization of contents and information in the web platforms of the single partners.

Problems may occur if partners adopt different web platforms. A possible solution is to agree on the use of a common web platform. In this case an additional training for professors and technical staff in the use of the new platform may be required. In addition, there has to be concern for the contents' format, which has to be compatible with the common platform and with the partners' platform. Hardly partners would produce contents that they can't reuse individually.

The problem doesn't occur if partners decide to design the networked curriculum each one using his own web-platform. This means that partners agree on the program and on the contents and then implement it individually in their web platforms. This requires a simpler management of technological aspects for Universities. Anyway contents have to be produced in a format acceptable for all the web platforms (videos above all), unless each partner produces its own contents. In the last case the interactions among professors and students of different institutions have to be accurately planned and organized. Virtual mobility actions have to be improved and encouraged, in order to support the interactions and cultural exchanges among students and among professors. If professors and students work locally, there is the risk that the added value of a networked curriculum as an intercultural experience is reduced.

Problem: Metadata standards

Contents can be produced in different formats, according to different standards and protocols. If partners produce contents in different ways, it can be difficult to merge them and sometimes to share them in the web platform.

Suggestion: The choice of the web platform is strictly connected to the kind of contents the partners want to adopt. Different platforms may only support some kind of contents or protocols (e.g. embedded video players may require only some kind of video formats). This can introduce some constraints on the contents formats. Other constraints may be introduced by the partners to ensure a uniformity in the produced contents.

All the technological and style constraints have to be agreed in advance and strictly respected in the contents production.

Problem: Language of platform

Especially in international programs, the use of a platform working in a language different from the students' native language, could introduce an obstacle in the learning process and reduce its efficiency since the students have to waste time facing language problems and not focusing all their effort on the didactic activities.

Suggestion: The platform language has not the same role as the content language. Students may use contents in one language (for example a working language) and study in an environment implemented in their own native language. This allows the students to study in a more familiar environment and so they can focus all their efforts on the didactics. Anyway the platform language is not a problem if all the partners use the same language.

Partners have to consider this aspect in the design process, not only for the initial aims of the curriculum, but also fostering future expansions of the program and of the target students. A suggested choice is to adopt a platform that, even if working in a single language, is predisposed to support multi language functionalities.

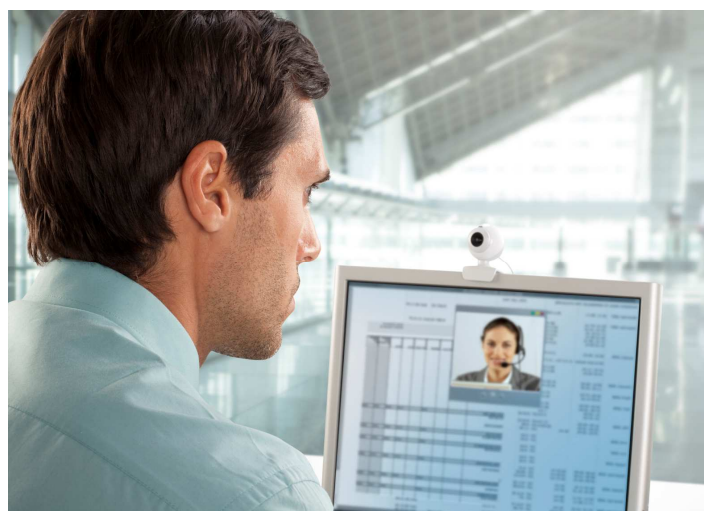
7.2.6 Management aspects

Administrative aspects are an important success factor. Despite of excellent didactic methods, management inefficiencies may produce usually an overall negative image of the program. This aspect is very important, since professors usually spend a lot of effort in the didactic design of the program and sometimes neglect or underestimate the role of management aspects in a networked curriculum. Also reminding that administrative staff is not so skilled for cooperation activities (especially at international level) as professors may be.

For these reasons administrative aspects have to be designed as carefully as didactic ones. The role of partners' administrations has to be clear and, if necessary, regulated by specific procedures.

Each administration function (enrolment, fees collection, documents' production, students' and staff's affairs, etc.) can be centralized in one partner or shared among the partners.

If a function is centralized, duplications of procedures are avoided and the users have a single reference (more clearness). Anyway the charged administration has to interact with the students and/or staff from all the partner Universities, so this administration has to be excellent in communication and interaction skills.



If a function is individually performed by each administration, the interaction with local students and staff is easier. Fewer new administrative procedures have to be produced. In addition, all the partners get more responsibilities and are more involved in the program. Anyway, a very good communication among administrations is required, since more data have to be shared and several procedures have to be uniformly performed in different partners' administrations.

Of course, in the design process, partners may wish to centralize some procedures and individually manage other ones. Taking care of advantages and disadvantages in centralizing or individually performing administrative procedures is essential in order to properly design the management functions.

Problem: Administrations' communication

Depending on the management organization, in some cases the administrations have to share data. These data may be collected in different ways, formats and languages, this can create serious problems.

Suggestion: If administrations have to share data, contents and formats have to be agreed in advance, trying to introduce as less novelties as possible.

A possible solution to easily manage and share data among the different administrations is the adoption of dedicated management tools. Anyway, not always management tools for these aims are available or adequate to the administration needs and skills.

It is highly important that any choice regarding data formats or management tools is performed jointly with administrative staffs. In order to avoid future troubles and misunderstandings, it could be useful to define formal procedures for administrations' communications.

Problem: Production of documents and certificates

Students may require documents that the Universities are not used to produce. Problems may occur with the documents' typologies, data, language, recognition. If a student requires a document and the University is not prepared to deliver it, the solution of the problem may require a long time in some cases and may have a negative impact on the image of the program.

Suggestion: In the design phase, each University should list the documents it can provide and the ones the students may require. Universities should check if they can produce all the deliverable documents. If not, alternative solutions have to be foreseen.

Universities have to consider that some documents could be required in several languages. They have to decide if and which languages can be acceptable, and eventually get organized.

Some documents should require additional procedures to be recognized in other countries (e.g. validations from Embassies, specific offices, etc.). Partners have to consider this aspect too, and properly get organized in advance.

Problem: Real mobility aspects

Curricula including real mobility have to face several management aspects connected with travel and hospitality of students and staff, especially if coming from outside the EU.

Suggestion: For real mobility from non-EU countries, visa problems may occur. Especially if the mobility is a periodical activity, it is strongly suggested to establish direct relationships with the Embassies of the origin and hosting countries. This helps in facing any kind of problems.

Hosting Universities need to have an efficient mobility office that can support students and staff in the research of an accommodation and in avoiding possible linguistic and logistic problems.

Depending on the reason of mobility, insurance problems may occur. This aspect has to be considered in advance and faced properly.

It is strongly suggested, especially in the case of international mobility programs, to define a list of procedures that the administration has to adopt to face all these management aspects.

8. Legal frameworks

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8.1 e-learning at European level

At European level the Council Resolution of 13 July 2001 on e-learning defines the guidelines for Member States' employment policies for 2001, stressing that, in connection with developing skills for the new labor market in the context of lifelong learning, Member States should aim at developing e-learning for all citizens. This Resolution aims to foster the European dimension of joint development of ICT-mediated and ICT-complemented curricula in higher education. It also invites the Commission to:

- i) continue supporting existing European portals and to encourage the development of other portals to facilitate access to educational content and to promote collaboration and exchange of experiences in the area of e-Learning and pedagogical development, especially with a view to supporting transnational virtual meeting places, stimulating European networking at all levels and in this context establish and provide networks for the benefit of teacher training, supporting directories of existing quality Internet resources;
- ii) to support the development of European multilingual educational resources, platforms and services, taking into account, when necessary, education and training-related aspects of intellectual property rights and the use of new distribution methods, and the development and promotion of internationally accepted standards and open source software (CR, 2001).



8.2 Networked curricula for formal learning at European level

Within the strategic framework for European cooperation in education and training ('ET 2020') the creativity and innovation, including entrepreneurship, at all levels of education and training should be enhanced. Well-functioning cooperation using new, transparent ways of networking is needed not only between the relevant EU institutions but also between other international institution (CE, 2009).

The European Commission has different international co-operation programs that enhance/recommend joined curricula for formal learning in higher education. These are:

- Erasmus Mundus: enhancing quality in higher education through scholarships and academic co-operation worldwide;
- Tempus: building co-operation between the EU and neighboring regions;
- Alfa: supporting co-operation between higher education institutions in the EU and Latin America.

Erasmus Mundus (already introduced in Chapter 2) is a co-operation and mobility program in the field of higher education. It aims at enhancing the quality of European higher education and promoting dialogue and understanding between people and cultures through cooperation with third countries in accordance with EU external policy objectives in order to contribute to the sustainable development of third countries in the field of higher education. The Education, Audiovisual and Culture Executive Agency (EACEA) is responsible for the implementation of the Erasmus Mundus Program. Erasmus Mundus supports top-quality programs at postgraduate level (Master and Doctoral). A minimum eligible consortium consists of full-partner High Education Institutions (HEIs) from three different European countries, of which at least one must be an EU Member State.

Erasmus Mundus Master Courses and Joint Doctorate Programs are designed and implemented by consortia of HEIs from Europe and any other parts of the world. Enrolled students will study in at least two of the European countries represented in the consortium and will be awarded joint, double or multiple degrees on behalf of the consortium after the successful completion of their studies. Several criteria must be fulfilled for an Erasmus Mundus course/programme:

- include similar working load (ECTS);
- be recognized or accredited by the European countries in which the participating institutions are located;
- have tuition fees, in accordance with its members' national legislation;
- have joint student application, selection, admission and examination criteria;
- include training/research mobility periods;
- provide for the use of at least two European languages spoken in the countries where the HEI involved in the programs are situated and
- have an adequate quality assurance and evaluation procedure (EC, 2010).

The Tempus program supports the modernisation of higher education and creates an area of co-operation in countries surrounding the EU. Established in 1990, the scheme now covers 27 countries in the Western Balkans, Eastern Europe and Central Asia, North Africa and the Middle East. One of the key actions funded by Tempus is about “Joint Projects”, which involve partnerships established between higher education institutions in the EU and partner countries. These joint projects are all about the development, modernization and dissemination of new curricula, teaching methods or materials, as well as aim to boost quality assurance and management of higher education institutions (EC, 2011b).

The ALFA program, now in its third phase, ALFA III, is a program of co-operation between Higher Education Institutions of the European Union and Latin America. The program’s main objective is to promote Higher Education in Latin America as a means to contribute to the economic and social development of the region (EC, 2011c).

At European Level there are several guidance and recommendation reports for the implementation of joint master or doctoral degrees (EACEA, 2011), namely the following:

- EUA (European University Association) Survey on Master Degrees in Europe and information material on joint doctorate developments in Europe (information available at <http://www.eua.be/publications/>)
- Good Practice Report for the Management and Administration of Joint Programmes (JOIMAN) (information available at <https://www.joiman.eu/resources/default.aspx>)
- Erasmus Mundus Excellence: Handbook and evaluation website for the implementation of excellent EMMCs (information available at <http://www.emqa.eu/>)
- European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers (especially section 2) (information available at http://ec.europa.eu/eracareers/pdf/am509774CEE_EN_E4.pdf)
- "Salzburg II Recommendations: European universities' achievements since 2005 in implementing the Salzburg Principles" (information available at http://www.eua.be/Libraries/Publications_homepage_list/Salzburg_II_Recommendations.sflb.a sh)

8.3 Networked curricula for Informal or non-formal courses at European level

Definitions and understandings of what counts as non-formal and informal learning can vary between countries. At European level, the following definitions are used:

Non-formal learning is not provided by an education or training institution and typically does not lead to certification. However, it is intentional on the part of the learner and has structured objectives, times and support.

Informal learning results from daily activities related to work, family life or leisure. It is not structured and usually does not lead to certification. In most cases, it is unintentional on the part of the learner (EC, 2011a).

The decision 1720/2006/EC establishing the Lifelong Learning Program (LLP), Chapter V, Article 33 (the transversal program) article 1(e) mentions under the key activity of policy cooperation and innovation in lifelong learning: "...action to support transparency and recognition of qualifications and competences including those acquired through non-formal and informal learning, information and guidance on mobility for learning purposes, and cooperation in quality assurance, as referred to in Article 5(1)(f), which may include: (i) networks of organizations which facilitate mobility and recognition, such as Euroguidance and National Academic Recognition Information Centers (NARICs)" (ECDG/EACEA, 2010).

In order to enable European wide mobility of staff and students it is of increasing importance that people who have qualifications based on recognition of prior learning (RPL) will be recognized within the European Union, as well as abroad. This is especially pertinent in view of the current Lifelong Learning agenda of the European Commission in which recognition of competences (whether they are gained through formal, informal or non-formal ways) play a key role. To foster mobility it is therefore desirable that there is a European practice or at least a common understanding regarding recognition of RPL in this field.

REFNILLO: Recognition of Formal, Non- and Informal Learning: use of Learning Outcomes project from Education and Culture DG - Life Long Learning and Education Audiovisual & Culture Executive Agency (EACEA) addresses this clear need for European cooperation in the field of international recognition of RPL and for recommendations on what information should be included in order for NARICs to be able to evaluate these. Currently there is no agreed European practice on how to recognize RPL certificates and the aim of REFNILLO is to formulate recommendations on how evaluations can be undertaken. According to the REFNILLO project RPL certificates should include information like Learning outcomes and ECTS and reference to QA procedure/body (ECDG/EACEA, 2010).

Of equal importance is the European Qualification Framework (EQF), which acts as a translation device to make national qualifications more readable across Europe, promoting workers' and learners' mobility between countries and facilitating their lifelong learning. The EQF aims to relate different countries' national qualifications systems to a common European reference framework. Individuals and employers will be able to use the EQF to better understand and compare the qualifications levels of different countries and different education and training systems. The EQF applies to all types of education, training and qualifications, from school education to tertiary education, professional and vocational training. It also encourages lifelong learning by promoting the validation of non-formal and informal learning. In 2009, the "European guidelines on the validation of non-formal and informal learning" were published by Cedefop, the EU's reference center for vocational education and training. Based on common principles adopted by the Council in 2004 and the work of the cluster on the recognition of learning outcomes (now the Learning Outcomes Group), these guidelines provide a support tool for the development of validation practices (EC, 2011a).

8.4. Legal frameworks or recommendations at European countries level

The EACEA has a Eurypedia site - The European Encyclopedia on National Education Systems, where information is available. The site covers 38 European education systems within the 33 countries participating in the EU's Lifelong Learning Program (all 27 EU Member States as well as Croatia, Iceland, Liechtenstein, Norway, Switzerland and Turkey). By choosing a country from the interactive map, users gain access to specific national education system information, either in English or in the native language of the country. The site is available at http://eacea.ec.europa.eu/education/eurydice/eurybase_en.php

Within each European country different legal aspects are applied for networked curricula in e-learning/distance learning regime. In Table 8.1 we go through some representative countries as examples.

A general web search (at European level) was also carried out for the purposes of this project. However, it seems that there is no legal framework specifically focusing on networked curricula (formal, informal or non-formal), even less focusing on e-learning. Some countries encourage the development of networked curricula, although not specifically for e-learning.

Table 8.1 – Some examples of legal frameworks at European Countries level.

Country	Formal courses	Informal or no formal courses (1)	Links for more information
Finland	<p>At the Finnish National Board of Education website there is no reference to e-learning or networked curricula regulations. Nevertheless this institution (namely through the Centre for International Mobility) supports network cooperation between higher educational institutions namely with Nordic countries, China and India.</p>	<p>– Finnish National Board of Education has a "quality management recommendation for vocational education and training", but this document doesn't present anything about network curricula and e-learning.</p> <p>In Finland, the national quality management system in vocational education and training (VET) comprises quality management of VET providers, national steering of VET and external evaluation of VET.</p>	<p>http://eacea.ec.europa.eu/education/eurydice/documents/eurybase/eurybase_full_reports/FI_EN.pdf</p> <p>http://www.observal.org/observal/documents/finland-fd-4-quality-management-vet</p>

Country	Formal courses	Informal or no formal courses (1)	Links for more information
Italy	<p>The Italian HE study system is regulated by Law 270/2004, based on the Bologna process, for both traditional and distance Universities. The only reference on networked curricula is in Section 3, Paragraph 10: "On the basis of specific agreements, the Italian Universities can issue the titles listed in the current section, also jointly with other Italian or foreign Universities". Listed titles are bachelor, master degree, specialization courses and PhD.</p> <p>The Law 240/2010 could produce some modifications of the legal framework regarding networked curricula. Applicative acts about this aspect have to be released in the next future.</p> <p>Italian distance learning system is ruled by Ministerial decree of April 17th 2003. It anyway covers technical and organizational aspects and doesn't cover curricula design or Academic cooperation, since this is under other laws (actually n° 270/2004).</p>	<p>There is no legislation about network curricula in informal and no formal courses.</p>	<p>http://www.miur.it/0006Menu_C/0012Docume/0098Normat/4640Modifi_cf2.htm</p> <p>http://www.unitn.it/files/download/3973/DMIUR_17_aprile_2003.pdf</p>

Country	Formal courses	Informal or no formal courses (1)	Links for more information
Lithuania	<p>Resolution no 60 of the government of the republic of Lithuania has an approval of regulations of assessment and academic recognition of foreign qualifications giving access to higher education and higher education qualifications. There is an Lithuania national report about e-learning. They have a modernisation of the Education and Training Systems towards the 2010 common goals of the EU.</p>	<p>In May of 2010 the Minister of Education and Science orders to form a working group to prepare “Guideline: Common Principles for the Assessment and Recognition Of Non-Formal and Informal Learning at Universities”.</p> <p>There is a “Procedure of assessment of non-formal, informal and self-education learning achievement and competence recognition” approved by Kaunas College Director, January 24th, 2010, No. 1-329.</p>	<p>http://www.european-agency.org/country-information/lithuania/docs/education_lithuania.pdf</p> <p>http://promitheas.iacm.forth.gr/fe-cone/docs/national%20reports/Lithuania.pdf</p> <p>http://www.smm.lt/svietimo_bukle/docs/apzvalgos/EC_LLL_report_final_ENG.pdf</p> <p>http://gk.kauko.lt/files/neformal_mok_tvarka_2010.pdf</p>

Country	Formal courses	Informal or no formal courses (1)	Links for more information
The Netherlands	There is a general national qualifications framework for the Netherlands as well as accreditation procedures and requirements. There is also a Protocol for joint degree applications.	There are several regulations about Informal or non-formal courses but all in Dutch.	http://nvaio.com/nqf-nl http://nvaio.com/three_steps_of_accreditation http://nvaio.com/page/downloads/Assessment_frameworks_for_the_higher_education_accreditation_system_6_Dec_2010.pdf http://www.nvaio.net/page/downloads/Protocol_Joint_Degree_tno_ENGLISH_7_juni_2010.pdf

Country	Formal courses	Informal or no formal courses (1)	Links for more information
Norway	<p>Norway does not have a separate open university but there is the Norwegian State Institution for Distance Education, that somehow regulates e-learning and flexible ICT-supported courses. Norway Opening Universities (NOU) was established in 1999 as a national collaboration and networking agency, supported by the Ministry of Education and Research. A national distance education network in higher education (SOFF) was established in 1990, and is responsible for distant ICT-supported learning, working with stimulation through public grants for development and networking.</p>	<p>All higher education, both public and private, in Norway is subject to the Act relating to Universities and University Colleges No. 15 of 1 April 2005. Two sections concern the validation of non-formal and informal learning, for admission and for exemption.</p>	<p>http://eacea.ec.europa.eu/education/eurydice/documents/eurybase/eurybase_full_reports/NO_EN.pdf</p> <p>http://www.observal.org/observal/documents/norway-formal-documents-1-2008-lawsstatisticspublications</p>

Country	Formal courses	Informal or no formal courses (1)	Links for more information
Slovenia	<p>The Slovenia Government has several Multilateral Programs and Initiatives. The Higher Education Act (2004, last amendments 2006) introduces joint degree programs.</p>	<p>The Council of Experts of the Republic of Slovenia for Vocational and Technical Education proposes vocational standards and catalogues, passes a methodology for the creation of vocational standards and catalogues on the basis of the long-term needs of the labor market, proposes training programs for members of commissions for the license acquisition.</p> <p>Professional, technical and other tasks in the field of vocational standards and catalogues are, for the relevant council of experts, performed by the National Institute for Vocational Education and Training (NIVET).</p>	<p>http://eacea.ec.europa.eu/education/eurydice/documents/eurybase/eurybase_full_reports/SI_EN.pdf</p> <p>http://www.observal.org/observal/documents/slovenia-formal-documents-1-2008-national-vocational-qualification-act-2000-en</p>

Country	Formal courses	Informal or no formal courses (1)	Links for more information
Spain	<p>Universities follow the common legislation on higher education (LAW 1393/2007), which is then adapted to each institution. There is no specific framework about networked curricula but universities are autonomous to propose and create their own degrees and syllabus, following the basic criteria, including the possibility of establishing Joint programs with other Spanish or foreign universities. These can be Bachelors', Master's or Doctoral Studies, and require signing an agreement. The new Doctoral legislation (LAW 99/2011) encourages joint programs and mobility of students, both graduate and postgraduate.</p>	<p>LAW 5/2002</p> <p>This law establishes, among others, two instruments fundamental to carry out the proposed tasks: the National Catalog of professional Qualifications that will order identifications in the productive system based on the appropriate competitions for the professional exercise and a procedure or device of recognition, evaluation, accreditation and registry of the professional qualifications.</p> <p>LAW 2/2006</p> <p>The law makes a significant insistence in the necessity to recognize and to validate not only the learning acquired in the labor experience but also in the experience in social activities. But these documents didn't present anything about networked curricula and e-learning.</p>	<p>http://www.boe.es/boe/dias/2011/02/10/pdfs/BOE-A-2011-2541.pdf</p> <p>http://www.boe.es/boe/dias/2007/10/30/pdfs/A44037-44048.pdf</p> <p>http://www.boe.es/boe/dias/2010/08/06/pdfs/BOE-A-2010-12621.pdf</p> <p>http://www.observal.org/observal/documents/spain-formal-documents-1-2008-legislation</p> <p>http://www.observal.org/observal/documents/spain-formal-documents-2-2008-legislaci%C3%B3n-es</p>

Country	Formal courses	Informal or no formal courses (1)	Links for more information
Switzerland		<p data-bbox="699 450 1059 801">National VPL Guidelines drafted on the basis of lessons learnt from OPET's national VPL project. The National VPL Guidelines serve as a reference and working tool for anyone wishing to establish qualification procedures to validate prior learning in the upper-secondary level VET or tertiary-level PET sectors.</p> <p data-bbox="699 842 1059 1155">The new Federal Act of 13 December 2002 on Vocational and Professional Education and Training (VPETA, SR 412.10) came into force on 1 January 2004, opening the way for the validation of prior learning (referred to as other qualification procedures).</p> <p data-bbox="699 1196 1059 1655">The new Federal Ordinance of 19 November 2003 on Vocational and Professional Education and Training (VPETO, SR 412.101) came into force on 1 January 2004. This legislative text provides more information about what is meant by "other qualification procedures" mentioned in VPETA but this document didn't present anything about networked curricula and e-learning.</p>	<p data-bbox="1086 450 1428 584">http://www.observal.org/observal/documents/switzerland-formal-documents-2008-validation-prior-learning</p>

Country	Formal courses	Informal or no formal courses (1)	Links for more information
United Kingdom		<p>UK has different laws/regulations:</p> <ul style="list-style-type: none"> - Guidance on the recognition of prior learning within the Qualifications and Credit Framework - The Recognition of Prior Learning in the European Union - A contribution to the Metropol is 2008 Workshop on different approaches to the integration of professionals in national labor markets - Piloting National And European Guidelines Designed To Encourage The Take Up Of The Recognition Of Prior Learning Outcomes - The Scottish Credit And Qualifications Framework <p>But these documents didn't present anything about networked curricula and e-learning.</p>	<p>http://www.observal.org/observal/documents/uk-formal-documents-1-guidance-recognition-prior-learning</p> <p>http://www.observal.org/observal/documents/uk-formal-documents-2-recognition-prior-learning-european-union</p> <p>http://www.observal.org/observal/documents/uk-formal-documents-3-recognition-prior-learning-outcomes</p> <p>http://www.observal.org/observal/documents/uk-formal-documents-4-scottish-credit-and-qualifications-framework</p>

1) According to European Observatory of Validation of non-formal & Informal learning (http://www.observal.org/observal/search_formal_docs?keys=&tid%5B%5D=8&tid_2%5B%5D=55)

8.5 Lessons learned from the questionnaires

The networked curriculum case studies are surveyed on results of joint courses and pilot projects. Three to five of the projects are still in their first pilot phase, the future will tell if these projects are sustainable and successful. Four of the curricula are collaborating on the level of one or more joint courses. A minority of the partners are already involved in a joint or double degree and open courses.

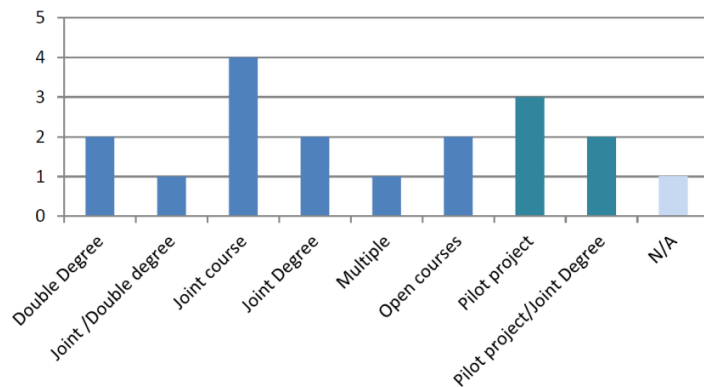


Figure 8.1 - Kind of program.

As shown in Figure 8.2 most of the partners are collaborating in formal courses at master level, but bachelor and PhD are represented as well.

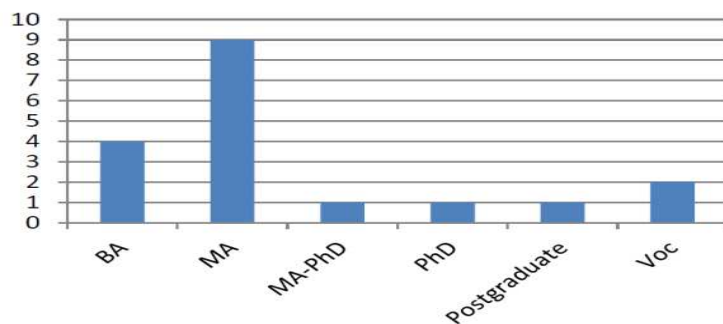


Figure 8.2 - Level of the program (BA - Bachelor, MA - Master, PhD - Doctoral, Voc - vocational training).

Analysis of the data collected from the questionnaires shows that, most of the partners (63%) have identical or similar university regulations and procedures with respect to program design, offering and accreditation, which makes collaborating easier. 63% of the NetCu showcases is using the well-known European ECTS system, which facilitates study recognition and improves mobility exchanges (Figures 8.3 and 8.4) 58% of the partners were required to accredit the networked curriculum program established as part of the collaboration.

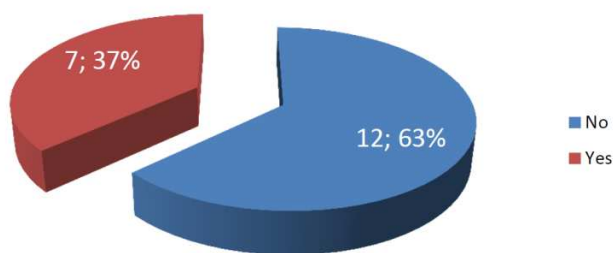


Figure 8.3 - Are all the partners under the same (or similar) University law?

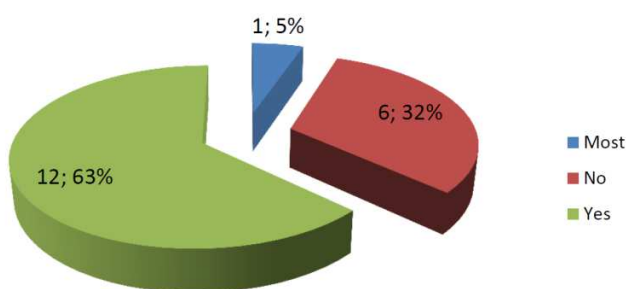


Figure 8.4 - Do all the partners use the ECTS system?

8.6 Decisions to make and steps to take

8.6.1 Decisions to make

With respect to the legal framework that should be in place when embarking upon a collaboration to design and/or offer networked programs, one of the most important decision to make is at what **type** of program you take on the initiative: at formal level, informal or non-formal. In case of formal programs, that lead to the award of a degree, the decision to make is the **academic level** (undergraduate, master or PhD). Networked curricula can also just concern a particular module that is part of a formal academic programme or can also concern short courses (i.e. Erasmus intensive programmes). The type and level of the networked programme have an impact on the management of the partnership and the level of complexity of the academic and administrative issues and aspects of its offering.

Another key decision to make is the **kind of program** (example: pilot, Integrated curricula degree, double/multiple degree, open course). Having reached a consensus on the type, level and kind of program to be designed and offered as part of a networked collaboration, the next step is to research all legal requirements and/or other constraints at each partner country level.

According to earlier analysis and bibliographic search there is no specific legislation at European level about networked curricula, even less in the e-learning regime. At European level there are only recommendation documents about e-learning, cooperation between higher education institutions and Life Long Learning. Also at country level the laws that deal with university partnerships, networked curricula and qualifications framework are even scarcer. One good example to follow is the Erasmus Mundus guidelines that include detailed criteria and directions on how to structure a joint course. In terms of homogenization of work load and credits, the ECTS system and the general principles of the Bologna process should be applied.

8.6.2 Steps to take

- During the initial stages of designing a networked curriculum and parallel to the definition of its goals, format, model and design, it is very important for the consortium to research any legal aspects and constrains (e-learning, network curricula, type, level) that might exist at partner level.
- Even if there are no legal constraints based on University or national rules and legislation, it is still important for the success of the networked curricula to adopt/create your own rules, set those up like the Erasmus Mundus and follow them, especially when formal courses are created. Moreover, as a consortium you can apply the guidelines of the Lifelong Learning Program, in case of informal or non-formal courses. Nevertheless each university should always take into account its own validation and accreditation procedures. As a guiding tool we advise the use of the manual that independent experts use for the purposes of assessing Erasmus Mundus Action 1 proposals - Implementation of Joint Programs (EACEA, 2011). This manual includes a useful list of assessment criteria that partners can use when designing their networked programme.
- In case a partner has institutional constraints and particular legal requirements that must be followed, then the consortium should take those elements into consideration and follow those requirements;
- In case where each partner member in a consortium has difference legal constraints and regulations/procedures that need to be followed for the design, offering and accreditation of networked curricula, each partner should respect its own regulations but, in addition to this, it is important to set-up a working group with the mandate to find the best possible consensus, especially for formal courses.
- All the partners should agree on the course work load in terms of ECTS.

8.7 Problems and suggestions

In the following table we list possible legal problems that might arise when designing networked curricula and respective suggestions to effectively address them.

Table 8.2 - List of possible legal problems and suggestions within network curricula establishment.

Problems	Suggestions
<ul style="list-style-type: none"> • There are no legal aspects at any partner, so what guidelines to follow? 	<ul style="list-style-type: none"> • Follow Erasmus Mundus guidelines and use ECTS. In case of informal or non-formal course follow the guidelines of the European Lifelong Learning Program.
<ul style="list-style-type: none"> • Legal aspects exist at just one partner. 	<ul style="list-style-type: none"> • All the consortium members should use that legal recommendations.
<ul style="list-style-type: none"> • Legal aspects exist at just one partner but are not easy to apply, or are not applicable at all the partners. 	<ul style="list-style-type: none"> • Only the partner with the legal aspects should follow their specific legal requirement. The others should follow European recommendations and a common framework.
<ul style="list-style-type: none"> • Legal aspects are different in each partner 	<ul style="list-style-type: none"> • Work in consensus, study and compare the different legal aspects of each partner and built a common framework.

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9. Quality assurance in Higher Education in Europe

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9.1. Quality assurance and accreditation

Quality assurance is an ill-defined concept that generally consists in different processes. In terms of Higher Education, quality assurance systems seek to guarantee the correspondence between the goals set by an institution or a study program and the expected or attained outcomes. It comprises of a set of procedures that aim at assessing, evaluating and monitoring programs, including the suggestion of correcting measures to address identified problematic areas and shortcomings and to promote innovation and development. In brief, quality assurance refers to the systematic, structured and continuous attention in terms of maintaining and improving quality.

There are several quality assurance models in Higher Education, focusing on different aspects, such as educational policy and educational projects, conditions for the implementation of teaching, factors relating to teaching and learning and to the modes and results of evaluating the expected outcomes.

Quality assurance processes can involve (a) **internal assessment** by institutions or entities providing study programs, using self-assessment models, and/or (b) **external assessment**, generally carried out by expert panels, professional entities or government agencies. In internal quality assurance, the actor of the activities is the institution itself. The external quality assurance is performed by a body or organisation outside the Higher Education Institution. In some cases, institutions combine the two quality assurance models and implement both an internal and an external QA system.

In the European Union there is no homogeneity in the mode or the focus of higher education quality assessment systems, although there is an increasing trend towards making the processes comparable and compatible⁵. Several countries in the EU have their own legislation or they have created standards and criteria for quality assessment for HEIs, while others have specialized government agencies in order to achieve that effect.

At the same time, in accordance with the guidelines of the Bologna Process, each institution has the responsibility of developing a quality assessment system aligned with its mission, goals and institutional

⁵ *The European Higher Education Area* (1999). Joint Declaration of the European Ministers of Education convened in Bologna on June 19, 1999; *Towards the European Higher Education Area* (2001). Communiqué of the meeting of European Ministers in charge of Higher Education in Prague on May 19, 2001

culture. Although they may adopt different models, quality assurance mechanisms generally seek to evaluate curricula, technical and organizational infrastructure, learning materials, learner performance, tutors, learning facilities and assessment outcomes. Quality assessment systems can rely on expert panels that determine the assessment modes and instruments. The assessment systems are in many cases based on document analysis and surveys taken by the actors involved: administrative staff, faculty and students.

In order to disseminate existing perspectives in the EU concerning quality assessment and the adoption of convergent practices in this field, the European Association for Quality Assurance in Higher Education (ENQA) has conducted several studies and prepared some reports on internal quality assurance and external quality assurance.

In 2009 the ENQA released a detailed report which outlines a broad framework of standards and guidelines that have been adopted, thus seeking to i) provide a source of assistance and guidance to higher education institutions and other relevant agencies in developing their own culture of quality assurance; ii) contribute to a common frame of reference for the provision of higher education and the assurance of quality within the EHEA⁶. This report, a response to the request about quality assurance in the EU made in the Berlin Communiqué (September 19, 2003) by the Ministers of the Bologna Process signatory countries, was addressed to the European Ministers of Education. It includes guidelines and standards for internal and external quality assurance in European Institutions of Higher Education, for external agencies that provide quality assurance and for a peer review system for quality assurance agencies.

This document points to quality patterns and guidelines for quality assessment in European institutions of higher education within the framework of both quality assurance systems: internal and external evaluation. Seven quality patterns are emphasized for **internal evaluation**:

- 1) The need for institutions to define and implement a strategy so that the quality of their programs is assured as a process of continuous improvement, to formalize and publish the procedures to that end. Within this framework, institutions build an internal quality assurance system and implement a “quality culture” through at their organizations;
- 2) Periodic monitoring of the programs in all aspects (academic, administrative, student support system, etc.);
- 3) Student assessment based on publicized regulations and criteria; used procedures should be applied consistently;
- 4) Safeguard that the teaching staff is qualified and competent;
- 5) Guarantee that students are provided with adequate resources and support concerning the programs offered;

⁶ ENQA (2009) *Standards and Guidelines for Quality Assurance in the European Higher Education Area*, p. 14, [http://www.enqa.eu/files/ESG_3edition%20\(2\).pdf](http://www.enqa.eu/files/ESG_3edition%20(2).pdf).

- 6) Deployment of an information system that guarantees the collection and processing of data relative to an effective management of teaching programs and other activities;
- 7) Regular publication of objective and impartial information, both qualitative and quantitative, about the programs and degrees offered.

Regarding the quality patterns for **external evaluation**, the same entity (ENQA, 2009) highlights the following:

- 1) External evaluation procedures should take into account the internal processes of quality assurance;
- 2) The goals of the evaluation process should be previously defined and published, along with the description of the procedures to be used;
- 3) The criteria underlying the decisions taken should be applied consistently and are pre-defined;
- 4) All processes in the external quality evaluation should be designed so as to guarantee their adequacy to the established goals;
- 5) The reports should be publicized and clearly written, so that decisions and recommendations can be easily disseminated and communicated to the various stakeholder and adequately consulted;
- 6) Reports including recommendations for new actions should be accompanied by predetermined follow-up procedures;
- 7) External evaluation of institutions or programs should be carried out cyclically, within previously defined and publicized periods of time;
- 8) Quality assurance agencies should produce reports of the performed evaluations on a regular basis.

In 2010, ENQA⁷ produced a report on quality assurance of e-learning where it is stated that quality assurance agencies can use the aforementioned document (*Standards and Guidelines for Quality Assurance in the European Higher Education Area*) as a working basis, developing additional material that takes into account the specificities of e-learning (Grifoll et al., 2010). This report includes several contributions on quality assurance in e-learning contexts. Namely, in Chapter 2, the authors describe the quality evaluation system in the case of a virtual university, taking into consideration that the student's profile is different from the profile of the conventional student, and present a model focused on evaluation at two different levels: institutional and programs offered. Other chapters are related to systems developed by several European institutions for e-learning contexts, including blended learning.

Although there is a perceptible lack of experience in quality evaluation of e-learning at a European level, a notable effort is made towards establishing patterns and standards in this field. Section 9.4 presents some models designed on the basis of projects involving several organizations and institutions that could stand for good examples of quality evaluation in e-learning. It is worth to notice some key aspects when evaluating quality in e-learning:

- Technical and organizational infrastructure

⁷ Grifoll, J. et al. (2010). *Quality Assurance of E-learning*. ENQA, <http://www.enqa.eu/pubs.lasso>

- Curricula
- Educational material
- Performance
- Teachers
- Students
- Assessment tools

References to quality assurance and to the aspects that should be taken into account are even scarcer when it comes to non-formal learning. Regarding this, the document produced by the Commonwealth of Learning, that tries to bring together thoroughly the fundamental traits of a quality assurance system for non-formal open and distance education programs,⁸ deserves attention.

Besides this, there is another type of certification of educational institutions and programs: the accreditation system. Several countries have governmental agencies for the accreditation of higher education institutions. In these countries, the accreditation of formal programs, leading to a degree, is mandatory.

Accreditation represents an assessment of the validity or adequacy of an institution or study program or module. It is usually valid for a limited period of time, after which the program is reevaluated. It is common for the accreditation to include a component of quality assessment (internal and external) in order to guarantee the public in general the quality of the educational provision⁹. The result of an accreditation process is a formal yes/no decision about the quality of the program.

9.2. QA in networked curricula – lessons learned

In this section we discuss the results obtained through questionnaires focusing on quality the assurance aspects of the examples of networked curricula across Europe.

9.2.1. Who is responsible?

According to the study, the procedures of quality assessment in networked curricula have taken different forms, which can be summed up in four categories:

1. Partner institutions implement quality assessment autonomously, often taking into account national legislation and standards. These are internal systems, based on evaluation committees, although they can also include external experts. The committees design the procedures to be adopted and produce periodic reports. The results are passed on to the coordinators, who adopt the suggested changes if needed.
2. Coexistence of internal assessment systems, led by the coordinators of each consortium, and assessment carried out by external experts. Quality assurance is performed for all the partners of the consortium by external consultants. The results of this quality report are used to improve the procedures of the consortium.

⁸ Commonwealth of Learning (2012). *Quality Assurance Toolkit for Open and Distance Non-formal Education*.

⁹ European Network for Quality Assurance in Higher Education (2003). *Quality procedures in European Higher Education*.

3. The quality assurance procedures are shared among all the partner institutions and are based on a conjoint panel of experts from the institutions, which can also include external members. These expert panels meet regularly and the reports are subsequently analyzed by the program coordinating committee, in order to implement measures to improve the program. Sometimes the staff members of the different universities, coordinated by the central coordinator, define joint procedures. This is a shared process, based on group reflection, reports from student groups, observations by tutors and experts, and impressions by the central coordinator
4. Quality assessment is carried out in compliance with national accreditation agencies, that assess the curricula in each country in advance. After accreditation, quality assessment is performed collaboratively by the different partners.

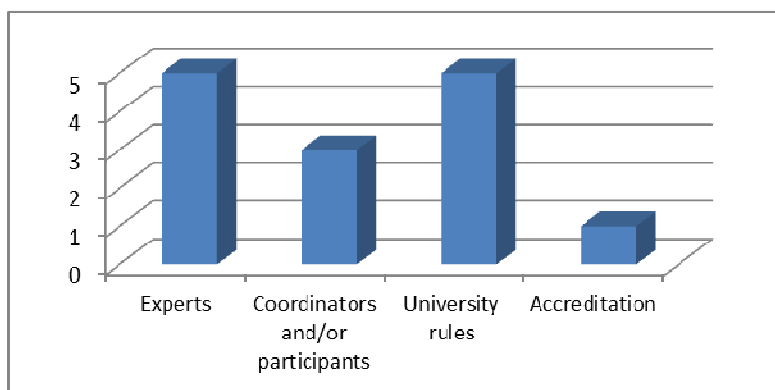


Figure 9.1 - Who is responsible for the quality assurance of the networked curricula.

9.2.2. Shared or independent?

The second aspect analysed is whether the quality assurance (QA) system implemented in the various networked curricula examples is a shared or an independent process. A shared QA means the expert panel is composed by members from all the partners, with in one case including external experts. Most of the existing networked curricula are organized as independent, as shown in Figure 9.2. But in one case, QA will change from the “independent” to the “shared” model after 2011.

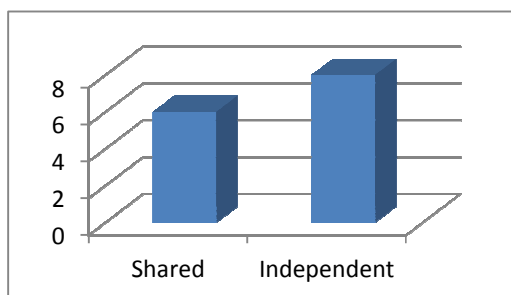


Figure 9.2 – QA shared or independent process.

9.2.3. Internal or external?

Only a few respondents answered that they have external actors involved in the quality assurance and evaluation procedures, at least in some part of the QA process. The majority pointed out that the QA is only internal (Figure 9.3).

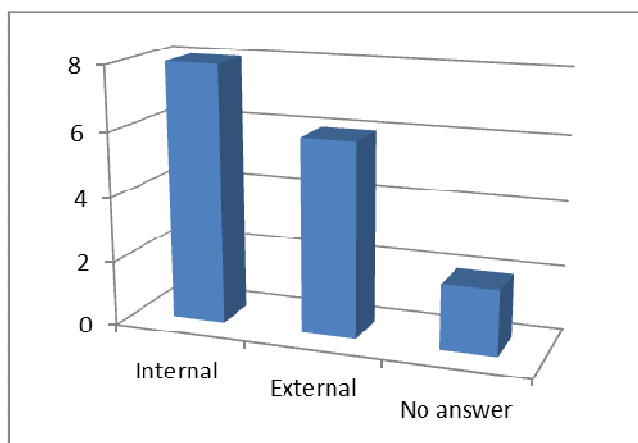


Figure 9.3 - External actors involved in the QA process.

9.2.4. QA for improvement

The fourth aspect was related to how the QA feedback is used to modify and improve the ongoing activities. The answers to this question were very heterogeneous, but we can divide them in three categories:

- 1) Yes - the QA affects the management activities;
- 2) No - the QA does not affect the management activities;
- 3) the respondents do not clearly say that QA is affected or they simply did not answer (Figure 9.4).

In the category "Yes", we present some examples of answers:

"Management board analyzed the periodic reports and adopted corrective actions, in order to improve the program";

"Faculty boards take notice of the Evaluation Team notes and implement the proper modifications";

"The results of the quality report are used to improve the procedures of the consortium";

"The institutional coordinator in each partner institution is responsible for implementing the corrective actions";

"QA feedback will be very important as it will be used to improve the course";

"The workload is greatly increased during the evaluation".

In the category "No", there are answers like:

"internationalization has been recommended by the interuniversity quality control";

"Learning material, slides, and students' activities are constantly revised and improved.";

"QA regulation of the University";

“Modification of study material and course harmonization”, but respondents didn’t say how this evaluation is made or what the drivers are.

There is only one respondent in the category “No answer”.

Nevertheless, we can say that in the majority of cases the QA feedback is used to modify and improve the ongoing activities.

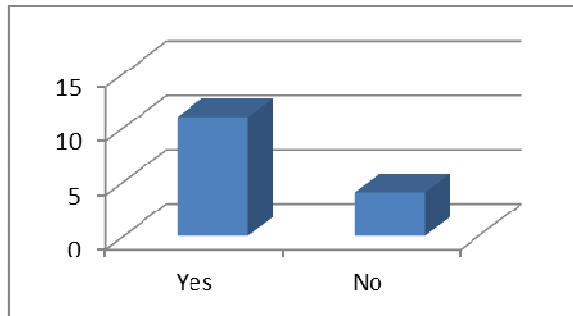


Figure 9.4 The QA affect the management of activities.

9.3. Decisions to make and steps to take in quality assurance

9.3.1. Decisions to make

The first important point regards analyzing the networked curricula type: is it formal or non-formal? Second, you must analyze with the partners involved if there are specific legislation or guidelines, in the respective countries, concerning the programs, either formal or non-formal. If yes, the partners concerned have to decide how to apply these guidelines in the program or course. This is very important when the program is formal and if there is specific national legislation about accreditation.

Third, you should also decide if there should be a quality assurance system shared by all partners or if each one should manage an independent system. If it is shared, you should also decide with the partners on the nature of the procedures to apply: should they be internal at the consortium level, should they be based on external consultants, or both? How will they operate?

9.3.2 Steps to take

- At the same time of defining the goals, format, level, partnership, decide about the quality assurance system/processes to use for the networked programme.
- Form a working group representing all the partners involved (including administrative /international collaborators) that will deal with evaluation and quality assurance
- Look for national specific legislation or guidelines for the type of programs the consortium will implement and assign a responsible in each partner for the application of these orientations.
- Start an inventory of quality assurance possibilities and advantages of each of them: totally independent? Internal and shared within the consortium? Internal to the consortium with

external consultants? Performed by an external committee? How to fund in the case of external committee or external consultants?

- Start an inventory of the procedures to implement according with the decisions made: how to perform the analysis? Who will be the actors involved in the evaluation? Which will be the documents to analyze? Should specific surveys be created?
- Set up a plan to make the chosen quality assurance system operational.
- Run the plan.
- Discuss results.
- Set up a plan for possible required adjustments or changes to do in future.

9.4. Examples of models of quality assurance in e-Learning

In this section you can find some organizations and networks that provide valuable resources regarding aspects to take in account, namely quality on e-learning, due to the importance of ICT and distance education in the field of networked curricula.

9.4.1 E-xcellence - Quality assurance in e-learning

Led by EADTU, “E-xcellence” - <http://www.eadtu.eu/e-xcellencelabel/> - is a European movement concerned with QA in e-learning. More specifically, it aims at building an e-learning benchmarking community of Associates in Quality.

The proposed evaluation is focused on 6 areas:

- strategic management
- curriculum design
- course design
- course delivery
- staff support
- student support.

In total, it includes 35 benchmarks with indicators and the definition of the level of excellence.

You can access a guided self-assessment and obtain a label regarding the usage of the E-xcellence instrument.

9.4.2 EFQUEL – European Foundation for Quality in e-Learning

EFQUEL is a network with over 100 member organisations from Europe and beyond, such as other networks, universities, corporations and national agencies. You can find useful information at the EFQUEL site at <http://www.qualityfoundation.org>.

A quality evaluation system for e-learning has been developed within this network, based on a peer-review international community (OPEN ECBcheck, <http://ecb-check.org/>)

EFQUEL maintains a quality certification process, the UNIQUe system (Certification for quality use of ICT in Higher Education), based on 3 areas of analysis:

- Learning / Institutional Context (Strategy and e-learning, Commitment to Innovation and Openness to the Community)
- Learning Resources (Resources for Learning, Students, University Staff and Technology & Equipment)
- Learning Processes (Quality of the Offer, Assessment of Learning and Human Resource Development)

9.4.3 Epprobate – The international quality label for e-learning Courseware

Epprobate is a joint organization of three agencies - The Learning Agency Network (LANETO), the Agence Wallonne des Télécommunication (AWT) and the e-Learning Quality Service Center (eLQSC)- who provides consulting in quality in e-learning courses. You can find information about a label quality on e-learning in <http://www.epprobate.com/index.php/es/home>.

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