Cross Border Virtual Entrepreneurship

European Funded Research on Flexible Modality Entrepreneurship Education and Training

Cornelis Adrianus van Dorp (Eds.)

CBVE CROSS BORDER VIRTUAL ENTREPRENEURSHIP

EADTU

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Project information

Cross Border Virtual Entrepreneurship (CBVE) is a multilateral European project under the Lifelong Learning Programme 2007-2013 within the sub programme Erasmus – Cooperation between Universities and Enterprises. It is a collaborative European action by a 6C Consortium which urgently addresses the skills of the lifelong learner in a way that fits the needs of the contemporary learner(s), not (longer) part of traditional cohorts. The main objective is to enhance learners' professional skills by lifelong, open and flexible learning approaches, with a specific focus on the development, extension and expansion of entrepreneurial skills.

Formal project consortium

- European Association of Distance Teaching Universities – EADTU
- Universidad Nacional de Educación a Distancia – UNED
- Tallinn University – TU
- University of Miskolc – NHRDEC
- International Telematic University UNINETTUNO – UTIU
- Maria Curie Sklodowska University – MCSU

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Abstract:

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Keywords: lifelong learning programme, distance education, entrepreneurship.

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Prologue

What is the Cross Border Virtual Entrepreneurship (CBVE) project about?

Cross Border Virtual Entrepreneurship (CBVE) is a multilateral European project, part of the Erasmus Programme under Lifelong Learning 2007-2013. The objective of CBVE is to enhance the professional competence of students by lifelong, open and flexible, didactically-innovative and pedagogically-rich learning approaches. CBVE has a specific focus on the development, extension and expansion of students' (international) entrepreneurial skills. It experiments with entrepreneurship in a novel way, as prospective part of the (off-campus) curriculum, for students not part of traditional cohorts (which usually are delimited by ages 18-25). The CBVE project fills up the blank spots (for) where no structured entrepreneurial training opportunities and external network liaisons with business are in place for open and distance teaching universities, and where no flexible learning approaches regarding entrepreneurship are in place for reaching students outside traditional cohorts. Not only open and distance teaching universities are beneficiaries, mainstream universities also benefit whenever students outside traditional cohorts are to be reached, using flexible entrepreneurial learning approaches.

CBVE has a clear operational focus on cooperation between higher education institutions and relevant stakeholders in the field: regional entrepreneurial networks, chambers of commerce, investment banks and other professional organisations. By developing pedagogically-rich learning content and recruiting non-traditional learners, CBVE directly engages the stated target group and offers them a unique opportunity to lever entrepreneurial training. Learners benefit from third-party engagement and interaction with stakeholders outside the university when being confronted with a (critical) assessment on proposed business ventures. A main benefit for the learner is the added value which is created in his or her portfolio concerning acquired entrepreneurial competence. In the end, the learner is better equipped for successful business start-up, as well as for innovation inside traditional companies i.e., intrapreneurship. Under CBVE, enrolled learners are offered 'flexible Masterclass content' (lead university: Università Telematica Internazionale UNINETTUNO), and incubating business-plan training facilities (lead university: University of Miskolc NHRDEC); all in one virtual entrepreneurial space. The learning environment strongly fosters knowledge acquisition, exchange and creation processes, and provides for a real learning experience.

CBVE by itself, is part of a (larger) international programme within the European Association of Distance Teaching Universities (EADTU). This programme is geared towards enhancement of (international) student employability. Back in 2006, the EADTU started its (first) European employability project: Cross Sector Virtual Mobility (CSVM). CSVM had the objective to facilitate (distance education) students to enter into online working, stimulate their employability, and provide (distance) educational systems with increased business and market connectivity, using flexible modality internships. CSVM triggered the launch of the four year employability programme (2006-2010) in which projects like Cross Border Virtual Entrepreneurship (CBVE), Cross Border Virtual Incubator (CBVI) and The Employability Clinique (TEC), entered the drawing board. The employability programme generally promotes the notion that open and distance teaching universities as well as mainstream universities are able to differentiate their education delivery by means of flexible modality solutions. Within the lifelong learning paradigm, stakeholder relations should be reinvented, as improving the (creative) cooperation with public and private organisations, professional bodies, chambers of commerce, and social partners.

Why is it so important that students and staff increase their exposure to international trends and opportunities?

When considering CBVE and the international exposure of the theme entrepreneurship, one may remark that (formal) education in Europe has traditionally not been conducive to entrepreneurship. Only few chairs in entrepreneurship exist in Europe for that matter. Entrepreneurship expertise for both students and staff relies on effectively sharing resources by cooperation in an international context. Special attention to systematically integrate entrepreneurship training in studies within institutions e.g., universities and polytechnics, will help to develop entrepreneurial competence of staff and students further, and will increase (future) chances of start-ups and spin-offs in Europe. Although no immediate hard evidence between education and venture creation can be established, and not everyone who develops entrepreneurial competence will become entrepreneur, it is most plausible that favourable conditions can be created by educational incentive and international cooperation. Collaborative development of competence and (inter-institutional) sharing of educational resources are very beneficial.

In administrative, organisational, financial and pedagogical preparation of (virtual) staff and student mobility, (especially) the open and distance teaching universities may identify new and

innovative strategies for internationalisation. Open and distance teaching universities have far less than conventional universities, embraced strategies of internationalisation. However, deteriorating government funding and emergence of one European market increase the importance of internationalisation and the leverage of partnerships. Especially in niche areas, where some institutes have more expertise than others, collaboration is particularly rewarding. This is true for entrepreneurships where not much chairs in Europe exist, in conventional universities or in distance teaching universities. In trying to realise international objectives efficiently, the cooperation between partners and the sharing of mutual resources, are a means to an end.

As regards students and international mobility; students in distance higher education have traditionally been deprived of mobility schemes such as Erasmus. With open and distance teaching universities now in the act of mainstreaming virtual mobility, and students engaging, new opportunities of gaining expertise and international credentials come within reach. Students enrolling in virtual mobility schemes will do so to strengthen their subject expertise and not for a social experience, as Erasmus is often criticised of. By focusing on academic content and personal professionalism, students adopt a strategy of internationalisation in which they source from the best academic offers. Next to virtual staff and student mobility, the integrated cooperation between stakeholders from partnering countries and the study and assessment of innovative business proposals, may potentially lead to new (sustainable) cross border collaboration through design of dedicated knowledge chains i.e., university - applied research - and exploitation, in as far as local infrastructure is not equipped to provide for this by itself. Long-term collaboration between regions may emerge from embryonic venture ideas, whereas before no history of cooperation may have existed.

What is the big challenge of cross border projects?

Cross border projects are leading edge projects in which partners strongly depend on each other. Project strategies revolve around the notion of pooling knowledge, capacity and financial resources. The binding factor of partners within cross border projects often is diverse. Factors may be related to the (up)holding of expertise on the subject matter, in line with one's own capacity unit or faculty research programmes, but may also be related to more personal and trustworthy relationship building, extending good cooperation over the years. A challenge in cross border projects is keeping interpersonal relations vital, taken notice of the fact that partners'

project skills have been assessed a priori. Whenever face to face meeting are limited such as in cross border projects, subject expertise and personal reliability are important factors. Any glitches in this area may become a potential burden and could be at the root of any possible partnership separation. As regards EADTU on this matter: the organisation is able to source from reliable and experienced partners in its membership directory, herewith upholding and assuring (project) quality in general.

As regards the CBVE project, the cross border factor is very beneficial whereas the content development on entrepreneurship is concerned. With socio-economic and cultural dimensions different among the countries, formulae for success in entrepreneurship in countries will have different accents. For instance, in some southern countries, relatively more elderly start-up (new) business ventures (in order to stay economically independent given lack of welfare), as apposed to other countries. By means of the cross border dimension, the CBVE partnership is able to lever such aspects and integrate multi-cultural aspects on entrepreneurship in its content provision. Some parts of (personal) self-assessment instruments for entrepreneurship shall accordingly differ for the partnering countries. Accordingly, a challenge for CBVE partners is to decide on general content and localised content i.e., the European product and its local instantiation. In fulfilling the needs of (local) learners which do not master the English language, derivative multilingual versions and localisation/culturalisation of Masterclass content is (very) important. CBVE incorporates such features.

One last challenge I would like to mention here is the challenge of the CBVE partnership to be able to act as a cross border intermediary to mutual entrepreneurial resources. The CBVE project, assesses whether the partnership is able to act a broker, helping all involved partners and stakeholders (academic, public, private, professional, regional, et cetera), to gain better access to information, knowledge, technologies, finance, expertise, and assistance they need, from the resources available in the different regions. The main benefit hereof is the stimulation of possibilities for cross border cooperation and partnershipping. As knowledge transfer is facilitated between the partners, the success of one region's best practice may be emulated by others. Of course, one must not forget that the CBVE project is first and foremost about addressing the lifelong learner in Europe: addressing in particular the learner outside the traditional cohort(s), eager on developing entrepreneurial competence through autonomous learning. And, as with other sectors of our economy, this type of education cannot do without the challenge of internationalisation.

How can universities in the future meet the challenge of satisfying lifelong learning needs?

In sustaining competitiveness, unconventional methods for educating, training and retraining of the European labour force must be envisaged. The predominating challenges of global competition and demographic change can only be faced by tailored, high quality, 21st century education. When talking about unconventional methods, I would like to refer to flexible modality solutions. Flexible modality solutions are able to address lifelong learners in a customised, formal, informal and/or non-formal way. Such solutions are creative and appeal to target groups beyond tradition. One example I can refer to in this context, are flexible modality internships; in some way similar to virtual entrepreneurship. Flexible modality internships are field-driven assignments designated to students by third parties i.e., public or private organisations in which students work for the most part off-site and on flexible hours, herewith utilising generic and/or specific information and communication technology.

The flexible modality internship represents a new type of modality by which (lifelong) learners can enhance their professional experience, relatively independent. On the subject of flexible modality internship, EADTU has released 'Stimulating Employability through Cross Sector Virtual Mobility; European funded research on flexible modality internships' (Eds. C.A. van Dorp). This publication, which is available from EADTU, contains some 42 European and non-European case references to flexible modality internships, and provides a first-hand look into 7 flexible modality internship projects, as conducted by two CSVM project partners i.e., the Estonian e-University and the Open University of the Netherlands. As mentioned before, the CSVM and CBVE projects are both part of the employability programme of EADTU.

EADTU will act as an intermediary body for the exchange of information, helping to facilitate a European-wide perspective on the opportunities and threats for the provision of lifelong learning. A coherent programme of (applied) research on open educational resources, employability, associations' operations, virtual mobility, quality assurance, and university strategies, is in place to serve members' priorities. Members themselves show leadership by the impact of their activities throughout the higher education system as a whole. It is apparent that by our actions we strongly encourage the development of the entrepreneurial spirit of our members. Through such incentives of projects, programmes and task forces, we hope to have a positive effect on both staff and students of institutions, facilitating respectively intrapreneurship and (self)employability.

Needless to say that EADTU is an active partner to the European Commission, the Council, the Parliament and national governments.

Formal partners

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Associate Partners

- Open Universiteit Nederland - OUNL
- Euro-Contact Business School - ECBS
- University of Maastricht - UM
- Chamber of Commerce and Industry for Borsod-Abaúj-Zemplén County

September 2009

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Contents

1. Beyond the 2010 decade: the vision and the challenges

This chapter scopes the vision and the challenges for universities and open universities in particular, for the post 2010 decade. It introduces a context and background for discussion (section 1.1), provides a tale for the reader in order to explicate the problem at hand (section 1.2), pictures the role of entrepreneurship in economies and societies (section 1.3), subscribes to a Europe in transition (section1.4), asks the question to deliver students: educated, employable or entrepreneurial? (section 1.5), puts forward university strategies and institutional profiling support (section 1.6), outlines the practices to help support institutional profiling (section 1.7), postulates the prerequisite of university costing transparency (section 1.8), and finally, describes the road ahead: towards adding more value (section 1.9).

1.1 Introduction

The end of the decade is approaching. Europe's universities are getting ready to materialise their strategies for post-2010. How well equipped are today's universities for tomorrow's demands? In face of enormous socio-economic and demographic challenges, Europe requires more advanced educational performance, which better contributes to innovation, competitiveness and economic growth. Educational systems and associated business models must be agile enough to respond to, and survive, the changing external factors. Universities are faced with high demand from STEM occupations, against lagging student numbers and unpleasant changes in national funding schemes. Ascertaining one's role and place within the knowledge society is pivotal not only for conventional (research-based) universities, but also for open and distance teaching universities (education-based). Whereas traditional universities commence strategies on serving the lifelong learner, open and distance teaching universities learn that sole education delivery without acts of innovation and entrepreneurship is draining. To be ready for the next decade, universities must search to create added value and accordingly innovate their business models. The year 2009, proclaimed to be the year of creativity and innovation by the European Commission, should lead the exploration of new entrepreneurial possibilities. In this chapter, the open and distance teaching universities in particular, are assessed on their potential to innovate beyond flexible education: generating new modes of academic and commercial entrepreneurship including the launch of new generation (networked) business incubation. It is evident that universities cannot do without creativity and innovation: it is the engine of (long-term) prosperity not only for universities, but for enterprises, economy and society as a whole.

1.2 The tale of John and Maria

Edwin, Anne and Michael were children of John and Maria. Both parents were hard workers, as also the children: they worked very hard on the field together with their parents. They lived in an area with only a few inhabitants and had very little problems besides the ones of growing their own crops, vegetables and fruits and the selling thereof to the local population. The children learned to work alongside by copying and internalising the activities of their parents. The family was content and life could not be much better. There was prosperity. All was splendid, up to the moment when more young entrepreneurial families came to live in the area. The provision of crops, vegetables and fruits quickly became too much and many of the products produced could not be sold any more, other than for very low prices on which one could not sustain a living. The father thought it would be a good idea that the children would revitalise the business with infusion of new knowledge. Creative as they were, they worked on the field during day time and studied in the evenings and exchanged newly acquired knowledge. New ideas emerged, which seemed worthwhile to give it a try. Maria, the mother, promised her children that if they would perform their regular work and still find time to test new ideas, they would be allowed to keep the profit thereof. Enthusiastic as the children were, they immediately acted on their newly acquired knowledge and ideas. The children of John and Maria made new combinations between existing country-side products that customers liked. By this, they simultaneously addressed new customers. Even urban inhabitants from the cities, came to visit them to buy the new products. The group of new products and customers even outgrew the traditional offers. John and Maria could not believe their ears and eyes. John and Maria and the children actually succeeded to gain benefit out of a threatening situation by adapting in such a way that they could now lead a prosperous live. Unfortunately for John and Maria and the children, in this situation they also became too complacent, too self-satisfied. In this safe and balanced situation, the urge to continue learning and be creative slowly eroded. The creation of new ideas vaporised. Eventually, John and Maria and their offspring did not live happily ever after. The young entrepreneurial families that had settled in their vicinity, apparently were also quite open minded and ready for new ventures. It did not take long before the offspring of the young families made their entry with new offers which were slightly different than the existing offers. Customers for example, would not need to get their products themselves any longer, products could now be shipped in groups with other products that went in that direction anyway. In a fast pace, the old offers were overtaken by the new offers, they did no longer fit in a society which was modernising rapidly. Although John and Maria did realise that gaining and applying new knowledge and ideas, was an important factor for success, they did not understand that the other young families provided this important key to success also to their young generation, as a leading principle.

Dear reading audience, although this is a sad tale, we can state one positive note: John and Maria did become happy grandparents and both of them reached a respectable old age!

The tale about John and Maria shows us that some mode of entrepreneurship is necessary for renewal and competitiveness. In changing conditions, uncertain times, and mutually reinforcing factors, renewal is often the only way out of the situation and the only way to reclaim leadership. Striking with the tale presented just now is the situation higher education is in at the moment, especially where it concerns the comparison of traditional education with open and distance education. In this regard, the situation of open and distance education can be compared with that of John and Maria, and the situation of the young families with that of traditional education. In fact, traditional education is rapidly picking up the tricks from open and distance education in flexibilising one's offers: an area in which distance education has excelled for decades. Already we notice an increase in study models for e.g., starters, professionals, mid-careers, executives, either available as part time, evening or weekend studies, with a firm offer spread over different academic disciplines. Indeed, educational sectors that have traditionally been separate are now more and more closing in. This could either result in more competitiveness or in more cooperation between the institutions in the different sectors. In addition, conventional education is strongly internationalising in the field of (foreign) student admission: an area open and distance education is also aiming for. Finally, and perhaps the most important issue: the call for innovation and entrepreneurship: key drivers for economic growth. They have been addressed insufficiently by open and distance education. At this moment, our society is in need of creative and risk taking students that excel in research, entrepreneurship and innovation. Entrepreneurship has actually become one of the key competences for the new generation students. Of course, in addressing this issue for open and distance education, the absence of a long research tradition must be taken into account, a factor which undoubtedly affected the institutional capacity in this area. Concisely, all these factors can either hold back the classic model of distance education or sprout new opportunities and new forms of cooperation between both types of universities. In any case, governance boards should not lean back and be complacent, self-satisfied, like what happened in the tale of John and Maria. The call for entrepreneurship and innovation from society is quite loud. And now, with the traditional universities acknowledging lifelong learning and the flexibilisation of educational offers, the players on this market will only increase with market shares to decline. Something must happen. Value must be added for Open and Distance Teaching Universities (ODTUs). It is one argument that open and distance education must innovate beyond the education-based model and progress towards an education-research continuum. For the remainder of this chapter, we shall address this problem and propose an answer for open and distance education.

1.3 Entrepreneurship in economies and societies

Knowledge, innovation and entrepreneurship are increasingly important as societies shift or make the transition to new economic (sub)systems. We refer here to economic system as being a system that involves production, distribution and consumption of goods and services by entities in a particular society or rather the method used by society to produce and distribute goods and services. In a global perspective, one may classify societies into three types of economies (Bosma et al., 2009): agricultural, manufacturing and service economies, often referred to as factor driven economies, efficiency driven economies and innovation driven economies.

The agricultural society is one that is based on agriculture as its prime means for support and sustenance. This type of society has been the main form of socio-economic organisation for the most part of human history. It also acknowledges other means of livelihood and work habits but mostly relies on agriculture and farming. The manufacturing society is one that uses machines, tools and labour to make things for use or sale. Although manufacturing refers to a range of human activities from handicraft to industrial production, it is mostly directed towards the mass production of products for sale to consumers. In a supply chain raw materials are transformed into finished goods or are used as semi-finished products for manufacture of more complex end-products.
The service society is a society which is mostly based on producing a service rather than just an end product. It involves the provision of services to businesses and consumers wherein the main focus is serving customers by human and technological interaction, rather than transforming raw materials into physical end products. In the services industry, providers offer value added services to existing products and/or offer radically new information and communication services by hand of new technological opportunities. This new type of society strongly addresses the potential of humans to generate new knowledge and ideas, to be creative and entrepreneurial, and to stimulate innovation and research: hence the name of innovation driven economy.

Now, what is the role of entrepreneurship in these economies (Bosma et al., 2009)? In agricultural or factor driven economies the notion of entrepreneurship is one of necessity: it must be exercised in order to generate and maintain an individual income and herewith avoiding the risk of unemployment. In manufacturing economies or efficiency driven economies the notion of entrepreneurship is one of opportunity: it may be exercised by the recognition of a good opportunity which implies more income and a way of obtaining more independence for the individual. In service economies or innovation driven economies, the notion of entrepreneurship is one of possibility: although knowledge societies are in need of innovations to sustain their economy, the individual and financial necessity of actually becoming entrepreneurial has

diminished. A relative decrease of entrepreneurial activity is observed for economies progressing from agricultural and manufacturing towards innovation driven economies. Throughout these economic systems though, general school-level education and training is noted to increase with economic development, however post-school quality of entrepreneurship education and training is seen as inadequate in almost all innovation-driven countries (Bosma et al., 2009).

Although the individual (financial) necessity for entrepreneurship diminishes in modern economies, the collective importance to the economy as a whole, is pivotal (Figure 1.1). The innovation driven economy strongly depends on entrepreneurs. They are the seed of new economic activity. They are the persons generating value through creation or expansion of economic activity, by identifying and exploiting new products, processes or markets (OECD, 2008). Entrepreneurs introduce new products and production methods, as well as new organisation and service concepts. Entrepreneurship can be regarded as one of the important drivers of economic growth, productivity, innovation and employment. With new firms entering the market and old ones disappearing, entrepreneurship allows for both growth and economic restructuring.

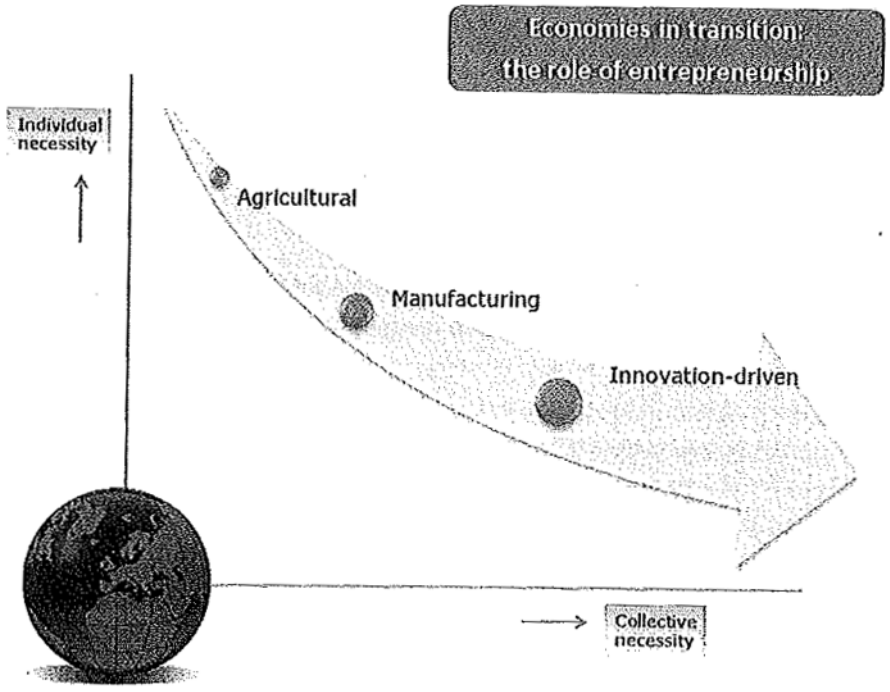

Figure 1.1 Individual versus collective necessity of entrepreneurship

1.4 Europe is in transition

More and more messages echo in Europe concerning future labour market imbalances and expected shortages in skills and competences. Globalisation, greying populations, urbanisation and the evolution of social (health) structures, together with the growing importance of information and communication technologies, biotechnologies, nanotechnologies and green technologies, have accelerated the pace of change in the labour market and associated requirements for skills and competences. Although nobody is able to precisely predict what the future will hold, it becomes more and more apparent that Europe is bequeathing us with an ageing, decreasing and more inflexible workforce which strongly requires anticipatory measures. And, across all sectors and occupations, the nature of work changes. Labour markets and the skills people need are evolving ever faster and future jobs are likely to require higher levels of education and a different mix of skills, competences and qualifications (EC, 2009).

According to the CEDEFOP skills needs report (2008), most jobs on the market in 2020 will require high- and medium-level qualifications (around 32 % and 50 % respectively) (Figure 1.2). In 1996, 31% of jobs needed low-level or no qualifications, by 2020, this proportion is expected to fall to around 18 %, implying a marked decline for those with low-level qualifications. Net job creation projections estimate that up to 20.4 million new jobs will be created from 2006 up to 2020, in favour of high-skilled jobs. Can higher education expand in such a pace? A particular problem arises whereas concerns the continuing decline in interest among students in science, technology, engineering and mathematics or STEM, the so called key subjects of which we know that they are of upmost importance to innovation driven economies. We refer here for instance to the demand in e-skills for which STEM is essential. The demand for e-skills is expected to grow significantly in web-based companies, IT services and software design and development organisations. In the fields of strategy, security and new business solutions, high level e-skills shall be needed. A particular point of attention is software design and development, where a large share of the demand for e-skills shall be related to computer programming professionals, professionals that can show to have a deep understanding of the generation of software code, when comparing this with traditionally undemanding software production. The need for graduates that not only have superb technical skills but are also able to combine this with the application domain they serve in, will become more demanding.

Indeed society paces onwards and requires more and more complex skills; workers accordingly should be able to participate in lifelong learning and be able to adapt to a variety of new tasks over their working lives. Next to domain-specific knowledge and expertise, workers more and more require the acquisition of transversal skills and competences such as analytical skills, self

management and entrepreneurial skills, which are transversal and transferrable in the event of reconversion after restructuring and displacement. Preventive measures must be taken and upgrading of the lower skilled must be taken up as a priority to maximise employment and self employment opportunities. Public authorities, education and training providers, students, social partners, as well as regional and local actors must join hands in contributing to the design of more efficient education and training policies.

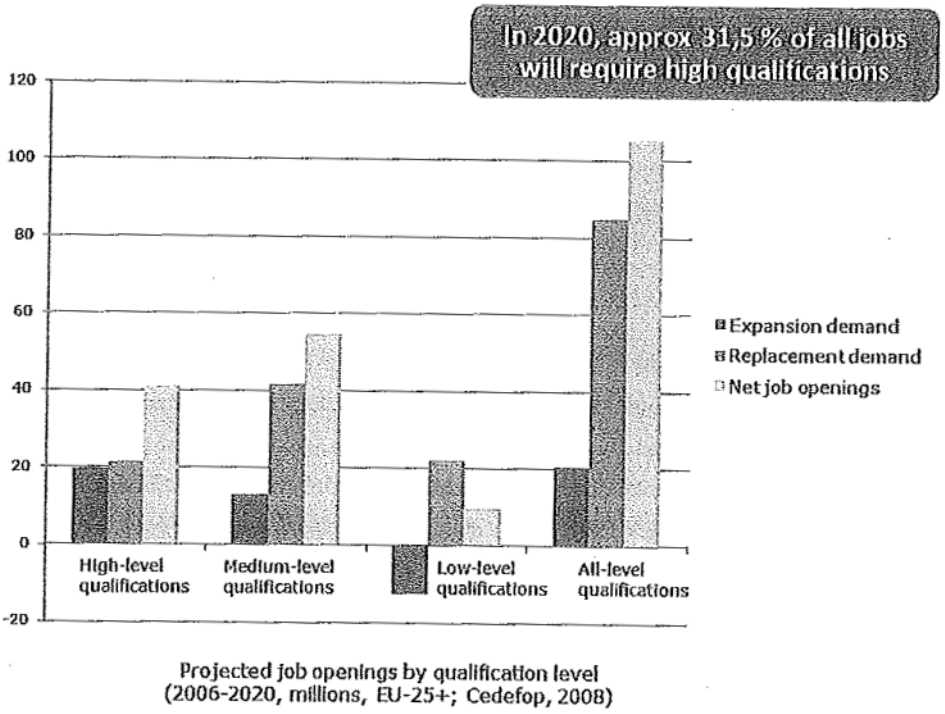

Figure 1.2 The need for high qualifications

Amidst this, we have been plagued with a financial crisis caused by weak governance and inadequate regulation of the financial system of some industrialised countries (ILO, 2009). This financial crisis and its impact on the employment of individuals, provides for an additional degree of uncertainty. For the short term, conditions for enterprise growth and employment development must be reset. Hitherto, the financial system must become a well-functioning system again. It must provide enough lubricant for a growing and dynamic business sector, making it easier for small and medium-sized enterprises and entrepreneurial start-ups, to access financing, for example credit, leasing, and venture capital funds. Avoiding errors of the past, authorities should watch that financial institutions strike a responsible balance between their outstanding risks and new lending practices. Simultaneously, the crisis stresses the need to put a (social) floor under

the stimulus for job creation, by maintaining and enhancing social protection systems which support independent workers and their families, so that their enterprises remain productive, and that they are able to avoid lay-offs and wage cuts. Extending social protection comprises of unemployment benefits, facilitating additional training and retraining opportunities, strengthening placement services, putting in place emergency employment schemes and targeted safety nets, and supporting disadvantaged and vulnerable groups. The challenges higher education is currently faced with, are big. On the one hand targeted education and training policies must be developed to support employability for the existing labour market, on the other hand education and training policies must also provide for the jobs for the future.

1.5 Delivering students: educated, employable or entrepreneurial?

1.5.1 Educated students

Gilbert Keith Chesterton (1874 - 1936), a British writer, critic and author of verse, essays, novels, and short stories, once pointed out the fallacy of crying out for a practical man. He noted obviously enough, that when a problem is really bad, one should rather wail and pray for an unpractical man. The more serious the trouble gets, the more probable it will be that some knowledge of scientific theory will be required; and though the theorist will be called unpractical, he will most likely be indispensable, whereas the practical man, who knows how modern business works, may not be imaginative enough to suggest alternative solutions. For Chesterton the whole point of education is to give a man abstract and eternal standards by which he can judge material and fugitive conditions. Training youth to earn a living is not education at all, training may even keep the youngsters away from earning the best kind of living, and moreover, it cannot be done at school anyhow. Of course these statements are quite bold and conservative. Although some may still share the opinion, today however we are far away from the universities of the thirties in the previous century, which were at the leading edge of knowledge in almost every field, being the repositories of intellectual capital. Many universities nowadays however, don't have exclusive rights on explicit knowledge anymore. Rather knowledge sharing and transfer mechanisms between universities and businesses have become essential.

1.5.2 Employable students

Employability can be defined as the empowerment of students to seize opportunities on the labour market i.e., to gain and maintain employment and move around on the labour market

(BBS, 2009). Employability depends on much more than explicit (subject specific) knowledge, but has a lot to do with personal skills and sociability, or the so called general and/or transferable skills, part of it including tacit knowledge. In frame of the innovation economy, organisations tend to look much further than just a successful degree when recruiting, they seek students with flexibility that are able to adapt to manifold situations. In order to improve chances on the labour market, the skills base of students must be extended. When considering the improvement of subject specific and personal skills in relation to the three cycles of Bachelor, Master and Doctorate, the dialogue and involvement of employers should be promoted, in order to effectively devise and innovate curricula. Dialogue is particularly needed for universities that traditionally had long first cycles, and now run the risk of condensing their Bachelor by school methods. Also, whereas explicit or subject specific knowledge is concerned, dialogue with employers is the way forward. However, caution must be exercised with the adaptation of curricula to prevent universities from becoming proprietary knowledge providers to firms and/or or taking on the role of existing professional training centres.

1.5.3 Entrepreneurial students

Educated, employable or entrepreneurial: it is not a matter of choice (Figure 1.3). The innovation driven economy requires students to (i) generate, judge and validate knowledge, (ii) satisfy the need of human capital on the labour market, and (iii) push value creation by new endeavours and/or ventures. The European Reference Framework for Key Competencies in a Knowledge-Based Society was keen on identifying entrepreneurship as a key competence to be implemented for all students as part of a multifunctional package of knowledge, skills and attitudes that all individuals need as a foundation for lifelong learning (EC, 2004). We must indeed strongly promote that students are equipped with the ability to induce change brought about by own discovery or invention, or by adopting to discoveries or inventions brought about by external drivers. Mind that entrepreneurship is not bound by study discipline: it is transversal to many. Recognising it as transversal key competence implies acknowledgement and implementation throughout curricula, pedagogies and qualifications (COM, 2008). It results in students being taught how to develop initiative, lay down vision and strategy, set objectives and take responsibility for one's actions. Mind that the entrepreneurial spirit must not only be promoted in young students but also in researchers. By triangle of education-research-innovation, entrepreneurship must give rise to novel paths of institutional collaboration: a role attributed to the European Institute of Innovation and Technology (EIT).

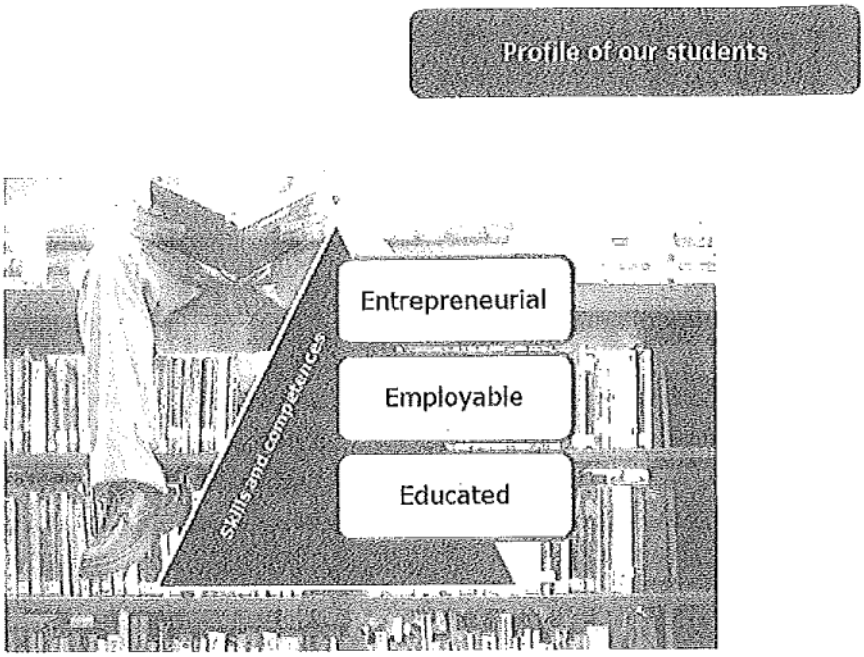

Figure 1.3 Educated, employable or entrepreneurial?

1.6 University strategies and institutional profiling support

1.6.1 An open mode of operation is needed

In as far as universities of the past have operated with non or semi-permeable borders to societal stakeholders, those that wish to grant themselves a respectable position in the educational landscape in the post-2010 decade, or even want to become recognisable landmarks, can no longer afford passivity. Universities must be inventive when it comes to satisfying labour market demands and the needs of the innovation-driven economy. It calls for an expansion of the educational system with its associated participation rates, along with new partnerships, curriculum innovation and more flexible models of delivery. Undoubtedly also in this context, funnelling the possibilities of new media and social networking technologies will bring high yields to learning in the different settings: formal, informal and non-formal. We ask universities to explore their current role and position against their envisioned future leadership in the respective field, by means of three institutional profile archetypes: an institutional profile geared towards more inclusion and social mobility, an institutional profile streamed towards enhanced employability, and a profile directed towards entrepreneurship and innovation.

1.6.2 Strategic directions for universities: three scenarios

1. Higher education, inclusion and social mobility

The first scenario is a baseline scenario in which higher education is associated with the various potential 'public good' functions (Figure 1.4). Herein, higher education aims to provide for more equitable access in terms of costs, entry qualifications and flexible learning opportunities. Education acts as a driver towards more inclusion of the population. An inclusive higher education strategy enables disadvantaged groups to improve their social mobility and enhance their educational attainment throughout first and second cycle study programmes. The aim is to fully take part in and benefit from a successful economy and obtain a set of competences which act as foundation for further learning as part of lifelong learning.

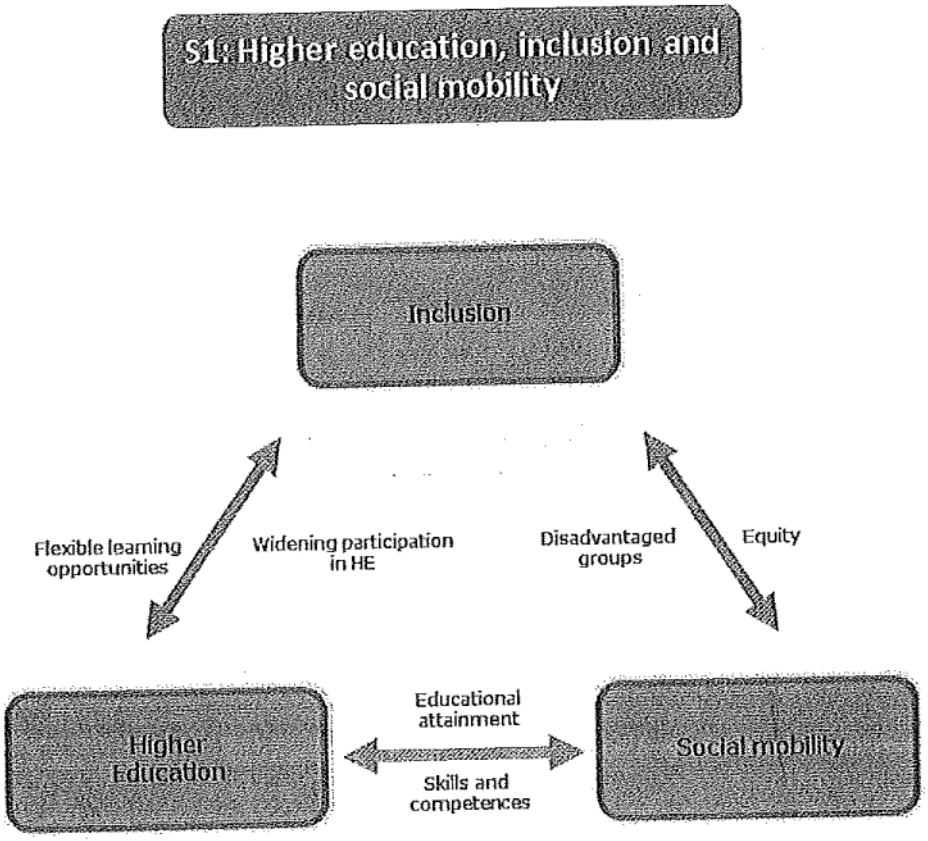

Figure 1.4 The first scenario

2. Higher education, continuous education/professional training and employability

In the second scenario (Figure 1.5), higher education connects with the labour market by delivering students with the so required high level skills and competences, while simultaneously driving the dialogue on curriculum development with external stakeholders. This scenario connects higher education with continuous education and training requirements and employability prospects. Depending on the lifelong learning mission of the university under discussion, the institute provides for continuing education and professional training and/or develops joint programmes in collaboration with dedicated professional education and training institutions.

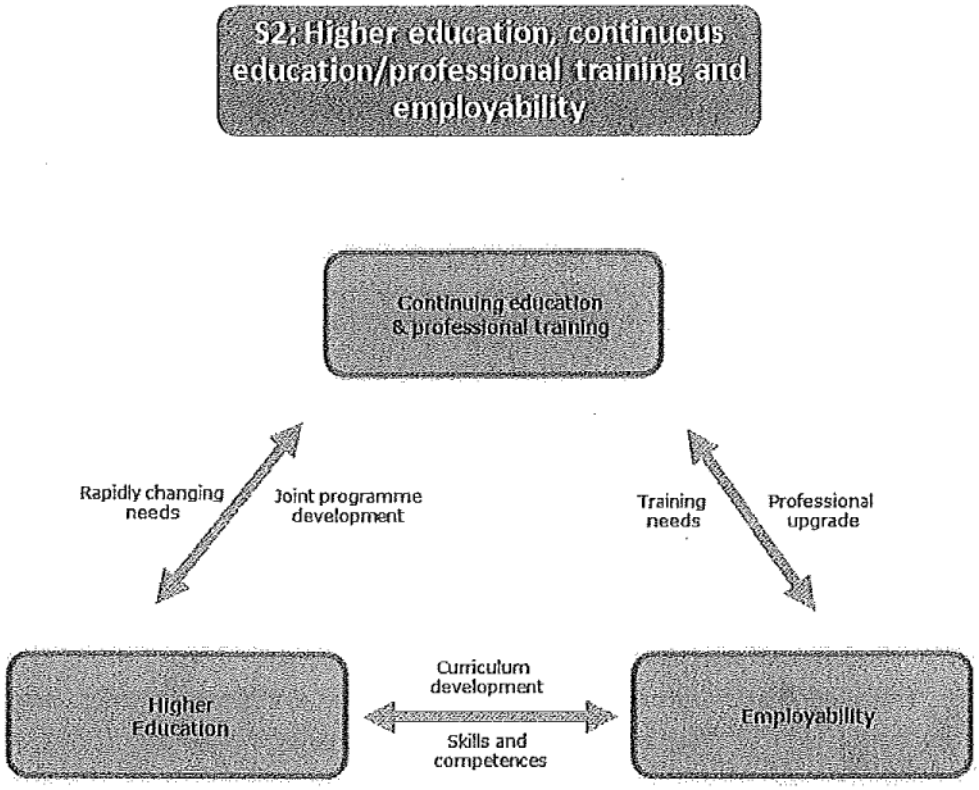

Figure 1.5 The second scenario

3. Higher education, entrepreneurship and (open) innovation

In the third scenario, higher education connects with entrepreneurship and innovation by delivering students that are not only educated in subject matter but also have essential skills and competences to adopt or drive successful developments (Figure 1.6). Such universities excel in programmes aimed at the coaching of innovation and feed the lessons which they have learned back into the curriculum. Simultaneously, opportunities for new economic activity and entrepreneurship provide for new research domains and teaching horizons. Any decisions by universities however, on one of these three scenarios however, will have to be balanced with the current possibilities, and the level of transparency, of the university's financial system. We shall come back to this issue later.

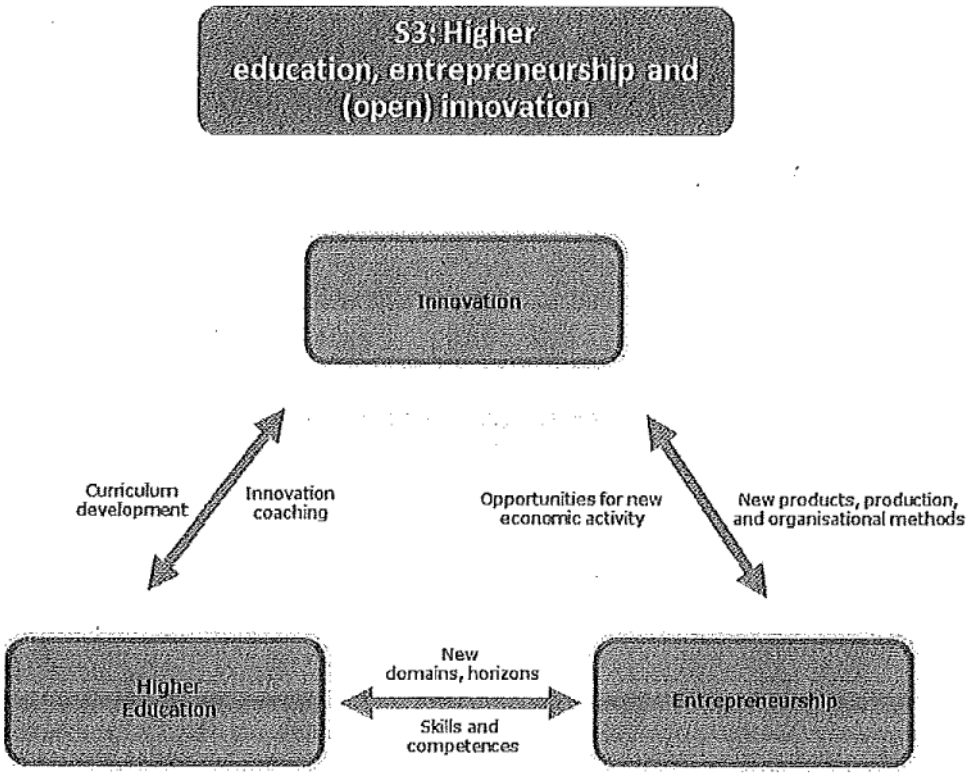

Figure 1.6 The third scenario

1.7 Current practices to support institutional profiling

One thing is clear: the immersion of educational institutions in one European Higher Education Area (EHEA) makes it increasingly important for universities to explicate a distinctive institutional profile and be able to effectively animate the target groups one envisions to cater. The European Association of Distance Teaching Associations (EADTU), being a pan-European organisation asks itself the question: how may it effectively assist its members in helping institutional profiling, in relation to the three archetype scenarios. So the crucial question would be: is it possible for EADTU to initiate and sustain action programmes on - (1) Higher education, inclusion and social mobility, (2) Higher education, continuous education/professional training and employability, and (3) Higher education, entrepreneurship and (open) innovation, - for ODTUs to gain a taste of institutional profiling? Generally speaking, EADTU takes the lead with the application, management and coordination of the projects but also acts as contracting partner in many affiliated projects of partners themselves. Most projects are co-financed by the European Commission through such programmes as the Framework Programme (FP) and the Lifelong Learning Programme (LLP) among which we include, Socrates Minerva, Erasmus, Leonardo da Vinci, KA4 Multilateral, and Jean Monet. The U.S. based William and Flora Hewlett Foundation is (also) among the co-funders of EADTU projects. For each scenario, we shall now discuss supportive development projects.

1.7.1 HE, inclusion and social mobility

Multilingual Open Resources for Independent Learning (W&F Hewlett Foundation)

When universities still offer the same traditional courses to the same student cohorts, they fail to open up to other types of learning and other types of learner groups. This has potential risks, especially when considering the need for equitable access of higher education and the need for more inclusion and improved social mobility. Differentials in accessing education are stark, and dramatically evident in the disparities between developed and less developed countries. Access to educational materials can improve though utilisation of Open Educational Resources (OER). OER are a phenomenon in higher education (Atkins et al., 2007; Geser, 2007; OECD, 2007; Iiyoshi and Kumar, 2008). Many universities have created OER over the last few years, following the developments of the Massachusetts Institute of Technology with their Open CourseWare initiative (MIT OCW, 2008). OER provides an opportunity for accessing high-quality learning materials, which would otherwise not be available and within the financial grasp of many groups. While the MIT OpenCourseWare initiative has been very successful in generating a great deal of

interest in the area of OER, it still required classroom support. Empowered by a Consortium of eleven ODTUs, EADTU launched MORIL which now delivers high-quality OER with pedagogically-rich content, specifically designed and developed for distance learning (van Dorp, 2006; 2007).

MORIL refers to 'Multilingual Open Educational Resources for Independent Learning': a new generation of OER with a strong focus on development and delivery of quality-assured materials for off-campus target groups. MORIL is value added, as face-to-face didactics are not obligatory, contrary to on-campus education. Besides open offers, formal offers are introduced as well, establishing a transparent prospective learning path into (formal) higher education for those that seek (the additional) recognition and/or certification. MORIL provides a single European access point: a referatory to participating local repository portals. EADTU, itself being a (mere) process facilitator, also strongly draws on leading partner initiatives: the British OpenLearn (Gourley and Lane, 2009) and the Dutch OpenER (Schuwer and Mulder, 2009). The expertise and support of OpenLearn (OUUK) and OpenER (OUNL), also (co)-funded by the William and Flora Hewlett Foundation, have been quite instrumental to the valorisation of OER. Both UNESCO and the William and Flora Hewlett Foundation have co-funded activities under EADTU's MORIL. UNESCO in exploring the requirements for capacity needs of other continents and the William and Flora Hewlett Foundation to kick-off all, in the first place by two American Grants (2006-2008). In June 2009, the European Commission granted EADTU a continued financial support under the LLP Erasmus by means of the project: 'Innovative OER in European HE', a study on OER best practices and quality support.

EU4ALL - European Unified Approach for Assisted Lifelong Learning (FP, IST eInclusion)

A European consortium of 13 partners performs research and develops (open) technologies to make learning and higher education more accessible (Boticario et al., 2006). EU4ALL enables that different target groups, which currently feel unable to, are facilitated to participate in studies. This allows millions of citizens to obtain key competences and the necessary skills to enter the European workforce. Be it that technology is already available to support learning, there are still enormous barriers for (adult) students and professionals with special needs to access it. This is true at all stages required to realise one's learning goals, from enrolment to assessment. Therefore, if the benefits of technology in flexible learning are to be extended to disabled and older learners then the technology must be implemented in a way in which it is fully usable by them. For example, if technology is inappropriately introduced, or is introduced with insufficient support, disabled and older people face further exclusion from the interlinked worlds of education

and work. The four year project, entitled EU4ALL - European Unified Approach for Accessible Lifelong Learning - investigates these issues. The project is partly funded by the European Commission. The total funding is 10.5 Million Euro with 7.4 Million Euro being provided by the Commission.

EU4ALL includes multiple stakeholders in the service chain of the higher education sector, involving organisations of disabled people, large educational institutions in Europe with thousands of disabled and elderly, and industry stakeholders. The project provides the opportunity to hundreds of disabled and older students to access adapted content as well as learning guidance and support. For example, based on profile and specific capabilities, a blind student in computer science will be provided with a verbal description of an electronic circuit diagram (usually provided only as a picture). A student with difficulties to concentrate will benefit from particular pedagogical support, proposing alternative learning strategies, such as working in pairs or using lecture transcriptions, to reduce anxiety problems. The EU4ALL project conducts extensive consultation with disabled and older learners and with staff of universities that teach and support disabled and elderly, on how best to develop technological support services. The goal of EU4ALL is to influence the way universities and other educational institutions across Europe and beyond deliver lifelong learning services to the whole population. Therefore, the project not only delivers technical results but also brings together and provides support to communities of practices, from both the side of the providers of distance education and the learners.

1.7.2 HE, professional training and employability

CSVM – Flexible modality internships (Leonardo da Vinci LLP)

To serve the call for employability skills and competences, along with the increasingly individualised needs of the 21st century, ODTUs must become exposed to radically new and flexible placement practices (van Dorp, 2008). Many single mode ODTUs in Europe seem to have quite a focus on educational delivery, without the possibility of providing students access to work experience during enrolment, the kind of experience traditional universities refer to as: placements. Stakeholder relations are limited in that respect, as regards the cooperation with public and private organisations, professional bodies, chambers of commerce, and social partners. Moreover, the typical organisational and administrative characteristics of ODTUs prevent the implementation of traditional solutions. To be able to contribute to the Copenhagen declaration (EC, 2002) and to infuse the modernisation of the European education and training system, action would be needed. In 2006 EADTU launched Cross Sector Virtual Mobility (CSVM)

with the aim to sensitise distance higher education to the contribution of remote internships for professional training and acquisition of associated skills and competences. Executed by a leading European Consortium (Belgium, Spain, Estonia, Italy, Hungary, Poland and the Netherlands), CSVM now contains some 42 European and non-European case references to remote internships and provides a first-hand look into 7 remote intern (pilot) projects, conducted by the Estonian e-University and the Open University of the Netherlands; more than a dozen remote internship experiences are available from the Hungarian CSVM partner as well, the University of Miskolc. As of June 2009, EADTU also partners with the K.U. Leuven (KUL) in the follow-up Erasmus LLP project: Enterprise-University Virtual Placements (EU-VIP).

The Employability 'Clinique': fast-track multiplication of good practice (Erasmus LLP)

This year 2009, the Good Practice for CSVM has been consolidated by Leonardo da Vinci with scores of 8 and 9 out of 10. The action now is to sustain the practice of flexible modality internships by means of 'Fast-Track Multiplication Cliniques'. So called Cliniques will assess the most feasible multiplication and replication strategies/models, with the aim to flexibilise (local) university internship programmes and align student, university, and enterprise profiles. Each Clinique will have an (open) stakeholder invitee network configured, originating from HE institutions, enterprises, professional organisations, chambers of commerce, social partners, and regional bodies, as well as influential European networks: EADL, EDEN, EADTU, EFMD, EFQUEL, ELIG, ESU, EUCEN, EuroPACE, MENON, EUA, and Coimbra. TEC focuses on: (1) multiplication of the impact of good practice examples by 'Fast-Track Multiplication Cliniques' with proven showcases, (2) attributing a regional perspective in diagnosing and remedying obstacles, (3) confronting existing assumptions on work placements with empirical outcomes of the Clinique trials to set out policy recommendations, and (4) providing ICT support for structured mediation between universities and enterprises, by means of periodic Virtual Internship Fairs (pVIF) utilising 'Matchmaking technology' (i.e., virtual market moderation) and Communities of Practice (CoP) i.e., technological mediators for (shared) interests, seeding informal cooperation and innovation. TEC is a bid to the Lifelong Learning Programme of the European Commission, KA4 Multilateral Projects (van Dorp and Virkus, 2009).

Network Open Polytechnic (NOP): transversal education for enhanced ICT employability

The Network Open Polytechnic (NOP) is a Dutch collaborative initiative of the Dutch Open University and five professional polytechnics. The NOP launched an ICT programme for

professionals. The labour market screams for professionals in the ICT sector with appropriate qualifications, and demand is certainly not satisfied. Hitherto, the NOP commences a new form of part-time education which is directed towards persons that are currently employed in ICT as well as those that seek employment in ICT. It targets individuals with mid-level vocational ICT education and/or those with work experience on the same level, that wish to follow a programme of professional ICT education that suits their personal combination of working and learning. The programme caters for a blended learning mode, combining face to face practices and classroom sessions with online delivery of educational materials (OER-based). This type of education is more flexible than other professional provisions as the NOP has the advantage of being flexible of pace and place, is modular, does not require prior qualifications, leads to acknowledged certificates on the international bachelor level, acknowledges previously gained competences, and combines the study with practical learning on the workplace. The benefits for the employer are apparent as well. Workplace learning in the shape and size of infused virtual internships, allows for improved employability of personnel and enhanced professional mobility within the organisation. By all, the NOP is a good example of strategic scenario no. 2: institutes providing for continuing education and professional training by development of joint programmes in collaboration with dedicated professional education and training institutions.

1.7.3 HE, entrepreneurship and (open) innovation

CBVE – Cross Border Virtual Entrepreneurship (Erasmus: University- Enterprise Cooperation)

CBVE is a European Multilateral project under the Erasmus Programme: Cooperation between Universities and Enterprises. It enhances the professional competence of students by open and flexible, didactically-innovative and pedagogically-rich learning approaches. CBVE has a specific focus on the development, extension and expansion of students' (international) entrepreneurial skills. It experiments with entrepreneurship in a novel way, as prospective part of the off-campus curriculum for students not part of traditional cohorts. The CBVE project fills up the blank spots (for) where no structured entrepreneurial training opportunities and external network liaisons with business are in place for ODTUs, and where no flexible learning approaches regarding entrepreneurship are in place for reaching students outside traditional cohorts. Not only ODTUs are beneficiaries, mainstream universities also benefit whenever students outside traditional cohorts are to be reached, using flexible entrepreneurship learning approaches. CBVE has resulted in an incubating virtual business-planning environment and an off-campus Masterclass entrepreneurship in five languages: English, Hungarian, Estonian, Italian and Spanish. Next to Internet, the entire Masterclass has been broadcasted across Western, Central and Eastern

Europe, the Mediterranean and North America, through the (free-on-air) RAI NETTUNNO SAT1 satellite infrastructure.

CBVI – Cross Border Virtual Incubator: the 'open' frontier (Erasmus Virtual Campus)

CBVI provides for cutting-edge research and development on a new generation of incubators: Networked Virtual Incubators (NVI). The NVI surpasses the networked business incubator, as described by Bøllingtoft and Ulhøi (2005). The NVI is a key social platform for entrepreneurship aimed to support the ODTUs in providing flexible modality incubatorship. The NVI valorises the social and technological connectivity of individuals. Having grown into a large network of higher education experts and third party professionals, EADTU is now able to utilise accumulated social capital. In contrast to traditional incubators that have come about top down by public initiative, the NVI expands bottom-up on each new venture, providing a larger social springboard each time for new ventures. The NVI is an 'open' virtual platform, a social and technological infrastructure that delivers professional entrepreneurship services and takes full advantage of Web2.0 technologies. The NVI has its roots in social capital and network theories and valorises social networking as a prime driver in entrepreneurial success. The NVI caters for relational symbiosis and scale advantages by providing virtual office space to tenants, communication facilities, collaborative support tools, virtual business and financial coaching support, IT infrastructure and web development services, access to e-content, access to (internal) incubator tenants, access to external stakeholders, and other types of social input and entrepreneurial support.

The previously discussed concepts of virtual internship, virtual masterclass and virtual business planning, are actually powerful pre-assessment tools for the NVI: enabling the selection of a premier league of creative students, which can finally be granted the opportunity to bootstrap a business venture in the NVI. Next to student ventures, the NVI is able to support the transition of own university research products, by speeding up processes of spinning-in and/or spinning-out. The NVI is a serious social platform and an essential asset to contemporary (networked) research and education. It caters for sourcing of expertise that transcends one's own region. It subscribes to the need for open innovation with purposive inflows and outflows of knowledge in order to accelerate enterprise start-ups. The NVI has many advantages: outside-in thinking, inclusion of different disciplines, alternative time/capacity scales, virtual workforce extension, insourcing of ideas and intellectual property, sharing risk and cost, et cetera. The launch of this new generation (networked) business incubator is expected to push new modes of academic and commercial entrepreneurship for ODTUs. EADTU offers an open invitation to experts that can work with EADTU on the development of this next frontier.

1.8 The prerequisite: university costing transparency

Universities in Europe, both conventional universities and ODTUs, tap from a mix of different public and private financial sources, which is reflected in the different institutional profiles, their missions, strategies and business models. One of the main challenges of today's universities is managing an increasingly diversified portfolio of activities with increasingly limited access to state funded financial resources. Most universities increasingly rely on external project and programme funding schemes. Many university costing systems however do not account for the full costs made in these activities, and accordingly do not provide for a sound basis to decide on long term financial sustainability of these activities.

Only universities that will be able to identify their costs 'in full' will be able to determine whether they can operate on a financially sustainable basis and prove what is needed on a reliable and verifiable basis. In the diversified European landscape of education, strategic funding decisions pertaining to traditional universities as well as to ODTUs, can only be done in light of the institution's (specific) profile as well as its ability to prove full costs. In this respect, the move towards full costing systems in Europe is expected to contribute strongly to the appropriate assessment of new (strategic) programmes and projects, by enabling improved management tools, subsidy programmes/cost recovery, national obligations, European policy, and stakeholder accountability (EUA, 2008).

1.9 The road ahead: adding value

Dear reader audience, in this chapter we have outlined three scenario's, three strategic directions for universities in general but for ODTUs in particular: 1. Higher education, inclusion and social mobility, 2. Higher education, continuous education/professional training and employability, and 3. Higher education, entrepreneurship and (open) innovation (Figure 1.7).

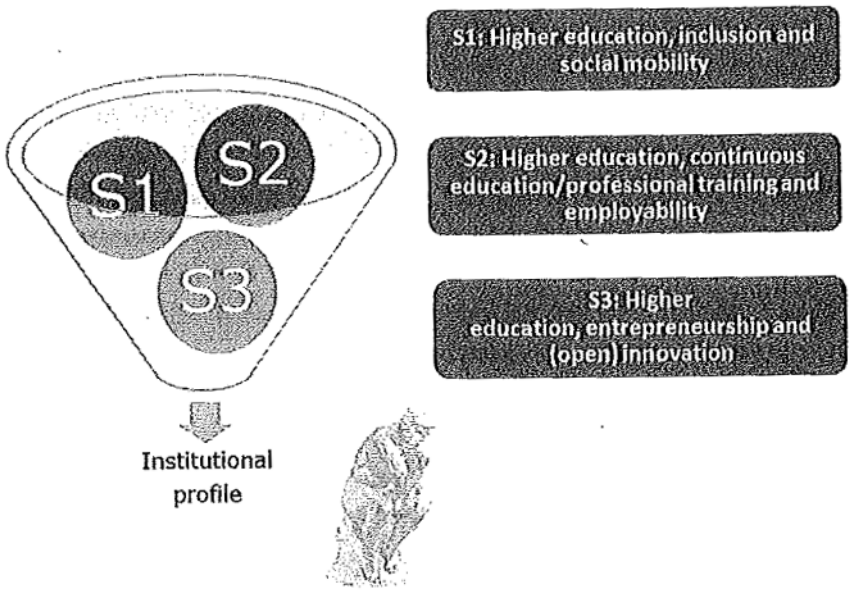

Figure 1.7 Combinations of scenarios

Regardless of the profile of educational institutions or the desired strategic shift in a certain direction, all educational institutions should meet the new standards of the innovation economy. Entrepreneurship has been acknowledged to be a key competence and cannot be omitted any longer from the curriculum. At this moment our society is not eager to receive risk averting students or students that merely consume jobs. No, what society requires are more creative and risk taking students that are curious, and excel in research, entrepreneurship and innovation, and drive the production of new jobs. Educational programmes including those of ODTUs should be reinforced and restructured with such requirements in mind. The call for high-level, educated, employable and entrepreneurial students with the proper skills, competences and qualifications, in this respect, cannot be misunderstood. Curricula infusion with new elements must take place. In this chapter we have posed the question: what transformations should we welcome within our university curricula, when skills to generate and apply new knowledge have become crucial to power the innovation-driven economy? By mode of example, we have provided in this chapter a number of practices that can support the institutional profiling in this direction. Already many distance learning institutions and ODTUs have partnered with EADTU to successfully experiment with pilot projects. And, under their own specific conditions of flexible modality, ODTUs have already come far with the adoption of innovative modes of operation that directly strengthen their capacity in the field of employability and entrepreneurship.

However, infusing new parts in ODTU curricula, which have been successful in pilot projects, will by itself not be enough to satisfy the quality and the demand for new skills and competences on the labour market. Something more dramatic is needed: a change of educational philosophy. This change must come in the form of education and research programme fusion. In a traditional Bachelor profile, students have a standard intake of obligatory courses, while actually missing out on the real understanding as to why these courses are needed. Students often only realise the necessity of incorporating particular skills and competences once they have experienced own research work in their Masters. But without early research contact, students may easily decide to neglect certain courses and/or drop-out, and be deprived of vital skills and competences. To say it bluntly, to allow for enhanced connectivity with future research and innovation directions, course flexibility should be added and research options incorporated. Post-2010 education curricula should be steeped with research challenges and should promote undergraduate research in what we may call research-based bachelors. Students working with researchers and tuning their educational profile based on participation and experience in real research projects: directly learning to perform successful research. The undergraduate research also strengthens the relationship between the university and organisations in the region for which research is conducted and stimulates the creative and productive processes of students, making them better prepared for entry on the labour market. It is now evident as by societal progress, that the old institutional dichotomy between education and research is fading out and making way for an education-research continuum. For ODTUs which traditionally deliver education without research pollination (besides educational research), such a shift will be a huge challenge. For single mode ODTUs in particular, the building of research capacity for one's staff and students, might actually imply the insourcing of a new function into the existing value chain.

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2. CBVE: the scope of the Erasmus project

This chapter describes the background and introduction of the project Cross Border Virtual Entrepreneurship (CBVE) (section 2.1). It elaborates on the aims and objectives of the CBVE project (section 2.2) and the lifelong learning objectives and priorities addressed (section 2.3). The chapter provides for a particularisation of the results and deliverables (section 2.4) and formulates guidelines as to the final project and product usage (section 2.5).

2.1 Background and introduction

Conventional universities need to step up their efforts to achieve more responsiveness to the lifelong learning paradigm (COM, 2006; 208). A great number of conventional universities are still in the strategy of educating traditional students in the age category of 18-25. To delineate this development would imply that a vast number of potential (lifelong) learners will not be reached. Demographics and global competition however make the necessity of reaching those learners very clear (COM, 2005; 24). With the number of learners outside traditional cohorts to increase, the need to act on the development of their skills is of vital interest to the long-term competitiveness of the Union. Open and Distance Teaching Universities (ODTUs) are strong in this field. They render years of experience in deploying flexible approaches to reach different categories of learners (EADTU, 2006, 2005, 2004). Cross Border Virtual Entrepreneurship (CBVE) is to lever this experience. CBVE is a collaborative action by an established European consortium to urgently address the skills of the lifelong learner in a way that fits the needs of the contemporary learner, not (longer) part of the traditional cohort (including minorities). CBVE is dedicated to serve priority skills of interest: entrepreneurial. The main objective of CBVE is to enhance the professional skills of students by lifelong, open and flexible learning approaches, with a specific focus on the development, extension and expansion of entrepreneurial skills.

CBVE pilots entrepreneurship as prospective part of the curriculum for students not (longer) part of traditional cohorts. CBVE addresses the training of trainers as well i.e., the upgrading of entrepreneurial skills of the academic staff involved. CBVE has a clear operational focus on cooperation between higher education institutions and relevant stakeholders in the field: Regional Entrepreneurial Networks, Chambers of Commerce, Investment Banks and other Professional Organisations. This has been acknowledged to be a major lifelong learning priority (EAC, 2006; 61). By developing pedagogically-rich learning content and recruiting non-traditional learners, CBVE directly engages the stated target group and offers them a unique opportunity to lever entrepreneurial training. Such learners also benefit from third-party engagement and interaction

through stakeholders outside the university, when being confronted with a (critical) assessment on their proposed business ventures. A main benefit for the learner is the added value which is created in his or her portfolio concerning acquired entrepreneurial competence. In the end, the learner is better equipped for successful business start-up, as well as for innovation inside traditional companies (intrapreneurship). CBVE fills the blank spot for the ODTUs where traditionally the investments in education, training and (external) networking for students' entrepreneurship are few. It fills the blank spot for the conventional universities where traditionally no flexible entrepreneurial learning approaches are present for students outside traditional cohorts. In reaching the lifelong learner, conventional universities may especially benefit from the transfer of pedagogically-rich learning styles, from distance education.

2.2 Aims and objectives

The main objective of CBVE is to enhance the professional skills of students by lifelong, open and flexible, didactically-innovative and pedagogically-rich learning approaches, with a specific focus on the development, extension and expansion of entrepreneurial skills. CBVE pilots entrepreneurship in a novel way, as prospective part of the curriculum for students not (longer) part of traditional cohorts. It includes the training of trainers as well i.e., the upgrading of entrepreneurial skills of academic staff involved. The project addresses the needs identified previously, such as filling the blank spot (for) where no structured entrepreneurial training opportunities and external network liaisons with business are in place, and where no flexible learning approaches regarding entrepreneurship are in place for reaching students outside traditional cohorts.

Entrepreneurship (actual or potential) is influenced by a number of factors. The importance of learning about factors affecting entrepreneurship (whereas the addressing of non-traditional targets groups is concerned), increases ever more. Especially with demographic developments such as aging (i.e., entrepreneurship in later stages of life) and ethnical diversification (i.e., cultural factors influencing entrepreneurship), CBVE hopes to contribute to explaining some drivers of entrepreneurship and hopes to integrate them into the body of knowledge for competency development. With innovative instruments and combined institutional approaches, CBVE takes up the development of entrepreneurial competence for non-traditional target groups by collaborative action between the ODTUs and the conventional universities, as is reflected in the Consortium.

The objectives of the CBVE project are clearly linked to the main objectives and priorities as identified by the European Commission in its associated programme for lifelong learning. By allowing for the development and delivery of didactically-innovative and pedagogically-rich learning approaches, covering the area of entrepreneurship, in cooperation with both conventional and distance teaching universities, and external stakeholders in the field, this project helps to improve existing quality and volume of ICT-based course content and helps promote creativity, competitiveness, employability and growth of the entrepreneurial spirit. In reaching out to learners outside traditional cohorts i.e., not being served by traditional universities, the project by competency of ODTUs, also contributes to increased participation of currently disadvantaged groups.

Regarding operational and specific objectives, the project addresses the cooperation between higher education institutions and enterprises: interaction with the business community and regional stakeholders are important drivers for the project. They allow for the shaping of business planning test beds and allow for the external stakeholder evaluation of student business plans. This part of the project coincides with the topical priority 2007: to include professional organisations, chambers of commerce and local/regional bodies and aligns with the deployment of strategies for cooperation between higher education and enterprises which have a clear concept of guidance and counselling. By delivery of student Masterclass materials and the training of teachers on entrepreneurship, the project forwards entrepreneurship as prospective part of the curriculum and the development of skills for teachers and researchers.

2.3 Lifelong learning objectives and priorities addressed

CBVE helps to promote creativity, competitiveness, employability and the growth of an entrepreneurial spirit by implementation of a series of measures that acts on the promotion of entrepreneurship in the distance-student population, and on the development, extension and expansion of entrepreneurial competence (in that same population). CBVE addresses this amongst others by the development, implementation and branding of a premier university-embedded 'referatory' portal on entrepreneurship (reaching out to the distance leaner or adult learner), the development, implementation, testing and deployment of state-of-the art course materials (based on distance didactics), the design, configuration and roll-out of an international (distance) student pilot on entrepreneurship, the recruitment of potential distance student entrepreneurs, the (entrepreneurial) training of trainers (involved academic staff), and the liaison with regional professionals. The project contributes to increased participation in lifelong learning by people of all disadvantaged groups, regardless of their socio-economic background.

Most university partners of the CBVE consortium have a long experience in addressing especially non-traditional learner groups. Their approach is characterised by the off-campus didactical concept, the delivery of courses specifically designed and developed for distance learning, the inherent nature of the courses i.e., pedagogically-rich learning materials for independent self-study, the use of state-of-the-art technology and platforms for highest accessibility, the application of innovative support structures for group interaction and tutorial support, the support by leading-edge learning management tools, and the creation of collaborative learning environments. Most recently, Open Education Resources (OER) have been added to this list. Deploying the mentioned concepts enables the institutes to deeply reach into society and offer opportunities for mostly all disadvantaged learners, regardless of their socio-economic background.

CBVE fosters the cooperation between regional stakeholders of the partnering countries and the creation of innovative proposals for business ventures. The project intends to valorise as much as possible the model of the knowledge chain i.e., university, applied research, and exploitation. Next to having professionals in the field assess business plans generated by students in the pilot run(s), it also wants to lever those ideas, with a potential future prospect. Besides students valorising their idea themselves (by potential start-up), it could include subsequent cooperation and/or co-development with existing SMEs. We know, chambers of commerce hold the portfolio of SMEs in the region: they are the prime point of access for CBVE to lever cooperation with entrepreneurial networks. CBVE acknowledges the added value of cooperation between higher education and enterprises with a clear concept of guidance and counselling. Within the CBVE project such an approach is taken in conjunction with the planning of the national and international pilot-runs. A step-wise approach for coaching students in the development of competence and enterprise planning, is supplemented with feedback and reflection by stakeholders in the field. Through successive phases of coaching via consultations with students (peers), academic staff and third-parties, entrepreneurial competence is built.

2.4 The particularisation of results

Entrepreneurship training opportunities for learners outside traditional cohorts are not good at the moment. Those intending to learn more about the entrepreneurial challenge are practically left standing in the cold. ODTUs for example, have no institutional booth with 'referatory' information for students to consult, nor do many offer professional support, guidance and counselling to encourage start-ups successfully. Many students already enrolled in distance education are likely to loose their entrepreneurial spirit i.e., self-employment over regular employment possibilities,

despite the fact that particularly here major opportunities lie for fostering (traditional) entrepreneurship, as well as for fostering flexible modes of entrepreneurship such as part-timepreneurs, distancepreneurs, seniorpreneurs, weekendpreneurs, et cetera. The need for a 'referatory' portal for entrepreneurship in distance or adult education is apparent. A dedicated portal should serve the lifelong learner i.e., the learner outside traditional cohorts, and should be regionally embedded with liaisons to important stakeholders in the field.

On this university portal, actual or potential entrepreneurs (full-time or part-time), should be able to find start-up information, expert references and university enrolment schemes for professional courses and trainings. To address the entrepreneurial skills of learners outside traditional cohorts i.e., distance students, which are, or have been deprived of high-quality education in this respect, students must be able to obtain dedicated pedagogically-rich education and training opportunities. To adhere to this request, the CBVE project must deploy well-grounded didactic and technological models as founded in distance education. It should infuse a clear focus on creation, development and testing of cutting-edge learning and training materials, and/or the adaptation thereof. State-of-the-art knowledge from contributing disciplines must be levered. Students shall receive specific training on how to start (and run) a business, including the capacity to draft a real business plan and the skills associated with methods of identifying and assessing business opportunities. Students will be thought how embryonic business ideas can be supported (for instance by referring to special loans, business facilities, mentorship, etc.), and what the process is of putting projects into practice and on the market.

Within the CBVE project, education and training is delivered online, using an electronic learning environment, dedicated to delivery of flexible education. The geographically dispersed learners are communalised by concept of international virtual mobility: students enrolling in entrepreneurship education and training, within a different country. Training of academic staff is prerequisite and relies on workshops in which professionally coached and interactive sessions move all attendants towards the development of entrepreneurial attitude and skills. How the actual 'learning by doing' by prospective student entrepreneurs is organised, is addressed by the design, configuration and planning of an actual test-bed. It deals with the organisation of business planning inside a supportive and incubating environment, an environment which strongly fosters knowledge acquisition, exchange and creation processes, and which is able to provide for a real learning experience to students. The test bed is initiated longitudinal (one test-run), cascade (small sequential runs) or concurrent (parallel runs), with flexible composition(s) of students, staff and external stakeholders, relating to the selected scientific framework. As of the constraints i.e., non-traditional & distance learning, expertise within the partnership of CBVE for such (social) technological environments is crucial.

The virtual entrepreneurial space provides for the main platform on which learners, academic staff and third parties interact. Besides design, configuration and planning of the test-bed, development of criteria by which to measure post-pilot success are formulated. The actual pilot-run on business planning itself, as operationalised by (virtual) integration of students, academic staff and external stakeholders, forwards a multi-institutional group of (international) learners, which gradually develops competence in entrepreneurship. Leading in the pilot-run is the principle of competition. A contest between talented role-playing students, which are geographically dispersed, sets the stage for advancing embryonic ideas on product, organisation (mission, vision and core values), strategy, stakeholders, environment, marketing plan, production plan, financial plan, management plan, and legislative matters. Through successive phases of coaching by academic staff and through consultation(s) with third-parties, entrepreneurial competence is built. By-product of the coaching of students, is the essential valorisation of the entrepreneurial skills of the academic staff.

The inclusion of external professionals is also important as it increases the prospects for localised spin-offs. By increasing the visibility, education, and training of entrepreneurialism for non-traditional learners i.e., distance students, as described by some main actions above, this project directly stimulates the entrepreneurial competence of this group in the short term, and contributes to a boost/increase of (regional) entrepreneurship rates, in the long term. As of distance didactics, miscellaneous disadvantaged groups (previously deprived) are able to seize opportunity to become skilled in entrepreneurialism and increase chances for self-employment. In the short term, distance education institutions and staff obtain also benefit: with partners of the consortium, they lever collaborative development of competence and (inter-institutional) sharing of educational resources.

In administrative, organisational, financial and pedagogical preparation of (virtual) staff and student mobility, the ODTUs also identify new and innovative strategies for internationalisation. Long term beneficiaries are regional development centres and semi-government stakeholders, with regard to prospects of coaching and sustaining new SME start-up potential for the region (by localisation of initiatives). Other long term beneficiaries are venture banks (i.e., financial stakeholders). By potential return on investment, they are able to provide support for, and invest financially in, high-potential start-ups. The project intends to cascade all signalled business opportunities to the above identified (regional) stakeholders, directly - by means of liaison contacts (as of project involvement), and indirectly - by means of the proposed 'referatory' portal.

2.5 Final project and product usage

With its standing e-learning content meant for independent self study, CBVE is geared at enhancing the professional skills of students by lifelong, open and flexible, didactically-innovative and pedagogically-rich learning approaches.
Entrepreneurship is piloted in a novel way, which is especially aimed at learners which are not part of mainstream education and/or student cohorts (18-25).

The project fills the blank spot for institutes where no structured entrepreneurial training opportunities and external network liaisons with business are in place, and where no flexible learning approaches for reaching students outside traditional cohorts, are in place.

We recommend that developed products shall not be used in isolation but be truly part of the integral approach as sketched throughout this Book. Moreover, we strongly recommend frequent interaction with the regional bodies for the inflow of apparent and new training needs. As for that reason, content localisation and customisation of the developed entrepreneurship products must be dealt with.

exploiting opportunities that exist in the environment or that are created through innovation in an attempt to create value. Gibb (2005) defines entrepreneurship in terms of sets of behaviours, attributes and skills that allow individuals and groups to create change and innovation and cope with, and even enjoy, higher levels of uncertainty and complexity in all aspects of their life.

More generally entrepreneurship is the practice of starting new organisations, particularly new businesses in response to identified opportunities. Entrepreneurship mostly refers to the creation and management of a new business venture by an individual or a team. It refers to an individual's ability to turn ideas into action. It includes creativity, innovation and risk acceptance, as well as the ability to plan and manage projects in order to achieve objectives. In a broad sense, entrepreneurship should be considered as a mindset that can be usefully applied in all working activities and in life. Therefore, entrepreneurship is a key competence for all (http://ec.europa.eu/enterprise/entrepreneurship/training_en.htm).

Children can learn about entrepreneurship from an early age, with appropriate techniques both within the classroom and beyond. And as they get older, the range of skills and experiences relevant to entrepreneurship can be widened. At university level, there is also a need for specific courses to help students (particularly those with technological skills), better appreciate the prospects of their work on the market. Finally, for those who have built up experience as an employee, the possibility to learn particular skills may allow them to move to set up or take over a firm later in life (http://ec.europa.eu/enterprise/entrepreneurship/training_en.htm).

Researchers also attempt to define the entrepreneur in myriad ways and the debate over the definition of an entrepreneur continues today (Bygrave & Hofer, 1991; Gartner, 1990, cited in Brown, 2006). In this book a pragmatic approach is taken on dealing with the phenomenon entrepreneurship. The definition of entrepreneurship as formulated by the Organisation for Economic Co-operation and Development shall be directive (OECD/Eurostat , 2008).

Entrepreneurs are persons who seek to generate value through creation or expansion of economic activity, by identifying and exploiting new products, processes or markets.

Entrepreneurship is the phenomenon associated with entrepreneurial activity. It acts as a driver of economic growth, productivity, innovation and employment. Entrepreneurship causes firms to enter/exit the markets, and forces newcomers to be more efficient; existing firms are forced to innovate in order to stay competitive (the cause for creative destruction/Schumpeter). Although entrepreneurship is recognised by academic studies, only recently has it been explicitly discovered by policy makers. Policies on entrepreneurship differ nevertheless in OECD

countries/regions. The different national and regional policies affect the rate and type of entrepreneurship. Some examples as to how and why policy can be developed for entrepreneurship: (1) simply for firm creation as such, (2) as connected to regional development programmes (depressed regions), (3) as strategic element to include certain target groups (minorities, women, et cetera), (4) as for supporting domain specific starters i.e., high-tech starters, life sciences, etc., and (5) as decision to support especially high-growth firms.

The measurement of entrepreneurship has been a relatively young phenomenon. There has been no systematic effort in comparing OECD countries. Only in 2005, first financial support from the Kaufmann Foundation came to OECD to perform a feasibility study on improving entrepreneurship data. In late 2006, the OECD Entrepreneurship Indicators Programme (EIP) was coined. There grew a certain willingness from National Statistics Offices to harmonise methods: 12 OECD countries, World Bank and Eurostat joined the steering group to develop indicators. In 2007, a formal OECD-Eurostat cooperation came into being, concerning the EIP for structuring and gathering policy relevant entrepreneurship statistics.

Although a definition of entrepreneurship has been provided, actually measuring entrepreneurship seems a whole other case. Entrepreneurship as a variable seems to be multifaceted and non-linear. Likely factors that influence entrepreneurship are only *proxies*. A closer explanation is needed. We distinguish (1) factors that impede or motivate entrepreneurship (determinants), (2) indicators for the amount/type of entrepreneurship (entrepreneurial performance), and (3) outcomes of the performance on general economy (impacts, value created). This is represented by Figure 3.1 (OECD/Eurostat, 2008).

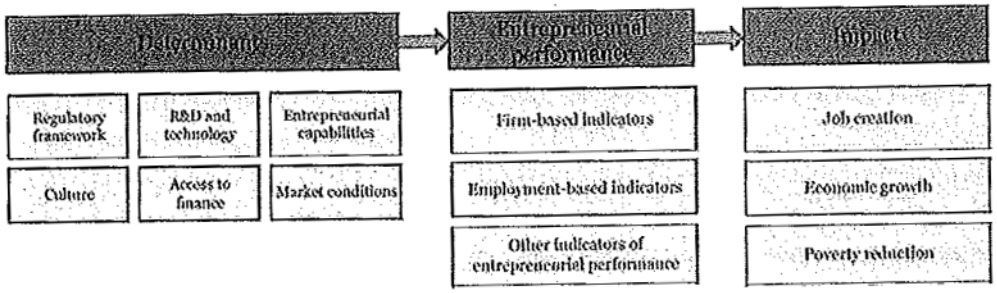

Figure 3.1 Indicators of entrepreneurship (OECD/Eurostat, 2008)

As concluded before, policy making on the phenomenon of entrepreneurship differs throughout regions in Europe. Many domains may be of priority interest to policy makers depending on the needs of the region under discussion. Figure 3.2 depicts the larger portfolio of policy areas, which is used by policy makers in Europe.

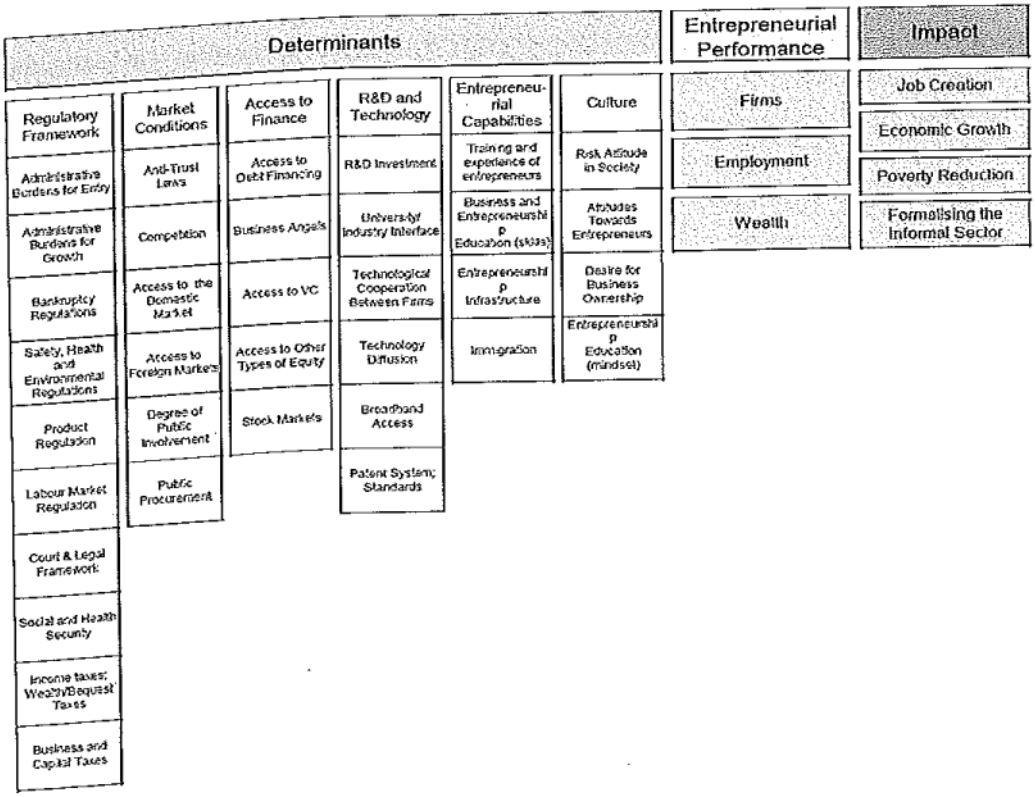

Figure 3.2 Associated policy areas of entrepreneurship (OECD, 2008)

The policy emphasis can differ from region to region. The areas of attention for project developers or policy makers for example focus on incentives aimed at: (1) the regulatory framework, (2) the market conditions, (3) the access to finance, (4) the R&D technology, (5) the entrepreneurial capabilities, (6) and/or the aspect of culture.

The Cross Border Virtual Entrepreneurship (CBVE) project is **demarcated** in activities by its focus on point 5: entrepreneurial capabilities. More specific, the focus is on the Business and Entrepreneurship Education (skills).

3.2 Entrepreneurship in education

Since the first entrepreneurship course was taught in 1947 at Harvard Business School in the United States, the entrepreneurship field has grown extensively. There has been growth in entrepreneurship course offerings and the number of entrepreneurship faculties, endowed positions, academic journals, conferences, books, and research centres (Katz, 2003, cited in Brown, 2007). The Academy of Management's Entrepreneurship division grew more quickly from 1999-2004 than every other division, by 77 percent (Shaver, 2004, cited in Brown, 2007).

It is evident that the management field is taking on a new vision of entrepreneurship. More than 1,600 universities offer 2,200 entrepreneurship courses. There are at least 277 endowed faculty positions and 44 refereed entrepreneurship journals (Katz, 2003, cited in Murphy et al, 2006). There are over 100 established and funded entrepreneurship centers offering resources, consulting, and guidance to entrepreneurs, with pedagogical opportunities for students. Within the last 15 years, Fortune 500 companies and large corporations have endured major retrenchment and eliminated millions of jobs, whereas discoveries in the entrepreneurial sector have yielded an average of 600,000 new incorporations per year and generated millions of job opportunities (Morris and Kuratko, 2002, p. vii, cited in Murphy et al., 2006).

A report identifying the current situation of entrepreneurship education in Europe was published in 2002 (EC, 2002). Even though the report indicated considerable differences between countries concerning the position of entrepreneurship education in their national educational systems, ten out of sixteen member countries had recognised a considerable national policy commitment to promote entrepreneurship in education. This report recommended that the importance of entrepreneurship teaching should be acknowledged in the national curriculum as well as in the curricula for each level of the educational system. This was also recommended as being one of the key qualitative indicators for entrepreneurship education (Kyrö and Carrier, 2005: 17). Even though the intensifying role of entrepreneurship education is recognised on both sides of the Atlantic, there are some differences.

For example, in Canada every university offers one or more courses, and sometimes a degree, or a degree concentration in entrepreneurship (Menzies, cited in Kyrö and Carrier, 2005: 19). Europe has work to do to attain this density in its universities. The trend in Canada is also a bit different than its counterpart in Europe. It has developed, on the one hand, towards offering introductory entrepreneurship courses to a greater number of students rather than building the discipline by offering more advanced courses in entrepreneurship. On the other hands there has also been a de-emphasis on small business management and more interest in preparing students

for high-potential start-ups. In Europe, on the other hand, the focus is still on the start-up phase, but it has also expanded towards the pre-intention phase, assuming that entrepreneurship education should be implemented throughout the educational system (Kyrö and Carrier, 2005: 19).

Kyrö and Carrier (2005: 19-20) also refer to another strong trend around the world. Traditionally, the private universities and the great business schools, that also offer business education, had always concentrated on preparing students for becoming efficient managers in large organisations, with a management paradigm centred on 'planification', command and control. But, in both North America and Europe, it seems that these higher education schools realise that the economy is actually developed to an ever-increasing extent by the contribution of small- and medium-sized enterprises, and that even the big ones must now become more entrepreneurial to keep their place in the markets.

However, entrepreneurship is often a difficult undertaking, as a vast majority of new businesses fail. Almost 60% of those in the EU starting up a business, consider this as an opportunity rather than a necessity. But the fear of business failure, bankruptcy and the uncertainty of income are the top fears in the EU. Lack of finance remains to be the main problem in the EU as well. It is believed that Europe has too few entrepreneurs, or at least too few who actually take the decisive steps to launch their own business. There is a need to create a more favorable climate in society for entrepreneurship. Education and training as well as professional support, guidance and counselling can contribute to addressing this challenge successfully[1]. However, several studies indicate that it seems difficult for traditional university structures to adopt and develop entrepreneurship education (Kyrö and Carrier, 2005: 21).

3.3 Statistics on entrepreneurship

It is widely acknowledged that entrepreneurship is a vital force for economic growth of countries as well as an important opportunity for individuals. For many years, economists and policymakers have identified entrepreneurs as important drivers for employment, innovation and economic growth. Entrepreneurship is an important source of job creation, career opportunities and poverty reduction for both men and women.

Entrepreneurship has been receiving a lot of attention from governments, academics, business support groups and others. There is widespread policy interest in entrepreneurship in the

[1] http://ec.europa.eu/enterprise/entrepreneurship/training_en.htm

European Union as well as in several intergovernmental organisations. Entrepreneurship programmes exist throughout countries of the Organisation for Economic Co-operation and Development (OECD) (OECD, 2006). The European Union has prioritised entrepreneurship as one of the key factors for enhancing the prosperity of its member countries. The European Community (EC) issued a Green Paper "Entrepreneurship in Europe" in 2003, detailing benefits and encouraging joint work on common practices. The EC followed with an Action Plan on entrepreneurship in 2004 and, subsequently, they regularly monitor progress on factors that affect entrepreneurship as well as on specific pro-entrepreneurship activities of member countries. The EU Proposal for Employment guidelines (2005) gives entrepreneurship a priority in the education system (Kyrö and Carrier, 2005).

A political mission emerges in the form of national policy commitments with a more extensive meaning than previously. The strategy of the European Union highlights the importance of the creation of an entrepreneurial culture. The French government has several initiatives to enhance this spirit (Kyrö and Carrier, 2005). Ireland encourages expatriates to return to set up firms while Japan assists those in older age groups to be entrepreneurial. The UK has also repeatedly stressed the importance of entrepreneurship and has numerous support mechanisms in place. The Danish interest in, and attention to, entrepreneurship is well documented and they have taken the lead to engage six other OECD countries in an International Consortium to support common understanding of issues and to tackle international measurement issues (OECD, 2006). The Finnish Government has also generated a special policy programme and an implementation plan for entrepreneurship education (Kyrö and Carrier, 2005). North America, Canada and the United States have public sector programs in place to support entrepreneurship, and many quasi-public or private bodies also support the development and growth of new and/or small businesses. Thus, entrepreneurship is widely regarded as an integral player in the business culture of American life, and particularly as an engine for job creation and economic growth (OECD, 2006).

When we take a look in somewhat more detail to the statistics of entrepreneurship, comparing different countries for as far as the services sector is concerned (Figure 3.3), one notices the relative lower birth rate in U.S. of start-ups i.e., employer birth rate, as compared to the countries in the European Union. This could come as a surprise, as the U.S. is widely known for its entrepreneurial success? This can explained however, by the fact that this success is caused by more firm employment in later years, whereas in countries of the European Union this is less. The statistics also reveal a high ratio birth/death rates in Eastern European Countries: Romania, Estonia, Lithuania, Slovak Republic. This is to be identified as a process of growth and economic restructuring: Schumpeterian. The birth rates in the services sector are generally higher than in

the manufacturing sectors. This underlines the dynamic character of services, which also has higher death rates than manufacturing. The birth rates in the services sector are however higher than the death rates: implying a net creation of firms.

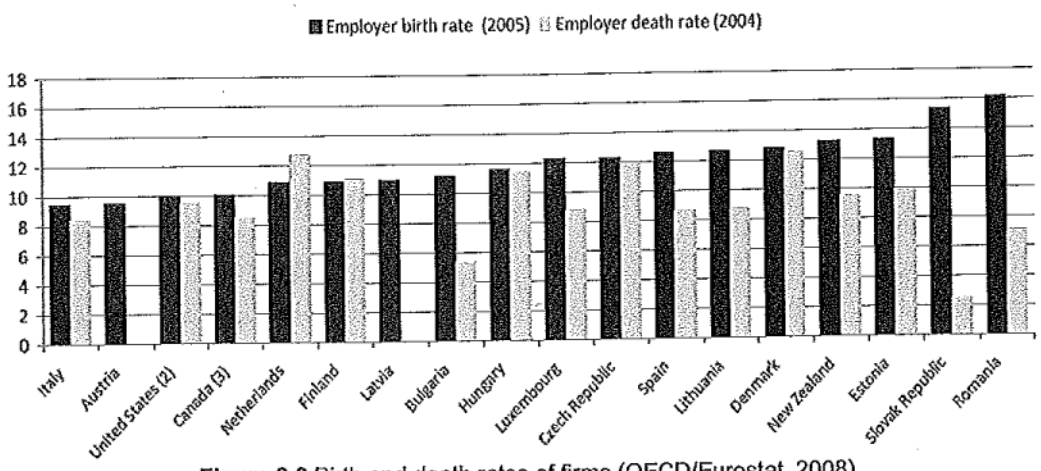

Figure 3.3 Birth and death rates of firms (OECD/Eurostat, 2008)

It appears that the survival rates seem slightly higher in manufacturing than in services. Maybe this can be explained by the following: (1) manufacturing has typically higher entry and exit costs, (2) the smaller entry/exit costs in services allow more readily for trial and error, and (3) the services sector is relative benign to active and passive learning, and experimentation. Figure 3.4 presents the comparison of manufacturing and the services sector.

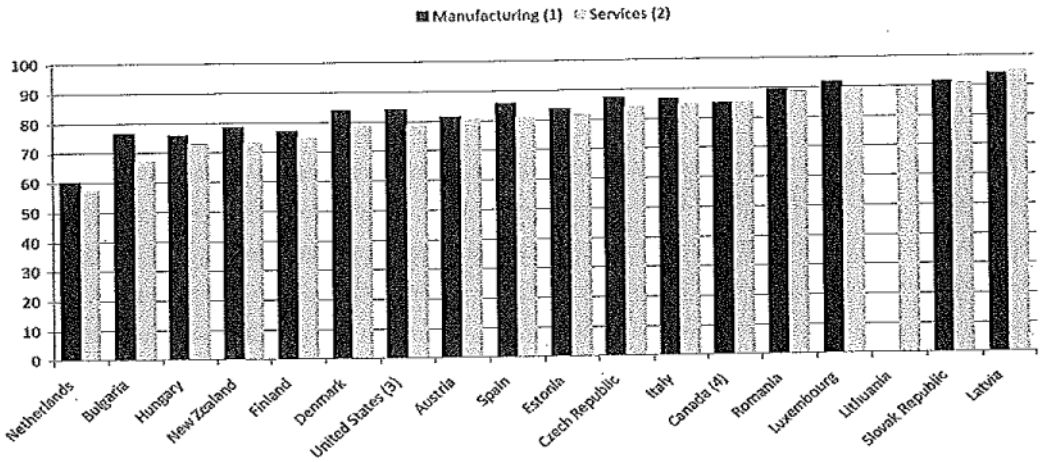

Figure 3.4 Comparing manufacturing and services (OECD/Eurostat, 2008)

The promotion of entrepreneurship for persons to actually start up companies is of vital importance to society. More so, it is apparent from the figures on employment as well. The SMEs account for a very large share of employment of all organisations in societies. Figure 3.5 displays the different employment percentages in the differently sized companies. It distinguishes between companies with 1,9; 10-19; 20-49; 50-249, and 250+ employed persons. The largest share of employment is identified within the categories of companies that fall within the SME definition (up to 250 employees). In addition, Figure 3.6 additionally reveals that the share of micro-organisations within the total population of organisations, is quite large.

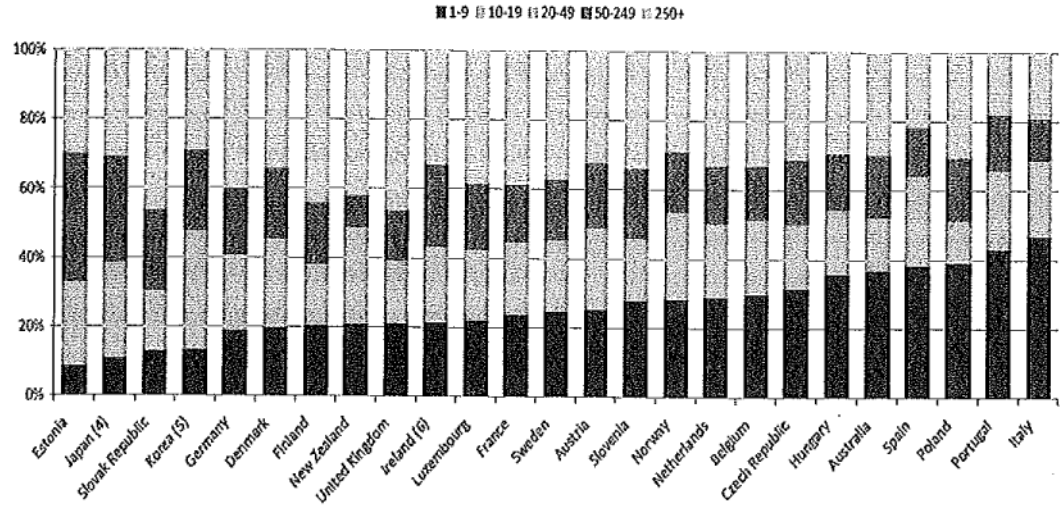

Figure 3.5 The share of employment within SMEs (OECD/Eurostat, 2008)

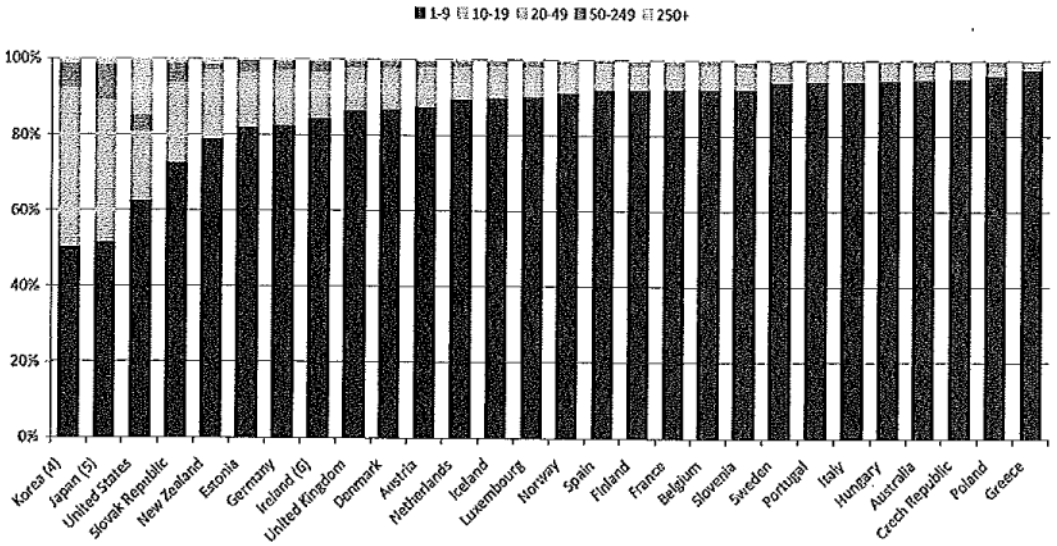

Figure 3.6 Share of micro-organisation within total population (OECD/Eurostat, 2008)

3.4 Development of a referatory portal

Open and distance teaching universities have no institutional referatory information systems for students to consult, nor do they offer professional support, guidance and counselling to encourage SME start-ups successfully. Many students already enrolled in distance education are likely to lose entrepreneurial spirit i.e., self-employment over regular employment possibilities, despite the fact that particularly here major opportunities lie for fostering (traditional) entrepreneurship, as well as for fostering especially the flexible modes of entrepreneurship such as parttimepreneurs, distancepreneurs, seniorpreneurs, weekendpreneurs, et cetera. A need for a referatory portal on entrepreneurship in distance or adult education is apparent. A dedicated portal should serve the lifelong learner i.e., the learner outside traditional cohorts, and should be regionally embedded with liaisons to important stakeholders in the field. On this portal, actual or potential entrepreneurs (full-time or part-time), should be able to find start-up information, expert references and university enrolment schemes for professional courses and trainings.

The progress of technology as well as the introduction of new entrepreneurship practices in every day businesses requires a structured access to resources and training opportunities as well as continuous training on new topics and subjects. In this section we describe the pilot development of a multi-country referatory portal for distance students to consult, whereas (native) professional support, guidance and counselling for SME start-ups is concerned. It is in line with the general objective of the project CBVE, which is to enhance the professional skills of students by lifelong open and flexible learning approaches, with a specific focus on the development, extension and expansion of entrepreneurial skills. The multi-country referatory portal for distance students is to contribute to the objective by offering gateways to multiple entrepreneurship resources. The development context of the referatory portal is (also) one of renewed political interest in entrepreneurship across Europe and beyond. All EU Member States are well aware of the need to integrate entrepreneurship training into the curriculum, but it is still far from universal across schools and further and higher education institutions. And whilst there are many examples of initiatives which have had great results in encouraging young people to think in a more entrepreneurial way, these examples tend to have reached relatively few of the target group. The Commission is therefore working to encourage Member States to learn from each other's successes, and to develop a more systematic approach. The aim is that the education process in all Member States includes elements of entrepreneurship education, so that potential entrepreneurs have a better skills base. Furthermore, the better the understanding of the entrepreneurial environment amongst citizens in general, the more supportive they are likely to be of it.

In 2002, a group of experts from across the EU produced a report on the various initiatives and techniques then in use to foster entrepreneurship skills in schools and universities. A follow-up report looked in more detail at initiatives in primary and secondary education. Seeking to build on the many good examples already in place across Europe, the Commission made entrepreneurship education a central aim of its 2004 Entrepreneurship Action Plan. The work of the expert group has encouraged Member States to review their work in the field, with some changing their approaches on the basis of the report. The Commission also adopted a communication on fostering entrepreneurial mindsets in February 2006, seeking to promote entrepreneurial attitudes and in particular to make entrepreneurship education and training central to curricula at all levels of education. It followed this up with a major conference, bringing together a wide range of stakeholders to share experiences and specifically to put the communication's policies into practice. The Commission further initiated the pilot project "ERASMUS for young entrepreneurs" with the objective of facilitating the exchange of experiences, learning and networking among young and young nascent entrepreneurs, who stay abroad with another entrepreneur in an SME. Information on all these initiatives can be retrieved from: http://ec.europa.eu/enterprise/entrepreneurship/training_en.htm.

Many authors, however, highlight the pressure faced by entrepreneurs and potential entrepreneurs in our increasingly digital information world (Guimaraes, 2000, Chaston et al., 2001). Small businesses have to find their way in the world of increased regulations, politics, and competition. A lack of resources represents one of the major hurdles faced by most entrepreneurs. This is often compounded by a lack of information and a sense of helplessness in terms of knowing where to find this vital knowledge or who to ask for help (Evans and Volery, 2001, cited in Jones et al., 2006). Simsek (2003, p.1) notes that entrepreneurs who have an informational advantage, which he calls "entrepreneurial arbitrage," have a competitive edge. It is believed that information and knowledge management helps small firms to survive in complex business environments (Chaston et al., 2001). The ability to use technologies effectively to capture valuable knowledge during all phases of entrepreneurial business creation and growth can significantly help the success of a new business (Jones et al., 2006).

It is widely believed, therefore, that entrepreneurs who can use knowledge networks to combine, exchange or create resources by using other resources have far greater chances for success. Knowledge management techniques of acquiring, sharing and effectively using knowledge from many different resources may transform a small entrepreneurial venture into a successful business by facilitating innovation, idea creation, and operating efficiencies. Technology-based solutions allow entrepreneurs to leverage the skills, expertise, and knowledge of a broad cross

section of entrepreneurs as well as service providers. The development of portals for entrepreneurship can help entrepreneurs by providing a superior, 'one-stop shopping' knowledge system to those who decide to use these. A virtual approach also provides access to all entrepreneurs regardless of geographic location (Jones et al., 2006).

With the advent of Web 2.0 and social software technologies it is also important to note that entrepreneurs who develop more advanced social networks or invest more heavily in social capital may be more successful than those who "go it alone" because they can fill knowledge gaps and find more opportunities (Weisz et al., 2004, cited in Jones et al., 2006). Thus, the ability of entrepreneurs to connect virtually via discussion forums of interest offers a significant benefit. Chrisman and McMullen (2004, cited in Jones et al., 2006) demonstrated that entrepreneurs who used outside assistance wisely increased their chances of survival.

Therefore, an organised collection of resources, gateways and guidelines to repositories, topical collection of digital resources, as well as a platform bringing together all the information that a learner needs, in a single place, and accessible in a coherent way, will offer a great potential for covering training and lifelong learning needs.

3.4.1 Terms and definitions

The resources that are developed to support entrepreneurial activities must be easily located, retrieved and be well selected to meet the needs of those persons to whom they are delivered. As there is still a considerable degree of ambiguity regarding what constitutes a repository, referatory, digital library and portal, these terms are examined in the next section.

Digital repositories, in the broadest sense, are used to store any digital material. Digital repositories are systems for the storage, location and retrieval of content. However, digital repositories for learning resources are considerably more complex both in terms of what needs to be stored and how it may be delivered. What makes a digital repository much more than a web portal is the ability to discover a learning resource and put it to a new use. The purpose of a digital repository is not simply safe storage and delivery but reuse and sharing (Duncan, 2002). According to a report concluding the results of an international summit of stakeholders of repositories with learning resources, the definition of a **digital learning repository** (DLR) is the following: a digital repository is a DLR if it is created in order to provide access to digital educational materials and if the nature of its content or metadata reflects an interest in those materials being used in an educational context (Holden, 2003; Tzikopoulos et al., 2005).

According to Downes (2003), DLRs are distinguished in:

- course portals,
- course packs and
- learning resources repositories.

A course portal is a website offered either by a consortium of educational institutions or a private company working with educational partners that lists courses from a number of institutions. The purpose of a course portal is to enable a student to browse through or search course listings to simplify the student's selection of an online course.

Course packs are packages of learning materials collected to support a course. Offered primarily by educational publishers, course packs are collections of learning materials offered to instructors for use in traditional or online courses. The course pack may be pre-defined or custom built by the instructor. The instructor is expected to supplement the course pack with additional content, educational activities, testing and other classroom activities. Some course packs are stand-alone. Other course packs are available for use only in a learning management system (LMS).

The third type of digital learning repositories are the ones that store learning objects, which are called *learning object repositories*. A learning object is defined as: "an independent and self-standing unit of learning content that is predisposed to reuse in multiple instructional contexts" (Polsani, 2003; Tzikopoulos et al., 2005).

There are two major types of repositories: those containing both the learning objects and learning object metadata, and those containing metadata only. In the latter case, the learning objects themselves are located at a remote location and the repository is used as a tool to locate learning objects. In the former, the repository may be used to both locate and deliver the learning object. Most learning object repositories are stand-alone. That is, these repositories function a lot like portals in that they contain a web-based user interface, a search mechanism, and a category listing. Digital resources in the form of learning objects can therefore be stored in databases (repositories) containing either the objects themselves or metadata describing the objects. Learning objects are accessible and searchable through Web-based repositories and "referatories". A repository in terms of where the learning objects are physically stored. In a repository, objects reside within a database on the same server that the Web-enabled gateway to the collection, whereas a **referatory** contains no objects but only links to objects residing on remote servers (Metros & Bennet, 2002; Tzikopoulos et al., 2005). Thus, an instructional repository is an organised collection of online teaching materials; an **instructional referatory** is a

gateway for locating and using repositories. However, while the number and size of online digital collections is growing rapidly, the nature of these relatively new tools remains a mystery to many.

The phrase 'digital libraries' is not well defined in literature. Digital libraries are also referred to as: electronic libraries, virtual libraries and hybrid libraries. McLean and Lynch (2004: 5) consider digital libraries as one of the components of the broader and so called "information environment" which also includes "records management, publishing, and scientific and scholarly data management". Sharifabadi (2006) recognises the lack of consensus of what constitutes a digital library. However, when defined, they are associated to the content they provide, as in Saumure and Shiri (2006), who quote the definition of Virtual Reference Canada (2004) emphasizing the possibility of access to resources in the World Wide Web, as well as digitised materials of the library's collections. Sarifabadi (2006, p. 392) presents what can be regarded as a visionary approach, by explaining that "in the e-learning environment, digital libraries are considered as a federation of library services and collections that function together to create a digital learning community" (Virkus et al., 2009).

Much of literature also describes two types of portals:

- institutional portals and
- subject-based portals.

The **institutional portal** provides its users with a wide range of services, integrating these through a common interface regardless of whether particular services are provided by that institution or not. The key to the institutional portal is that it has information about the user, which enables it to customise itself and be customized to the individual's interests and responsibilities (Franklin, 2004).

A **subject-based portal** on the other hand, brings together a variety of information sources and tools about a common theme, but is unlikely to have very much information about the user (Franklin, 2004).

Portals are a way of bringing together all the information that users need in a single place, accessible in a coherent way that provides for enhanced productivity. The key features of a portal include:

- *Service based* - Portals are built up of small amounts of functionality that the user needs, called services. These are much smaller than applications.
- *Unified* - The portal brings together in a single place all the information and services that

users need and makes them available through a common interface.

- *Secure* - A user logs on to the portal, and once they have logged on they should not need to log onto any other systems, either because they are using the same authentication system or because the portal can log them into other systems.
- *Neutral* - Portals allow users to make use of services from within the institution (such as library services, administrative services, VLEs) and external services.
- *Adaptive* - Portals are role based. This means that the portal has a knowledge of the role(s) of the user and the services that they are likely to need and will present these to the user. The tools that an academic needs, differ from those a student needs, which differ from those an administrator needs. Of course, many people occupy multiple roles and the portal needs to be able to cope with this too.
- *Customisable* - People like to work in different ways, and as the portal is a productivity aid it needs to be capable of being easily adapted to the ways in which individuals like to work.
- *Desktop replacement* - Some proponents suggest that all the services and resources that people want will be accessed through the portal and that users will cease to use the interface provided by the operating system. This will provide complete platform independence for the user. As Lightfoot and Ihrig of the University of Washington put it: "The goal is to provide people with the information they need -when they need it, where they need it, and in a format that can easily be acted on" (Katz, 2002, cited in Franklin, 2004).

Portals have been gathering momentum for at least twenty years and are part of a move towards more customer-focused systems (e.g. Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM)). The theory behind these, and especially behind CRM, is that all the information about customers (in education this means students, prospective students, alumni, employees etc.) should be available when interacting with a customer (Franklin, 2004).

There are six reasons commonly given for the drive to implement portals, which can be summarised (Franklin, 2004):

- cost reduction;
- improved efficiency;
- improved customer service;
- building customer loyalty;
- building relationships with suppliers;
- ease of development.

As Gartner puts it, "wise portal deployment can help large enterprises achieve millions of dollars in productivity savings, accelerate critical business activities, and provide competitive advantage by broadening the scope of access to content, applications, and business processes to key customers and trading partners" (Phifer et al., 2003, cited in Franklin, 2004). Table 3.1 represents a glossary of terms used in this report.

Table 3.1 A glossary of terms and definitions (adopted from Hart and Albrecht, 2004).

Term	Definition	Example, Reference URL
Repository	Organised collection of resources	MERLOT (http://www.merlot.org)
Referatory	Gateway and guidelines to repositories	EduResources Portal (http://sage.eou.edu/SPT/) Web Tools for learning (http://wwwtools. cityu.edu.hk) RDN Virtual Training Suite (http://www.vts.rdn.ac.uk)
Digital library	Topical collection of scholarly digital resources	DSpace MIT (http://www.dspace.org) California Digital Library (http://www.cdlib.org) Einstein Archives Online (http://www.alberteinstein.info)
Portal	A platform bringing together all the information that a user needs in a single place, accessible in a coherent way that provides for enhanced productivity.	The elearningeuropa.info portal. This portal is an initiative of the European Commission Directorate-General for Education and Culture which aims to promote the use of ICT for lifelong learning. http://www.elearningeuropa.info/

3.4.2 Identification of stakeholder needs

There is a fairly extensive body of theoretical literature on entrepreneurship, its determinants and impacts, psychological traits of entrepreneurs, sociological theories about entrepreneurs, and the economic role of entrepreneurs. This includes research from other business-related disciplines such as management, marketing, and strategy, as well as other fields such as education, history, political science, and psychology (Brown, 2006). A significant amount of research effort has been devoted in defining the meaning of entrepreneurship and of the entrepreneur in business economics, sociology, psychology and many other scientific disciplines. These studies help to understand the nature of entrepreneurship, the needs of entrepreneurs, and help to provide relevant background information on entrepreneurship.

However, the developing field has been criticised for having an ill-defined paradigm (Shane and Venkataraman, 2000), being highly fragmented (Gartner, 2001), too many stakeholders with conflicting agendas and interests (Curran and Blackburn, 2001), and a scarceness of stable researchers (Landstrom et al, 2001). A balance has not been struck between theory emergence and a paradigmatic foundation (Bygrave and Hofer, 1991; Gartner, 2001; Low and MacMillan, 1988); the miscellany of entrepreneurship theories does not rest on a distinctive and defensible theory base (Bull and Willard, 1993). Further, there has been little interpretive and explanatory work on this issue (Hebert and Link, 1988); most historical analyses focus on entrepreneurship education, the empires of successful entrepreneurs, or the changing nature of economics frameworks or capitalism (Formaini, 2006, cited in Murphy et al., 2006). Murphy et al. (2006) were the first to trace conceptual development through history with a view toward the present and future of the entrepreneurship field.

It is also noted that relatively little empirical work has been done by policy analysts to analyse and compare entrepreneurship measures. In part this is due to the fact that limited data is available, especially international data. While there is considerable interest in entrepreneurship throughout OECD countries, there is, as yet, neither an overall entrepreneurship statistical framework, including concepts and definitions, nor an agreed-to list of the key indicators that are required to improve the collective understanding of entrepreneurship and its impacts. This situation has been due, in part, to financial constraints and also to differing statistical priorities among member countries. The OECD however, successfully started to focus attention on entrepreneurship as part of its "Jobs Strategy" in the latter part of the 1990s, and there are efforts to assemble information on entrepreneurship as part of Country Surveys, including a number of targeted analytical pieces on entrepreneurship and/or growth (OECD, 2006).

Our initial task was to broadly identify stakeholders for the 'referatory' portal. These were condensed into the following categories:

- traditional bachelor/master students;
- distance students;
- academic staff;
- professional organisations;
- chambers of commerce;
- social partners;
- local/regional bodies.

As a result of the literature review the analysis published by Jones, Golann and Vollmers "Using Web-Based Technologies in a Graduate Class to Develop an Entrepreneurship Knowledge Portal" was the most relevant for this task. Students conducted market research with entrepreneurs to establish client requirements for the portal for entrepreneurship. Students conducted interviews and focus groups with entrepreneurs in their geographic regions.

Jones et al. (2006) found that: (1) many support resources exist (with some duplication) but these resources are focused on supporting specific target markets – not entrepreneurial business overall, (2) most organisations serve multiple functions thus creating duplication and overlap, and (3) a mix of diverse resources is very confusing to users who are searching for specific types of business assistance. Major recommendations accordingly include (Jones et al., 2006):

- a "first stop" centre that provides central access to all services;
- improved access to university and college resources plus access to business and technical information related to new business ventures;
- self-help tools to assist clients in assessing their own needs accurately;
- improved technology to provide easier access for clients;
- better distribution of training materials;
- improved ways to identify and support potential entrepreneurs.

Interview and focus group participants in their study identified the main requirements for an entrepreneurship portal. Identification of the needs of entrepreneurs follows Table 3.2.

Table 3.2 Entrepreneurs' requirements for a portal (Jones et al., 2006)

Communication • User friendly linkages among entrepreneurs: forums & news service • Mentoring: ability to contact and talk to experts in different fields • Network of people and resources
Information • Guided assessment process: assist entrepreneurs to ask the right questions • Navigation among services to support new business • Integrated entrepreneur's information forum: local and global event information • Special interest functions: classified section for available services, products and employment • Training possibilities for beginners and advanced level • Blogs, resource lists • Competitors

Interview and focus group participants all mentioned the discussion forum as an important part of a portal. Entrepreneurs should be able to register (at no charge) and immediately join forums of interest. The forums would be monitored by volunteers who were experts in those areas. In addition to networking and brainstorming about solutions to specific business challenges, the forums were viewed as a great way for entrepreneurs to share and evaluate professional resources such as attorneys, accountants and patent information.

Mentoring: A directory of expert 'coaches' who assist entrepreneurs in applying effective business practices to their own business operations was needed. Business practices include financial planning and controls, promotional systems and manufacturing processes. Other needs include individual assistance in crafting effective strategies for new product designs or technologies, developing effective supplier and distributor relationships, intellectual property protection and approaches for attracting venture capital. The portal could create a culture that makes it useful to new entrepreneurs and of interest to successful entrepreneurs who would like to give back to the state. Retired business leaders and entrepreneurs may choose to become involved.

Assessment: Entrepreneurs often are not certain what questions to ask. Several suggested ideas for the structure of a self-assessment tool that would walk entrepreneurs though a series of questions to assess their individual business situations. Based on their responses, an 'if-then' model would guide them in formulating strategies for choosing the most appropriate resource

provider(s). The assessment tool could also identify the business needs and return the most relevant articles i.e., finance, capital, and IT needs, providing a response customised to each entrepreneur. If this approach would not be satisfactory for the entrepreneur, the questions could be forwarded directly to a live advisor.

Navigation: Entrepreneurs want an easier way to identify the resources they need. Typical questions include whom the organisations' target and what they can (and cannot) offer. Explanations of the specific funding sources for new business are of special interest. Although several sources of funding are available to entrepreneurs, these target different stages of business development. Entrepreneurs want information on what is available in terms of grants, advice about writing grants, templates for grant writing and perhaps a vehicle to critique their grant applications. Thus, the assessment tool plus a search feature provides easily navigable methods to find needed resources.

Integrated forum: Participants thought that a centralised calendar of events relevant to entrepreneurs would be very desirable. Entrepreneurs could choose among seminars, networking meetings, trade association meetings or shows across the state and region. The Forum could also provide news and profiles about new or growing small firms. Entrepreneurs could learn about others who may have solved similar problems or be pursuing similar goals. This would allow people to both to learn about innovative solutions and would promote alliances among entrepreneurs to build on their strengths. It could also encourage constructive comments and the sharing of ideas. Such a format could be seen as 'news releases' and encourage ideas and comments from other users.

Special interest functions: Listings and advertising of resources in a classified sales format was suggested. As examples, entrepreneurs could sell and purchase equipment or announce their needs for specific types of employee skills.

In spite of the fact that this study explored mainly the requirements for the portal among entrepreneurs, many of the requirements seem to be relevant also to other stakeholders who are interested in the entrepreneurship: traditional bachelor/master students, distance students, academic staff, professional organizations, chambers of commerce, social partners, and local/regional bodies.

Figure 3.7 and 3.8 show the final flowchart developed for the entrepreneurship portal by Jones et al. (2006). The first flowchart is the extended model for the Community Section. The second shows the entire portal.

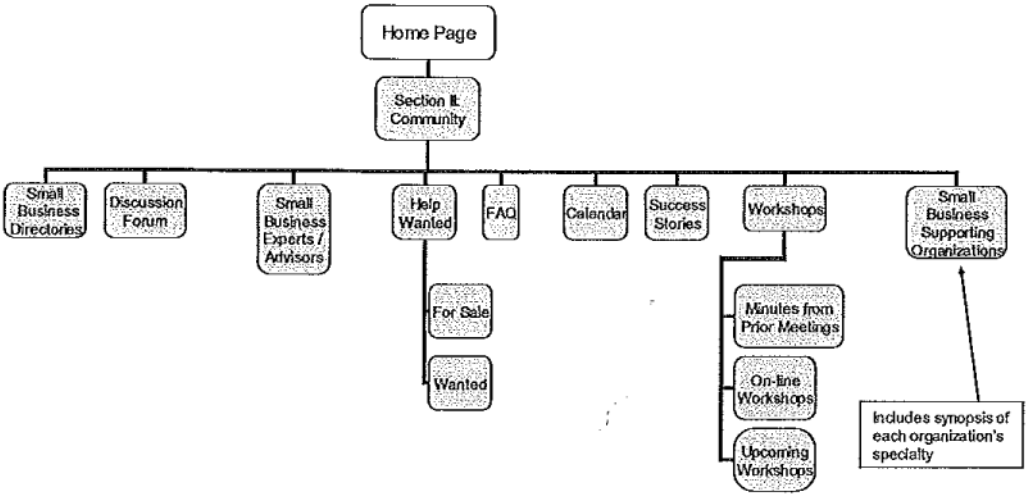

Figure 3.7 Flowchart of the Conceptual Design of Entrepreneurship Knowledge Portal_ Community Section

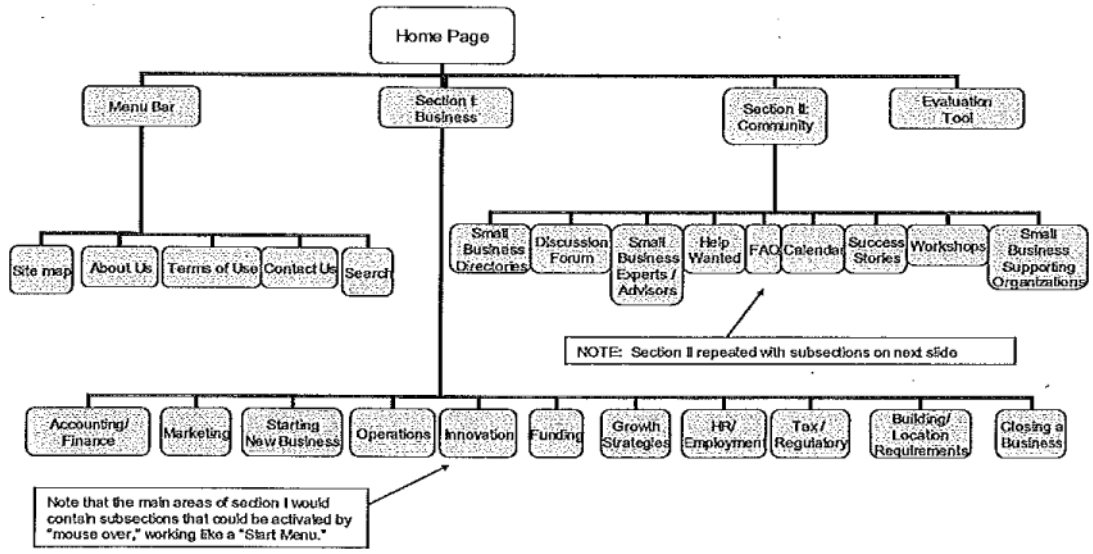

Figure 3.8 Flowchart of the Conceptual Design of Entrepreneurship Knowledge Portal

Table 3.3 summarises the value of a web-based knowledge portal to entrepreneurs using both research and that of the Kauffman Foundation Survey (Jones et al., 2006).

Table 3.3 Entrepreneur needs and portal features

Portal Features → / **Identified Entrepreneurial Needs & Recommendations** ↓	Directory	Assessment tool	FAQ's	Discussion Forums	Knowledge map of expertise	Company & entrepreneur news	Consolidated calendar of events	Classifieds	Links to sites	Functional Area resources
First-stop access to all services	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Guided evaluative tool to help entrepreneurs ask the right questions		♦								
Communication links				♦		♦		♦		
Access to expertise	♦			♦	♦					♦
Navigation of state resources	♦				♦				♦	
State-wide event calendar							♦			
Special interest functions			♦	♦	♦			♦	♦	♦
Repository of information	♦									♦
Access to academic, business and technical resources including training materials	♦	♦		♦	♦				♦	♦

Under ideal circumstances a 'referatory' portal will be able to draw on the skills of staff with the following roles and/or job titles (Table 3.4). Reality may mean that a few staff cover all these roles.

Table 3.4 Skills and people checklist (DESIRE Information Gateway Handbook, 2000; adapted).

Title	**Description**	**Skill Set**
Project manager	someone to over see the whole project and ensure the smooth day to day running	organisational skills, good written and oral communication, person management, subject and technical knowledge and understanding, excellent information management skills
Subject specialist	person or persons to develop the intellectual scope of the portal and the expansion of the portal resources	excellent subject knowledge, understanding of information management issues, ideally extensive Web experience and some understanding of technological principles behind portal
Information cataloguers	person or persons directly involved in the entry of resources into the portal (often the same as the subject specialist)	subject knowledge, confident Web user, some understanding of technological principles behind portal

Technical implementation officers	person or persons involved in the development and implementation of the technical side of the portal	excellent technical understanding of the networked environment, good programming and scripting skills and good working knowledge of proposed portal technology. If developing new portal technologies then very high network related technical skills are essential. Ideally have some appreciation of information management issues
Technical support officers	person responsible for the day to day technical integrity of the portal	as technical implementation officers but can be slightly less experienced if correct tools are put in place in the system development
Web server administrator	person responsible for the running and administration of the portal web server	as above plus excellent Web server administration skills
User interface designer	person or persons responsible for the design and implementation of the portal user interface	good understanding of Web site design and well versed in usability and accessibility issues
Finances officer	person responsible for the financial side of the project	good understanding and experience of potentially large scale project financial management, may or may not be project manager
Publicity and promotions officer	person or persons responsible for the development and deployment of publicity and promotional materials/activities	experience in publicity and promotions, good subject knowledge and user community understanding

Portal services need to be provided in such a way that they are:

- reliable;
- responsive;
- efficient;
- scalable.

A reliable service is one that is available all (well, almost all) of the time, is secure and does not lose all your data in the event of disk failure or security breaches. A responsive service is one that can be browsed, searched and maintained in a way that does not subject the end-user and cataloguer to undue delays. An efficient service makes the best use of the available hardware and network resources. A scalable service is one that can cope with demands placed on it by growing numbers of end-users, increasing database size and new service scenarios (DESIRE, 2000).

Portals should also provide their users with a quality controlled environment in which to search for information on the Internet and they do this by building selective collections where every resource that the Portal points to has been carefully selected for its quality. The selection process involves people making value judgements about resources and selecting only those resources that satisfy certain quality criteria. Portals need to use a service-driven definition of quality, where resources are selected for their relevance to the user group as well as their inherent features. Selecting

resources for a Portal therefore requires a clear understanding of the information needs of the users. A formal selection policy can support the development of a consistent and coherent collection of high quality Internet resources (DESIRE, 2000). Many portals on the Internet do not explicitly state their selection policies, but there are a number of advantages in developing a formal selection policy for a portal and publishing it on the site: (1) it helps users to appreciate that the service is selective and quality controlled, (2) it helps users to understand the level of quality of information they will find when using the service, (3) it helps portal staff to be consistent in their selection and to maintain the quality of the collection, (4) it can be used to train new staff, and (5) it ensures consistency in collections that are developed by a distributed team.

By publishing the selection policy on the portal, it can help users to conceptualise the nature of the collection they are using. On the Web, users are very often faced with a search box or an index, and it is not always easy for them to understand exactly what they are searching. An explicit selection policy can help them to understand the nature of service. In an information environment, a selection policy defines the criteria used for selecting resources to add to a collection. It will typically outline the scope of the collection and the criteria used when new resources are selected for the collection. The scope policy relates to the needs of the target user group, while the selection criteria relate to the inherent features of the Internet resources (DESIRE, 2000).

Portals do not aim to include every resource available on the Internet. The scope of a portal defines the boundaries of the collection. The scope policy is therefore a broad statement of the parameters of the collection. The scope policy of a service states what is and is not to be included in the portal. In the selection process, the scope of the service will affect the first decisions made about the quality of the resources. Those falling outside the scope will be rejected and the rest will have the quality criteria applied to them. The scope criteria are the first filter through which the resources pass. They will tend to involve clear decisions; either a resource falls within the scope or it does not (DESIRE, 2000).

A scope statement will typically outline: the subject areas covered by the gateway and the types of resources covered by the gateway. It may also outline: language parameters (e.g. whether the gateway only includes resources in a certain language), geographical parameters (e.g. whether the gateway only includes resources from a particular country), and other parameters of relevance to the user group served (DESIRE, 2000). In the development of a portal it is important to have a good user interface design: (1) portals need to be usable, (2) good portal design can significantly increase the ease with which users can complete tasks, i.e. it increases usability, (3) users who can't complete tasks are frustrated users; frustrated users don't come back, (4) users who complete tasks are happy users; happy users come back to a portal and often tell their friends and colleagues about a great portal (DESIRE, 2000).

The user interface is simply what the user sees on the screen through their browser. If what they see is hard to understand or difficult to use, then the vast majority of users will never make it to the real content or value-added features of the Web site. It doesn't matter how good the information is on the portal - if the user can't access the information, they will go elsewhere (DESIRE, 2000). Poor user interface design can hide even the most powerful and useful Web sites from all but the most advanced and patient users. Web site developers (including portal developers) have to consider seriously the issues of user interface implementation. A poor user interface will mean low usage of the site and its ultimate failure. The failure of Web sites is often due to their designers' not considering their users and designing with the assumption of too much technical knowledge (DESIRE, 2000).

It should always be remembered that, by being in the position of developing or even just considering the development of a portal, you are probably in the category of an advanced user. You may not be as advanced as the system administrator or 'techie' in your organisation, but compared to the average man in the street you are an expert! Never overestimate the skills of your users, unless you have direct evidence on which to base your judgements (DESIRE, 2000). Usability and accessibility often go hand in hand; if a portal is difficult to use then it may become inaccessible, as users cannot get to the information that they want. Making something more accessible often makes it more usable for all users. Designing for maximum accessibility helps designers to focus on users and content rather than on 'flashy' design issues. But accessibility also needs to be considered with regard to people with disabilities and giving equality of access to a portal. By making sure that a portal is accessible to as wide an audience as possible you also necessarily increase the usability of the site (DESIRE, 2000).

3.4.3 Survey of contemporary resources and functionality

Next to the fairly extensive body of theoretical literature on the needs of entrepreneurs in view of portal development, this section describes the results of a survey into existing entrepreneurship resources and functionalities: portals, repositories, referatories, digital libraries, and other websites. Part of the research methodology for portal development was (also) the conduct of selected qualitative interviews among prospective student-entrepreneurs, academic staff and other stakeholders, but results thereof shall be presented later.

A review of relevant online sources, including information resources and digital learning resources relevant for entrepreneurship, systematically organised and classified, can prove of great use both for potential learners, as well as for tutors and everybody else interested in

entrepreneurship. The objective of the study described next, has been to review existing repositories, referatories, digital libraries and portals, and identify the ones offering resources relevant for the entrepreneurship, and examine their characteristics.

Searches were conducted on the web and entrepreneurship-related web portals and referatories were identified around the world. The terms "Entrepreneurship portal" or "Entrepreneurship repository" or " Entrepreneurship referatory" or "Entrepreneurship digital library" were used. The term "Entrepreneurship portal" provided 4700 and the term "Entrepreneurship repository" 1 citation in Google and there was no citations related to "Entrepreneurship referatory" (0) or "Entrepreneurship digital library". However using other terms like "Entrepreneurship Resources Subject Guide" or "Entrepreneurship Subject Guide" or "Entrepreneurship Resources" provided a huge amount of citations. Thus, only the selected results of the survey are presented here (Table 3.5).

Table 3.5 Entrepreneurship web resources

European portal for SMEs	http://ec.europa.eu/enterprise/sme/index_en.htm
Entrepreneur.com	http://www.entrepreneur.com
U.S. Small Business Administration	http://www.sba.gov
Business Access to State Information and Services	http://www.basis.ie/index.jsp
Department of Enterprise, Trade and Employment	http://www.entemp.ie/
OCRI Entrepreneurship Centre	http://www.entrepreneurship.com/
Main & Company	http://www.maineco.org/about/default.htm
My Own Business	http://www.myownbusiness.org/
IOWA Entrepreneur Network	http://www.iowaentrepreneur.com
Women's Entrepreneurship Portal	http://ec.europa.eu/enterprise/entrepreneurship/craft/craft-women/womenentr_portal.htm#Networks%20representing%20women%20entrepreneurs
Global Entrepreneurship Network	http://www.genportal.org/index.php?
NEN in media & news	http://www.nenonline.org/jsp/pressRoom/press_archives.jsp
Innovation & Entrepreneurship Portal	http://portals.dmst.aueb.gr/ie/
ZeroMillionCom	http://www.zeromillion.com/
Entrepreneurship Corner	http://edcorner.stanford.edu/
MIT Entrepreneurship Center	http://entrepreneurship.mit.edu/services_resources.php

European portal for SMEs

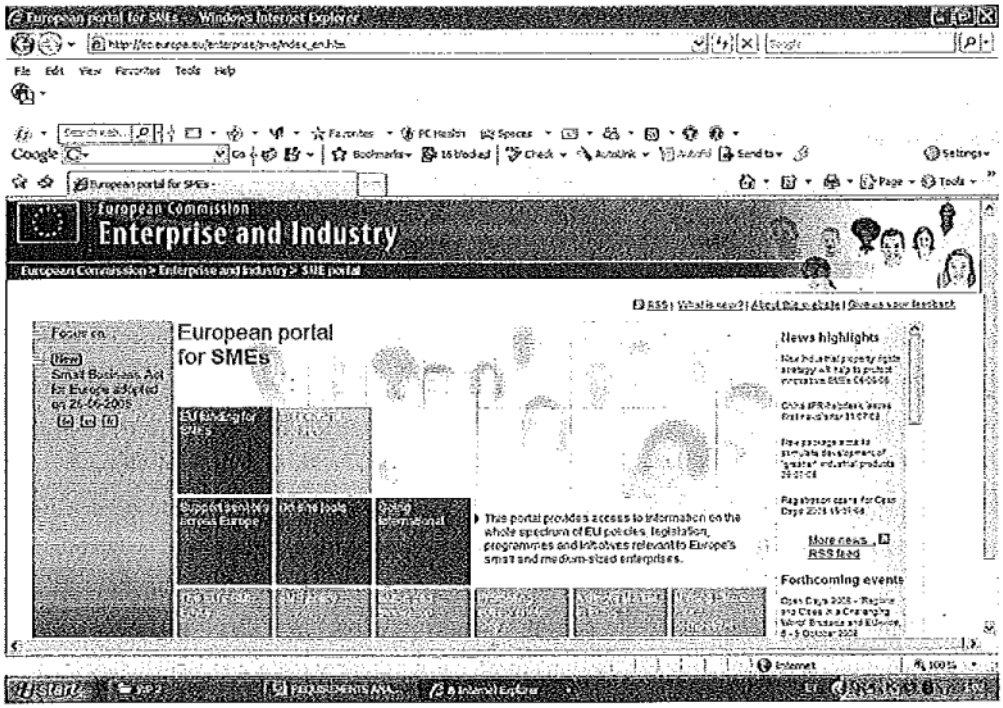

Figure 3.9 European portal for SMEs (http://ec.europa.eu/enterprise/sme/index_en.htm)

This portal provides access to information on the whole spectrum of EU policies, legislation, programmes and initiatives relevant to Europe's small and medium-sized enterprises. The following portal categories are presented: EU funding for SMEs, EU sectoral policies, Support services across Europe, On-line tools, Going international, The EU's SME Envoy, SME policy, SMEs and Innovation, Promoting entrepreneurship, A Single Market in Europe, and Making SMEs more competitive.

EU funding for SMEs

Covers many opportunities available within the range of programmes, and this tool aims to help SMEs to find the ones which are most appropriate to their individual situation. It provides quick and easy access to information on opportunities within all the main EU programmes relevant to SMEs. This on-line tool provides a simple means for SMEs to identify the European Commission funding instruments which could help their business. It explains the different programmes, their aims and the types of activity each supports. It also gives links to detailed information and contacts for further information and assistance in each EU Member State.

EU sectoral policies

The category links concern all enterprises operating in a given sector, and therefore may not be specifically designed for SMEs.

Support services across Europe

Covers general support services and support for innovation and research. On-line tool for SME funding providing a simple means for SMEs to identify the European Commission funding instruments which could help their business. It explains the different programmes, their aims and the types of activity each supports. It also gives links to detailed information and contacts for further information and assistance in each EU Member State.

On-line tools

Provides help to understand EU law, policies and initiatives which affect firms; the European Commission has created a number of specific websites and on-line tools which can help find rapidly the answers to many questions. The information available through these sites can be used as an initial step in researching business opportunities for firms and is an ideal preparation before making enquires with one of the dedicated support services listed on the 'Support services across Europe' page on this portal. Through these contacts it is possible to access local help and specialist help services for a range of issues relevant to the activities of SMEs. There are helpdesks, local advice, databases and directories, guides, handbooks and market analyses.

Going international

This link provides relevant sources for if a business is interested in going international.

The EU's SME Envoy

The European Commission has appointed an SME Envoy, to act as an interface for informal dialogue with SMEs across Europe, to ensure that their interests are fully taken into account in the design of all EU policies and legislation across all fields, under the 'think small first' policy. The page introduces the SME Envoy and her role. In addition there is a downloadable guide that provides a handy summary of EU SME policy, its key initiatives and programmes, and underlines the importance of making Europe a better place for SMEs to do business. It indicates how SMEs can get involved, and where they can turn to for additional information. A new and completely updated 2008 edition, including the "Small Business Act for Europe", is now available. There are more relevant sources on this page like European SME week - The European Commission is organising the first European SME week from 6 to 14 May 2009 to inform SMEs about available support at EU and national level and to encourage more people to become entrepreneurs. The SME week will be launched in Brussels on 6 May but the vast majority of events during the week

will take place across Europe in the Member States. SME contacts and Links page provide details of these bodies, their membership and their positions in current policy debates that enable SMEs to speak to policy-makers with a stronger voice at both national and EU level. It also provides access to a list of links to government sites and gateways for SMEs. This category also provides links to facts and figures on SMEs, Eurostat business statistics, The Observatory of European SMEs which monitors the economic performance of SMEs in Europe and provides information on SMEs on an annual basis to policy-makers, researchers, economists and SMEs themselves. There are links to the Eurobarometer flash reports and to the Survey on Entrepreneurship, which aims at a better understanding of entrepreneurship, by identifying what is fuelling entrepreneurial mindsets, what encourages people to become entrepreneurs and which obstacles exist. The results of the Eurobarometer (2007) survey, which for the first time covers 28 countries, will help the Commission shape its policy-making.

SME policy

The European Commission has developed and implemented a range of policy measures specifically to assist SMEs in Europe. These policies are aimed at creating the conditions in which small firms can be created and can thrive. This page give access to these documents.

SMEs and Innovation

This page provides access to EC programmes that support Innovation, to EU Innovation policy, to the European eBusiness Support Network portal, and to the European Commission' research portal for SMEs, providing information and resources for technology-oriented SMEs wanting to apply for research funding through the EU's 7th Research Framework Programme (FP).

Promoting entrepreneurship

This page gives links to EU initiatives to encourage entrepreneurship.

A Single Market in Europe

This page explains rights, opportunities and obligations for a Single Market in Europe and provides access to relevant sources.

Making SMEs more competitive

This page provides links to many useful materials that help SMEs to be more competitive.

In addition to these main categories there are also the sections: News highlights, Forthcoming events, Recent publications, Recent speeches, Public consultations, and Grants and Tenders. There is also an RSS feed that contains frequently updated content. The portal is available in 21

languages and there are also translation aids. The portal has search facilities and a user feedback facility. The portal is up to date, easy to navigate, aesthetically pleasant and contains links to useful resources and contact information.

Entrepreneur.com

Figure 3.10 Entrepreneur.com (http://www.entrepreneur.com)

This portal contains the following categories on the horizontal bar: Home, Ask Entrepreneur, Grow Your Biz, Business Ideas, Franchises & Opportunities, Video, Tools & Services, and Community. The following categories are presented on the vertical bar: Starting a Business, Money, Marketing, Sales, Advertising, Franchises, Biz Opportunities, Home Based Biz, E-Business, Management, Human Resources, Technology, Work Life, Automotive, Magazine, Special Listings, and Mobile Edition. Each main category contains subcategories. For example, Starting a Business category includes: How-To Guides, Self-Assessment, Business Ideas, Startup Basics, Business Plans, Getting Financing, Finding Customers, Inventing, Success Stories, and Teen Startups. The additional resources include: Franchise Your Biz, Business Blog, Columnists, Podcasts, Business Forms, Resource Centres, Startup Books, Special Offers, Products & Services, Free Trade Magazines, Classifieds, Trade Journals, Encyclopedia,

Slideshows, and Get the Magazine. There is also an RSS feed and a search facility. There are special resources for women entrepreneurs. The video clips are good visualisation tools on the page, and the Ask Question facility enables one to ask questions to experts or search already asked question/answers. The portal is very comprehensive and contains a lot of useful resources and tools, but the main page contains too much information and it takes time to find relevant information and tools.

U.S. Small Business Administration

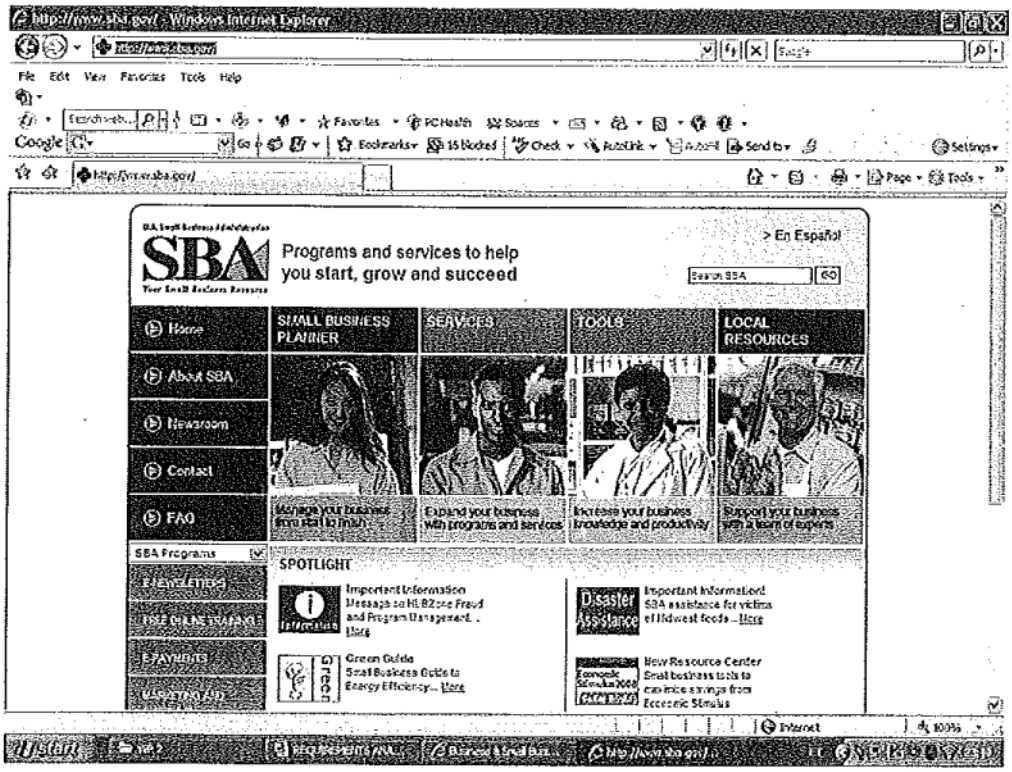

Figure 3.11 U.S. Small Business Administration (http://www.sba.gov)

The U.S. Small Business Administration (SBA) was created in 1953 as an independent agency of the federal government to aid, counsel, assist and protect the interests of small business concerns, to preserve free competitive enterprise and to maintain and strengthen the overall economy. Although SBA has grown and evolved in the years since it was established in 1953, the bottom line mission remains the same: the SBA helps Americans start, build and grow businesses. Through an extensive network of field offices and partnerships with public and private organisations, SBA delivers its services to people throughout the United States, Puerto Rico, the U.S. Virgin Islands and Guam.

The portal contains the following main categories on the horizontal bar: Small business planner, Services, Tools, and Local resources. Each main category contains subcategories. For example, the Small business planner includes: Plan your Business, Start your Business, Manage your Business, and Exit Strategy. The Services Category includes: Financial Assistance, Grants, Contracting Opportunities, Disaster Assistance, Online Training, Counselling & Assistance, Compliance Assistance, Laws and Regulations, and Special Audiences. The Tools category includes: Audio/Video, Library & Resources, Marketing & Outreach, Monthly Web Chat, and Forms. The portal contains the following main categories on the horizontal bar: E-Newsletter, Free online training, E-payments, Marketing and outreach, Most requested items, and Administrators corner.

On the main page there are also resources considered highly relevant for new entrepreneurs like "Starting a Business? SBA's New assessment tool will help you determine if you're ready" or "Small Business Guide to Energy Efficiency". There are also search facilities and a site map for easier navigation. The portal is available in English and in Spanish.

Business Access to State Information and Services

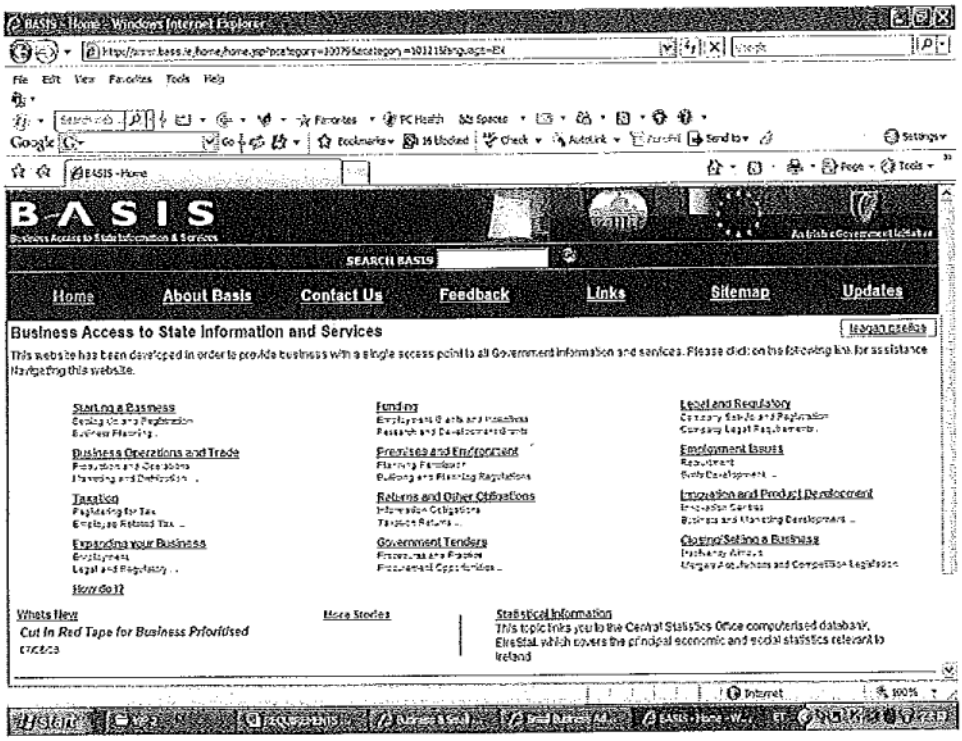

Figure 3.12 Business Access to State Information and Services (http://www.basis.ie/home/home.jsp?pcategory=10079&ecategory=10121&language=EN)

BASIS (Business Access to State Information and Services) was established in 2000 as part of the Irish Government Action Plan 'Implementing the Information Society in Ireland'. The Department of Enterprise, Trade & Employment is responsible for the development of the BASIS initiative. The aim of the BASIS website is to deliver Government information and services to business 24 hours a day, seven days a week, from a single access point and with a consistent look and feel. Information on the website is structured around the "life events" of a business, e.g. business start-up and development, paying taxes and employing staff.

The main categories include: Starting a Business, Funding, Legal and Regulatory, Business Operations and Trade, Premises and Environment, Employment Issues, Taxation, Returns and Other Obligations, Innovation and Product Development, Expanding your Business, Government Tenders, Closing/Selling a Business, and How do I? Each main category contains comprehensive subcategories. For example, the Starting a Business category contains the following subcategories: Setting Up and Registration (with Forming a Company, Registration of a Company for Tax Purposes, Registration of Banks and Friendly Societies, and Registration of Insurance Companies), Business Planning (with Market Research, Semi State Advisory Services, Business Planning, Choosing a Location, Sector Profiles), Legal and Regulatory (with Intellectual Property, Licenses and Permits, Trading Laws and Regulations, Environmental Licenses and Regulations), Employment (with Recruitment, Government Incentives, Work Permits and Visas, Employment Rights, Employment Taxation, and Health and Safety in the Workplace), Capital Grants, Trading Online, and Franchising.

In addition to providing several hundred articles on a wide range of topics, the BASIS website also offers the following services: links and contact details relevant to the subject on each page; and pointers to related subjects; a forms section giving access to the most commonly used application forms, returns and other forms; a service locator to find your local government services such as Tax, Fás and Enterprise Ireland offices; a what's new page keeping you up to date with Government information affecting business; a free updates facility, informing you by e-mail when articles on BASIS are updated; and, easy access to government online services such as the Revenue Online Services and the Public Procurement Portal.

The portal structure is clear and the site map provides a good overview of the portal. The portal has search facilities and a user feedback facility.

Department of Enterprise, Trade and Employment

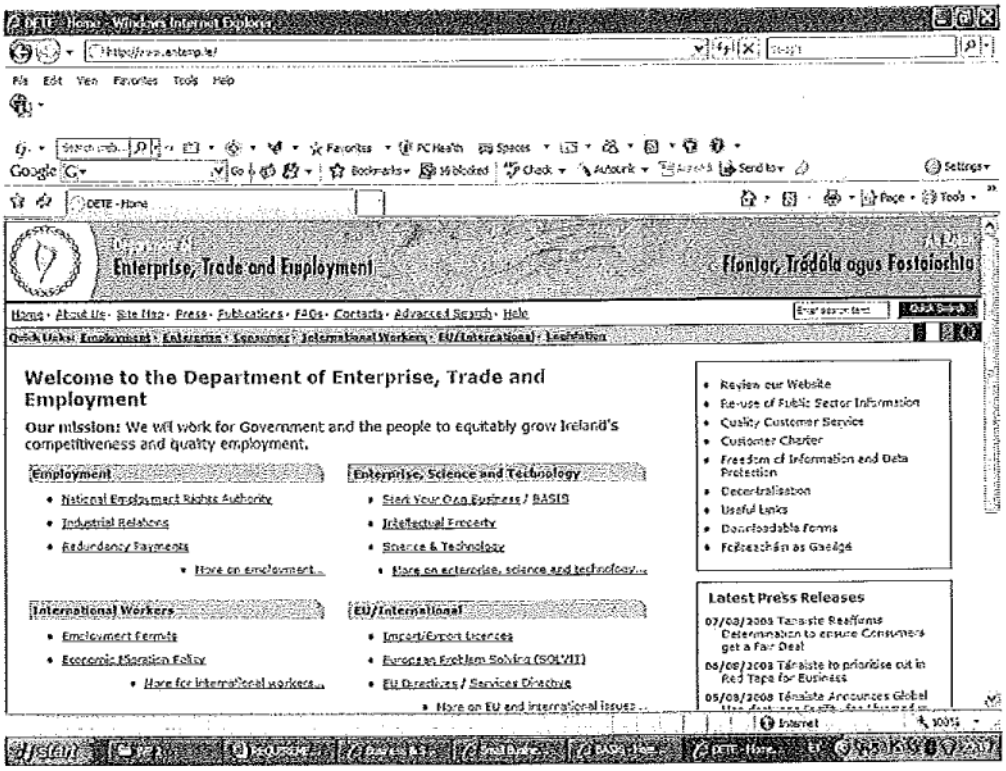

Figure 3.13 Department of Enterprise, Trade and Employment (http://www.entemp.ie/)

This portal is operated by the Department of Enterprise, Trade and Employment in Ireland. The structure of this portal is as follows: Home, Labour Force Development, Competitiveness and International Affairs, Employment Rights & Industrial Relations, Contact, Help, Search, Site Map, Science, Technology and Intellectual Property, Corporate Services & Economic Policy, Consumers, Competition and Commerce, and Enterprise & Agencies. A Downloadable Forms section giving access to download forms operated by the Department of Enterprise, Trade and Employment. The portal structure is clear and a site map gives a good overview of the portal. The portal has search facilities and a user feedback facility.

OCRI Entrepreneurship Centre

The OCRI Entrepreneurship Centre is dedicated to helping Ottawa entrepreneurs make educated decisions about starting and growing their businesses. The Centre aims to promote Ottawa's

economy, through the development of products and services that encourage entrepreneurship and support business growth.

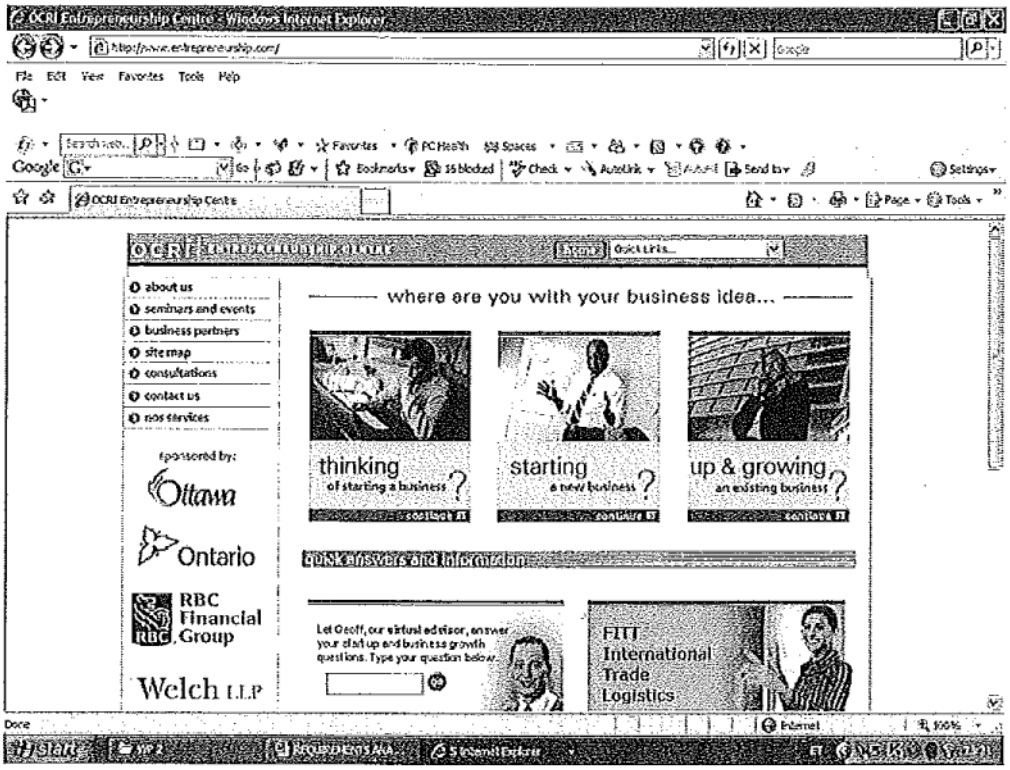

Figure 3.14 OCRI Entrepreneurship Centre (http://www.entrepreneurship.com/)

Where are you with your business idea?

The portal includes the following categories:

Thinking

- Frequently Asked Questions
- Activities of Interest
- Tools and Resources
- Discussion Forums
- Ask our Virtual Assistant

Starting

- Frequently Asked Questions
- Activities of Interest

- Tools and Resources
- Ask our Virtual Assistant

Growing

- Frequently Asked Questions
- Activities of Interest
- Tools and Resources
- Discussion Forums
- Ask our Virtual Assistant

Items for sale

- Seminars and Events
- Publications
- Consultations

About the Entrepreneurship Centre

- About Us
- Staff Consultants
- Business Partners
- Success Stories
- Contact Us
- Nos services

Other Content

- Site Tools and Resources
- Key Contacts
- Newsletter Signup
- Distribution List Unsubscribe Form

There is also a link to the Entrepreneur's Handbook and the Online Business Tutorials. The Business Tutorials are online training modules designed to help to learn the fundamentals of important business subjects. The modules include valuable content taught by subject matter experts. In addition, each program has links to other sources of relevant information in the "Resources" sections of the module. The Online Business Tutorial is free of charge. There is also a free, step-by-step business plan writing workbook. The portal is up to date, easy to navigate, aesthetically pleasant and contains links to useful resources and contact information.

Main & Company Solutions for Business

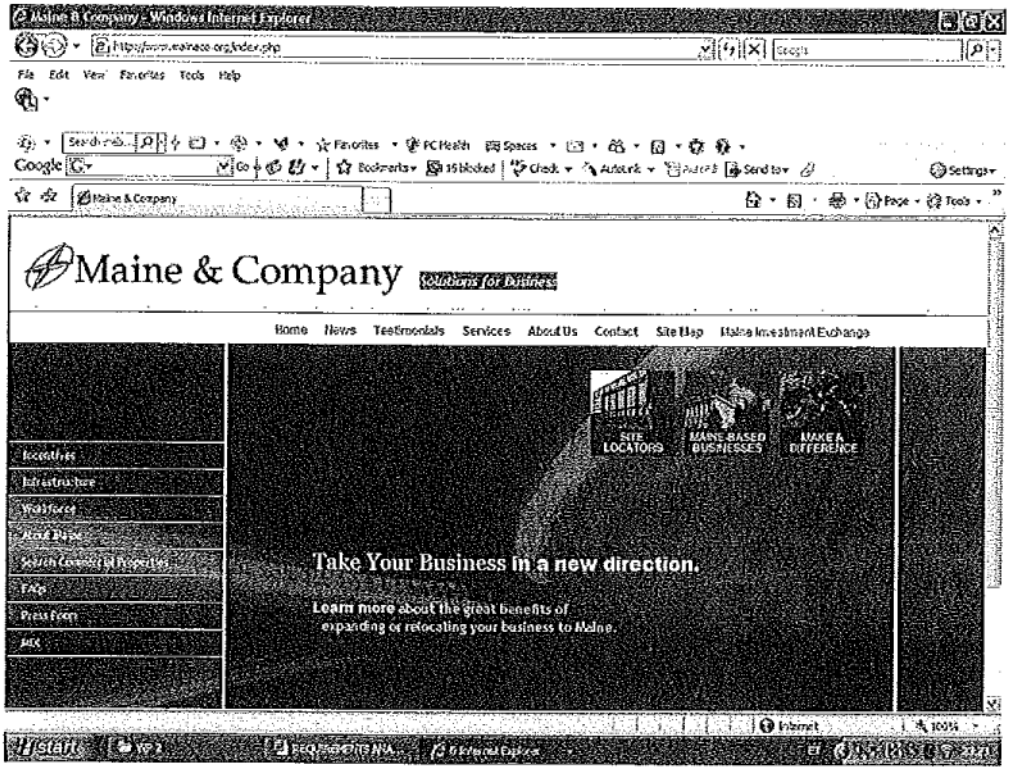

Figure 3.15 Main & Company Solutions for Business (http://www.maineco.org/index.php)

Maine Company is a private, non-profit corporation whose staff provides free and confidential services to companies locating to or growing in Maine. Services include real estate site searches, data collection and analysis, incentives identification and valuation, site visit coordination, and financing coordination. The Company also developed the portal. The portal includes the following categories: Incentives (Tax Incentives, Financing Assistance, Pine Tree Zones), Infrastructure (Telecommunications, Transportation, Utilities), Workforce (Maine Quality, Job Training, Colleges and Universities, Vocational Education, Testimonials), About Maine (Industry, Economy, Demographics, Regions, Statistics, Quality of Life), Frequently Asked Questions, and Press Kit.

The portal is easy to navigate, but the resources are designed for the region in specific. There are no search facilities and it is difficult to find out at what point in time the portal has been updated.

My Own Business

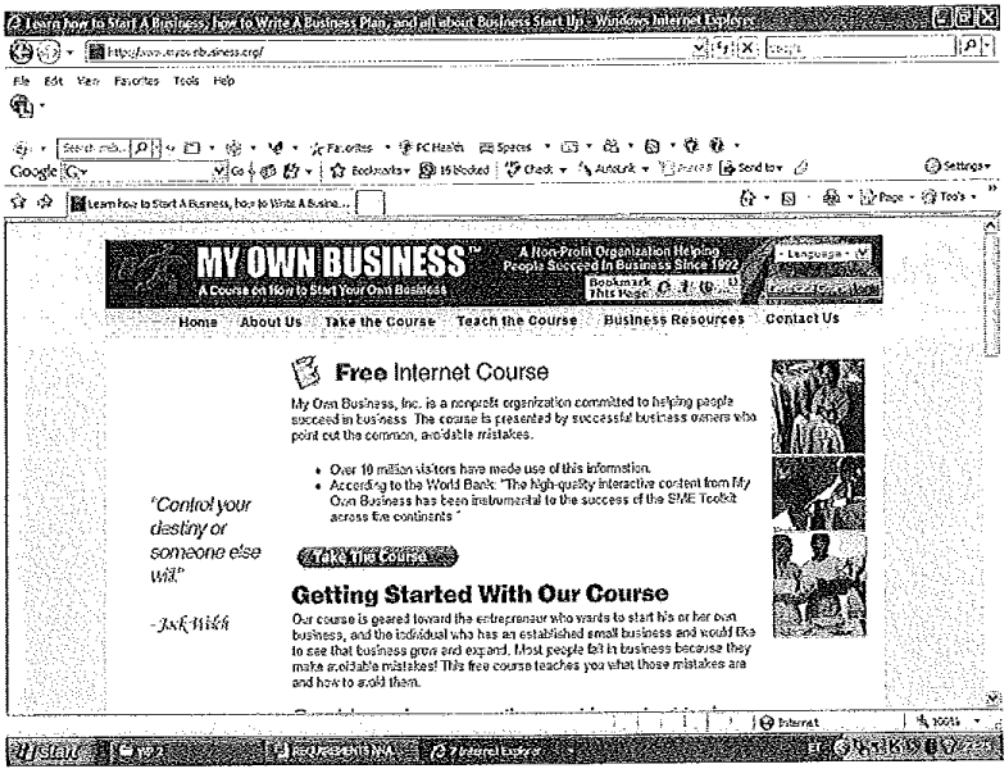

Figure 3.16 My Own Business (http://www.myownbusiness.org/)

The Mission of My Own Business, Inc. as a non-profit organisation is to educate entrepreneurs by providing free coursework to foster success and prevent and mitigate human suffering and economic losses arising from preventable mistakes. The objectives include:

- maintain a viable, growing organisation by developing, producing implementing, updating and marketing educational offerings through multiple delivery channels;
- fulfil a widespread, ongoing and important role in making the world a better place by nurturing successful entrepreneurs;
- nurture and expand collaborations with schools, community services organisations, the SBA, World Bank, SCORE, State Department and other respected collaborators;
- expand our multi-channelled and expanding delivery systems including the Internet, classrooms, newsletters and textbooks.

The main categories include: About (Our History), Success Story, Faculty and Advisors, Our Collaborators, Website Information, Frequently Asked Questions, Sponsors, Privacy, Take The Course, Teach the Course, and Business Resources

For example, Business Resources includes: Top Ten Do's and Don'ts, Top Business Mistakes, Business Plan, Textbook, Certificate Course, Resource Link, Home based Business, Inside the SBA, Free Newsletter, Free Forums, Words of Wisdom, and Start-Up Kit.

The portal is directed in seven languages: English, French, Spain, Hindi, Indonesian, Arabic and Mongolian.

IOWA Entrepreneur Network

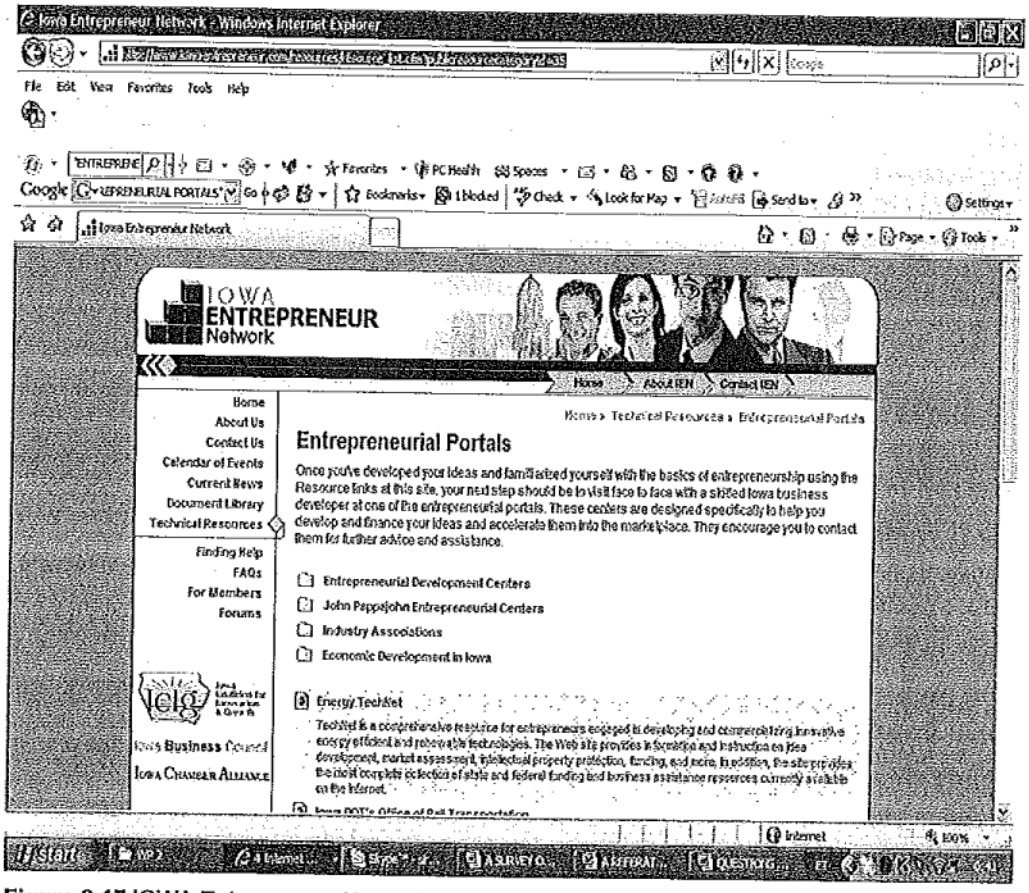

Figure 3.17 IOWA Entrepreneur Network (http://www.iowaentrepreneur.com/)

The Iowa Entrepreneur Network (IEN) provides Iowa entrepreneurs and investors with a community to integrate entrepreneurial expertise and interests across the state. Their goal is to create a critical mass of talent to accelerate the growth of Iowa business and career opportunities.

The IEN contains:

- "best Practices" reference materials for entrepreneurs needing reference help to better understand the technology of new business development and for investors seeking to learn more about how to invest in those businesses;
- links to self-teaching aids at entrepreneurial websites nationwide to provide training and encouragement for Iowa entrepreneurs and investors;
- links to organisations within Iowa, including the John Pappajohn Entrepreneurial Centers and local entrepreneurial development groups, to encourage entrepreneurs and investors through face-to-face contact and assistance;
- "virtual Communities" of entrepreneurs and investors through electronic forums in areas such as software, biotech, manufacturing, agriculture, angel investing, and venture capital.

The main categories are: About Us, Contact Us, Calendar of Events, Current News, Document Library, Technical Resources, Finding Help, FAQs, For Members, and Forums. There is also a feedback facility. The portal seems not to be (very) comprehensive.

Women's Entrepreneurship Portal

One of the findings of the project "Promoting Entrepreneurship amongst women" carried out by the European Commission was that networking and access to information for women entrepreneurs should be further promoted. As a follow-up to this project, the Commission has set up the portal on EUROPA specifically devoted to the promotion of women's entrepreneurship. This women's entrepreneurship portal aims at providing links to the websites of women entrepreneurs' representative organisations, networks, projects and events that relate to the promotion of female entrepreneurship. The Portal is organised into 5 categories: National organisations of women entrepreneurs, International organisations of women entrepreneurs, Networks promoting women's entrepreneurship, Projects promoting women entrepreneurs and female entrepreneurship, and Events related to women entrepreneurship.

Women's Entrepreneurship Portal

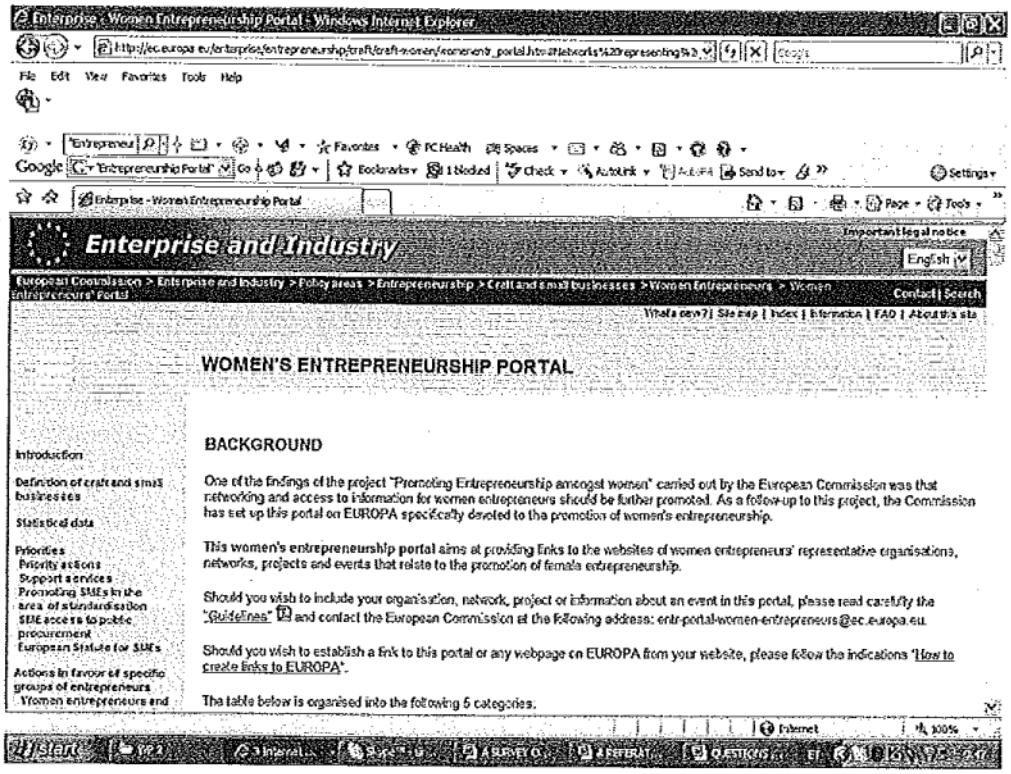

Figure 3.18 Women's Entrepreneurship Portal (http://ec.europa.eu/enterprise/entrepreneurship/craft/craft-women/womenentr_portal.htm#Networks%20representing%20women%20entrepreneurs)

Global Entrepreneurship Network

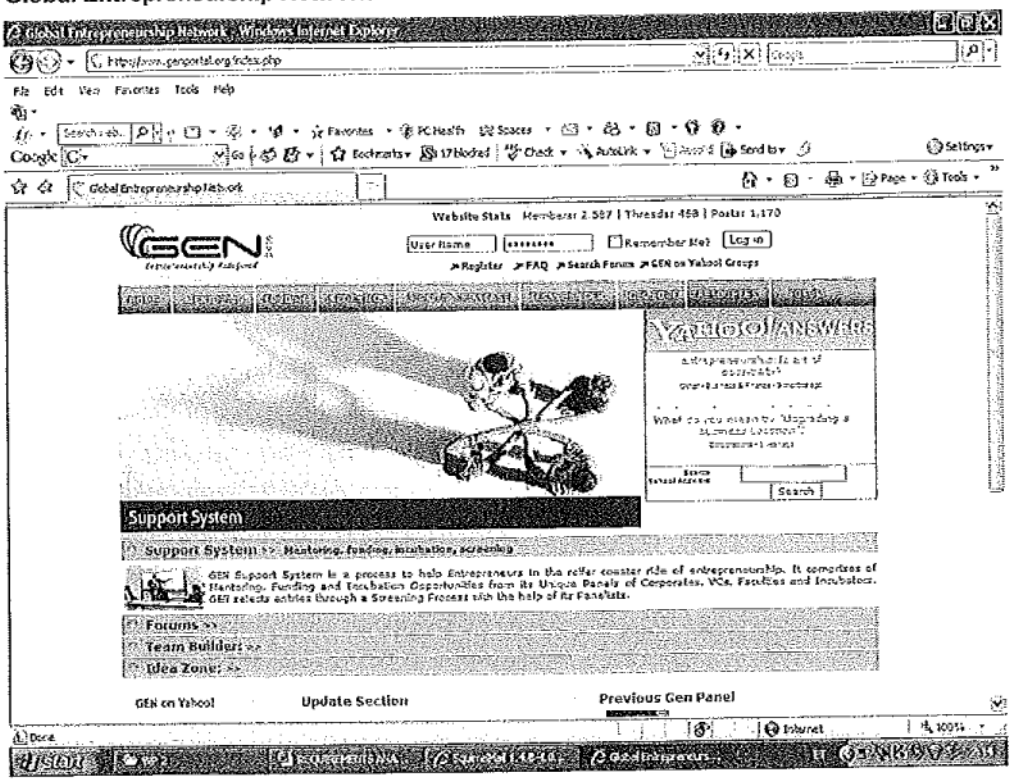

Figure 3.19 Global Entrepreneurship Network (http://www.genportal.org/index.php)

The GEN Support System is a process to help Entrepreneurs in the roller coaster ride of entrepreneurship. It comprises of Mentoring, Funding and Incubation Opportunities from its Unique Panels of Corporates, VCs, Faculties and Incubators. GEN selects entries through a Screening Process with the help of its Panelists.

NEN in Media & News

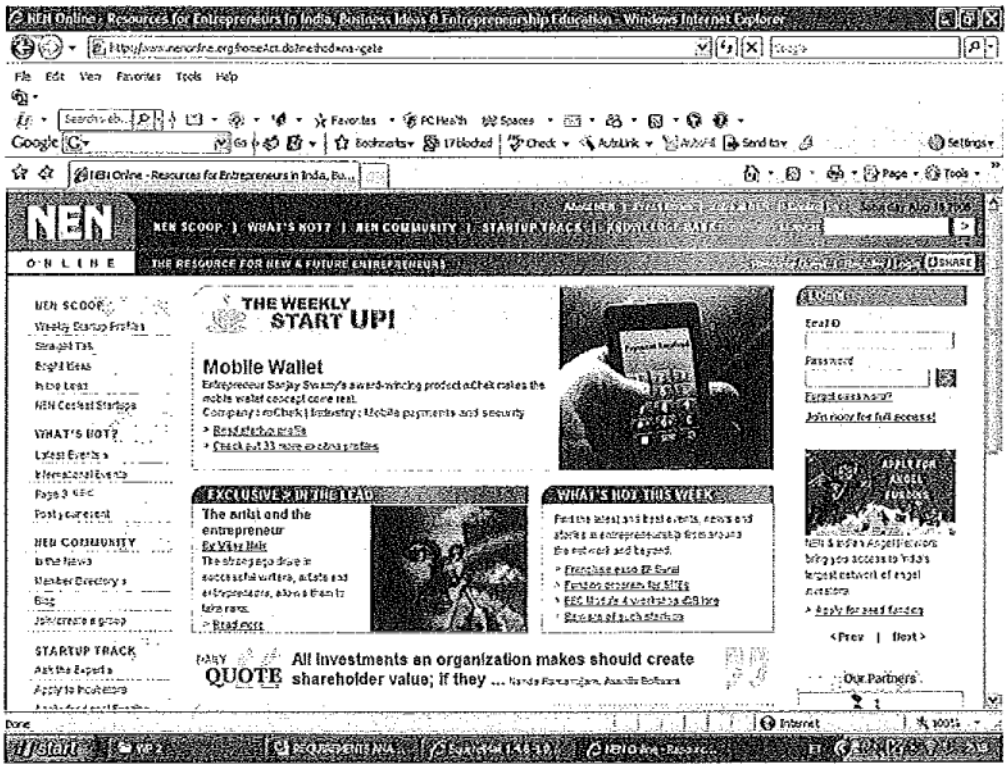

Figure 3.20 NEN in Media & News (http://www.nenonline.org/jsp/pressRoom/press_archives.jsp)

The National Entrepreneurship Network (NEN), founded in 2002, is a not-for-profit initiative of the Wadhwani Foundation, working to inspire, educate and support the next generation of high-growth entrepreneurs in India. The National Entrepreneurship Network portal acts as a platform for entrepreneurial community to share their ideas & thoughts on entrepreneurship. The main categories of NEN are:

- MEN Scoop, including the categories: Weekly Startup, Profiles, Straight Talk, Bright Ideas, In the Lead, MEN Coolest, and Startups;
- What's Hot, including the categories: Latest Events, and International Events
- MEN Community;
- Start Up Track, including the categories: Ask the Expert, Apply Incubators, and Apply for Angel Funding;
- Knowledge Bank, including the categories: Ideas & Opportunities, Angel Investing, Venture Capital, Beginner's Basics, Learning Tools, and Contact List;
- Fun Box, including the categories: Brain Teasers, and MEN Best Videos.

There are also search, blogs and community facilities. But the user interface of the page is a bit fuzzy and it is not easy to find relevant information.

Innovation & Entrepreneurship Portal

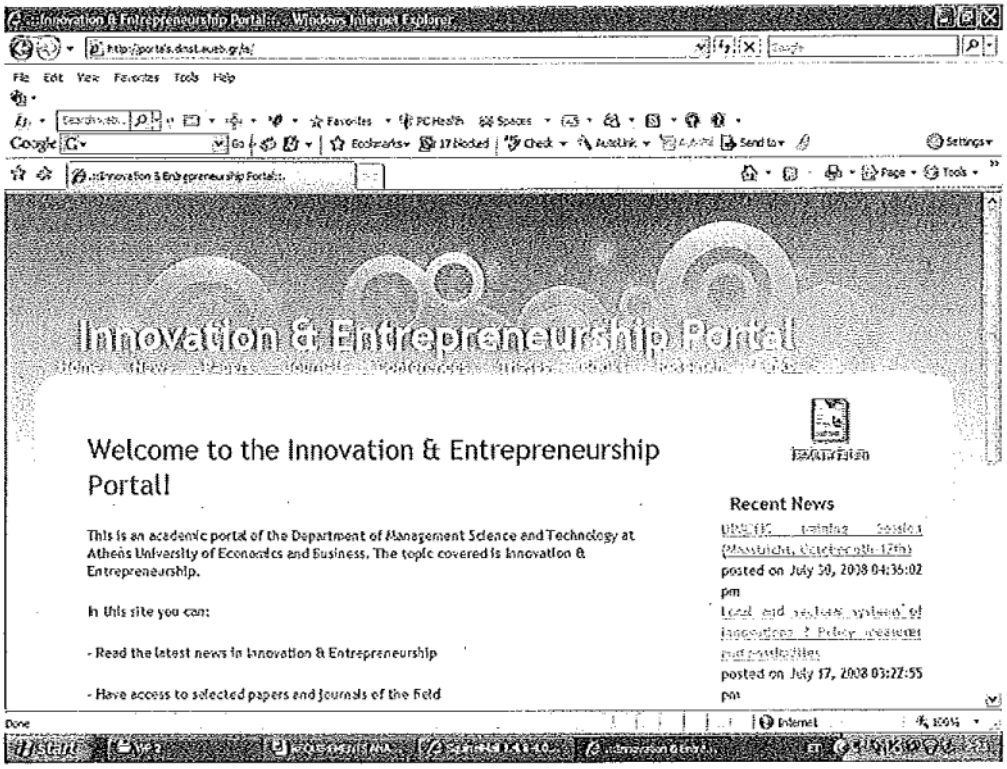

Figure 3.21 Innovation & Entrepreneurship Portal (http://portals.dmst.aueb.gr/ie/)

This is an academic portal of the Department of Management Science and Technology at the Athens University of Economics and Business. The topic covered is Innovation & Entrepreneurship. On this site, the visitor can:

- read the latest news in Innovation & Entrepreneurship;
- have access to selected papers and journals of the field;
- be informed of the latest conferences and have access to proceedings;
- have access to selected MSc and PhD theses;
- be informed about the best books in the field;
- discover innovative research centres related to Innovation & Entrepreneurship;
- visit interesting selected web links about the subject.

ZeroMillionCom

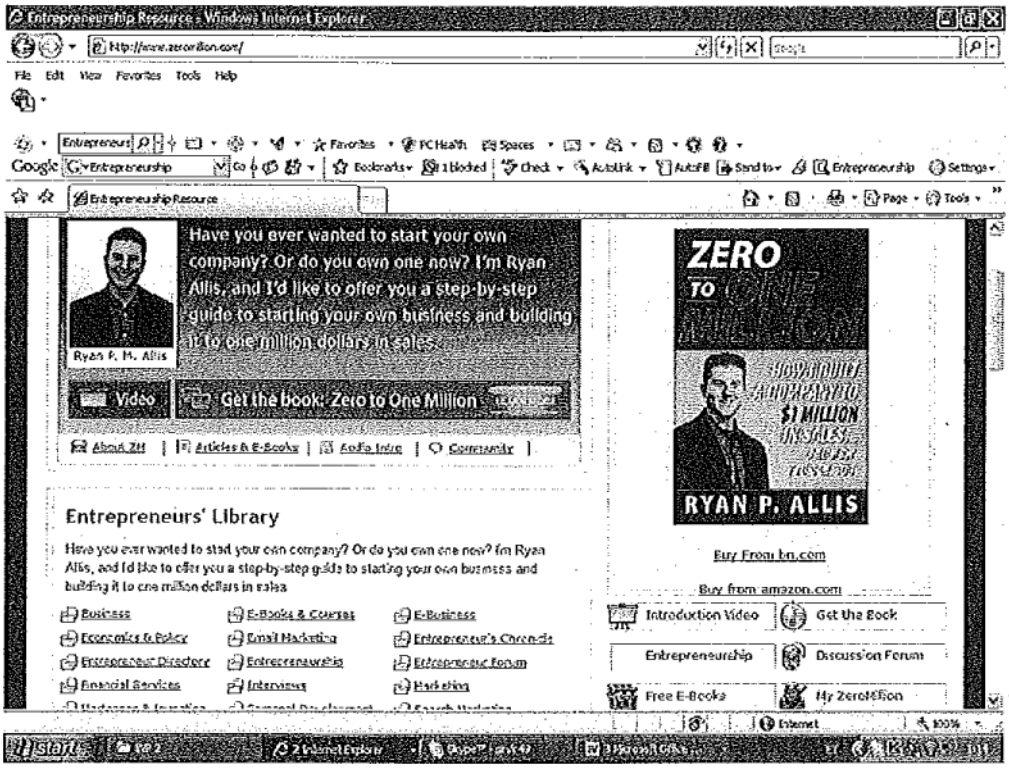

Figure 3.22 ZeroMillionCom (http://www.zeromillion.com/)

This is a portal on Entrepreneurship Information for both Pros & Novices to the World of Entrepreneurship. It includes also an Entrepreneur's Library and a step-by-step guide to starting businesses.

Educators Corner: Entrepreneurship Education Resources

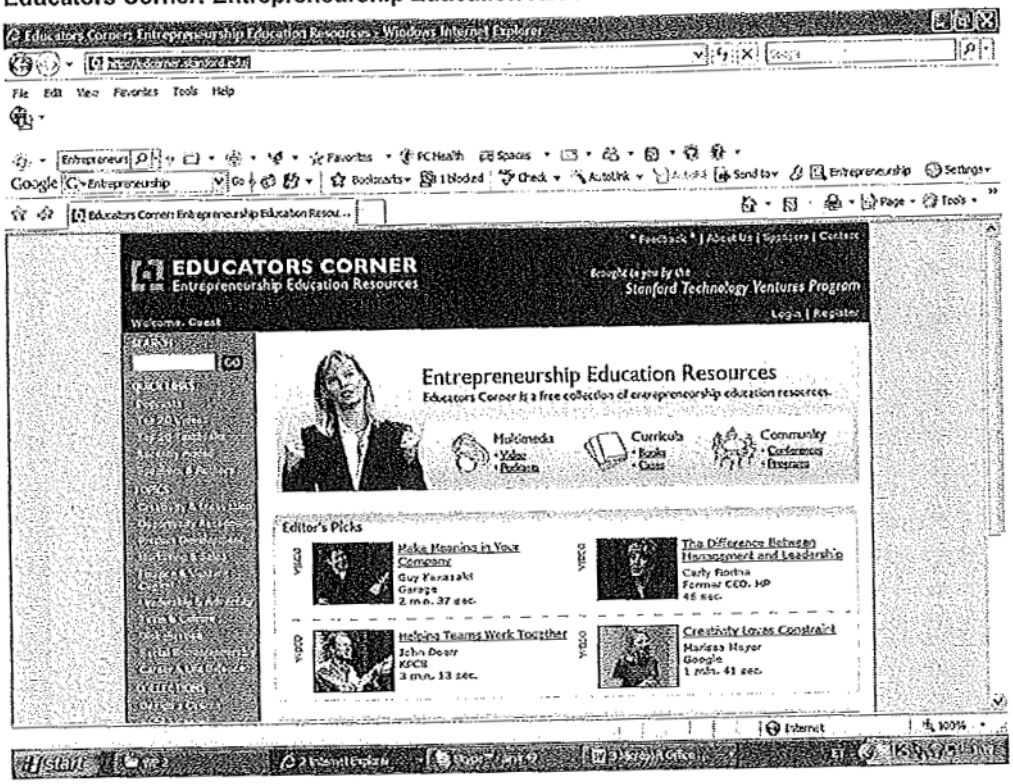

Figure 3.23 Educators Corner: Entrepreneurship Education Resources (http://edcorner.stanford.edu/)

Entrepreneurship Corner (ECorner) is a Stanford University collection of online resources for teaching and learning entrepreneurship. The mission of the project is to enhance the teaching of high-growth entrepreneurship and technology innovation. The site has been developed by a broad team of educators, entrepreneurs, engineers, and designers at the Stanford Technology Ventures Program (STVP).

The portal includes the following categories: Creativity and Innovation, Opportunity Recognition, Product Development, Marketing and Sales, Finance and Venture Capital, Leadership and Adversity, Team and Culture, Globalisation, Social Entrepreneurship, and Career & Life Balance. The portal includes popular videos, podcasts and speeches.

MIT Entrepreneurship Center - Services & Resources

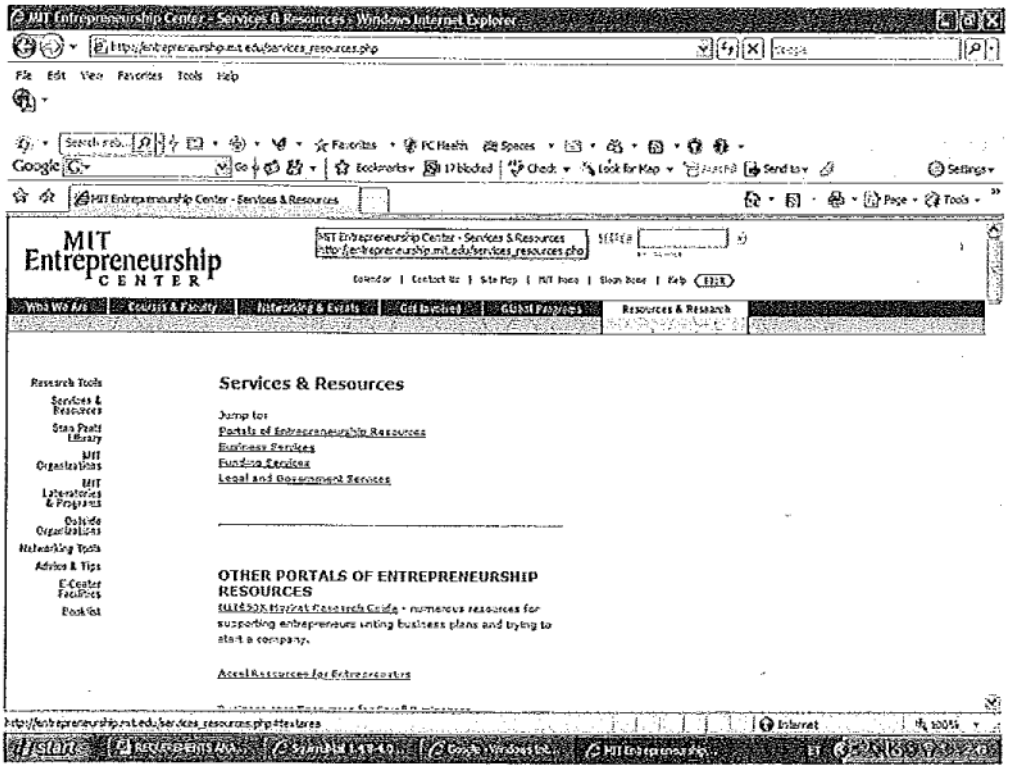

Figure 3.24 MIT Entrepreneurship Center - Services & Resources (http://entrepreneurship.mit.edu/services_resources.php)

The MIT Entrepreneurship Center provides content, context, and contacts that enable entrepreneurs to design and launch successful new ventures based on innovative technologies. They help MIT students, alumni, and colleagues access an array of educational programmes, networking opportunities, technologies, and resources, both at MIT and around the world. Members of the MIT E-Center community form a global network to actively advise and assist each other for mutual benefit, enabling them to set and meet their highest expectations.

The services and resources that were found to be of use: Portals of Entrepreneurship Resources, Business Services, Funding Services, Legal and Government Services, Other Portals of Entrepreneurship Resources, Services for entrepreneurs, Funding Resources for entrepreneurs, and Legal and Government resources.

3.4.4 User leads for portal development

The previous sections identified many online resources for entrepreneurs or potential entrepreneurs on the Web. Many organisations seem now to exist to support would-be entrepreneurs, including specialised government agencies, business incubators, science parks, and some NGOs. However, many of them are not focused specifically on entrepreneurs or new entrepreneurs but serve multiple functions, creating duplication and overlap. It is not always clear who is the specific target group for these resources. Some find these resources confusing and difficult to work with.

There is a clear need to provide more service for flexible modality target groups, be it in traditional, blended or distance mode operations of education. In servicing this special group, the regional aspect must be taken into account as well, as concerns the involvement of academic institutions, staff and professional organisations, chambers of commerce, social partners, and local/regional bodies; so as to identify diverse resources for them and provide access to these resources in a user-friendly web-based format.

As mentioned previously, in addition to literature analysis and scanning the Web, the third part of the research methodology was the conduct of interviews with would-be entrepreneurs and novice entrepreneurs, so as to establish client requirements for the portal. Qualitative interviews were conducted with distance students of the Tallinn University (partner in CBVE) and with a number of novice entrepreneurs, so as to identify common and newly emerging themes & requirements for the entrepreneurship portal, which may have been left untouched otherwise. The information from the interviews, in conjunction with stakeholder consultations and the analysis of the best practices, provided lead requirements for the pilot development of the referatory portal on entrepreneurship. Below, an overview is provided of the items which the referatory portal should preferably include from viewpoint of the qualitative consultations:

1. Information about different sources of funding available in the different stages of entrepreneurial activities together with clear deadlines and target groups. It would be helpful to provide information on what is available in terms of grants and other financing opportunities. Such financing sources should be presented in systematic way together with small summaries and deadlines for application.
2. Self-learning tutorials and handbooks on how to write grants, including templates for grant writing and hints of the most common mistakes.
3. Information on education and training possibilities in entrepreneurship.

4. Education and training resources including free online courses for beginners and advanced level (including How-To Guides).
5. Catalogued and evaluated resources in entrepreneurship.
6. Meta-resource guides such as guides on other entrepreneurial portals, referatories, repositories and digital libraries.
7. The site should include Web 2.0 and social software tools that enable one to network with experts and to be up-to-date with the most relevant developments (entrepreneurial blogs, RSS, new books and articles relevant to entrepreneurs).
8. Discussion forums (synchronous/asynchronous) with experts.
9. Examples of good practices, as well as lessons learned (not only success stories, but also negative experiences so that the novice entrepreneur can avoid these mistakes).
10. Business resources (how to start a business, how to write a business plan, how to run business, legal resources, et cetera).
11. Policy, regulatory and advocacy information.
12. Sector information and statistics. A profile of the sector, including statistical information about its size, composition and growth.
13. Partnership opportunities, including a list of experts and a list of relevant organisations and services.
14. List of acting enterprises in the region with basic data (or link to directories of businesses).
15. Tools for entrepreneurship, including advanced search facilities.
16. The Frequently Asked Question Section need not repeat the same questions somebody else already asked.
17. Event calendar (identifying seminars, workshops, conferences, et cetera).
18. Easy to navigate, aesthetically pleasant, and not to lead to information overload.
19. Take into account the persons with visual difficulties -- possibility to change the text size (not too small) and the colour (to colourful is difficult to see).
20. The portal should provide the ability for members to establish profiles, identifying areas of interest in the portal (and be customisable to satisfy user preferences).
21. The most frequently mentioned categories were: funding, grant writing, education and training possibilities and resources, information resources on entrepreneurship, best practice and lessons learned, social networking possibilities (discussion forums, blogs), relevant links to organisations, services and experts, and FAQ.

3.5 Prototyping the referatory portal

The main aim was to provide for a multi-country[2] referatory portal for distance students to consult, whereas (native) professional support, guidance and counselling for SME start-ups was concerned. As described before, preparatory activities included the research into local networks, stakeholders and student-starter consultations. Incremental prototyping commenced and a first light version of the referatory portal was developed for evaluation (Figure 3.25). User requirements were incorporated in different stages of prototyping. All partners were actively involved in the design and the set up of the website, its translation of texts and expressions, and the collection of global resources. In particular, the gathering of resources and links for the portal from a native (regional) perspective, was regarded important in the servicing of native students from the own region. The development of a light version of the portal already meant quite some development work on the partner-regional website sections, as well as making agreements on global i.e., English and local i.e., native language identities.

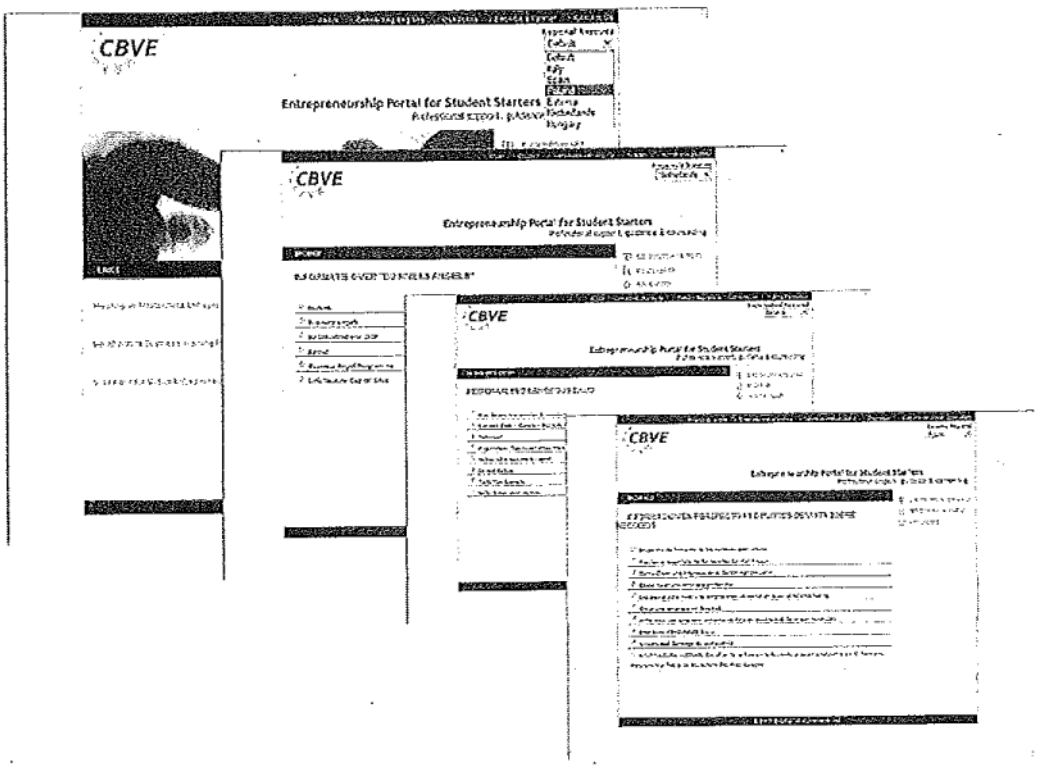

Figure 3.25 Interim referatory portal for entrepreneurship (multi-country, light version)

[2] NL, EE, HU, PL, ES, IT

On the portal, actual or potential entrepreneurs (full-time or part-time), must be able to find start-up information, expert references and university enrolment schemes for professional courses and trainings. The portal serves the lifelong learner i.e., the learner outside traditional cohorts, and is regionally embedded with liaisons to important stakeholders in the field. However, the portal did not only serve as an external gateway to entrepreneurship resources: students that were enrolled in the CBVE pilot also had access via (special) login to pedagogically-rich education and training opportunities developed by the CBVE Consortium. This is referred to as: the (multilingual) Masterclass entrepreneurship.

The (multilingual) Masterclass entrepreneurship levers state-of-the-art knowledge from different academic disciplines. Students enrolled in the Masterclass entrepreneurship pilot received training on how to start (and run) a business, including the capacity to draft a real business plan and the skills associated with methods of identifying and assessing business opportunities. Students were taught how embryonic business ideas can best be supported, for instance by referring them to special loans, business facilities, mentorship, et cetera, and what the process is of putting projects into practice and on the market. More information hereon is provided in the respective chapters on the 'Genesis of the Masterclass entrepreneurship' (Chapter 3) and the 'Masterclass curriculum infusion and business planning trials' (Chapter 4).

3.6 Intermediate user, menu and resource evaluation

The purpose of this section is to present results of a qualitative evaluation of the Cross Border Virtual Entrepreneurship Referatory portal. The qualitative analysis addressed three groups:

1. an international students' group consisting of 21 students;
2. an Estonian students' group consisting of 14 students;
3. a group of 12 entrepreneurs including novice and more experienced entrepreneurs.

Twenty one (international) students, within the so called Digital Library Learning programme, analysed and evaluated the Cross Border Virtual Entrepreneurship Referatory portal in April 2009. DLL is a joint international master programme for information professionals who intend to work in the complex world of digital libraries. It is a joint programme between Oslo University College (Norway), Tallinn University (Estonia) and Parma University (Italy), which was supported in the framework of the European Union (EU) Erasmus Mundus programme. Students of this programme study each spring term in Tallinn, Estonia. In 2008/2009 fourteen female and seven male students entered the programme. The youngest student was 24 years

old and the oldest student 44 years old with an average age of 30. In 2008/2009, thirteen students had worked as a librarian, three students as a lecturer in a university and five students had other jobs. Students originated from 15 countries: Bosnia Herzegovina, Botswana (2 students), Ethiopia (2 students), Ghana (2 students), Indonesia, Iran, Italy, Kenya, Nigeria (2 students), Taiwan, Thailand (2 students), Uganda, USA, Venezuela and Vietnam (2 students). The assignment of the students was to analyse and evaluate the Cross Border Virtual Entrepreneurship referatory portal from the information and knowledge management perspective, which included knowledge access, knowledge creation and knowledge transfer aspects. Nineteen students evaluated the English version of the referatory portal, one student evaluated the Spanish version and one student the Italian version.

Regarding the evaluation of the English version of the portal, most students found the referatory portal to be of good quality and to contain useful resources. The following comments illustrate this:

"I found this portal very useful and a good example that shows the information and knowledge management practice".

"The portal is a one-stop gateway to a huge amount of Internet resources. Moreover, the portal will be an appropriate information source for lifelong learning focusing on the entrepreneurial skills. They can learn whenever and whatever they want. Thus it is extremely useful. In addition to the usefulness and relevance, collected resources are qualitative and creditable. Most of resources are published under the responsibility of reputable organisations in the business area. This ensures that users will obtain valuable and qualified information".

"In my opinion, this portal provides really great evidence in managing and sharing knowledge relating to entrepreneurship. It is the fact that there are a lot of educational as well as governmental institutions which give a lot of useful information/resources on the web relating to entrepreneurship so users can freely use that. However, those resources are on the web, and as we already know, it is not easy to find what we really need in the huge storage of Internet. So in that context, based on the idea of providing professional support, guidance and counselling for student starters by connecting different resources in one gate-the portal, the Multilingual resource portal 'Cross Border Virtual Entrepreneurship' is really a good resource relating to entrepreneurship in which users will be directed to the appropriate resources to answer their questions. Through this portal, the useful resources become more searchable and can be more effectively used".

"The portal not only provides users explicit knowledge through a lot of freely used resources relating to entrepreneurship education, but also encourages users to develop their tacit knowledge through forums, blogs and online communities which give them the chance to contact and learn with experienced people or experts. Thus, from the perspective of information and knowledge management, the portal is really a useful resource and should be highly recommended to use among communities for sharing, expanding and managing the knowledge".

The following positive features were found as strengths of the portal:

- Multilingual
  The fact that it is multilingual gives diverse groups of people the opportunity to connect to relevant business information. It being available in Italian, Spanish, Estonian, Dutch, Hungarian and Polish languages makes the portal a rich information resource.

- Quality
  The online resources and references on the portal cover a wide area of entrepreneurship and are of good quality.

- Content
  The content provided on the portal is easy to understand and well structured.

- Usefulness
  Useful information on education and training possibilities is provided.

- Examples
  Some good examples of best practices and showcases are provided. Of course, for each country this is specific information.

- Layout
  Layout graphics and readability is appropriate.

- Media support
  The portal has references to video and audio clips that not only give clarity to the information being delivered but also makes it more interesting and gives the user motivation and keeps him or her alert.

- Community collaboration
  The references to social networks, blogs and emailing facilities for students is a good feature as it enables them to keep abreast with current news, to share important information and to communicate instantly.

In general the students found that the portal is useful and relevant in the search for entrepreneurial resources, counselling and guidance. The students expressed their views in the following way:

"In general this portal could be taken as a model in practicing information and knowledge management, in managing information (tries to locate the available and relevant resource for the user easily and quickly) and blogs, communities, networks, professional support, guidance and counselling are also available for sharing and managing knowledge".

"There are many very useful resources that can be used as starting point as well as for counselling about how to develop entrepreneurship".

"The resources in the portal are adequate for a beginner's entrepreneur by giving and directing to different links. I found the resources very interesting, it is shown from different perspectives, including successful women entrepreneurs and Zeromillion success stories. It is also motivating, in that it gives free online courses for those who want to become successful entrepreneurs".

"Moreover, being a multilingual resource portal, this portal is not only provided in multiple languages, but also provides resources based on its users' region, which are recommended from each region's perspective. By allowing users to choose their preferred region, the portal directs users to resources of that region. This function is really a user-oriented one, and helps users to find information more relating to them, at least by region/nation, thus improving the quality of information seeking for users. The portal not only provides users explicit knowledge through a lot of freely used resources relating to entrepreneurship education but also encourages users to develop their tacit knowledge through forums, blogs and communities which gives them the chance to contact and learn with experienced people or experts".

"The portal provides good quality materials on general resources, such as those of General Entrepreneurship Web Resources, Education Global , Global Assistance Networks, Best Practices and Showcases, Free Educational Resources, Entrepreneurship articles, Entrepreneurship tools, Blogs – communities - networks, Information on business angels, Entrepreneurship for (adult) student starters, and Professional support, guidance & counselling.

These general resources are easy to understand, interesting, practical, and adequate to the entrepreneurial enterprise".

"It is essential for institutions, staff, and students to be able to gain the basic concepts of entrepreneurial knowledge, and these resources allow them to do so; they will also be able to acquire in-depth entrepreneurial knowledge in specific areas, depending on their interests, because they will be able to find advanced, useful information on the portal, such as information on entrepreneurial networks, chambers of commerce, investment banks, and education and training possibilities. In this way, the resources can serve the demand of each person using the service".

"Finally, it is a useful resource to entrepreneurs, providing information by combining a lot of related home pages and websites together. Therefore, users could find information about entrepreneurship on the one stop shopping principle from this portal".

"I will recommend the guide to others because it has valuable information that will make people more entrepreneurial, if one properly uses it".

"In addition to the usefulness and relevance, collected resources are qualitative and creditable. Most resources are published under the responsibility of reputable organisations in the business area. This ensures that users will obtain valuable and qualified information. The resources provided are taken from highly prestigious institutions like the European Commission, MIT, Stanford University, et cetera, which bring about the feeling of reliability for users. Besides, materials provided on the portal have quite a high quality. There are even surveys which are requested by European Commission of best practices from many higher education institutions in Europe".

Besides the positive comments from the students, some more specific constructive remarks were provided on certain type of resources, which include suggestions for improvement. With regard to the section of the *blogs, communities and networks*, the impression was that this category was relatively fine, since it catered for resources from the global level to the regional level. All the resources create a good platform for information and knowledge sharing. The *blogs, communities and networks* category was found to be of interest and very useful for persons which want to become an entrepreneur, as of the many discussions, ideas and comments which were found; knowledge is valuable only when shared. With regard to the section of *best practices and showcases*, it was mentioned that it was relevant for students and mini companies, but that it didn't provide a standardised resource on what constitutes a general

best practice. The section of *entrepreneurial articles* was found to be very useful with regard to its audience and target group. However, it was recommended to include more links to articles on entrepreneurship, motivation, and general sources as well. Although there were only few entrepreneurship articles installed at that time, they were considered useful to foster entrepreneur concepts and ideas in education. The section of the *showcases* was thought of as still being limited in number. It would have helped when videos were put in for more visibility. That is, the *success stories* can have some video clips of work done, so that young entrepreneurs can comprehensively understand and adopt relevant skills and best practices in a short time, instead of having many pages of print. With regard to the *open educational resources,* useful and free educational resources could be found on the portal very easily. Another important and useful link was *information on business angels,* as it provided the apprentice entrepreneur basic information on how to find funds and bank investments. In addition, *user's resources and feedback* was seen as crucial for the improvement of products and services. The section was rated very important. The link *entrepreneurship for (adult) student starters* is another useful link which provides information on how to start a business, how to find a partner, and how to prompt entrepreneurship. *Professional support, guidance and counselling* as part of this portal is (also) a useful link, and helps entrepreneurs to get support, including step-by-step guides and publications.

Navigation is the most significant element of web portals. To make the perception of information use easier, the navigation system should be structured nicely. The majority of students found that the portal navigation was easy and in a logical order. However, some suggestions were made as well. Three main remarks by students are presented next.

"The overall portal navigation is arranged in a logical order. It is easy to find appropriate and useful information and resources.

"This web portal tries to classify and label resources with the logic of task, audience and topic. So I strongly agree with its arrangement. I found useful information and resources easily and I got familiar with the portal quickly. I know where I am and how to get to an appropriate place on the portal since the number of sites within this portal are few, majorly three: the first (home) page which contains the resource categories and some links, the second page is the one that contains resource links of each category and the third is other website or portals that have the information that I am looking for. The navigation system of this web portal though could use a global navigation bar which should then appear on the second page. It helps to get back to the home page. For the moment, the browser functionality must be used".

"One student even went on to say that the concept of Web 2.0 could provide for the possibility of users to participate in many tasks on website. The portal could be designed with interactive communication channels such as e-bulletins, web boards, and mailing lists. Such items will promote information and knowledge sharing among people who have the same interest. The Portal should act as an online community between new starters and professionals for sharing their knowledge and experience by collecting a list of specialists and professionals in this area and then providing it on the website. Of course, the privacy issue should be carefully considered".

In conclusion, the overall assessment of the referatory portal for entrepreneurship was positive by nature. However, some suggestions were offered which could be internalised by the project team to improve (access to) the portal resources, enabling them to be more open for users. Table 3.6 provides suggestions which are reviewed for inclusion during the lifetime of the project, whenever feasible and in accordance with budget constraints; or after project closure, as part of maintaining and sustaining the portal under EADTU policy.

Table 3.6 Additional student suggestions

Student suggestions	**Explanation**
Search interface	A search interface provides the information seeker with quick and effective access to information thus covering the notion of timeliness in information and knowledge management.
Multimedia resources	Providing an access point to other kinds of Internet resources particularly multimedia such as video clips, success and failure stories, which in fact can help the (novice) entrepreneur.
News, events and conferences category	Access to news, events and conferences. Users gain knowledge not only from information resources but also from experts, by attending conferences and workshops.
Guidance for the beginners	Basic concepts about entrepreneurship, guidance on the online courses and the training programmes, matching the needs and level of the users.
More resources	Information resources on best practices and showcases, entrepreneurship articles in areas of training, guidance and counselling,

	examples, showcases and best practices as well as professional support, guidance and counselling.
Chambers of commerce	More information about the help by chambers of commerce and investment banks on the regional or local level.
More specialised resources	Specific information about becoming an entrepreneur related to specific professions or disciples.
Books	Include relevant (open) books among the other resources.
More language versions	More multi-country functionalities for more countries. Expanding the resources in other languages, especially French, to make it accessible to other people too, since the word Entrepreneur originates from French language.
Breadcrumb trail	One student suggested to have of a breadcrumb trail. The website could benefit from the inclusion of a breadcrumb trail so users can identify where they are and return to where they began.
Interactivity	The portal can become interactive, including Web2.0 features.

In conclusion, the Multilingual Portal' - Cross Border Virtual Entrepreneurship (CBVE) - was assessed as a generally well constructed portal, that provides for quality information and resources in the area of entrepreneurship. The majority of students and (novice) entrepreneurs found it to be a useful resource. For institutions, staff and students, the portal is a useful tool in furthering study and entrepreneurial interests.

Although there is much to be applauded in the design of the site, there are improvements that could be made, and making improvements such as to portal navigation, layout and format of the site, could make CBVE portal an even more efficient and effective resource. Furthermore, constant updates are needed to keep abreast with new information and resources. This of course is a mutual responsibility of the CBVE project team as well being a distributed (native) partner effort whereas the profiling of local entrepreneurship resources is concerned.

3.7 The multi-country entrepreneurship referatory portal

The portal has been finalised with a range of (informative) functionalities. The portal opens with general menu items on the top of the page: About, Connecting Regions, Questions, Become a Partner, and Contact Us. These categories provide information into the background of the CBVE project, the attributed importance of entrepreneurship, and the vision of knowledge transfer between regions, so as learn from each other's practices (Figure 3.26).

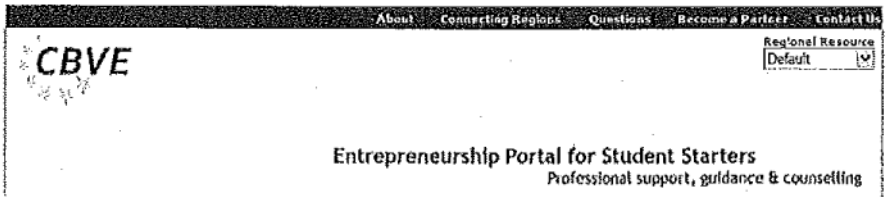

Figure 3.26 Introductory categories on the portal

Next to the introductory categories, the user of the portal can observe a section denoted as resources. This section of the homepage contains an introductory text on the resources that can be found on the portal, including the different languages that are available for supporting students from a local perspective, and from a local entrepreneurship resource necessity. In default mode, the menu displays 'English, global entrepreneurship' (Figure 3.27).

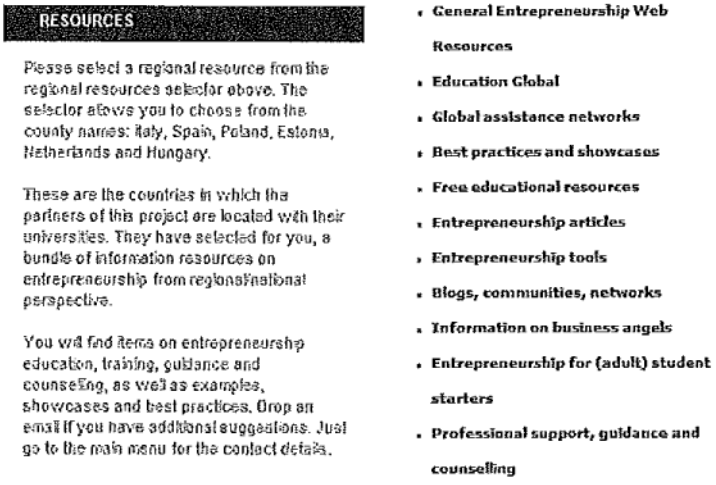

Figure 3.27 The 'default' resource category (global, English)

An example of a resource found in the global section on the CBVE portal is MIT's Entrepreneurship Center (Figure 3.28).

Figure 3.28 MIT's Entrepreneurship Center

The homepage of the portal allows the (prospective) student starter to choose between diffe categories of English entrepreneurship resources, and also allows him or her to choose categories and associated resources in a foreign language. Figure 3.29 provides the langua that are currently available on the entrepreneurship portal, as developed by the CBVE consortium. Although the suggestion has also been to include the French language (or othe languages for that matter), this was not in the direct interest of the project partners nor was i defined as an objective of the project. However, incorporating more languages can be achie an open context of collaboration with partners which may wish to freely associate with EAD

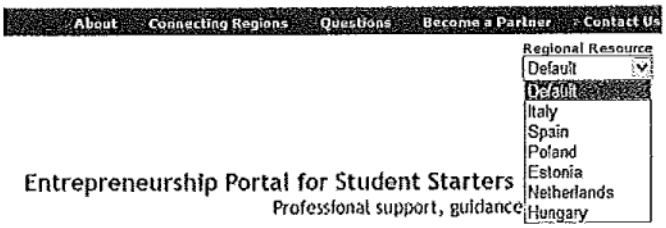

Figure 3.29 Multi-country, multilingual entrepreneurship resources

The homepage further incorporates a separate section that clearly identifies special functionality dedicated to special target groups. The links we refer to in this respect are shown in Figure 3.30. They deal with the login of students which are involved in the trial runs of the 'Multilingual Masterclass Entrepreneurship' and the 'Collaborative Business Training Platform'. The third link refers to information about the project itself: 'Cross Border Virtual Entrepreneurship'.

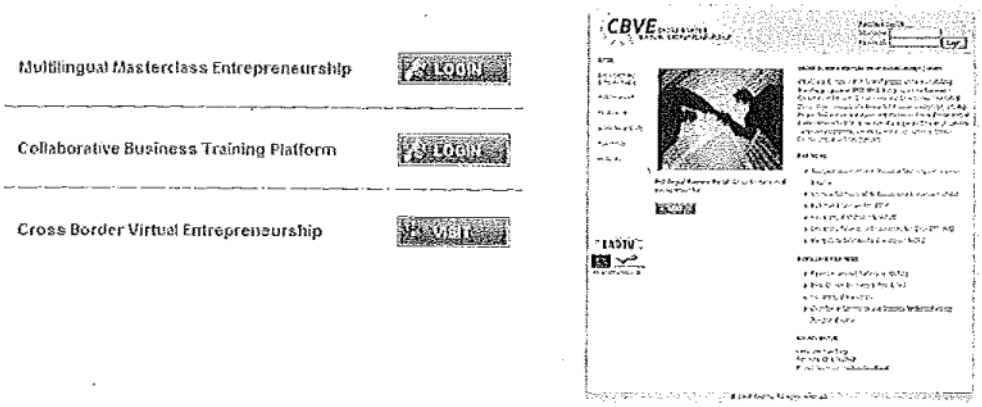

Figure 3.30 Special purpose sections

With the objective initially being that both the CBVE project and the referatory portal would be used only by the students involved in the (multilingual) Masterclass and the business planning trials, we can now fairly state that it reached an audience beyond (Figure 3.31). The CBVE information fiche on elearningeuropa.info registered somewhat less than 10.000 hits (while writing). Whereas our own CBVE portal and website performed more or less the same, also somewhat less than 10.000 hits[3]. From referrers by other institutions, we see the interest for participation in CBVE growing, especially since the renewed orientation and priorities of the European Commission.

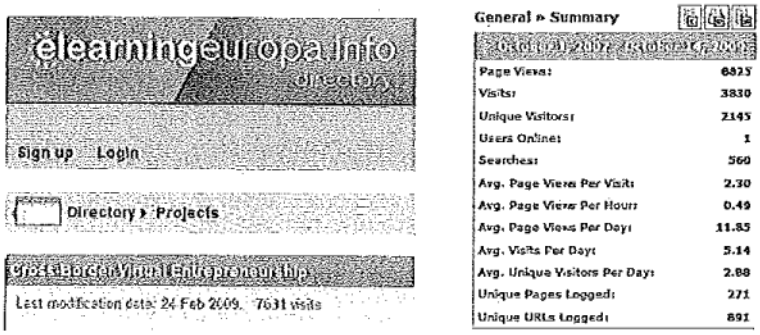

Figure 3.31 Interest from (external) visitors

[3] Excluding page visits to (local) CBVE websites of partners.

Now with the project coming to an end, the EADTU shall (financially) sustain the CBVE initiative, as part of its larger (defined) employability policy programme, and which (also) includes the good practice of Cross Sector Virtual Mobility: a project which has successfully piloted several flexible modality internships by grant of the European Commission. In terms of information management, the portal will be (jointly) sustained both by the coordinator and by the local partners, which have successfully participated. All partners are granted access to the constructed (native language) web pages on the EADTU server, allowing them to (technically) upload information to their local pages instantaneously, and use this for their local student population, in the context of successful European (academic) cooperation.

Finally, we conclude here with a remark that can be taken as constructive advice for ongoing improvement of the portal, and which was phrased by a novice entrepreneur during one of the qualitative interviews:

"I generally like the portal arrangement. I found useful information resources easily and it was easy to get familiar with the portal quickly. However, the navigation system of this web portal has no global navigation bar and it is a bit problematic to get back to the homepage. Layout graphics and readability of the portal is appropriate in general, but maybe the text should be a bit larger or at least there should be a possibility to change the text size".

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4. Genesis of the Masterclass entrepreneurship

This chapter describes the genesis of the Masterclass entrepreneurship. An introduction is given into the development aims of the Masterclass (section 4.1). An academic and business validation of the approach is presented (section 4.2). Then, the conceptualisation of the Masterclass is discussed (section 4.3). Following, the Masterclass structure and description is provided (section 4.4). Subsequently, the Masterclass recording and delivery are explained (section 4.5). Finally, the impact and outreach of the Masterclass is presented (section 4.6).

4.1 Introduction

In this chapter the joint development and delivery of pedagogically-rich education and training materials by the partners of the CBVE consortium is described. The activities performed include the development and delivery of pedagogically-rich education and training materials for Masterclass usage. It involved the creation, development and testing of cutting-edge distance didactics learning materials. The result is a Masterclass on entrepreneurship equal to 2 ECTS, corresponding to 50 hours of study load. The Masterclass is composed of 10 video lessons and supplementary training didactic materials, available in English, Italian, Spanish, Hungarian and Estonian. An English Masterclass and four associated derivative language versions were developed (IT, ES, HU and EE) i.e., tailored to the countries participating in the pilot-runs. Two of these partners i.e., UNED and UTIU, operate as distance universities, with consolidated IT support in their own e-learning framework and two of these partners i.e., the University of Tallinn and the University of Miskolc, operate as traditional universities, implementing e-learning in a blended learning approach, suitable to their education programs.

The added value of these different profiles allows partners to adopt a multi-purpose and multi-dimensional delivery through a two-model approach: a distance university approach and a traditional university blended approach. Accordingly, the Italian, English and Spanish Masterclass courses are delivered fully online on the UTIU didactic platform (www.uninettunouniversity.net) being composed of 10 video lessons (and supplementary training didactic materials), available in Italian, English and Spanish. The Hungarian and Estonian Masterclass courses have been balanced and integrated using an open-source e-learning platform (http://edu.uni-miskolc.hu), implemented by the University of Miskolc. In all, a pedagogically-rich model for development and delivery of Masterclass materials has been developed, capable of serving a wide spectrum of target groups within the framework of lifelong learning.

4.2 Academic and business validation

The joint development and delivery of pedagogically-rich education and training materials by the partners of the CBVE consortium has been an iterative process: a continuous process of development and validation. Validation concerned the internal and external validation of generated education and training materials, respectively by hand of internal project review and by external review. In both cases, the process has been one of peer review. Within the CBVE project both types of validation were (also) supplemented with user assessment by hand of students, and with (external) stakeholder sessions. In addition, intermediate and final results were fed into national and European platforms, assuring a connection with policy. The EADTU Board of European Principles and Rectors, which convenes twice a year, functioned as an Advisory Sounding Board. In view of university-business cooperation and professional development of Masterclass materials, an infusion of operational entrepreneurship and business expertise was also considered crucial. The approach taken on that, is discussed next.

The capacity to create new entrepreneurship by training non-professionals i.e., those who are beginners in the subject matter of entrepreneurship and who wish to gain a better understanding of business planning, represents a very important lever to create new jobs. The development of new business allows for the creation of new jobs, which is beneficial to both the entrepreneur and its collaborators. In order to realise an effective training path capable of duly training potential entrepreneurs, it is essential to have the cooperation of the academic world that by traditional has organised training activities. But it is also important to cooperate with the business world, which is able to better understand the problems linked to the assessment and the start up of new business. This combination of academic and business expertise has been embraced in the development of the Masterclass entrepreneurship. Within the CBVE project, the Masterclass entrepreneurship has not only been governed by traditional (academic) professors, but also by professional experts stemming from private businesses as well: a premium combination of human expertise, capable of dealing with the different academic and operational aspects of business start up.

Accordingly, the task of conceptualisation and development of the Masterclass course was performed in conjunction with expert professionals of business projects and consultants with experience and expertise in business plan preparation and business planning in general. They are the professionals who in their profession have to assess business plans frequently, supply or look for funding, perform reviews of production processes, reorganise business processes to enhance business efficiency, and/or identify new means to strengthen commercial penetration. The experts involved in the Masterclass development, are all highly qualified people, with a

pragmatic focus on required sources of information, study and analysis: excluding all overhead and superfluous aspects from business planning. The collaboration with these experts has been crucial to the success of the Masterclass. Moreover, it has been important (also) in view of the valorisation of the Masterclass, as this group of business stakeholders is a direct beneficiary of correct and successful implementation of business planning.

4.3 Conceptualisation of the Masterclass

Becoming an entrepreneur implies the capability to turn an innovative business idea into an economic entity or enterprise through a combination of productive resources. The mere fact of having an innovative idea is not enough to become an entrepreneur: one should succeed in turning the idea into a structured production process of goods and services, capable of making a certain profit. Firstly, one has as to evaluate the strength of the business idea, that is to say whether it is capable of making a profit. Secondly, one must find the resources to finance the business project and to do so one has to show it to potential financial partners i.e., banks, potential shareholders, institutional investors, et cetera. The business plan is the main tool that the entrepreneur has to internally and externally assess his or her idea. It can be used in the communication with potential business partners and financial partners. The tool enables one to make an outline of all the details needed to check the features of the enterprise, as far as it regards its innovative level, comparing it with other products within the same market sector, as well as assessing the strength and the quality of the production process. The business plan allows one to make a double-level assessment of the business idea. The first one is an internal one: a simple assessment of the feasibility of the initiative by the prospective entrepreneur. The second one, is the assessment of the economic viability. Mind though that it is not just the business idea which is to be assessed, it is also the entrepreneur, that is to say his or her capability and competences to realise a business project in a profitable way.

The Masterclass is to enhance the professional entrepreneurial skills of learners using a flexible learning approach. The Masterclass stimulates the development of such skills by theoretical-practical modules and operational tools, helping them to carry out business planning, as well structure dedicated entrepreneurship projects. The Masterclass, even if dealing with the main theoretical elements on which a business plan is based, aims at supplying satisfying practical information for anybody who wants to work out a project or a business idea. When needed, one can study, analyse and evaluate, in more depth, all the business plan elements so as to decide whether to go on with the implementation or not. And, in case of a positive response, the student is provided with an action plan to be carried out, to put his or her idea into practice. The

Masterclass actually is a versatile and practical tool, enabling students to systematise and rationalise all (theoretic) information and in-depth studies, needed to work out a dedicated business idea, and to assess whether it adheres to minimal requirements. Obviously, those who want to work out a business plan practically, but lack certain knowledge (depending on the specialised subject), would be advised to turn to experts in the field (for instance, a professional accountant or an administrative-financial consultant that will provide support to find out what relevant research studies and/or surveys are to be carried out in order to assess the potentials of the market of reference). Students who intend to work out a business plan under the Masterclass must understand the ultimate objective of the course: being able to orient in a complex system of actions along with practical analysis to be carried out, herewith assessing the potential for success of a business idea. As illustrated above, the course aims to supply an exhaustive overview of practical-conceptual categories for those who want to work out a business idea, prepare a business plan, and assess its strength and potential success. The conceptual categories outlined in the course are elaborated shortly from a theoretical and practical viewpoint. Regardless of the type of study, if one has a good experience and/or school training, one will be able to understand different types of analyses and in-depth-studies, and will be able to carry out the preparation of developing a proper business plan.

When one passes on to the implementation phase, much of the analyses to be carried out will have to be entrusted to experts in specific fields. At this point though the potential entrepreneur has already gained deep knowledge of the economic subjects and also of the technical-theoretical ones. The person to whom the business idea belongs now manages and fully understands the process of analyses on which the business plan is based, even though some parts must necessarily be entrusted to third parties during the implementation-executive phase. Factually, in almost all cases, a partial knowledge of certain subjects will generate the need to have recourse to external support. The Masterclass course is to supply all theoretical-practical suggestions needed to manage the process of analyses illustrated above, even if one does not possess all knowledge. Apart from the course and the lessons, the students will be supplied with various documents and supplementary training materials and also with bibliographical references. This that will enable them to study more in depth and increase their knowledge of all subjects required to prepare a business plan.

In developing the Masterclass, UNINETTUNO's video lessons' methodology is utilised: a methodology built upon a strong foundation of didactic and communication models (Henri and Rigault, 1996; Kass, 1996; Garito, 2007, 2006, 2001, 2000a, 2000b, 2000c, 2000d, 1998, 1997a, 1997b, 1996; Horowitz and Samuels, 1987). The upcoming sections will present the structure, the recording and the delivery of the Masterclass, based on this methodology.

4.4 Masterclass structure and description

This section describes the structure and contents of the Masterclass entrepreneurship. The Masterclass is subdivided into ten lessons covering all topics related to the set up of a business plan and to the evaluation of an entrepreneurial project. The first lessons provide basic topics to develop a detailed entrepreneurial project (i.e., product or service analysis, market analysis, competition analysis, et cetera). The lessons thereafter focus on the elements needed to develop an operational business plan and on performing a detailed financial and feasibility analysis. At the end of the course the student will be familiar with the basic elements of business and management control, and the tool of the balance ratio analysis. Below, a brief description of the objectives and the contents of the lessons, are given.

1st Lesson	What's the business plan
The objective of this lesson is to provide the student with a set of general topics about objectives and contents of a business plan. It contains a description of the various aims to carry out a business plan. They belong to two main categories: internal and external aims; the internal ones are mostly concerned with the focus on the feasibility of the entrepreneurial project, the evaluation of the investment plan and the planning and controlling of activities. The external ones (instead) are concerned with the availability of granted or ordinary loans, the realisation of a commercial partnership and with the general evaluation of the business from different points of view (i.e., potential customers, employees, suppliers, stakeholder or partner, et cetera). The minimum contents required for a detailed business plan are: brief description of the project, sponsor's target, market analysis, operational strategies and expected results.	

2nd Lesson	The business-idea
This lesson is focused on both the operational and organisational elements of the business idea, in order to evaluate its real feasibility. Main topics of the lesson are, in the operational area of the business: the definition of the mission, timetable for the start up phase and the focus on the strengths and weaknesses. In the organisational area: the company structure, rules and responsibilities of the key managers, and the organisational chart.	

3rd Lesson	Product-market analysis
The objective of the lesson is the definition of the product and the market. Main topics are concerned with the description of the quantitative and qualitative features of the product, its innovative aspects as compared to the competitor ones, the target-market and the competition analysis.	

4th Lesson	Industry analysis
The lesson objective focuses on the main aspects of the industry, the business project belongs to. Main topics are related to product life-cycle analysis, the identification of the direct and indirect competitors as well as the analysis of main competitor strategies (i.e., policies about price, level of service, supply).	

5th Lesson:	Competition analysis
The objective of the lesson is to focus on the competition level of the market to which the business (project) belongs, in order to choose or to improve the competitive positioning. It provides the student with theoretical aspects about the competitive positioning and provides him or her with the description of a business-case concerning the start-up of a commercial activity of a food-product.	

6th Lesson	Operational plan -- part one
This lesson focuses on the productive and commercial aspects of the business plan. Main topics are concerned with the make or buy analysis, that is the evaluation of the convenience of externalising part of the productive or commercial process, as well as the definition of an effective marketing plan and logistic plan too.	

7th Lesson	Operational plan -- part two
The objective of the lesson is to focus on the organisational aspects of the business plan. Main topics are concerned with the choice of the legal structure according to the law, the identification of the key-managers and the definition of the organisational structure (i.e., hierarchical functional structure).	

8th Lesson:	Economical feasibility analysis
The lesson objective is related to important accounting topics so as make a right economical sustainability (project) analysis. It provides for the basic topics about accounting (i.e., profit & loss and balance sheet), the cost analysis and the different types of budget (i.e., sales, production, cost of goods).	

9th Lesson	Financial feasibility analysis
The lesson focuses on the financial issues linked to the start-up of a new company in order to evaluate the kind of financial resources to use, compared to the kind of asset to finance, as well as the company's overall financial feasibility. Moreover, the lesson provides basic topics about the financial planning, as well as the assets and liabilities with some examples of financial budgets.	

10th Lesson	Control
The objective of this lesson is to deal with business control, and economical-financial & operational issues; described in all aspects. Moreover, the lesson contains main balance-ratios issues linked to financial and economical analysis.	

The University of Miskolc has developed several additional materials, which can be used as additional information, supplementary learning tools to the CBVE learning materials. These materials, written in English, can be useful for learners and entrepreneurs as well, to be delivered in printed form and also to be available on the website; learners can print them on their own. Titles of the series:

1. The Cycles of Your Business
2. Using Other People's Help
3. Sources of Capital
4. Developing Your Business Plan
5. Cash Flow Planning
6. Measuring Performance
7. Are You an Entrepreneur? (tests and questioners)
8. Becoming a People Manager
5. Glossary (making sense of terms and jargon - finance)

The University of Miskolc and the University of Tallinn are both traditional (mainstream) universities, serving both part time students and full time students. These universities further diversified their strategy with regard to the content development and the course delivery. As part of a blended delivery approach, the University of Tallinn adapted the English master course video lessons by adding subtitles to the video, whereas the University of Miskolc developed (in addition) a wide range of new, versatile content elements. Each course was designed for blended delivery, hereby adding different open and distance learning features and collaborative elements to it. With the aim to foster creativity and enhance complex development of entrepreneurial skills, both individual and group work was incorporated in the instructional design. Flexibility and reusability of content elements were considered to be key factors of sustainability.

4.5 Masterclass recording and delivery

The Masterclass recording and delivery has been done in a professional and systematic manner. All the video lessons have been recorded in Rome, using the Uninettuno Production Centre, endowed with the all the structures and facilities needed for the professional production of multimedia educational products (i.e., video lessons, slides, and multimedia products), and with the support of the technical staff involved in the production. Since many lessons are included in one Masterclass and each video lesson lasts approximately 45 minutes, the labour intensiveness of video recording is evident. In many cases practical arrangements are made on location, so as to enable video professors to fulfil the recording process efficiently. In many cases, video professors must be lodged in a guest room located on the fifth floor of the Uninettuno building. A production plan was devised for the production of the Masterclass which envisaged the sharing of the production phases and of time schedule for producing every didactic material, the subsequent digitisation and the posting on the Internet site: www.uninettunouniversity.net. On the basis of this production plan thirty video lessons were produced in Rome (IT), and among them ten in Italian, ten in English and ten in Spanish. The (ten) Hungarian and (ten) Estonian Masterclass derivatives were produced with the same methodology, though on site, domestically. The designated persons which were in charge of recording the video lessons in the different languages, needed to comply with detailed procedures, already fairly tested, and essentially aimed at producing the educational contents and facilitating the activities related to the processing and online publishing of the educational materials.

A theoretical and a practical training, specific for video lessons, has been delivered to the professors involved in the production of the educational content, strictly related to the

competence skills essential for implementing lectures in a novel and pedagogical-rich educational model. Such training was (also) envisaged within the project by means of 'training the trainers'. It basically concerned the training of the professors involved in producing the video lessons. The guidelines for realising video lessons (also) included the use of didactic communication on television, in the frame of psychological research work on learning theories, paying particular attention to the constructivist and cognitivist theories. In addition, special guidelines for realising slides were presented: this was facilitated by the UNINETTUNO Graphics Department. The training of the tutors (instead), took place later on, when the pilot course was delivered.

The learning process is crucial to the success of the Masterclass. Students have the choice of intake of video lessons in different ways: through the Internet in Didactic Cyberspace (Video Library Sections) and through satellite broadcast on the channel RAI NETTUNO SAT 1. The video lessons have the following characteristics:

- modular contents;
- indexing of the themes treated in the lesson;
- bookmark, a graphic icon that represents a connection to the (learning object).

Each video lesson is divided into topics and is created with a predefined indexing system, which allows for flexible usage. A student can view an entire video lesson in a linear fashion or follow a non-linear itinerary, thus choosing the topics that one wishes to study more in-depth, along with the connected study materials. The slides presented by the video professor during the video lesson(s) constitute an important support tool for study: the student can use them as a basis for notes, a means by which he/she can create his/her own network of links between topics and a way of writing a personal notebook. The video lessons, furnished with their relative slides, are enriched with didactic materials known as learning objects. They emerge during the course of the video lesson by an icon link (bookmark) and are made available in the Didactic Cyberspace of the Internet site. Such support materials comprise the following:

- books and articles (extracts, study sheets);
- CD-Rom or DVD;
- exercises (with answers);
- virtual laboratories;
- annotated bibliographies;
- annotated site links.

The modular organisation of the course contents, the indexing of the topics and the bookmarks allow for a multimedia and hypertextual learning process, and encourages a more personalised study path. The consultation and the study of the Masterclass materials enable the student to prepare himself or herself in a more comprehensive manner: utilising the possibility of in-depth study of topics raised in the video lessons, including the ins and outs of any practical application of the concepts learned.

The television interface through which the video lessons are transmitted is structured in the following way (Figure 4.1):

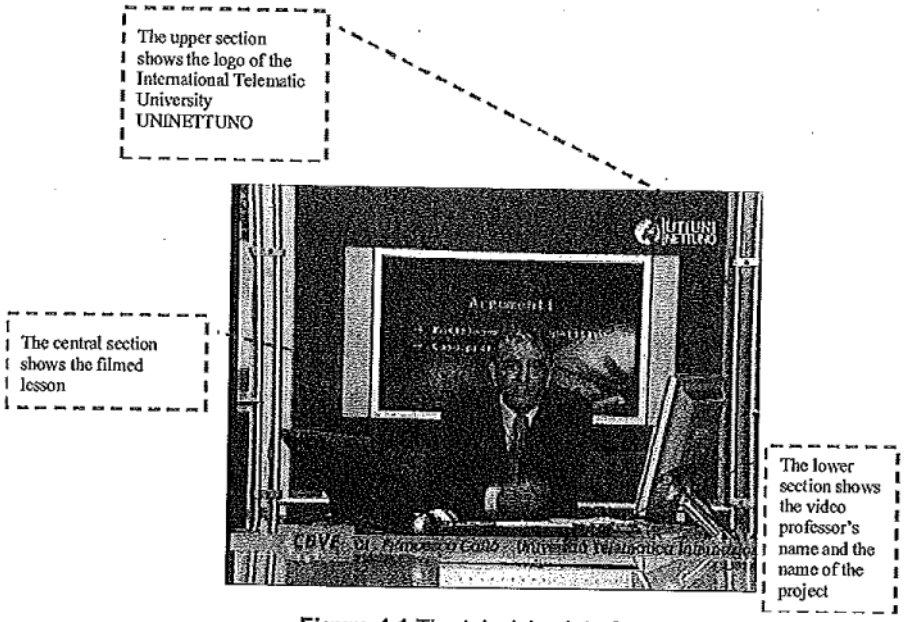

Figure 4.1 The television interface

The web interface for the transmission of the video lessons is structured in the following way (Figure 4.2):

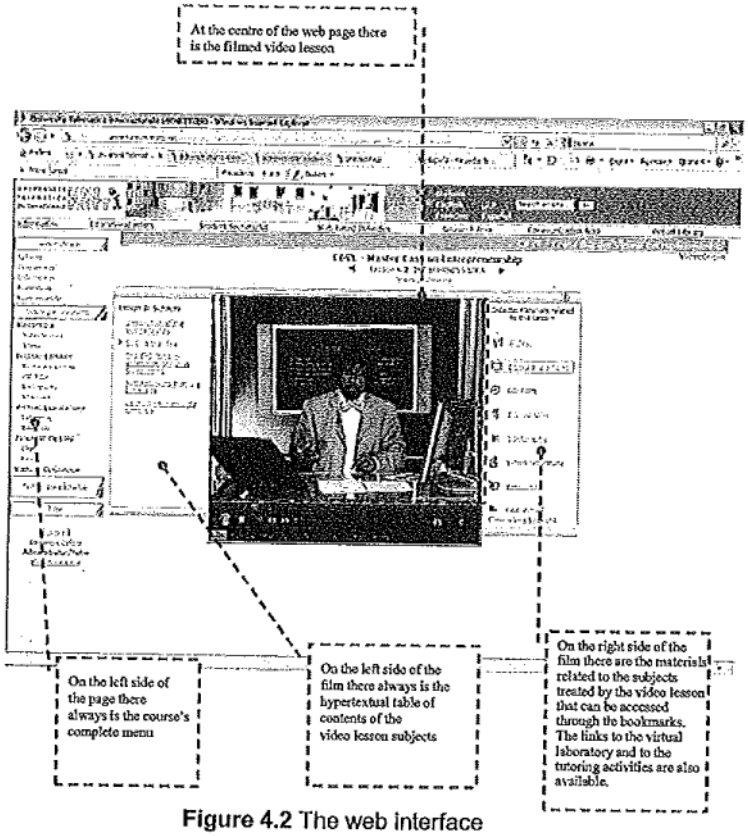

Figure 4.2 The web interface

It is very important to know the authors of the didactic contents: the UTIU e-learning platform always shows the authors. This is a great value of the e-learning system which is not only composed by the software platform and the didactic materials but also of the strong interaction among them. For example, looking at the Masterclass it is possible to see the authors of the course in each language, their institution and moreover it is possible to see their CV clicking on their names (Figure 4.3).

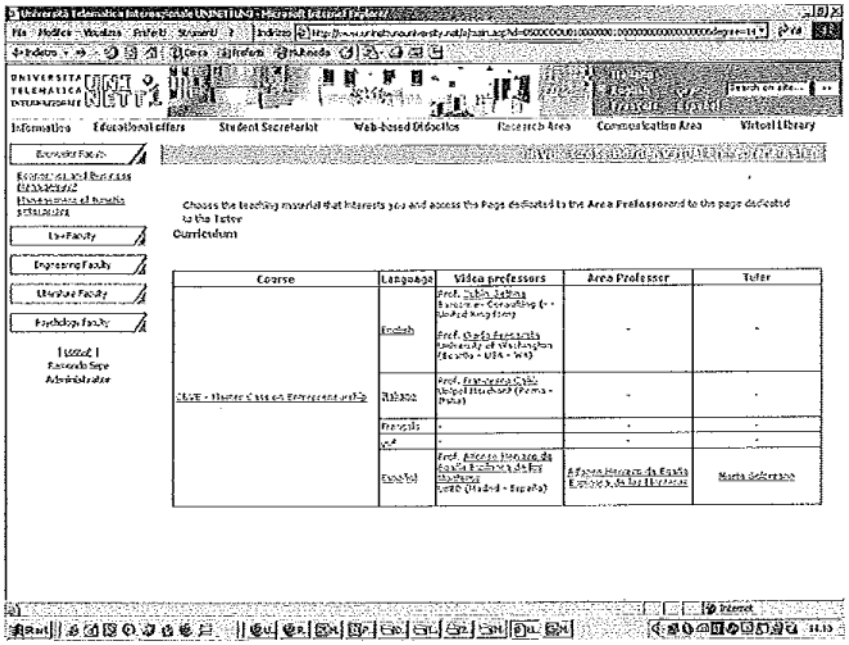

Figure 4.3 The authors of didactic content

The fulcrum of didactic activity on the Internet is represented by the WEB macro-area known as the Didactic Cyberspace, which allows those who participate in this learning process to access the areas relating to their area of study. In the Didactic Cyberspace a learning and developmental process is implemented through a new approach to communicating knowledge. There are various ways to access the Didactic Cyberspace through login and passwords on the basis of the three different roles of those who participate in the learning process: professors, tutors and students (Figure 4.4). All the content of the Masterclass can be accessed by a single page where there are all the links to the information of the course as well as links to the different learning environments. Also in this case, attention is given to the authors. The name, the photo, the email address and the CV of the tutor are well visible. The content of the course is accessible via the link *Syllabus* (Figure 4.5). Also in this case the primary authors of the content, the video

professors, as well the others authors involved in the production of the didactic material are listed, and their CV can be accessed by a simple click.

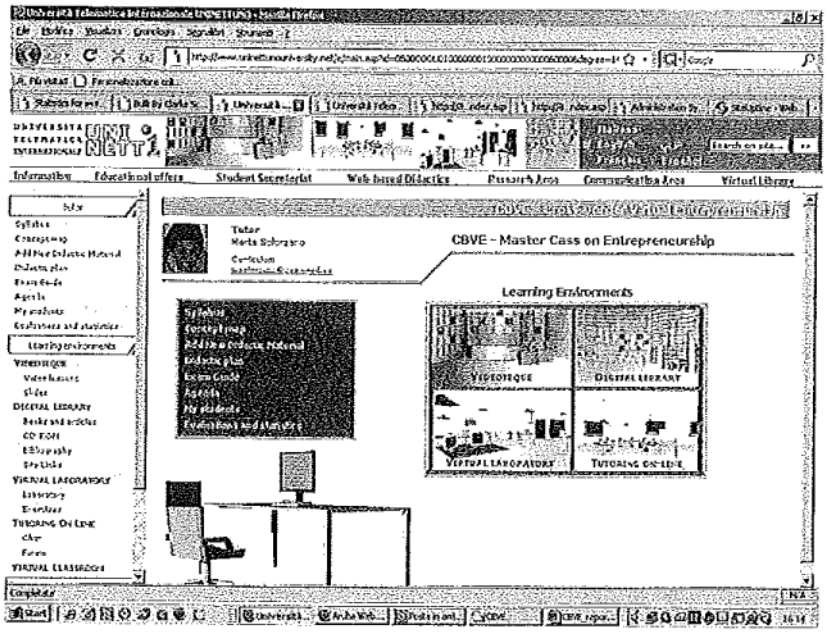

Figure 4.4 The tutor page

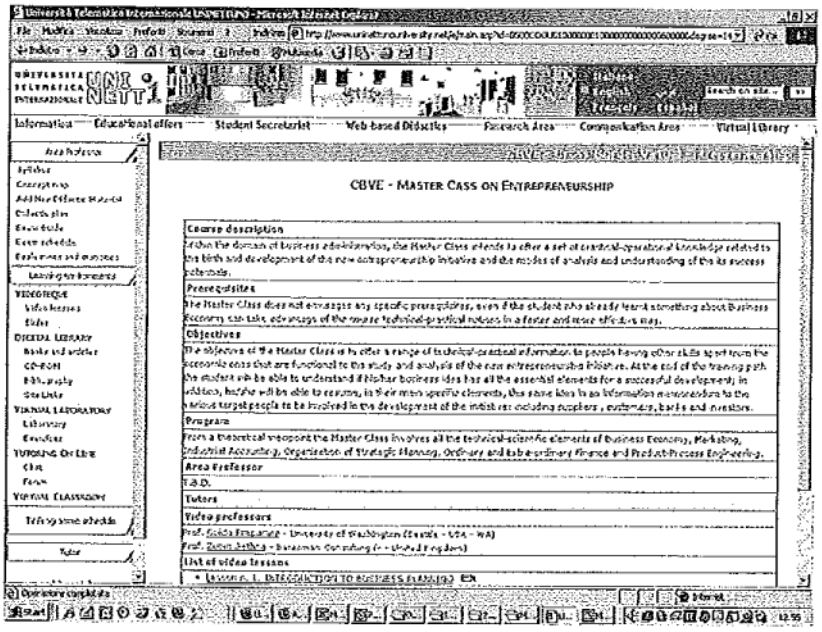

Figure 4.5 The course description

The Teaching Programme is structured in such a way as to contain: the description, objectives and contents of the subject being taught; the specification of necessary prerequisites; the reference to exercises relative to the video lessons; the indexing of textbooks; key words of the subject being taught; indications as to the methodology along with study suggestions for the subject being taught. The content of the course is presented in a graphical way via the Conceptual Map (Figure 4.6). With this tool, the student, and more generally any user of the system, can see what didactic materials are available for the course.

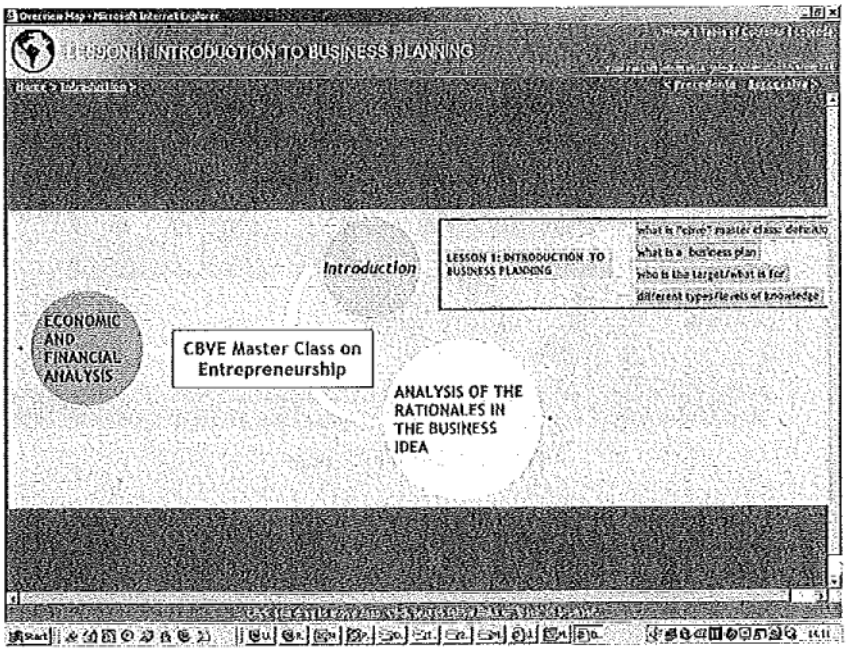

Figure 4.6 The Concept Map for the teaching subject presents

The Conceptual Map for the teaching subject presents the title of each lesson, a listing of the topics within each lesson along with bookmarks that connect the didactic materials (books and articles, CD-ROM, bibliographies, site links, exercises and virtual laboratories) relating to the various topics that are treated. It is possible to navigate the map zooming-in the specific lessons and even more on a given subject of a lesson discovering all the didactic material associated with the specific subject.

The following figure(s) display the delivery of the Masterclass in the different languages given by the different video professors (Figure 4.7). The recorded lessons are available on demand, via streaming, and the student has different ways to interact with it. One possibility is to click on

pause the lesson, allowing the student to reflect on the explanation of the professor and giving the student the possibility to takes notes. Another possibility is to use the *rewind button*, feeling like being in front of a DVD, to review a specific topic taught by the professor. Another possibility of interaction is to jump to a given subject of the lesson by clicking on the title of the subject that is on the left area of the video. This is possible because the lessons are digitalised and indexed by subject.

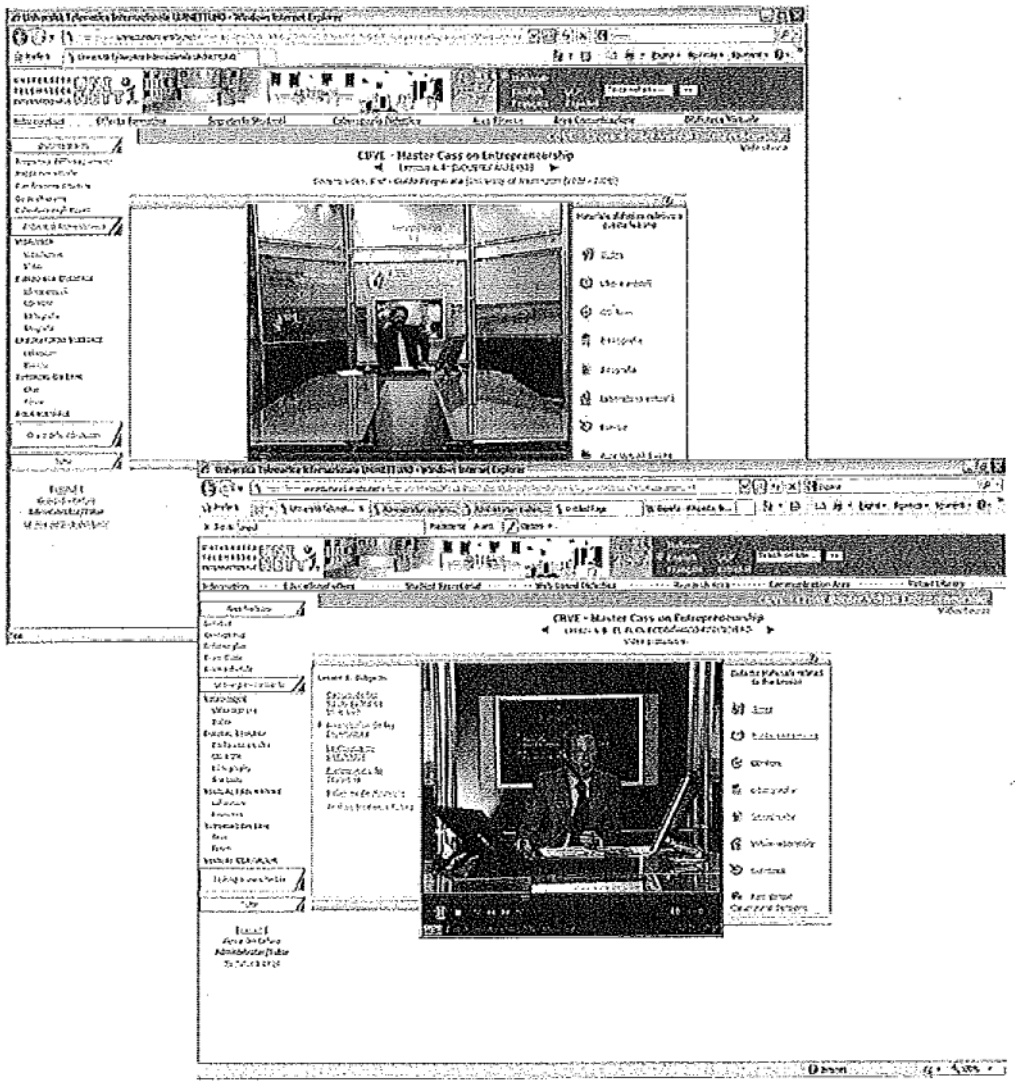

Figure 4.7 Guido Preparata, University of Washington (upper left), Alfonso Herrero de Egaña y Espinosa de los Monteros, Universidad Nacional de Educación a Distancia (bottom right)

There exists a further possibility of interaction. While the professor is talking, a bookmark on the left area of the video may be framed by a red box like in the following example (Figure 4.8). When this happens, we have a warning that there is didactic material available on the UTIU e-learning platform and that it is directly associated to what the professor was saying that moment. By clicking on the highlighted bookmark it is possible to get the desired content.

In addition to the possibility of retrieving the didactic material associated to a specific lesson by clicking on the active links on the right area of the video, it is possible to get the full list of the didactic materials available for the Masterclass, organised by type: books and articles, CD-ROM, bibliography, site links, laboratories, and exercises (Figure 4.9).

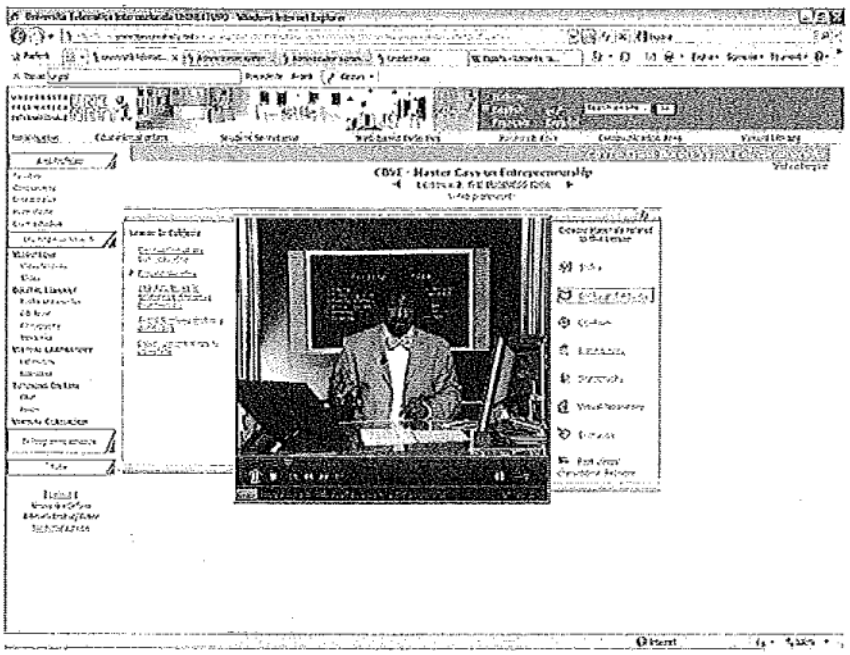

Figure 4.8 Zubin Sethna, University of Westminster

The Didactic Material is comprised of elements that have been prepared in an ad hoc fashion by the appointed professor. The materials can include articles, study sheets, exercises, CD-ROM/DVDs and slides. Selected materials, prepared by students during their collaborative studies, may be included at the discretion of the appointed professor. Figure 4.10 presents a *slide* from the video professor as presented during the video lesson. It is an important support tool for study. It can be used as a basis for making notes, as a means to create an own network of links between topics, and as a means to compile a personal notebook.

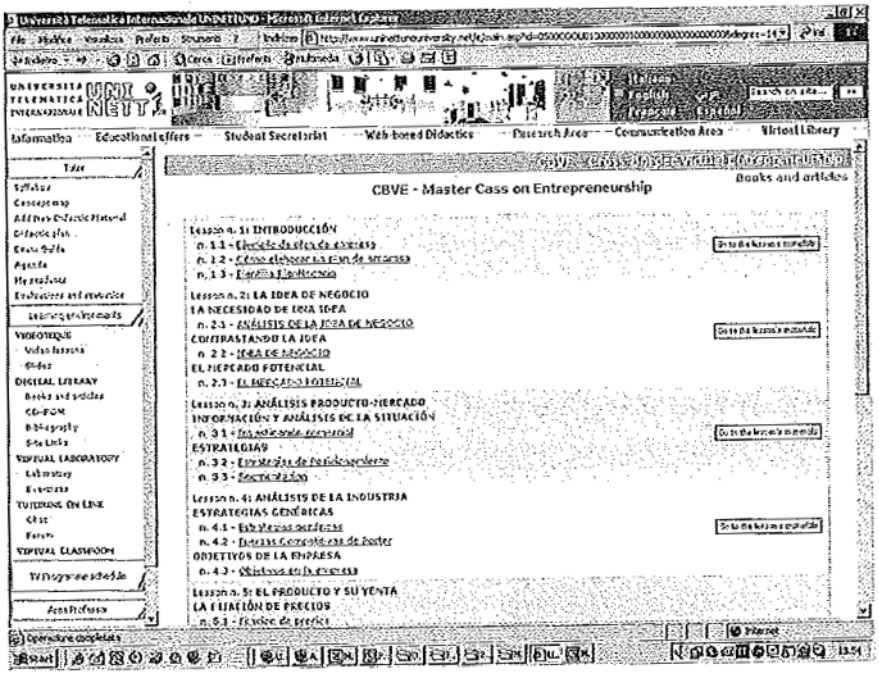

Figure 4.9 Didactic materials

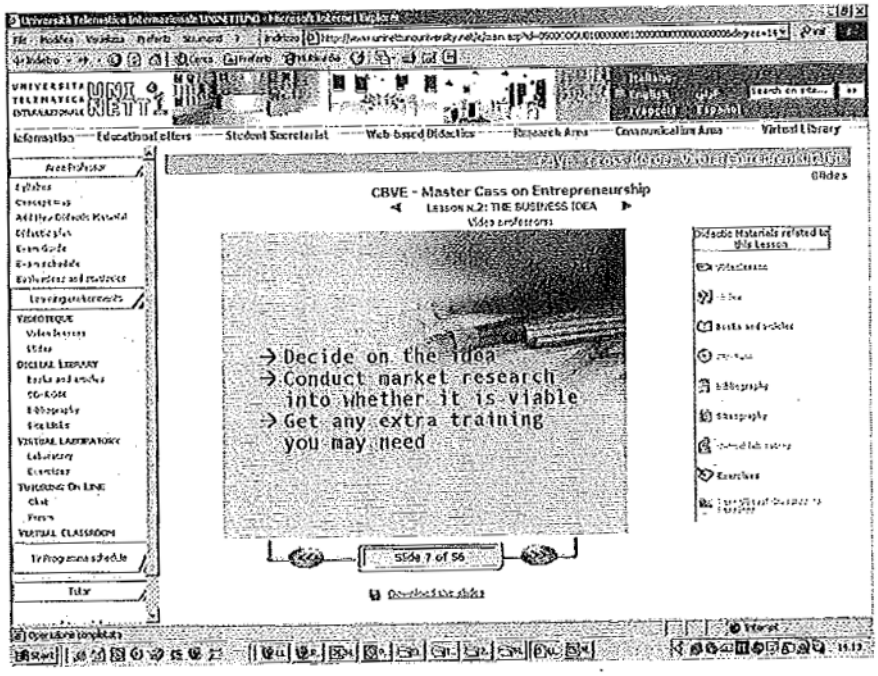

Figure 4.10 Slide support

In addition to what has been described previoulsy, the University of Tallinn and the University of Miskolc operate as traditional universities, implementing e-learning in a blended learning approach. Accordingly, these universities have (further) diversified their strategy with regard to the content development and the course delivery. Each course had to fit a blended delivery, implying the supplementing of different collaborative elements, next to the open and distance learning features. As part of the blended delivery approach, a wide range of new, versatile content elements and pedagogy have been added. This approach has enabled the University of Tallinn and the University of Miskolc to adopt a multi-purpose and multi-dimensional delivery, reaching out to a wider spectrum of target groups within the framework of lifelong learning. Next, some features of the Hungarian and Estonian recording and delivery are presented. The core content of the courses – similar to the EN, IT and ES courses – is presented in the form of video lectures (Figure 4.11).

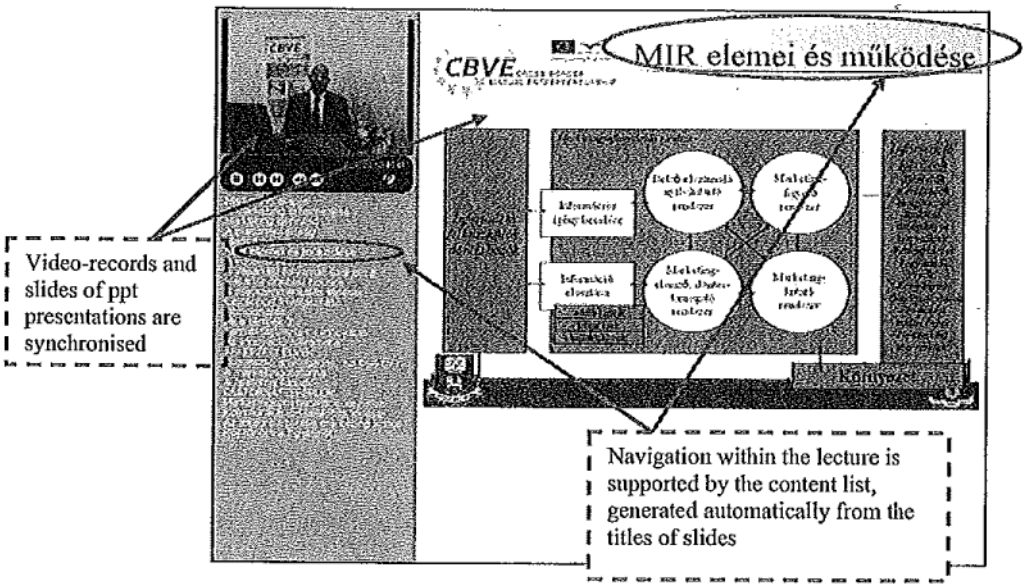

Figure 4.11 Video lectures edited by MS Producer software

Students are offered easy navigation – the content list below the video film shows the titles of ppt slides, which are published on the screen, synchronously edited with the film. By clicking on the titles, you may jump to any slide at any time. When you stop, and log out, but return later, the program will still remember, where to continue. The Powerpoint files are available for students to make printed versions in order to make notes while watching the presentation. A wide variety of learning support – offered by the Moodle platform – is available for the students to utilise: forum, blog, messages, tests, notes, and glossary. The staff-training for the academics and

professionals taking part in the course development and piloting, was organised in blended methodology, too. A separate course was developed for staff training purposes -- guidelines, presentations, useful links and templates were published both in English and Hungarian. Figure 4.12 displays the introduction to staff-training. Figure 4.13 displays a sample of the Estonian Masterclass.

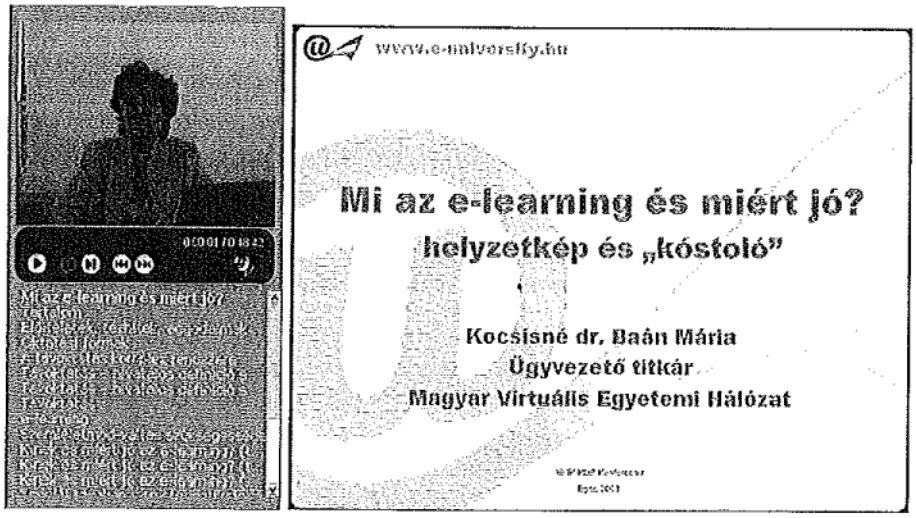

Figure 4.12 Hungarian video lecture used in staff-training

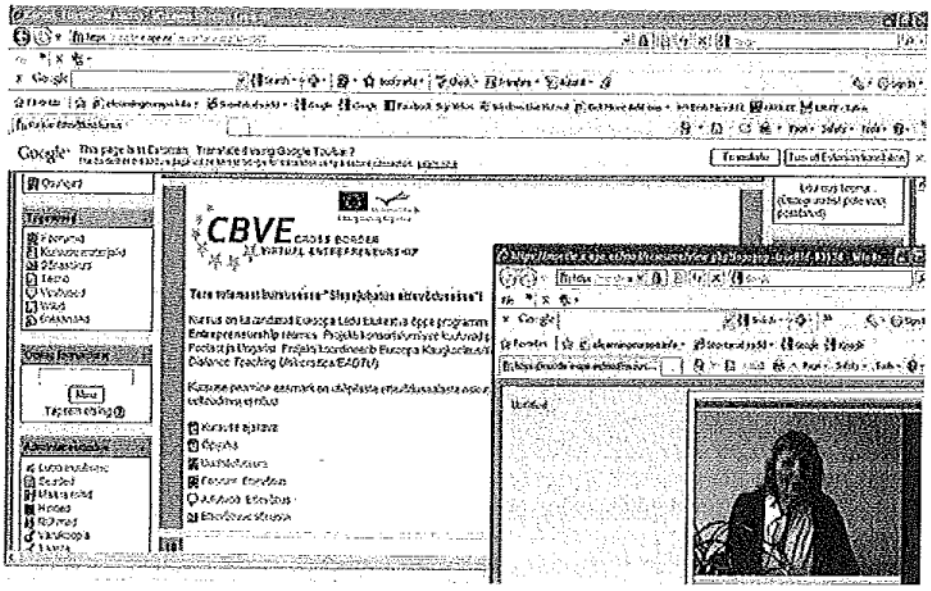

Figure 4.13 Sample of the Estonian Masterclass

4.6 Impact and outreach: Internet and satellite broadcast

The Masterclass entrepreneurship and its associated video lessons, have not only been delivered through the Internet but have also been broadcasted on the RAI NETTUNNO SAT1 satellite channel (free-on-air) (Figure 4.14). To receive the satellite broadcasts of RAI NETTUNO SAT 1, it is necessary to be equipped with a reception system comprised of a satellite dish and a decoder, set up with the following technical data: frequency: 11804,2 MHz; polarisation: vertical; symbol rate: 27,5 Msym/s; FEC: 02-mar. The Masterclass broadcast was delivered from June 14th to October 8th 2009. The broadcasting schedule was structured in such a way as to air one lesson a day, at 1:30 pm (CET) and be repeated at 9:05 pm (CET). A large outreach was obtained, covering among others: parts of Africa, America and Canada, Central and Eastern Europe, Russia, and the Mediterranean. Table 4.1 presents the broadcasting schedules on RAI NETTUNO SAT1 and SAT2 of the Masterclass, in as far as it involves the EN, IT and ES language versions.

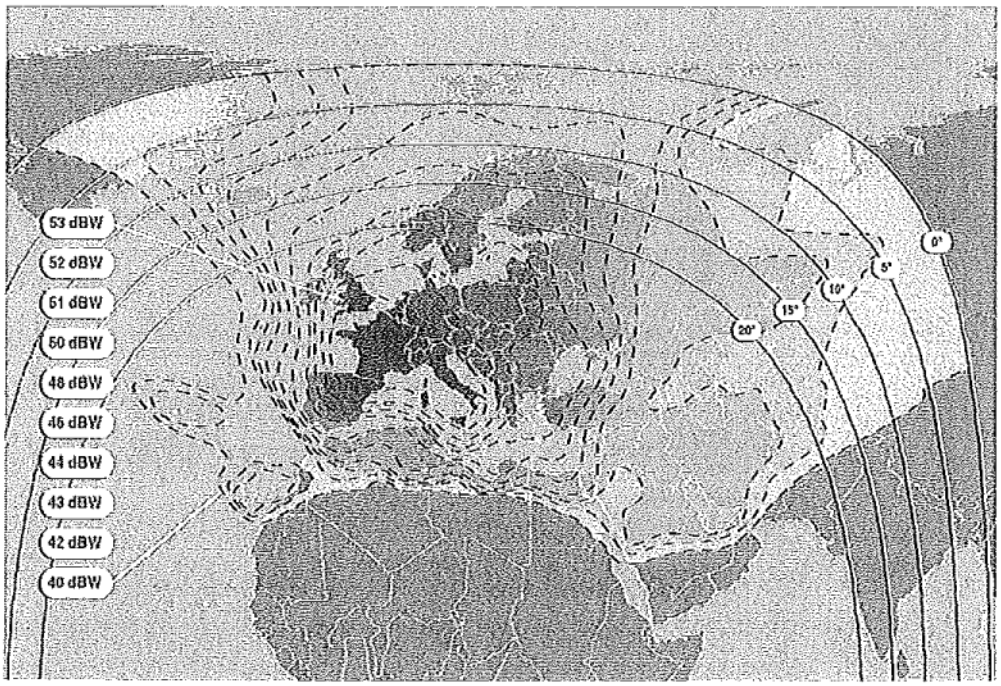

Figure 4.14 Outreach of the Masterclass satellite broadcast

Table 4.1 Broadcasting 13:30 on RAINETTUNO SAT1 - Re-run h 21:05; 04.15 on RAI2

	n.	Titles	Video Professor	Broadcasting time on RAINETTUNO SAT1	Broadcasting time on RAI2
IT	1	*Che cos'è il business plan*	Francesco Caliò	*14/06/2009* *09/09/2009*	*15/06/2009*
	2	*L'analisi dell'idea di business*	Francesco Caliò	*15/06/2009* *10/09/2009*	*16/06/2009*
	3	*Analisi prodotto-mercato*	Francesco Caliò	*16/06/2009* *11/09/2009*	*17/06/2009*
	4	*Analisi del settore*	Francesco Caliò	*17/06/2009* *12/09/2009*	*18/06/2009*
	5	*Analisi della concorrenza*	Francesco Caliò	*18/06/2009* *13/09/2009*	*19/06/2009*
	6	*Sviluppo del piano operativo - prima parte*	Francesco Caliò	*19/06/2009* *14/09/2009*	*20/06/2009*
	7	*Sviluppo del piano operativo - seconda parte*	Francesco Caliò	*20/06/2009* *15/09/2009*	*21/06/2009*
	8	*L'analisi di sostenibilità economica*	Francesco Caliò	*21/06/2009* *16/09/2009*	*22/06/2009*
	9	*L'analisi di sostenibilità e finanziaria*	Francesco Caliò	*22/06/2009* *17/09/2009*	*23/06/2009*
	10	*Il controllo di gestione*	Francesco Caliò	*23/06/2009* *18/09/2009*	*24/06/2009*
EN	1	*An Introduction*	Zubin Sethna	*24/06/2009* *19/09/2009*	
	2	*The business idea*	Zubin Sethna	*25/06/2009* *20/09/2009*	
	3	*Product/Market Analysis*	Zubin Sethna	*26/06/2009* *21/09/2009*	
	4	*Industry analysis*	Guido Preparata	*27/06/2009* *22/09/2009*	
	5	*Competitive Analysis*	Zubin Sethna	*28/06/2009* *23/09/2009*	
	6	*The Operational plan – Part 1*	Guido Preparata	*29/06/2009* *24/09/2009*	
	7	*The Operational plan – Part 2*	Guido Preparata	*30/06/2009* *25/09/2009*	
	8	*Economic sustainability analysis*	Guido Preparata	*01/07/2009* *26/06/2009*	
	9	*Analysis of Financial and Firm Sustainability: Accounts and Finance for new enterprises*	Zubin Sethna	*02/07/2009* *27/09/2009*	
	10	*Management Control*	Guido Preparata	*03/07/2009* *28/09/2009*	
ES	1	*Introducción*	Alfonso Herrero	*04/07/2009* *29/09/2009*	
	2	*La idea de negocio*	Alfonso Herrero	*05/07/2009* *30/09/2009*	
	3	*Análisis producto-mercado*	Alfonso Herrero	*06/07/2009* *01/10/2009*	
	4	*Análisis de la industria*	Alfonso Herrero	*07/07/2009* *02/10/2009*	
	5	*El producto y su venta*	Alfonso Herrero	*08/07/2009* *03/10/2009*	
	6	*El plan de operaciones*	Alfonso Herrero	*09/07/2009* *04/10/2009*	
	7	*El plan operativo*	Alfonso Herrero	*10/07/2009* *05/10/2009*	
	8	*El plan económico-financiero*	Alfonso Herrero	*11/07/2009* *06/10/2009*	
	9	*Necesidades financieras y cobertura*	Alfonso Herrero	*12/07/2009* *07/10/2009*	
	10	*Contabilidad*	Alfonso Herrero	*13/07/2009* *08/10/2009*	

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5. Masterclass curriculum infusion and business planning trials

This chapter describes the infusion of the Masterclass entrepreneurship, into the curriculum along with associated business planning trials. The chapter starts with an introduction (section 5.1). Following, the methodology i.e., a two-model approach, is explained (section 5.2). Subsequently, a sequence of virtual business planning pilots is described (section 5.3). Finally, model recommendations are made based on the evaluated strengths and weaknesses (section 5.4).

5.1 Introduction

Next to the development of the pedagogically-rich Masterclass materials for flexible and independent learning as described in the previous chapter, the entire Masterclass was (also) subject to pilot testing. Masterclass curriculum infusion in conjunction with business planning trials with students, constituted an important part of the CBVE project. Pilot models for virtual (entrepreneurship) business planning (with the Masterclass embedded) were designed, taking into consideration staff, students, institutional constraints, external stakeholders, and technical/collaborative facilities. Successive test beds at different partner institutions were implemented, aimed at the coaching of students in the development of their competence and enterprise planning. The test beds were diversified in terms of frequency, composition, duration, location, modality, and technology. In as far possible, university and regional specificities were taken into account.

5.2 Methodology: a two-model approach

During the project, and parallel to the content development process of the Masterclass, discussions started about the type of models to deploy in the pilot endeveour. The versatility of needs and the existence of common practices in partner institutions, were investigated. The partnership involved in implementing the test beds are distinguished by their different institutional profiles and characteristics. Two partners i.e., the Universidad Nacional de Educación a Distancia UNED and the Università Telematica Internazionale UNINETTUNO, operate as open and distance teaching universities, with consolidated robust IT support in their own e-learning framework. The other two universities, i.e., the University of Tallin and the University of Miskolc, are traditional (mainstream) universities, which implement e-learning in a blended learning approach, in versatile levels & forms within the education programme. This was recognised as a true added value and not as a restriction. The presence of diversified institutional profiles and

educational modalities, enabled us to evaluate the addressing of the (specified) target group, in more than one way.

The open and distance teaching universities i.e., the off-campus universities, forwarded a distance model for educational delivery with regard to the test beds. The traditional (mainstream) universities i.e., the on-campus universities, forwarded a blended model for educational delivery with regard to the test beds. Accordingly, the pilots were realised in two distinct test beds with associated technological platforms. The Italian, English and Spanish Masterclass versions were implemented on the UTIU e-learning platform. The Hungarian and Estonian Masterclass versions were implemented on a Moodle platform as developed and operated by the University of Miskolc. Although the necessity of diversified accessibility and platforms is evident, all partners agreed that all Masterclass versions needed to be transparently accessible through cross-referenced/ cross-linked functionality, enabling access for all students, to all derative language versions of the Masterclass courses, at any time, regadless of platform.

5.3 Virtual business planning pilots

In review of the aim of the virtual business planning pilots i.e., the implementation of a step-wise approach for coaching students in the development of their competence and enterprise planning, utilising flexible modality education and training in the context of an incubating virtual learning environment (along with new generation tools and techniques), we elaborate (next) some of the leading principles to work by.

Fitness for purpose:

> The e-learning pilot should be tailored to the specific pedagogical aims and tools, as defined in the preceding activities for Masterclass development. The technology available should be able to support all didactically necessary activities: autonomous learning, assessment, communication, collaboration, project-based learning, et cetera. The role of ICT however should be a balanced one. It is not allowed to hinder or restrict the application of any pedagogically required element, but also, it should not overgrow and have a certain type of domination over the learning process.

General/specific content elements:

General content elements refer to: lessons - texts, figures, illustrations, links for further resources, glossary, et cetera, video-recorded lectures, case studies, examples, and assessment (tests, essay, project work). Specific content elements refer to the need for specific didactical tools support dedicated to particular phases within the learning process. It may be comprised of elements that have been prepared in an ad hoc fashion by the appointed professor or students generated materials.

Versatility and flexibility:

Adequate support for learners preferring different learning styles must be provided. An individualised, personalised learning environment should be made accessible for those living as digital natives while a simple, easy-to-use learning paths should be offered for those being confused by too many options and too much sophistication. The potential of further development for both groups should be offered. Versatility must be considered not only from the side of the learners, but also from the side of course providers: the learning environment must bring together partner universities into a single place, where they can share their experiences with the use of the different e-learning environments deployed for either distance education or blended learning: be it Open Source platforms e.g., Moodle, commercial platforms e.g., Blackboard or WebCT, or custom-made platforms such as Coedu).

Structural build-up:

The build-up of the technological environment should preferably be based on standard, interoperable, existing e-learning solutions, enhanced by innovative, new functions of versatile collaborative tools. The pilots should be embedded in an attractive and accessible "all-player" learning environment, incorporating several open educational resources (e.g., glossary, external links, library, case studies) and open educational tools (e.g., wiki, blog, portfolio, forum, calendar, podcasting, instant messaging communication, audio-video conferencing over IP, RSS, mobile text messaging), aiming not only at knowledge transfer and acquisition but also at knowledge generation and social networking, as (new generation) instructional methods.

Collaborative tools:

Collaborative tools are essential to provide for efficient and effective involvement of different parties within multi-player activities. Electronic tools provide a means of involvement of geographically 'difficult' target groups, such as SMEs and the continuous involvement of a wide range of potential stakeholders, be it regional, national or international. Organisations and individuals involved in, and related to, the project have different stakes and interests in course development, delivery and in evaluation. It is important to make these stakes and interests explicit from the very beginning of the project.

Multi-purpose and multi-dimensional delivery:

As foreseen, the Masterclass learning materials and methodology are not only applied in local and regional courses and programmes, in the native languages, but they are (also) launched and delivered in the form of (networked) international courses. Multilingualism is an important asset in the learning design. Exchange of information/knowledge between students from different universities will not only improve the quality of the learning process but will also contribute to a better understanding of multicultural aspects of business life.

Academic cooperation and joint development:

Although the Masterclass addresses (adult) learners of non-traditional cohort, the associated learning materials can be applied as modules in various other training programmes (e.g., in BSc or Ms courses for traditional learners). Considering the versatility of training needs and learning paths, any reusability of bite-sized learning objects should be considered in a way to cater for effective reconversion of courseware to specific needs. The Masterclass can be at the centre of any academic cooperation whereas the joint development of (new generation) educational materials is concerned, for example joint educational Master programmes in entrepreneurship.

5.3.1 Blended delivery model: Moodle platform

Moodle has become the most popular, widely used virtual learning environment. Due to its dynamic and continuous development and its basic philosophy for supporting wide scale of learning activities and learning styles, it is used by millions of users, in all levels and forms of education. The wide scale of its activity modules (such as forums, wikis, databases, and so on) makes it simple to build rich collaborative communities of learning around subject matter (in a social constructionist tradition). Moodle is an ideal platform for international collaborative learning: it has been implemented in 204 countries and translated into several languages. Using the Moodle-centred Collaborative Business Training Platform means a guarantee for sustainability of the results, beyond the life-time of the project, and can be maintained without further financial support. The two traditional universities involved in the pilot run(s), offer e-learning not just to part time students, but also to full time students, as a versatile and effective learning support, using the Moodle platform.

5.3.1.1 Pilot description

The pilot runs at the University of Miskolc were organised in 3 phases, aligning with the curriculum of the Faculty of Economics and adhering to specific needs of Hungarian SMEs. In the academic year 2008/09, two parallel pilot courses were launched in Semester 1.

First pilot

In the frame of the course 'Business Planning', a first pilot was conducted. The target group comprised of full-time students in their 3rd year (5th semester) of the BA programme at the Faculty of Economics. This first pilot model allowed for a gradual introduction of the virtual environment, in a blended learning approach. The first period of the course was delivered mainly in a traditional classroom situation, however ppt presentations became available for learners to get them involved gradually in the virtual collaborative space. By the end of the semester, groups of 3-4 students developed their own business plans, which was the dedicated, core objective of the course. Creativity and fresh ideas of the learners were presented in project reports (60-80 pages in pdf files), highly illustrated and precisely detailed. The best of their presentations have been recorded and edited – also very attractive and creative presentations proved the improved skills of our learners. Some of these project reports and presentations received prizes in the Scientific Student Competition and Conference as well.

Second pilot

In the frame of the course 'Business Economics', a second pilot was conducted. The target group comprised of a mixed group of 6 foreign students, studying at the University of Miskolc through an ERASMUS scholarship (1 Finish, 2 Polish, 2 Bulgarian, 1 Turkish), and 7 Hungarian students. Pilot 2 had several differences as compared with Pilot 1 – in this case an international group of Erasmus students took part in a course aiming at much more collaborative learning, modelling and developing the different entrepreneurial skills in different situations and business games. During the course, students were very active, as it can be seen in video-recorded, and edited illustrations. Next to simulating a real business environment in an international collaborative learning scenario, multicultural aspects of business life were also an important component of the course. At the end of the semester, foreign students organised an International breakfast – inviting each other for tasting their traditional foods and presenting them their country, its cultural values and traditions.

Third pilot

In the spring semester of the academic year 2008/09, two additional (parallel) pilot runs were conducted. In frame of the course 'Legal aspects of SMEs in Hungary', the third pilot was executed. The target group comprised of full-time students in their 2nd semester of a MA programme, specialised in Entrepreneurial Studies at the Faculty of Economics. This pilot again involved large number of learners. Its thematic content focused on a specific subject of SMEs – legal aspects and legal environment. These subjects were highlighted in the presentations delivered by the teacher and the students' project. Learning material included a large collection of specific case studies. Further reading was offered to the students on the platform. The final reports of the students were submitted electronically and evaluated by the teacher. Peer review and video-recorded presentations were similar to the methodology used in pilot 1.

Fourth pilot

The fourth pilot was performed in frame of the course 'Development of Entrepreneurial Skills Business Games'. The target group comprised of full-time and part time students in their 4th semester of a BSc programme specialised in Entrepreneurial Studies, at the Faculty of Economics. Pilot 4 aimed at extending the collaborative learning scenario. Similar to Pilot 2, business games as simulations of real business environment, were core activities. Besides presentations, case studies and further reading, several video illustrations provided support to improve specific skills for entrepreneurship (e.g., conflict management, communication, protocol,

and body-language). In addition, tests were offered for self evaluation of the developed competences. In this course, part-time (i.e., correspondence) learners were also involved, forming a group of students with very different backgrounds, experiences and motivation.

Fifth pilot

A fifth pilot was conducted in frame of the course 'Development of Entrepreneurial Skills for adult learners starting a new business'. The target group comprised of adult learners who participated in a project organised by the Chamber of Commerce and Industry of Borsod County (BOKIK). The project had the objective of stimulating regional employability and competitiveness. The project offered a two-phase training programme for adult learners, mainly for unemployed people or SMEs just starting their business. In the first part, face-to-face lessons (classroom seminars) were delivered by the experts of BOKIK. The venues of these trainings were located in the neighbouring small towns. In the second phase, the University of Miskolc was commissioned to establish an electronic learning environment for these learners, continuing their studies in a more and more complex manner, giving access to wide variety of information resources and using advanced delivery methods. Based on a mutually beneficial agreement, in frame of the 5th pilot, the adult learners received access to the Hungarian Masterclass video lectures, as well as to some selected business plan project reports, developed in the earlier stages of the project, by students. Staff training of BOKIK experts on how to use the electronic learning environment and the learning materials, was organised (also) as an activity of the University of Miskolc.

All the 5 pilot courses followed different approaches and had different methodological aims. The pilots 1-4 had been integrated into the mainstream curriculum of full-time and part time students. All the programmes were delivered in duration of 14 weeks. Evaluation and assessment of the learners' progress was carried out according to the regular assessment process, so results and effectiveness of applying Masterclass methodology were measurable in comparison with the traditional delivery method. Progress of students was monitored continuously and they were supported by the tutor of the course. Final project reports (native Hungarian) were submitted electronically in pdf – with the supplement of an English summary - and were presented to the classmates. Peer review and evaluation had in some cases been extended to an institutional and national student research competition, where external evaluators assessed the project results as well.

5.3.1.2 Pilot outcomes

The development of a wide range of versatile learning materials as well as the delivery of pilot courses within the CBVE project at the University of Miskolc, have significantly contributed to the extension of the education activities within the University of Miskolc, and have contributed to stimulating the establishment of regional SMEs. For each specific pilot conducted, more detail is presented. All participants of the pilot courses – both students and tutors – received certificates as recognition of their attendance (Figure 5.1).

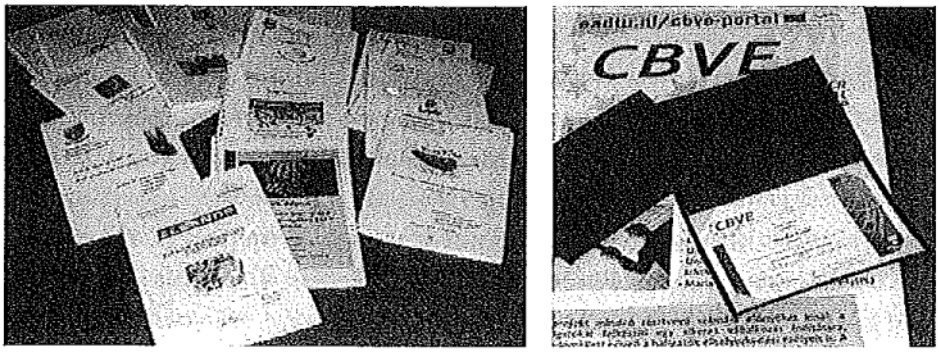


Figure 5.1 Student products and associated certification

Results of Pilot 1 – Business Planning (HU):

- Participants: 104 students
- Course in Moodle.
- Video presentations by students
- 41 Semester reports – Business plans
- 14 papers in (TDK) Students Research Competition at the University of Miskolc
- 32 students
- 16 prizes (1 Gold prize, 2 Silver prize, 1 Bronze prize)

Results of Pilot 2 - International Business Economics (EN):

- Participants: 6 foreign and 7 Hungarian students
- Course materials in Moodle in EN
- Video case studies, games
- International Breakfast - presentations of countries by students

Results of Pilot 3

- Participants: 50 MA students, specialised in Entrepreneurial Studies
- Course materials in Moodle – ppt presentations
- Video presentations by students
- Semester reports by students (15)

Results of Pilot 4

- Participants: 55 full-time and 40 part time BSc students specialised in Entrepreneurial Studies
- Course materials in Moodle – ppt, handouts, videos
- Video presentations by students
- Semester reports by students (10)

Results of Pilot 5

- Participants: 38 adult learners from three neighbouring towns
- Course materials in Moodle – video lectures of the Hungarian Masterclass
- Masterclass published in DVD format.

In addition, the knowledge pool as developed under the CBVE project (of these content elements) has been continuously enlarged (Table 5.1). Some attractive video films (video case studies, video illustrations and tests) produced in former national projects were also reused and reedited for (additional) illustration of entrepreneurship. Demonstrating the high level of support and commitment at the Faculty of Economics, all video lectures were recorded by different professors/ lecturers. Active involvement of the strategic, associate partner, the Chamber of Commerce and Industry of the county Borsod may be mentioned also as specific feature of the Miskolc CBVE collaborative model. As part of this collaboration, the Secretary General of the Chamber gave a presentation – also video-recorded – and adult learners from three neighbouring towns were enrolled to test the Hungarian Masterclass, coordinated by the Chamber. Moreover, it contributed heavily to dissemination activities as well (e.g., newsletter, distribution of leaflets). As regular students and adult learners may learn the same courses in the same electronic environment, interaction between the different generations is expected to offer unique mutual benefits for both cohorts of learners.

Table 5.1 Teacher and student generated content

Pilot No.	File format	Teacher generated content				Learner generated content			
		slide	page	minutes	pictures	slide	page	minutes	pictures
Pilot 1	ppt	335				719			
	doc /pdf						2373		
	Video							122	
	photo				30				
Pilot 2	ppt	69				89			
	doc /pdf		38				3		
	Video			30				4	
	photo				66				50
Pilot 3	ppt	464				329			
	doc /pdf		156				543		
	Video							207	
	photo								
Pilot 4	ppt	30				100			
	doc /pdf		163				296		
	Video			7				110	
	photo				19				19
Pilot 5	ppt	331							
	doc /pdf								
	Video			480					
	photo								
Total of Pilot1-5		**1229**	**357**	**517**	**115**	**1237**	**3215**	**443**	**69**

The approach which was taken for the pilots in Miskolc, (also) intended to illustrate the paradigm shift initiated by the Web2.0 technologies, as by the approach described in the ViCaDiS project: shifting the focus from the education materials and technology, towards the user-student, and beyond: towards user generated content. Not only thousands of pages and hundreds of slides were produced as student generated content elements, but also video presentations and video illustrations near to 8 hours in total, have been developed by learners in the Hungarian CBVE pilot courses.

In the final parts of this section, a number of illustrations are given, visualising the rich mix of approaches and content elements. In line with the blended learning methodology, several case studies and business games are illustrated. In each case, a detailed description of the tasks and steps were published in advance, as lessons. Subsequently, the groups could solve the tasks in the classroom and document their steps by photos and videos, which were then also published through the Moodle platform, and became available to the other groups as well. Screenshots taken from two case studies are shown in Figures 5.2 and 5.3.

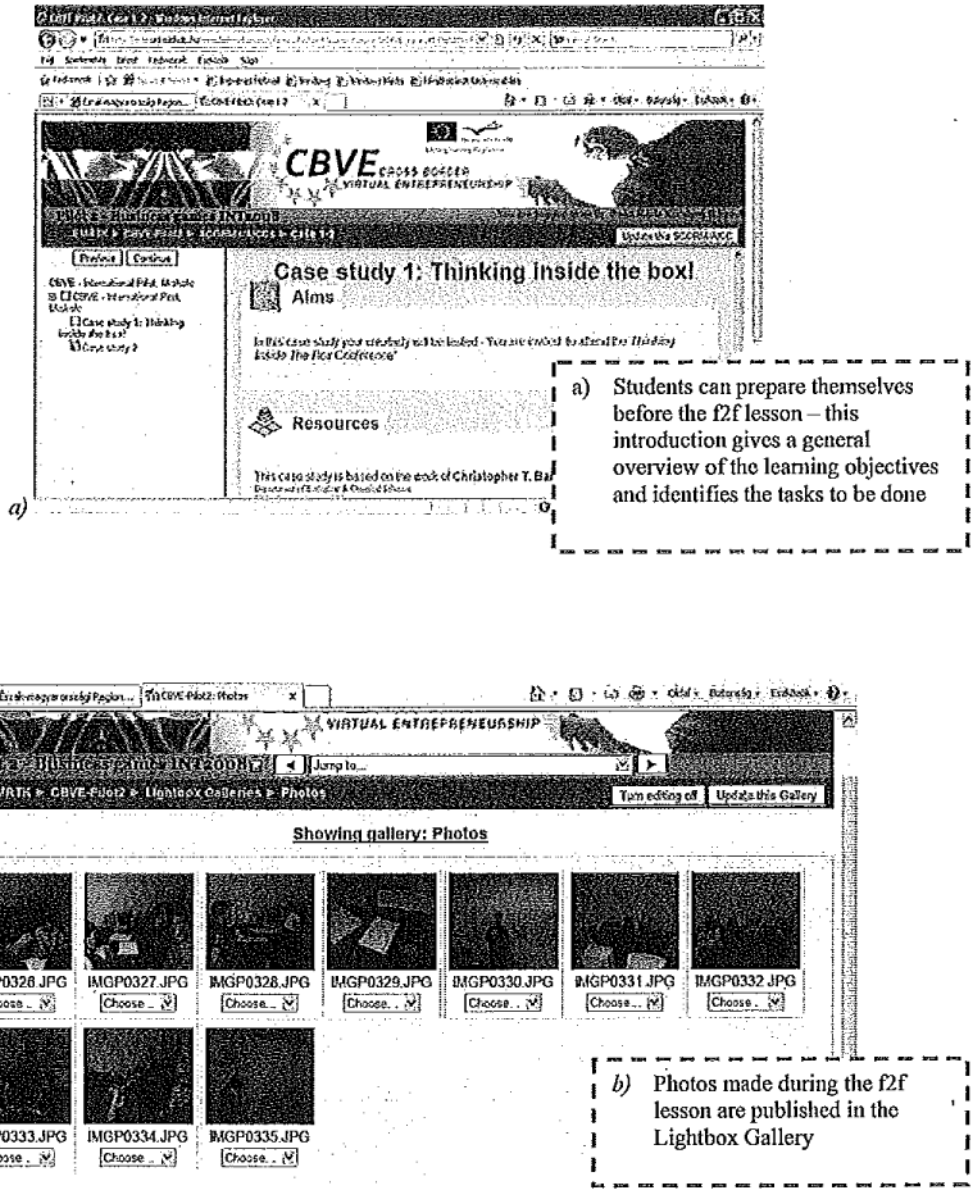
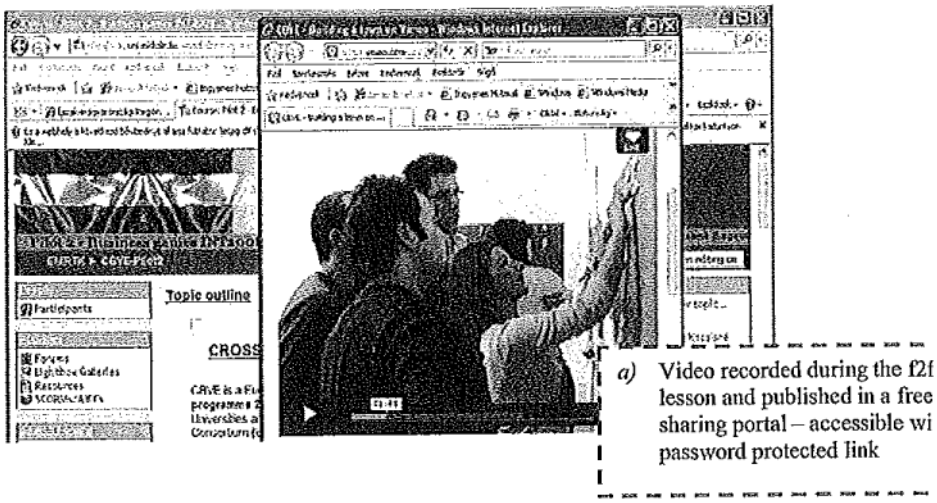


Figure 5.2 Case study: thinking inside the box!



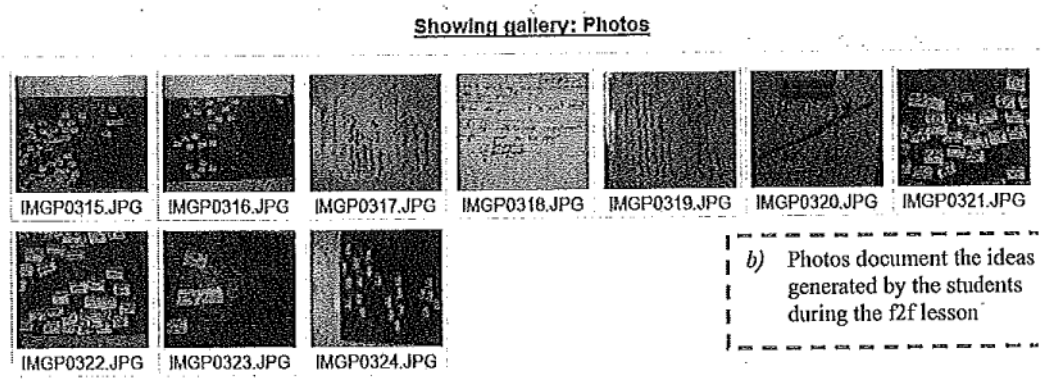


Figure 5.3 Case study: design your city!

Probably the most popular business game was designing a tower – from lego bricks (Figure 5.4). Student teams were expected to make a plan and realise it – simulating several decision making situations and managerial issues. The final evaluation did not only consider the height and stability of the tower, but also the time and budget used for building the tower. Templates were offered for students on how to calculate each budget line: man power, materials, overhead, et cetera.

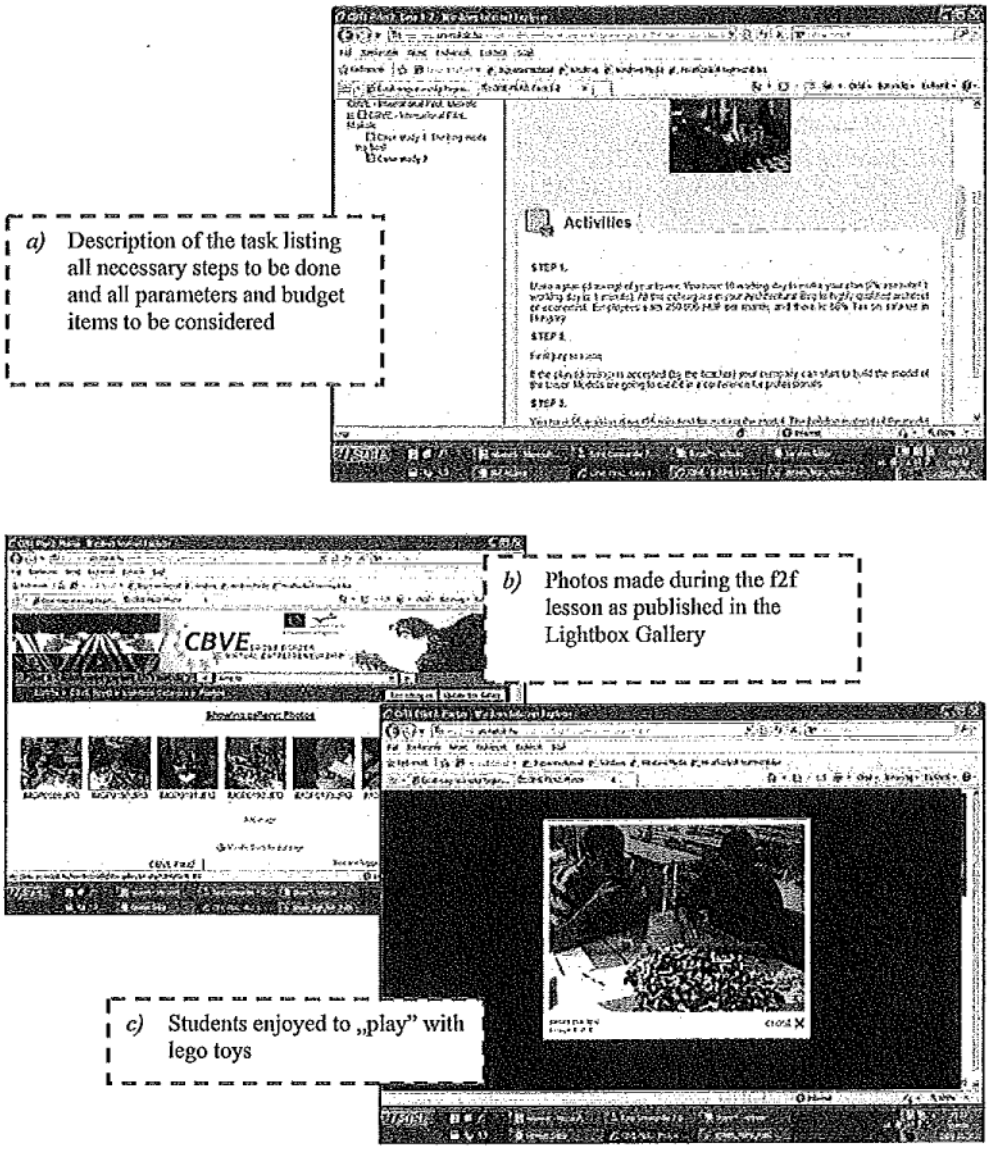


Figure 5.4 Case study: design a tower!

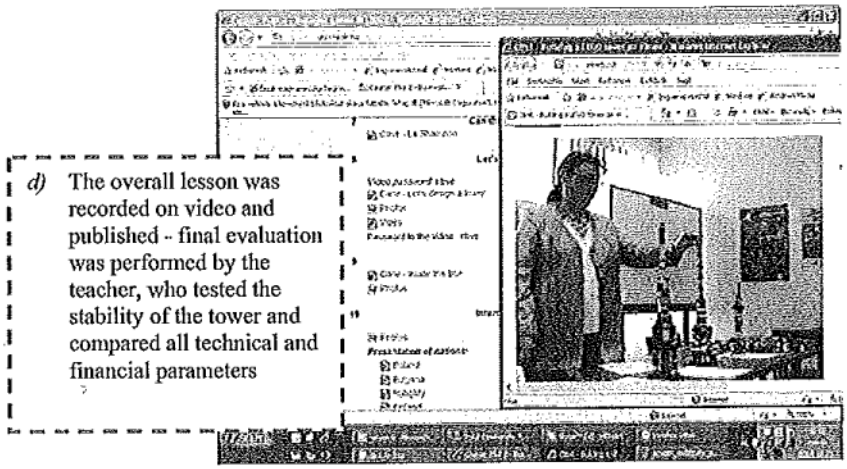


Figure 5.4 Case study: design a tower! (continued)

Overall, the students were expected to work on different projects and create a business plan for their own business idea. Their project reports have also been published on the course site, through the Moodle platform. By the end of the semester, the students presented their project work in a seminar – and some of these presentations were recorded on video as well. Presentations are documented by ppt files and video lectures – using the same methodology as for the lectures of the academics (Figure 5.5 and 5.6).

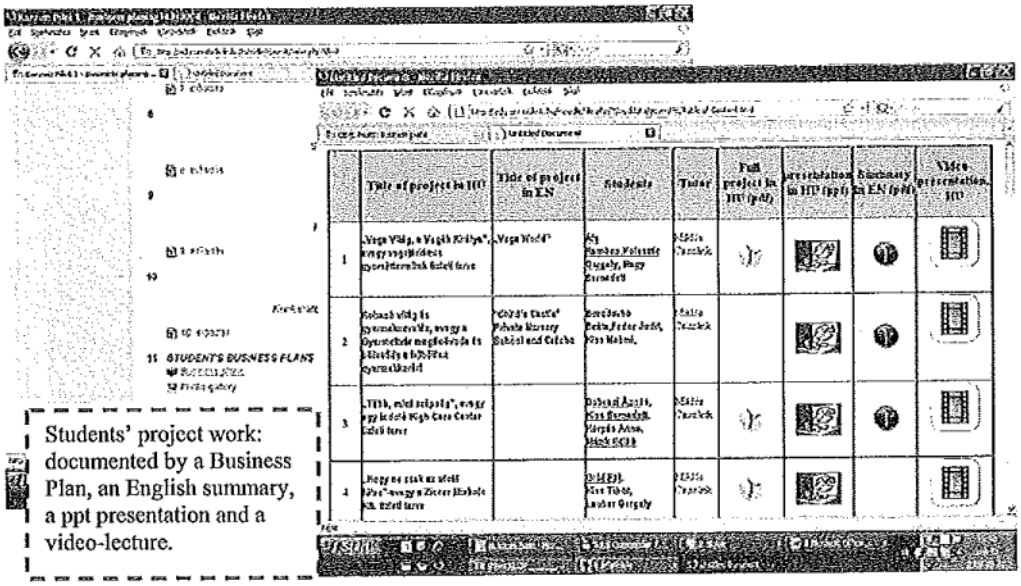


Figure 5.5 Documentation of projects

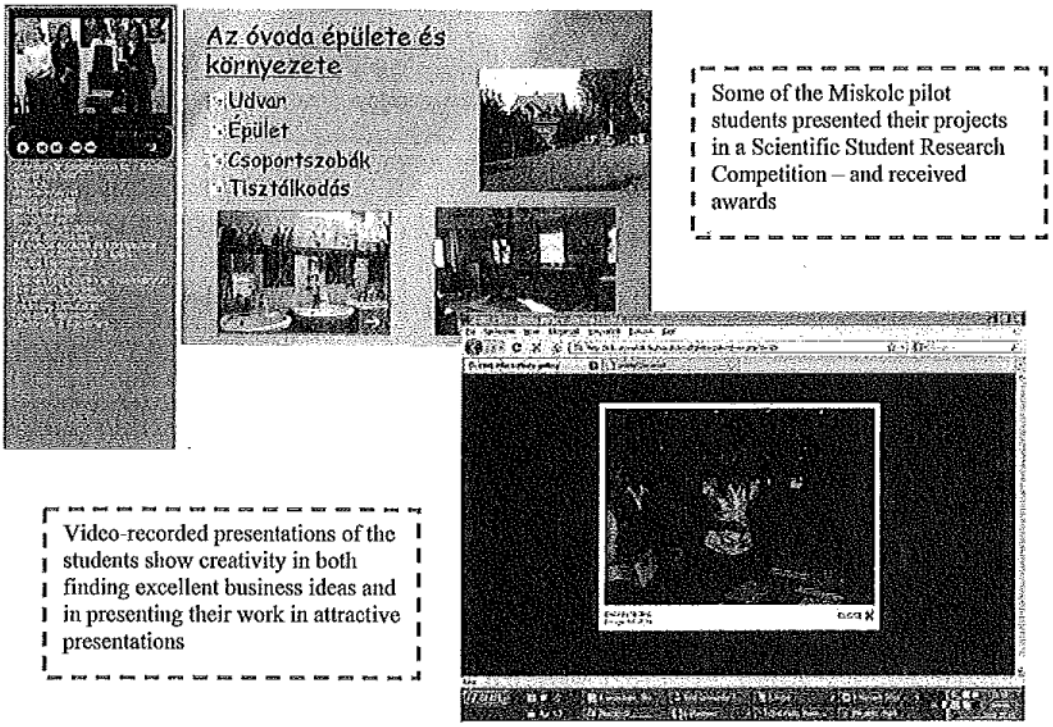


Figure 5.6 Project work including video

We shall end this section with some illustrations from the second pilot, the international group of Erasmus students. Especially in this pilot, added value was created through the establishment of learning communities and social networking. During that (second) pilot, students were very involved, as can be reviewed from the video-recorded, edited illustrations, presented on the password protected, free video-sharing portal.

The pilot focused on simulating a true business environment by means of an international collaborative learning scenario. Multicultural aspects of business life were included as an important component of the pilot. At the end, the foreign students organised an international breakfast – inviting each other to taste their (native, traditional) food, and presenting one's own country characteristics, cultural values and traditions (Figure 5.7).

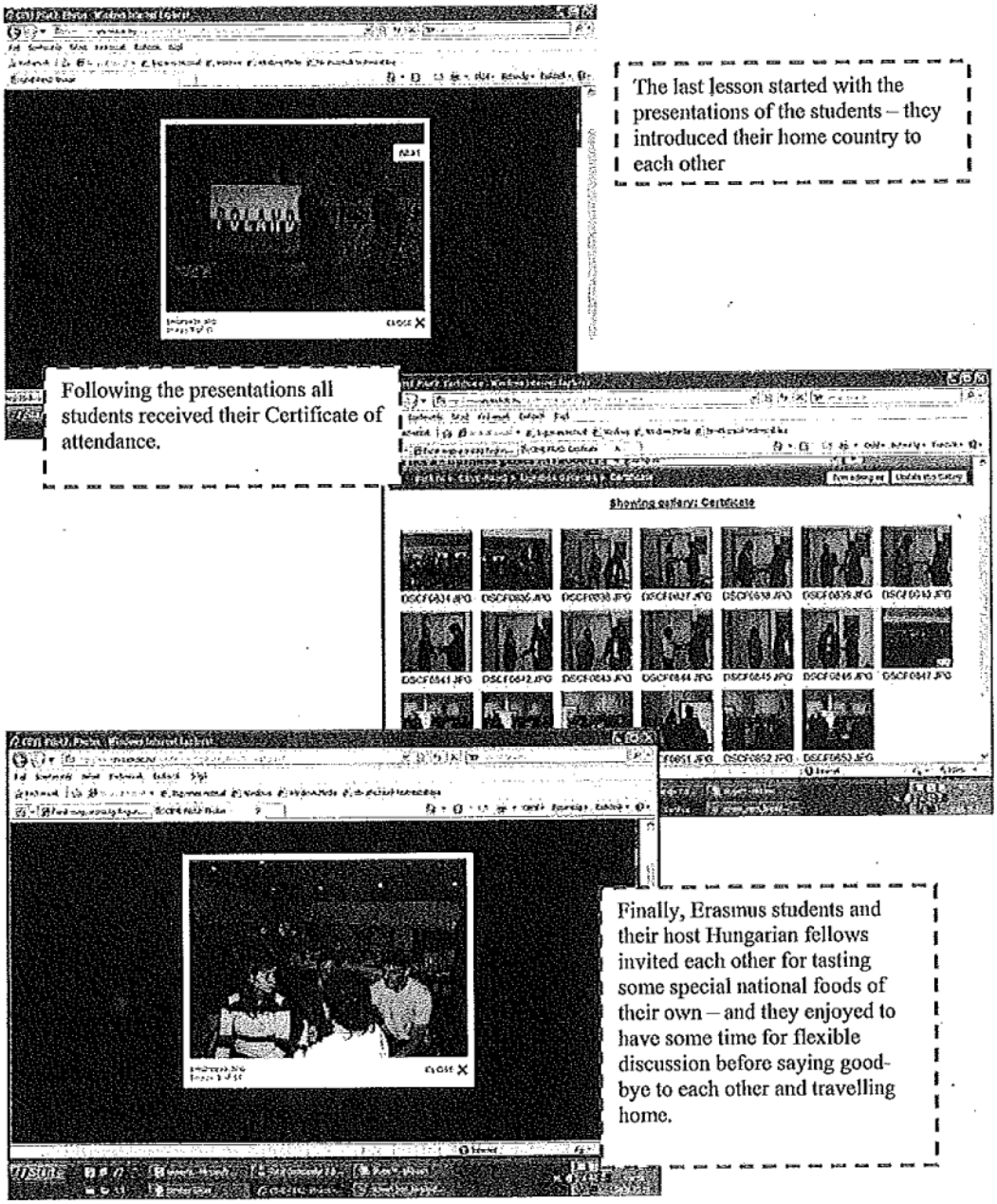


Figure 5.7 An international collaborative learning scenario

5.3.2 Distance delivery model: UTIU platform

The Università Telematica Internazionale UNINETTUNO hosts the UTIU e-learning platform. It is a dedicated delivery system for distance teaching. As has been described in Chapter 4, the UTIU e-learning platform is a didactic platform capable of serving a wide spectrum of target groups within the framework of lifelong learning. All Italian, English and Spanish Masterclass courses with supplementary didactic materials have been delivered fully online using the UTIU didactic platform (www.uninettunouniversity.net). Figure 5.8 illustrates the didactic tracking possibilities within the UTIU e-learning platform.

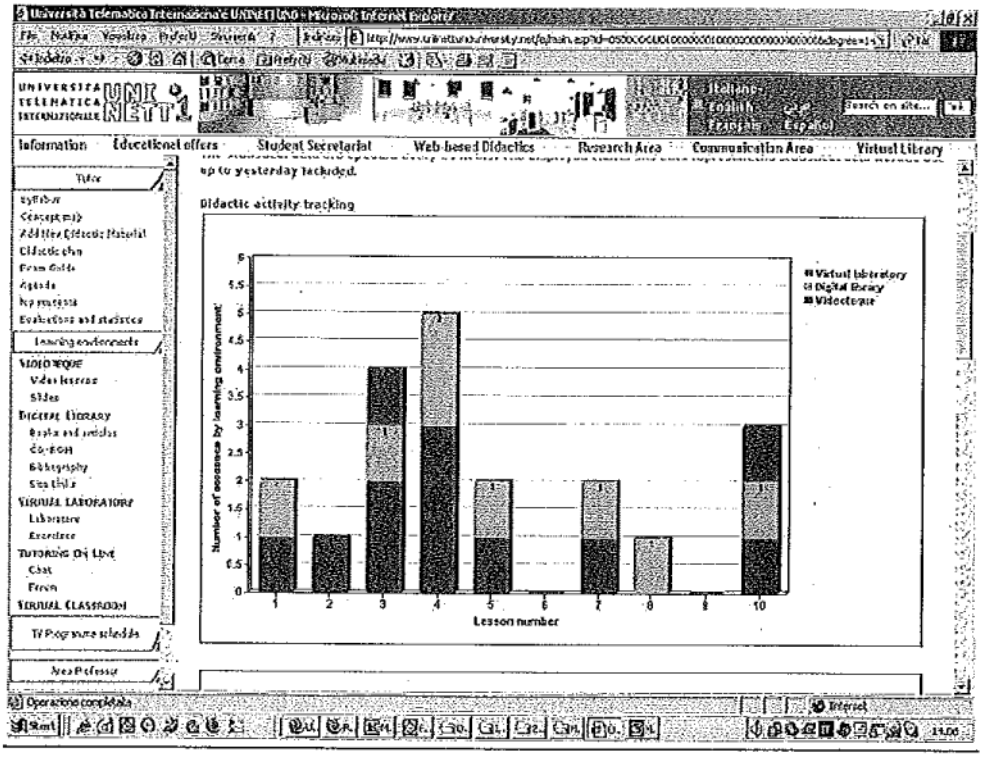


Figure 5.8 Didactic (student) tracking possibilities within the UTIU e-learning platform

5.3.2.1 Pilot description

Creating a new business is a process. However, there is no magic program that will guarantee someone a new successful business. The process is highly stochastic i.e., not all business ideas make it; and, the process is iterative i.e., based on what you learn as you proceed, you will likely have to modify your thinking and repeat parts of earlier steps. Moreover, there is little consensus

on what exactly entrepreneurship students should be taught. It is not particularly unusual, considering that the study of entrepreneurship is still its infancy at universities (Brazeal and Herbert, 1991), or at least far from maturity (Robinson and Hayes, 1991). The traditional business programmes have come under increased criticism for failing to be relevant to the needs of today's changing business environment (Sexton and Bowman, 1984; Solomon et al., 1994; European Commission, 2008; Block and Stumpf, 1992; Davis et al., 1985; Vesper and McMullan, 1988). Different methodologies, content and support materials are in existence, which can be used by entrepreneurship educators to coach the students. Having analysed the situation in the United States and in Europe (Solomon, 2007; NIRAS Consultants, 2008), UNED (also) developed a business planning pilot for their students within the frame of CBVE. The objective was to create a virtual business planning test bed, supported by the pedagogically-rich Masterclass materials, designed for the Spanish distance learning students, and which could guarantee that students would be able to develop entrepreneurial skills, and in some cases competences as well. The pilot design needed to take account of distance-learning students and their special off-campus features. This was not always easy.

> *For example, commonly used business simulation software is typically designed for on-campus usage given the interaction between instructors and students. In distance education though this is not (always) possible. Accordingly, if simulation software would be used, it needs to allow students to work alone without the interaction of the instructor.*

The UNED test bed comprises of three Phases (Figure 5.9). In Phase I, the students present their business idea. This idea is evaluated and commented upon by the teachers. Subsequently, the students' ability or capability as an entrepreneur is evaluated by using a special test. In Phase II, after the review of the course materials, the students start with their business plan. In this phase, the students seek advice from the teachers, or from experts and professionals stemming from a particular sector. When a business plan is finished, the teacher evaluates the plan. The teacher either accepts it or rejects it. Phase III commences when the students receive back the report from the teacher. When the business plan is accepted, the students apply Business Simulation Games to test the plan profoundly. To round up the business plan, the students communicate the results of the simulation by means of a final report.

Phase I	Evaluation of the business idea
	Analysis of the students' capability as entrepreneurs
Phase II	Study of the Masterclass
	Business plan development
	Business plan evaluation
Phase III	Business simulation

Figure 5.9 The UNED test bed

The essence of the UNED business planning trial was to train students to be able to develop a business plan, which could (then) lead to new business creation among participants, if they joined an Administration Programme for Business Creation, or if they would be capable of obtaining financial support from funding institutions. To qualify for entry, applicants did not require a special qualification, they just needed to have a business idea at feasibility or pre-feasibility stage. The programme was designed for distance and virtual education, thus participants could be employed, unemployed or continuing their education. The business planning trial was joined by 14 students. The total programme had a duration of about six months. From a methodological point of view, the aim of UNED was to craft a business planning concept that could meet the rigors of academia while keeping a reality-based focus and entrepreneurial climate in the learning experience environment. The UNED test bed was operated in conjunction with the UTIU e-learning platform from which the entrepreneurship Masterclass materials were delivered. The UNED students from Spain which took part in the business planning pilot, enrolled in the Masterclass at Uninettuno (Italy), utilising the UTIU e-learning platform. Accordingly, the Masterclass was a test bed for international virtual student mobility as well (Figure 5.10)

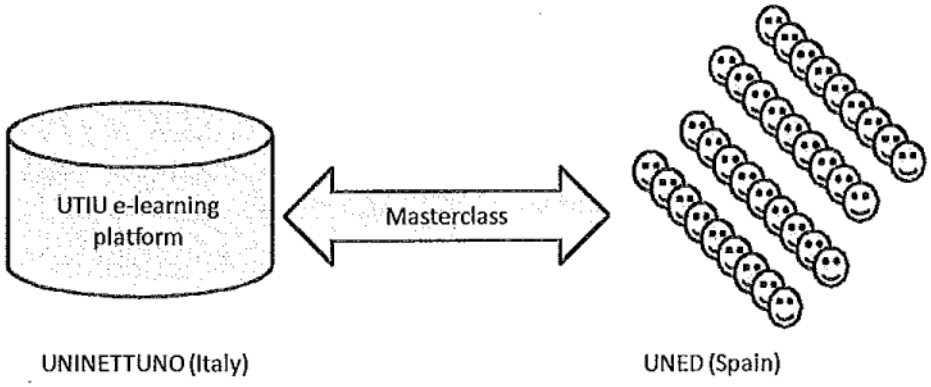


Figure 5.10 International virtual mobility

Both the students and the teachers utilised a number of resources to make the entrepreneurship pilot a success. On the one hand, it comprised of study materials (Figure 5.11), on the other hand it comprised of the deployment of human resources for student support (Figure 5.12).

Masterclass entrepreneurship i.e., the multilingual Masterclass versions and supportive didactic materials available
Reader or book, as supportive reference
The referatory portal: http://www.eadtu.nl/cbve-portal/default.asp?regionId=3
Free business simulation software: http://www.ipyme.org/IPYME/es-ES/ServiciosInteractivos/TablaHerramientasInteractivas.htm
Guides, patterns, help for each stage of the business plan
Virtual Class

Figure 5.11 The didactic instruments in the UNED test bed

A dedicated group of professors had been selected to monitor the quality of the work of the students and to provide support to the students. The role of the teachers was to act as

consultants to the student and to provide coordination between the different parts of the business plan. Independent consultants' help was available to the students to ask for professional advice. Figure 5.12 illustrates the deployment of the human resources.

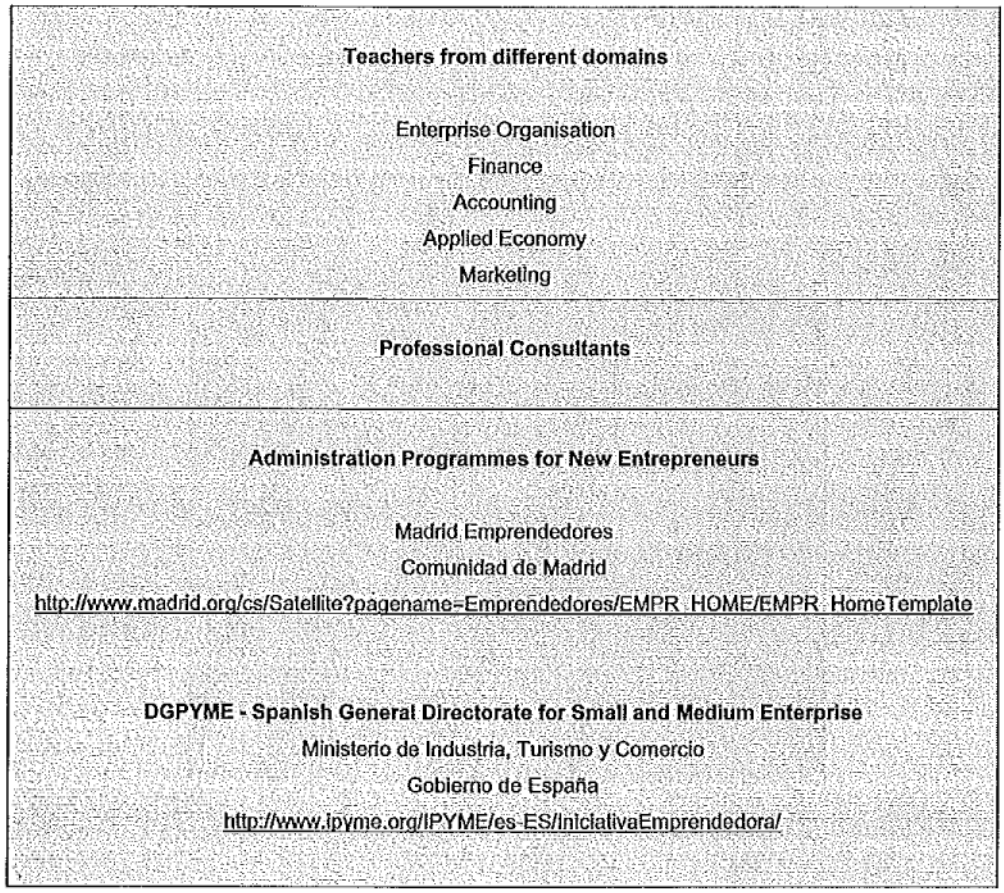


Figure 5.12 The deployment of human resources to the pilot

With regard to the students' learning objectives, UNED distinguishes a compulsory part and a facultative part. The compulsory part includes assessing the students on their entrepreneurship competences by screening business ideas, selecting most viable ones, and accordingly designating students to work on the associated business planning. The facultative part consist of presenting the developed business plans to funding institutions, as a viability test. On success, students could initiate the start of a business.

5.3.2.2 Pilot outcomes

The main aim of Phase I was to analyse the entrepreneurial capacity of the students and their business ideas. Information gathered in this stage, included a range of self-ratings of personal characteristics, self-ratings regarding a range of knowledge and skills, and other aspects, which will be described next. First of all, student had to list five arguments (or reasons) that would explain why he or she would qualify as self-starter or entrepreneur (Figure 5.13). The student had 18 possible choices to pick from. Teachers evaluated the coherence of the answers and classified them into categories. Most of the students answered in a logical manner. The response rate was 57.14% per cent.

Reason	Number of students
Great capacity for work	5
Capacity to plan and organise	4
Capacity to take initiative	4
Capacity to get along with different personalities	3
Capacity to assume risks	3

Figure 5.13 (Self)indicators for entrepreneurship

Then, the students had to self-rate (scale 1 to 5) their personal characteristics (Figure 5.14). The students also had to choose 5 factors that would indicate the success and failure of a business (Figure 5.15). Following, the students would assign a percentage to that factor and evaluate their personal position in relation to the factor. The evaluation ranking goes from 1 (very weak) to 4 (very strong). A score over 400 means that the student has a strong position whereas below 250 implies that the position of the student is weak.

Your situation									
Physical and psychological characteristics	4	5	3	4	5	3	4	5	33
Your knowledge and aptitudes	5	3	3	3	5	4	4	4	31
Time availability	5	4	3	3	3	5	5	5	33
Strong motivation	5	5	5	3	4	4	5	5	36
Support and trust from your family	5	4	4	4	5	3	4	4	33
Our social environment	5	4	4	3	3	3	3	3	28
Total	29	25	22	20	25	22	25	26	

Figure 5.14 Self-rating of personal characteristics

Success or failure factors	Importance	Evaluation	Result
Knowledge of sector	8%	4	32
Location	10%	3	30
Financial resources	25%	3	75
.....			
Total	100%		250<Total<400

Figure 5.15 Factors influencing the success of the business

In order to analyse the business idea, the students had to present their business idea and give at least three reasons that would support the idea. An example hereof is provided in Figure 5.16.

Business Idea	Reasons
Nursery School in Madrid	1. Demand in the area is saturated 2. Stable income and possibilities for growth 3. It is a need for couples when both are working
Rural Cottage in Asturias	1. Rural tourism is a sector that is growing in Spain 2. Supply is far from being saturated 3. The student is the owner of the house. That will reduce the amount of the initial investment

Figure 5.16 Supportive reasons for business creation

In order to round up Phase I, the students had to describe the process of their business and the financial resources required to actually start up the business. This gave the teacher and/or tutor a good idea of the students' knowledge along with the potential needs for the remainder of the business planning pilot. At the end of Phase I, six of the students were selected out of the course (i.e., did/could not continue). Phase II was the actual business planning phase. The participants needed to prepare their business plan of the selected project. It included work on different disciplines: marketing, production, organisation and financials. Seven students went on to present their business plan. Phase III was devoted to simulation and/or to the viability test. In this final Phase, participants were provided with the opportunity to defend their business plan in front of a panel of academic and professional experts. All the students succeeded in doing the feasibility study. Despite the fact that simulation software was available, most students preferred to have their business plan evaluated by teachers of the course. The reason hereof was that the simulation software was regarded as too general and too much oriented towards traditional academic purposes. It did not properly match the needs of a potential entrepreneur. *Four students expressed their intention to actually start their own business in the following months.* Figure 5.17 shows a summary of the outcomes of the UNED course pilot model.

Objectives	Method	Outcomes
Compulsory		
Assess their entrepreneurial competencies	Results of examination	57.14%
Screen business ideas and select the most potentially viable business project	Results of examination	57.14%
To be able to develop a business plan	Results of examination	50.00%
Entrepreneurial Skills	Results of examination and the kind of methodology (business plan)	50.00%
Additional[4]		
Proposals presented to funding Institutions	Number of students that have presented a proposal to a funding Institution	0.00%-28.57%
Business creation	Number of students that have started a business	0.00%-28.57%
Entrepreneurial competences	Number of students that have had an accepted proposal from a funding institution	0.00%-28,57%

Figure 5.17 Outcomes of the UNED pilot model

Some students dropped out of the course mainly due to personal reasons (for example they found a job). From the project's point of view, there is no doubt that the CBVE consortium together with UNED, did achieve the full objective of developing a virtual course with rich materials. Students though, were able to complement the Masterclass with other didactical instruments, as UNED had prior experience with distance learning and with entrepreneurship education. With respect to the objective of delivering a virtual course in entrepreneurship, this can now be confirmed as achieved for a full 100%.

Before delivering the final evaluation of the virtual business planning pilots, a closer insight must (first) be provided into the methodological issues surrounding the evaluation of education and training programmes for new business creation.

[4] Four students have expressed their intention to start a business in the following months.

Curran and Stanworth (1989), Gibb (1987), Block and Stumpf (1992) and Young (1997) have identified the need to evaluate education and training for new business creation. McMullan et al. (2001) make the point that while designing a methodology to evaluate programmes and courses may be comparatively easy, it is difficult to ensure that the approach adopted is actually valid. In a similar vein, Westhead et al. (2001) caution that, 'precise and careful methodologies are required to evaluate training programmes'. Below, we shall highlight and classify the different positions of authors as found in literature.

How to evaluate

Storey (2000) and McMullan et al. (2001) suggest that the best means by which to evaluate training courses is to relate programme outcomes directly to objectives.

Purpose of the evaluation

Stake (1980) suggested that its purpose should be to produce information that can guide decisions concerning modifications to a programme.

Methods of evaluation

Cost-benefit analysis

Gibb (1997) doubts whether a definitive answer can ever be found to the question of effectiveness in terms of payback, moreover, Wyckham (1989) has noted that there have been difficulties in identifying appropriate output measures of such programmes as well as in determining causality.

Economic analysis

McMullan et al. (2001) advance the view that the objectives of courses for new business creation should be 'primarily economic' and, as such, 'appropriate measures could include businesses started or saved, revenue generation and growth, job creation and retention, financing obtained and profitability'.

Positive position

Wyckham (1989) notes that no universally accepted criterion, which can be used to evaluate the effectiveness of such programmes, has yet been identified. Wyckham has argued that such programmes are measured in three ways. First, the knowledge and skills of students are assessed through examination. Second, courses and teachers are evaluated through student evaluation surveys. Third, after the course has been completed, data on the employment and income status of the graduate participants can be obtained and evaluated.

Subjective of questionnaire approach

Westhead et al. (2001) and McMullan et al. (2001) observed that initially researchers attempting to assess the outcomes of training programmes asked participants for their views.

Longitudinal study

One means of measuring the behaviour of participants following completion of a training course is to employ a model such as the one advanced by Jack and Anderson (2001). This is a five-step framework for assessing the effectiveness of entrepreneurship education and training programmes based on an earlier version developed by Block and Stumpf (1992). The model is comprehensive and emphasises the measurement and impact of different elements of training courses over time, from the outset of a programme to beyond its completion. A number of authors have noted the lack of longitudinal studies conducted within the area of education and training for new business creation and a clear need to evaluate such programmes over time has been identified (Wyckham (1989), Clark et al. (1984), Fleming (1996), Westhead and Storey (1996)).

Reviews to evaluation methods

The limitations of adopting a purely subjective approach to evaluation are highlighted as follows by Westhead et al. (2001). First, there is the issue of whether the participants of a particular course are representative of the target population as a whole. Second, respondents to a survey can be tempted to give answers that they feel the evaluator wants, instead of an honest response. Third, the impact of a programme can only be judged by comparing it with what would have happened had the respondent not participated in the course. Fourth, failure to take into account the personal characteristics of individuals might lead to an exaggeration of the effectiveness of a programme. Fifth, researchers should appreciate that participants self-select participation in programmes, which can lead to inaccurate assessments being produced in the evaluation of courses. Sixth, the subsequent behaviour of respondents is actually more informative than the reporting of their opinions.

McMullan et al. (2001) indicate that it is likely that most evaluations will continue to employ this approach. However, they do advise that this type of subjective judgement should be confined to determining the satisfaction of participants, and should not be used as a proxy for measuring the performance outcomes of a programme.

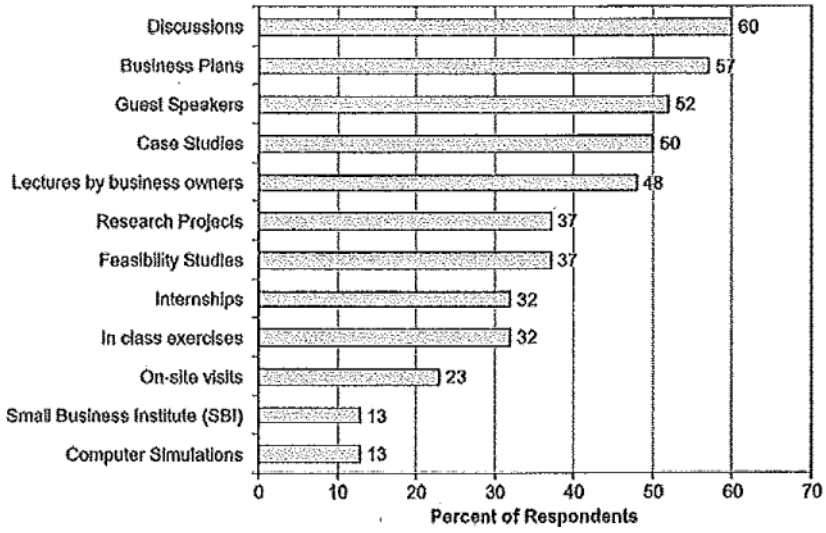
Possible sources of bias of the longitudinal study

Garavan and O Cinneide (1994) have stated that, 'longitudinal research designs, using control groups to compare participants with individuals who did not have entrepreneurial educational experience, are needed to examine the lasting effects of entrepreneurship education and training interventions'. Storey (2000) also advocates such an approach, but suggests that the most appropriate way to assess the effectiveness of support programmes is to include a control sample of matched firms that are identical on the basis of age, sector, ownership and geography. Ideally such matching should take place before a programme commences so that the two groups can be monitored over time. In practice however, such conditions may be difficult to satisfy. Even if such a methodological approach is adopted, researchers need to be aware of inferential problems, so despite the fact that the matching characteristics of the two groups are kept constant, there may be other ways in which they differ. With specific reference to participation in courses and programmes, Storey (2000) suggests that motivation and selection might be differentiating factors. For example, those firms or individuals seeking assistance or attending courses might be more dynamic and growth-oriented and therefore more open to new ideas.

Another source of bias can occur when participants are selected onto a scheme. In a competitive situation selectors will have to choose between various applicants and will select those who appear the 'best'. Potentially this could have implications when comparing against a control group, for as Storey (2000) notes, the performance of the selected group is likely to be superior to that of the matched group since the better candidates have been chosen. A related problem concerns exits during the course of a programme, which may introduce another source of bias. In addition, with particular regard to longitudinal studies, there is the problem of the 'mortality' of those being studied over time.

Previously, we discussed the first part of evaluating the UNED course model, i.e., we described the number of students enrolled in the course, their characteristics, the performance, the development and presentation of the enterprise proposals, the evaluations of the business plans, and the staff monitoring & experiences. With this information in mind, we can (now) continue to discuss the evaluation of the business planning course model of UNED, by comparing it with practices and methodologies which are used in Europe and in the United States. In accordance with the Final Report of the Expert Group (2008), the evaluation must be adapted to the objective, and to the entrepreneurial competences (under development). We shall (accordingly) compare the objectives proposed at the beginning of the project/course with the outcomes. When the objective is to learn how to engage in start-up activities, then the evaluation can be based on students' performance in developing and presenting a business plan, and their capacity to sell the project. The evaluation of the pilot presents (some) evidence that a range of qualitative and

quantitative outcomes may emanate from training programmes directed at aspiring new business owners, which are worthy of further investigation. Next, the pilot course will be benchmarked with courses in the United States of America and Europe, in respect of two dimensions: (1) teaching methods and (2) phases included in the course (Figures 5.18, 5.19, 5.20 & 5.21).



Note: Total respondents: 279

Figure 5.18 Teaching methods used in the United States (Source: Solomon, George (2007), "An examination of entrepreneurship education in the United States", Journal of Small Business and Enterprise Development Vol. 14 No. 2, pp. 168-182)

Use of teaching methods in entrepreneurship education in Europe	Average interval (1-4)	Often	Sometimes	Rarely	Never
Lecturing	1,38	75%	17%	8%	0%
Case studies	1,45	61%	36%	3%	1%
Entrepreneurs/practitioners in the classroom	1,62	45%	49%	4%	2%
Project teams	1,54	58%	35%	5%	1%
Company visits	2,16	17%	51%	28%	3%
Venture simulation/mini companies	2,13	31%	39%	19%	11%
Others	2,68	27%	16%	14%	43%
(n = 186)					

Figure 5.19 Teaching methods used in Europe (Source: European Commission, Survey of Entrepreneurship in Higher Education, Main Report, 2008)

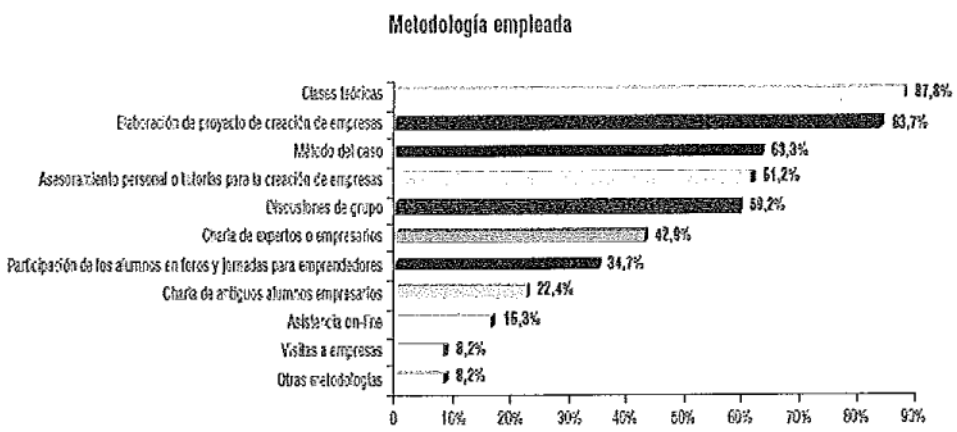


Figure 5.20 Teaching methods in Spain (Source: Ministerio de Industria, Turismo y Comercio, DGPYME, Iniciativas Emprendedoras en la Universidad Española, 2006)

UNED	USA	EUROPE	SPAIN
Lecturing	0.00%	75.00%	87.00%
Business Plan	57.00%	27.00%	83,70%
Simulation	13.00%	31.00%	8.20%

Figure 5.21 Teaching methods, a comparison

The UNED course model as piloted, applies the most common teaching methods in each area. We confirm that the phases of the UNED course model coincide with the phases of any standard course in Business Creation in the USA (Figure 5.22).

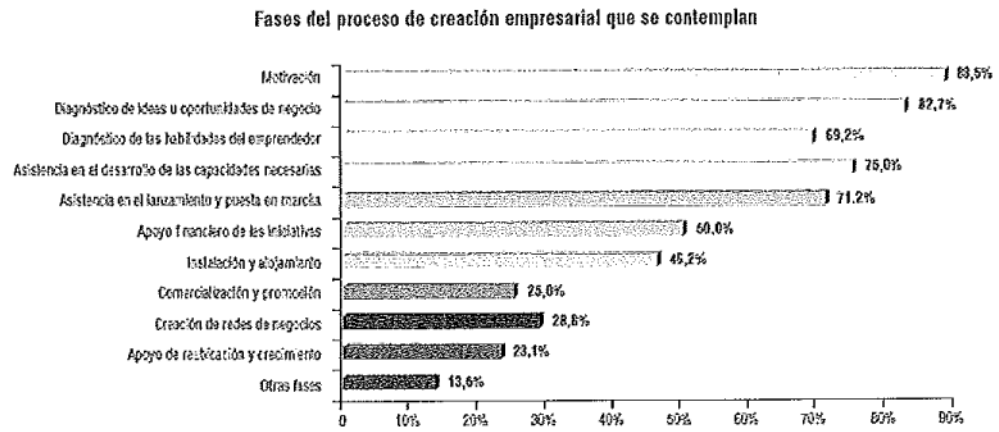


Figure 5.22 Different phases included in entrepreneurship (Source: Ministerio de Industria, Turismo y Comercio, DGPYME, Iniciativas Emprendedoras en la Universidad Española, 2006)

The phases that were included in the UNED course model, as piloted, were: motivation, assessment of entrepreneurial competences, and start-up assistance. Motivation deals with the screening of business ideas and the selection of the most viable business projects. Assessment deals with entrepreneurial competences: assessing the entrepreneurial competences of the students participating in the course and reflecting on their capabilities to perform in an entrepreneurial context. Start-up assistance deals with the assistance provided by the 'Administration Programme for New Entrepreneurs', enabling funding for a new venture. It proved that the best way to implement the UNED model is: having it coincide with the Administration Programme, which provides for necessary funding of new entrepreneurs.

On the question of how the teaching of entrepreneurship can best be applied in concrete terms, the members of the Expert Group were asked to identify a set of key features for effectiveness and success in implementing these programmes. These are proposed as general indicators for good practice. Following precise directions from the Experts, the good practice factors cover the way entrepreneurship teaching should be delivered ("how to teach"), and not the specific content of the teaching. Whether these criteria are satisfied in the UNED test bed, will be presented below (*in Italic*).

1. The purpose of the course/programme is precisely defined, being linked to the delivery of the expected outcome (definition of objectives, and capacity to measure outcomes related to those objectives). *Fully satisfactory*
2. There is a balance between the theoretical and practical aspects. Teaching makes use of interactive and pragmatic methods; active self-learning; action-oriented pedagogy; group work; learning through projects; student-centred methods; learning by direct experience; methods for self-development and self-assessment. Delivery is through mechanisms that maintain the motivation of students at a high level. *Fully satisfactory*
3. Activities and events are organised to improve students' ability to work in a group and build a team spirit, and to develop networks and spot opportunities. *Social networking not exploited*
4. Different guest lecturers are involved (e.g. experts on patent law, company financing, etc). A close relationship is in place with the local entrepreneurial environment, and educators are part of relevant networks (formal and informal). There is a collaborative approach with real business practice and industry. *Sufficiently satisfactory*
5. Young entrepreneurs (for instance, alumni who have started a company) and experienced business people are involved in courses and activities, and contribute to their design. Practical experience, by means of students cooperating with enterprises and working on concrete enterprise projects, is embedded in the programme. *Requires improvement*

6. Courses and activities are part of a wider entrepreneurial programme, with support mechanisms for students' start-ups in place and actively utilised. *Building capacity*
7. Exchanges of ideas and experience between teachers and students from different countries are sought and promoted, to encourage mutual learning and to give an international perspective to programmes, courses and activities. *Sufficient*

Regarding the educators and the role of business practitioners in teaching, the Expert Group recommends that professors need to have a background in academia including (recent) experience in business such as in consulting for, or initiating, entrepreneurial initiatives. Ideally they should maintain strong personal links with the business sector. The best professors are teachers that have the required teaching competences as well as professional experience in the private sector. This is a plus for the UNED course model: the majority of the teachers involved in the UNED pilot belongs to the Organisation Department, and combines work at UNED with work for companies in the business sector. In light of the lessons learned with the UNED pilot, the following recommendations are given:

1. There are many resources and materials that the students can use. They need to be centralised onto one platform.
2. Some difficulties have risen with the coordination of certain parts of the business plan and the relation with the balance sheet and the profit and loss account. A pattern or template in Excel must be developed that would help the students to understand the interrelations better.
3. Students should take an exam of the Masterclass. Although students do require some basic skills' development, they also need to be assessed on the knowledge that they need to know.
4. Increase the time dedicated to teach the students how to screen business ideas and select the most potentially viable business project using micro screening and SWOT or any other tool of strategic analysis.
5. Extend the length of the course if more impact is needed in new business creation; or, include other (employability) phases, such as: virtual internships, case studies, and so on.
6. Students must know all details of the business they want to enter: each and every phase must be learned by heart. This is the way in which feasibility study and simulation could have a meaning.
7. Strengthen the relations with business.
8. Teach students to distinguish between strategic, tactical and operational plans. Strategic planning is to set the main objectives of business with respect to the future positioning (long-term planning). Tactical planning involves the planning of how things or certain processes are done in a medium term time frame. Operational plans are to implement the business's strategic and tactical goals in daily activities.

5.4 Model recommendations: strengths and weaknesses

A strength, weakness, opportunity and threat analysis has been performed on the models that have been implemented. Below, the most important recommendations are presented in the frame of the two different delivery models: the full online model, as the approach of UNED depicts (1a+1b), and the blended model, as the approach of the University of Miskolc depicts (2a+2b).

1a. Internal attributes of the full online model

Helpful to achieving the objective

- Keeping a reality-based focus and entrepreneurial climate
- Meeting the rigors of academia
- Online educational materials, Masterclass in video, links and files
- Feasibility of creating of a complete online course in an e-learning platform.
- Tested methodology in distance education that could be adapted to online courses
- Know-how of the methodology by the teachers involved

Harmful to achieving the objective

- Materials of the course could be improved; lack of strategic knowledge
- The methodology could be complemented with:
    - Lectures by business owners
    - Virtual Internships
- The course does not assure that the student could start a business, as due to lack of a (complementarily) financial programme
- Lack of financial backing for independent consultants
- The course does not guarantee that a student will realise its competences as an entrepreneur, unless he/she is actually supported by the Administration Program for self-employment
- Simulation software available is too general to meet the student's needs

1b. External attributes of the full online model

Helpful to achieving the objective

- Absence (in distance education) (in Spain) of online courses offered by competitors
- The failure of traditional business education to meet the goals of students in a flexible manner
- Entrepreneurship courses are more and more becoming part of the educational offer of universities in the United States and Europe

Harmful to achieving the objective

- Competitors programmes and courses with sustainable financial backing
- The increase of entrepreneurship courses within the curricula of official studies
- New approaches to entrepreneurship education which may shift into maturity stage

2a. Internal attributes of the blended model

Helpful to achieving the objective

- Flexibility and reusability of content elements
- Versatility of courses, fitting to different learning needs
- Blended methodology for improving efficiency of education
- Involvement of regional stakeholders, strategic partners, e.g. the Chamber of Commerce and Industry
- Mixing of individual and collaborative learning scenarios
- Know-how of the methodology by the teachers involved

Harmful to achieving the objective

- Students' needs increase more faster than the pedagogical approaches of teachers
- In lack of experiences and human resources, several features and functions offered by the virtual learning environment have not been implemented
- Due to the economic crisis, starting a new business has become even more risky – changes of economic and legislation environment would need fluent upgrading
- Advisory support should be offered for a longer period
- Need for simulation software packages

2b. External attributes of the blended model

Helpful to achieving the objective

- Urgent needs for training SMEs – economic restructuring of the region is critical
- Visibility of the results of regional collaboration
- Exchange of experiences in international collaboration - improved creditability
- Added value of multilingual environment improving language skills of the learners as well

Harmful to achieving the objective

- Learners cannot finance their studies themselves – other training programmes gain governmental financial support and offer more recognition
- Lack of support for marketing
- Competitors programmes and courses with more stable financial background and human resources
- New approaches and tools in e-learning (e.g. mobile learning) may increase the cost of delivery

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6. Final student and stakeholder evaluation

This chapter describes the final student and stakeholder evaluation of the developed education and training models. The chapter is divided into two parts. First, the student evaluation is presented, describing the rating of the objectives and the assessment of their satisfaction (section 6.1). Second, the evaluation by stakeholders in the configuration of an external workshop is presented (section 6.2).

6.1 Student evaluation of education and training

As extensively discussed in the previous chapters, two different models for delivery of entrepreneurship education and training have been developed within the project CBVE (Figure 6.1). The first model refers to the University of Miskolc (i.e., the blended model), the second model refers to UNINETTUNO in conjunction with UNED (i.e., the distance teaching model).

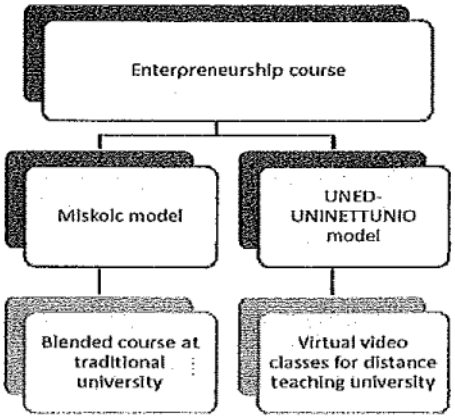

Figure 6.1 Development model for Masterclass education and training

Taking into account the course description and its programme, SMART objectives were set up to evaluate each lesson. Based on the evaluations, a questionnaire was designed. The main aim was to find out to which extent the course objectives had been fulfilled. That is why students had to judge the importance of each objective first, and then answer to what extent the training objectives had been achieved. The questionnaire was made available for the group of students (online), who were involved in the Masterclass entrepreneurship and the business planning trials of both the University of Miskolc and the UNED. In the questionnaires, all aspects are evaluated

on the scale from 0 to 5 points, where 0 generally means bad (i.e., not important, not achieved, not effective) and 5 generally means good (i.e., very important, strongly achieved, very effective). The following aspects of education and training were evaluated: (1) training objectives, (2) training methods, (3) the role of the facilitator/teacher, and (4) the training materials. Subsequently the results from the University of Miskolc (1) and the UNED (2) are discussed.

6.1.1 Results from evaluating the blended model

(1) training objectives

In this part the students were asked to reflect on the importance a given objective was to them, and on which level it had been achieved (0 – not important, not achieved; 5 – very important, strongly achieved). Mind that the low (lighter) bar refers to the given importance by the students, the dark (upper) bar reflects the perceived level of achieving an objective.

We start here with reviewing the objectives connected to the business plan itself, and perceived to be achieved by the students. Figure 6.2 shows that only the first objective connected with the names of the different types/elements of a business plan, was not achieved on the level of its importance, but the difference is very small.

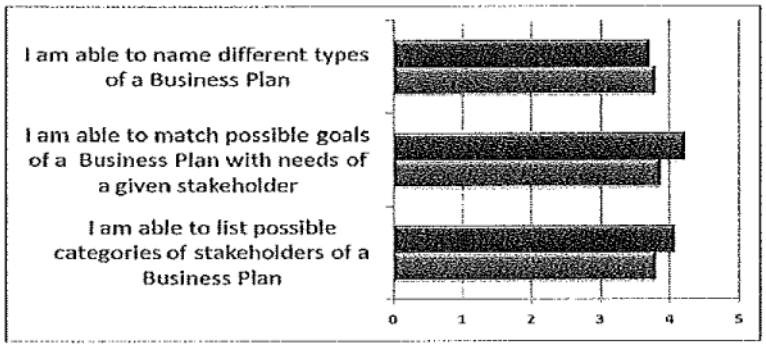

Figure 6.2 Objective: a business plan

Figure 6.3 shows that the most important for students was to identify the milestones of the business idea implementation project, but this objective wasn't achieved. The other objectives which were not so important got much better results.

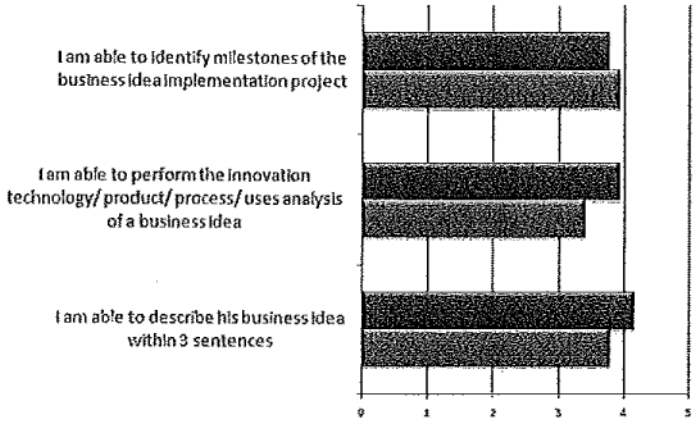

Figure 6.3 Objective: a business idea

Figure 6.4 shows that most objectives depicted, were actually achieved. Again, the one which was judged by the students as the most important i.e., describing a product/service with its most attractive features, did not achieve satisfactory results.

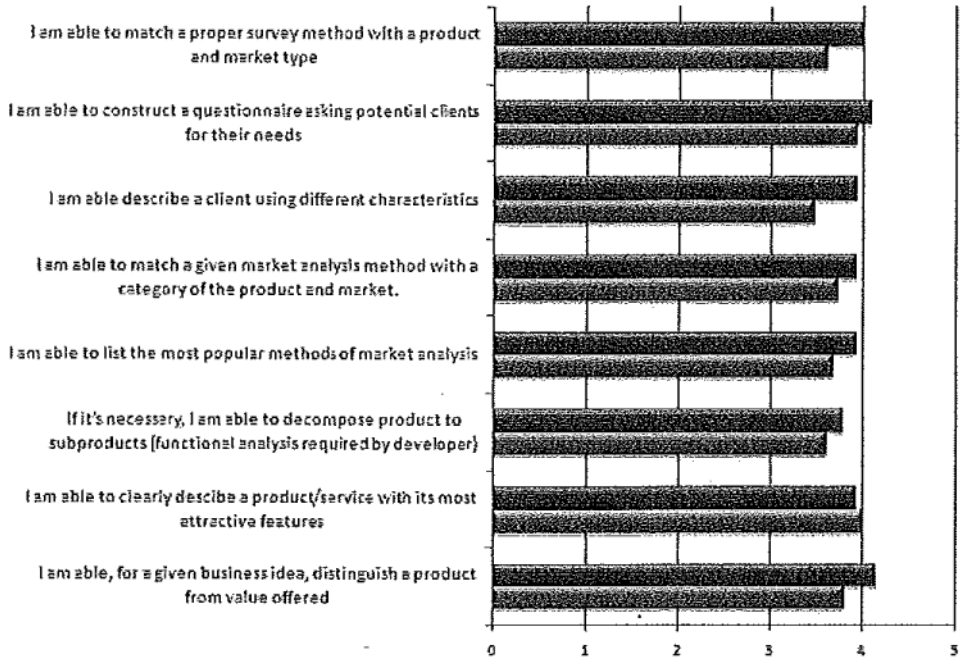

Figure 6.4 Objective: product-market analysis

Figure 6.5 shows that most of the phrased objectives were achieved. Two of them, which were judged by the students as the most important (to list different methods on competitor's identification and to identify the suppliers) did not achieve satisfactory results.

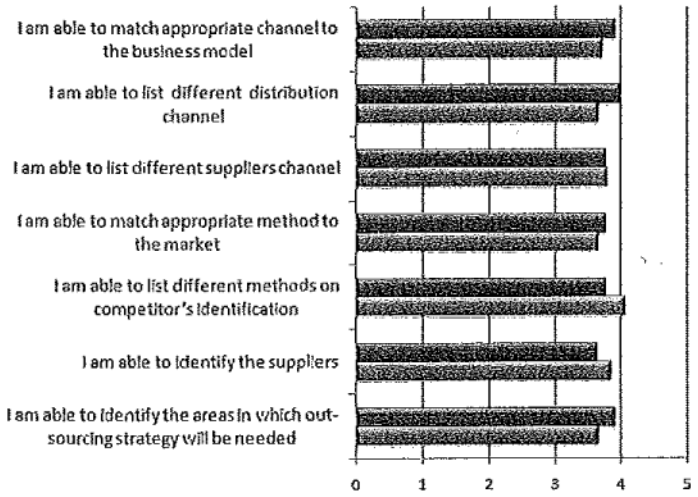

Figure 6.5 Objective: industry analysis

Figure 6.6 indicates that of the depicted objectives, the most important one was the one which dealt with the preparation of a SWOT analysis for a given product (almost 4,5 points), and this goal was almost achieved i.e., it got the best score from all 7 objectives.

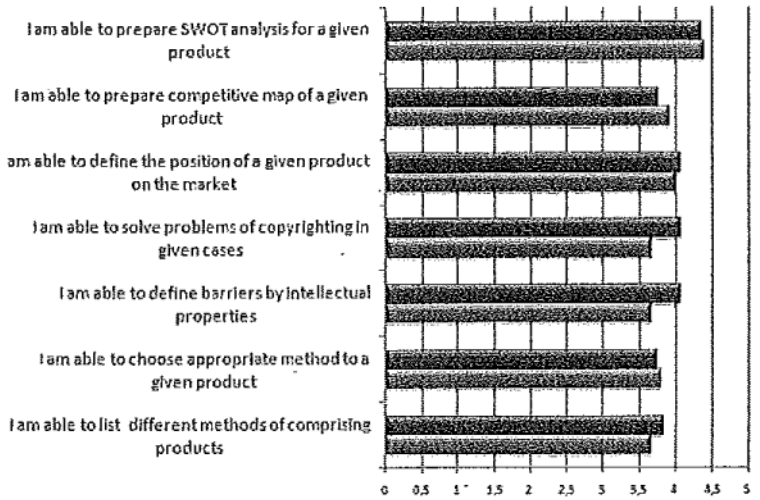

Figure 6.6 Objective: competition analysis

Figure 6.7 shows the group of objectives in which there were 6 which were judged as important (a score of 4 and higher). Unfortunately, none of them achieved the level of 4.

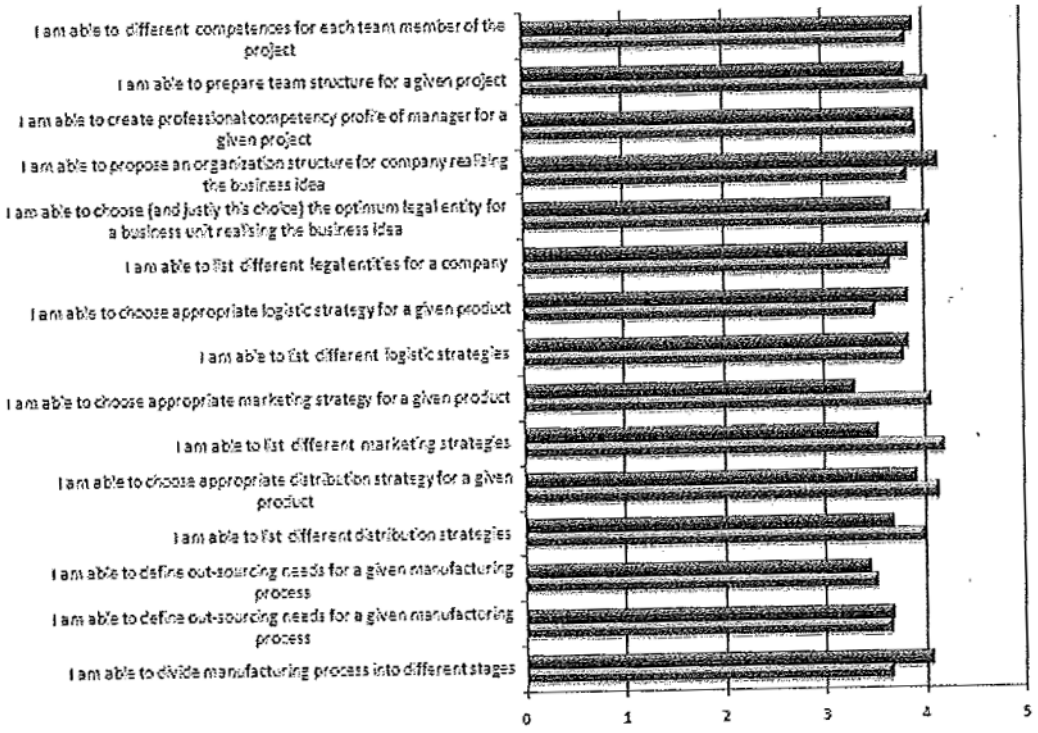

Figure 6.7 Objective: operational plan

Figure 6.8 describes a set of objectives, in which the most important one was the one to prepare a three-year plan of working capital investment for a given project; and this objective was achieved. Three other objectives, which were rated as not so important, were not archived.

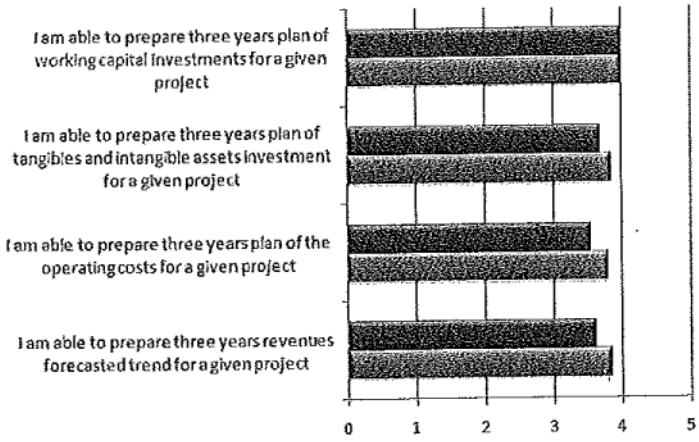

Figure 6.8 Analysis of the economic aspects and asset-liability

All financial requirements (Figure 6.9 and 6.10) were considered by the students as important, but only one of them was achieved with the satisfactory results.

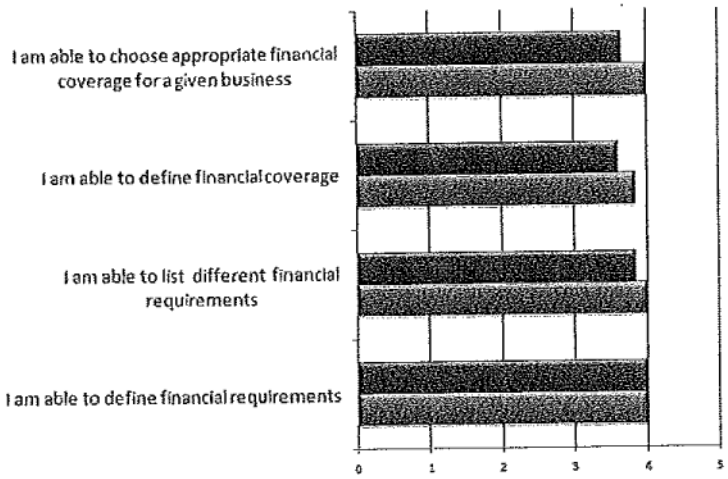

Figure 6.9 Objective: financial requirements and coverage

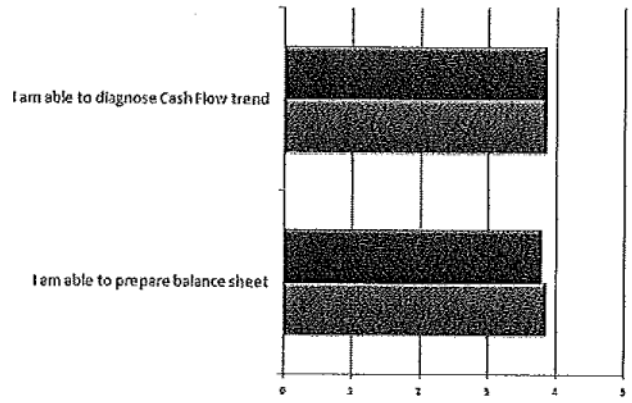

Figure 6.10 Objective: accounting

(2) training methods

In this part the students were asked to assess the training methods, using a scale from 0 to 5, where 0 is not effective, and 5 is very effective. Figure 6.11 reveals that the students assessed the usefulness of the training quite high (almost 4). With regard to the effectiveness of the training methods, one can state that the score is very high, as well.

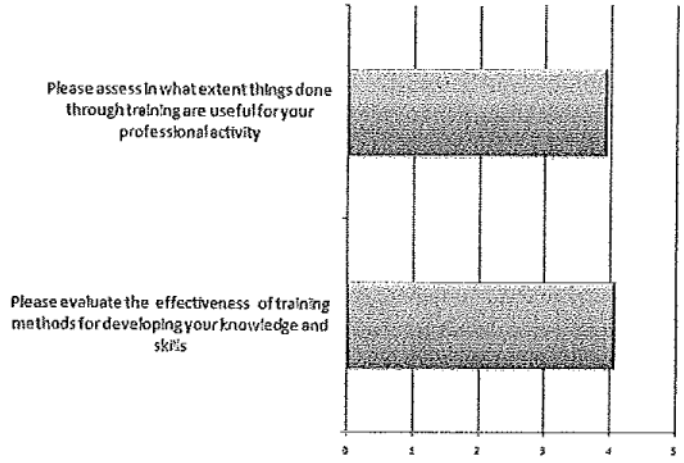

Figure 6.11 Usefulness of the training

(3) the role of the facilitator/teacher

In this part the students were asked to assess the role of the facilitator or teacher, using the scale from 0 to 5, where 0 is very low, and 5 is very high. Figure 6.12 rates the impact of the quality of the work of the lecturer/teacher.

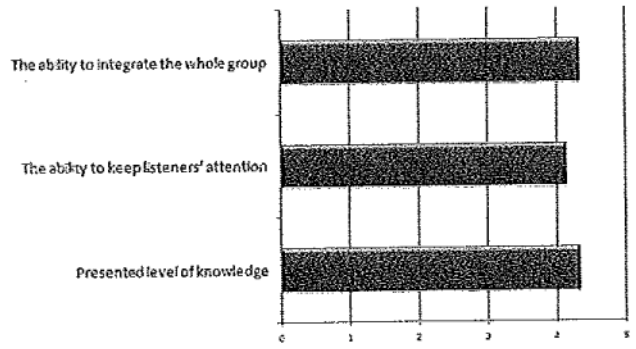

Figure 6.12 The impact of the quality of the work of the lecturer/teacher

(4) the training materials

Students were also asked to evaluate the quality and relevance of the training materials used during the pilot training sessions (0 being not relevant, 5 being relevant) (Figure 6.13). The quality and relevance of the training materials used, were evaluated as really good (especially the quantity of the materials used in the activities and adaptation of the materials for training).

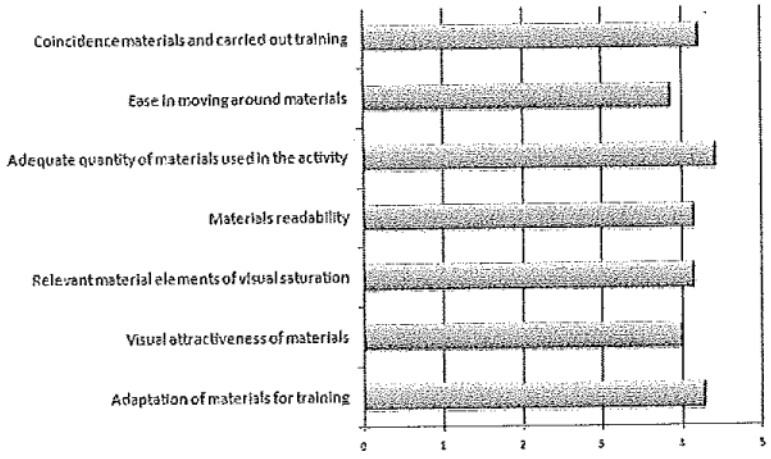

Figure 6.13 The quality and relevance of the training materials

6.1.2 Results from evaluating the distance model

(1) training objectives

In this part, students were asked to rate how important a given training objective was to them, and on which level it had been achieved (0 – not important, not achieved; 5 – very important, strongly achieved). Mind that the low (lighter) bar refers to the given importance by the students;

We start again with the objectives which are to related the business plan itself. The objectives connected with the business plan were perceived to be achieved by the students (Figure 6.14). Interestingly, the importance of the three objectives was rather high and the students evaluated the objectives as being achieved rather well.

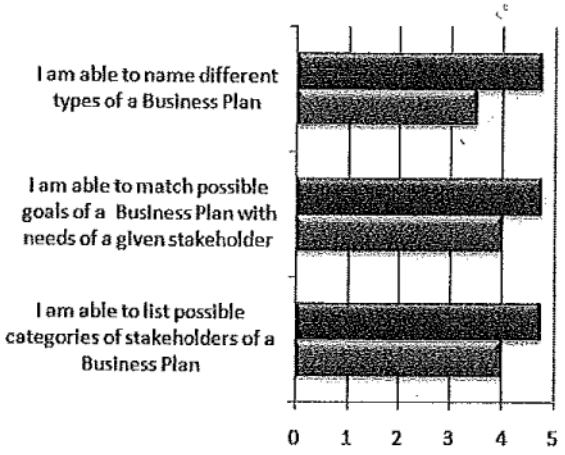

Figure 6.14 Objective: a business plan

The most important objective was to describe a given business idea within 3 sentences and this objective was achieved (Figure 6.15). The other objectives, less important, were also perceived to be achieved by the students from this group.

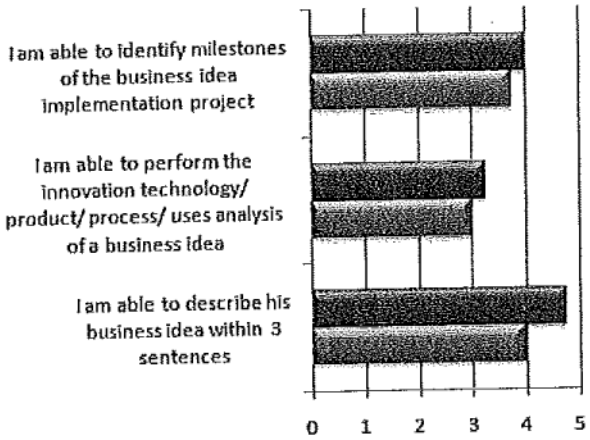

Figure 6.15 Objective: a business idea

Figure 6.16 displays a group of objectives for which can be stated (in general) that the realisation is quite adequate in respect of the expected result. However, two objectives were not achieved.

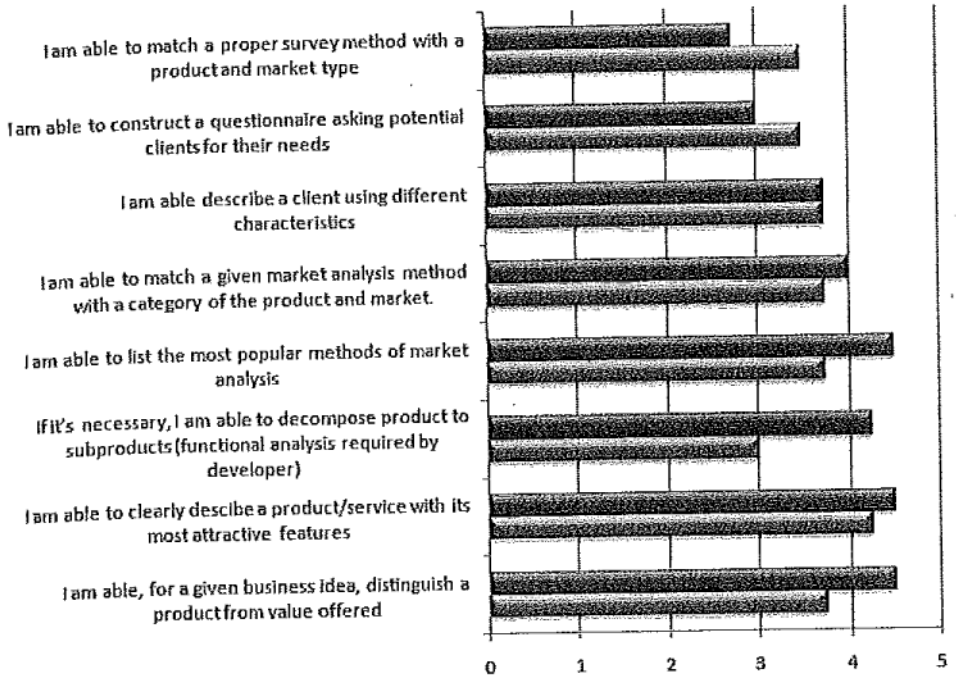

Figure 6.16 Objective: product-market analysis

With regard to the objectives of industry analysis (Figure 6.17), most were achieved (all of them at the same level – 4,25 points). Two objectives, which were regarded by the students as quite important (i.e., to match an appropriate distribution channel to the business model, and to list alternative channels), did not achieve satisfactory results.

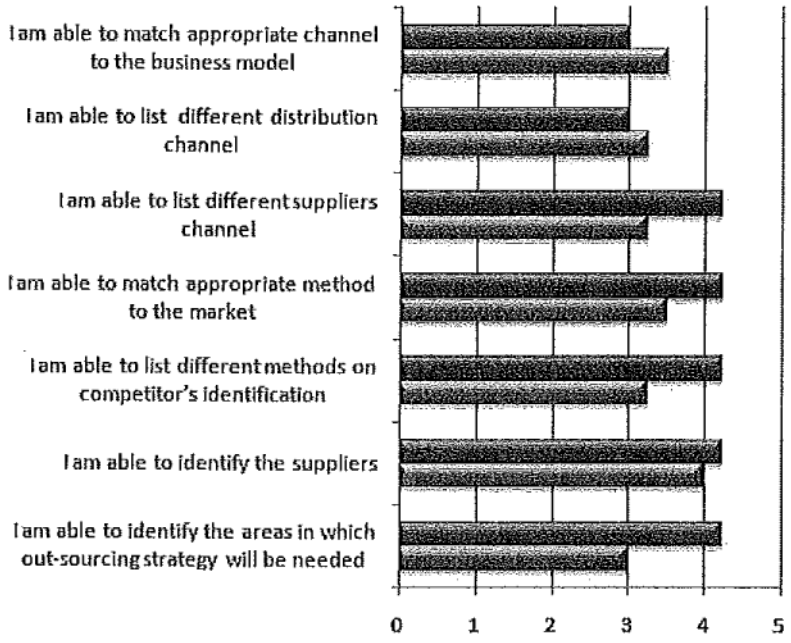

Figure 6.17 Objective: industry analysis

Figure 6.18 shows a group of objectives of which all were achieved, and even three of them i.e., the preparation of a SWOT analysis for a given product, the preparation of a competitive map for a given product, and the positioning of a given product on the market, were achieved with very good results (4,5 points).

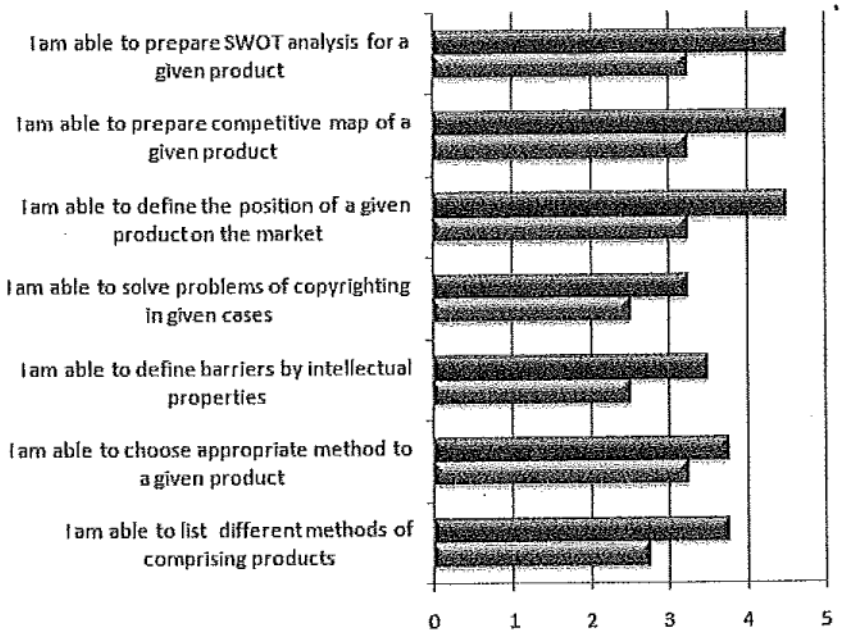

Figure 6.18 Objective: competition analysis

In the group of Figure 6.19, only one objective was not achieved, but with not such different result than the rest of the objectives. Two objectives i.e., depicting the legal entities for a business unit and depicting the legal entities for a (whole) company, obtained 5 points on the 5-point scale.

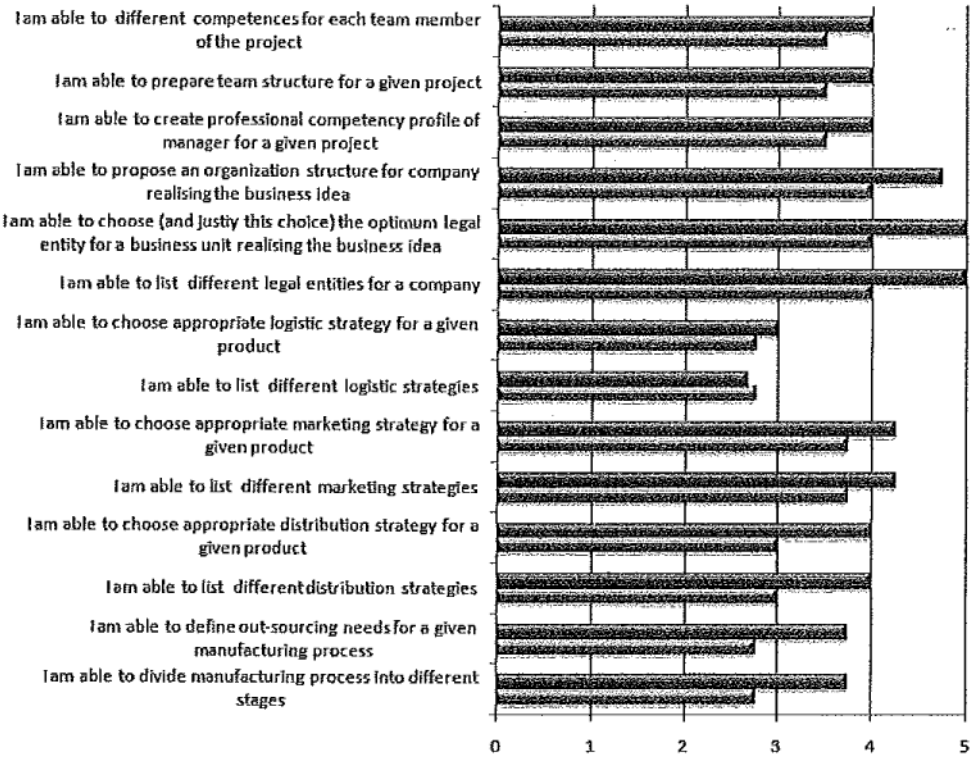

Figure 6.19 Objective: operational plan

In Figure 6.20, all objectives were achieved at the same, very high level – 4,75 points. The importance of all these objectives was also rather high – at least 3,75 points.

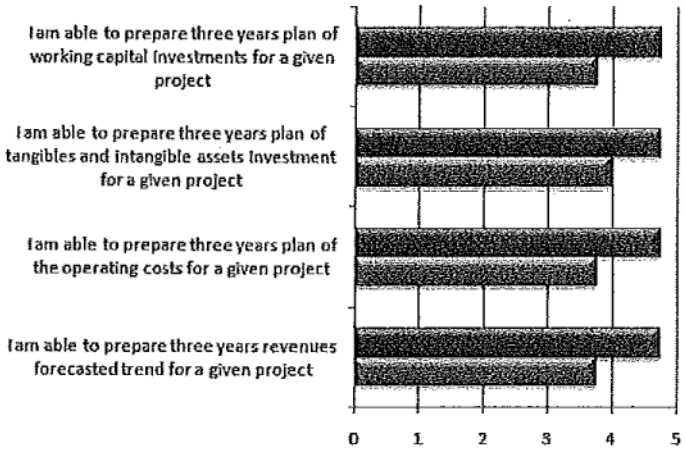

Figure 6.20 Objective: analysis of the economic aspects and asset-liability plan

All financial requirements (Figure 6.21 and 6.22) were considered by the students to be important, and all of them were (perceived to be) achieved. The level of importance was identical for all objectives (4,25 points), the same as the level of their achievement (4,75 points).

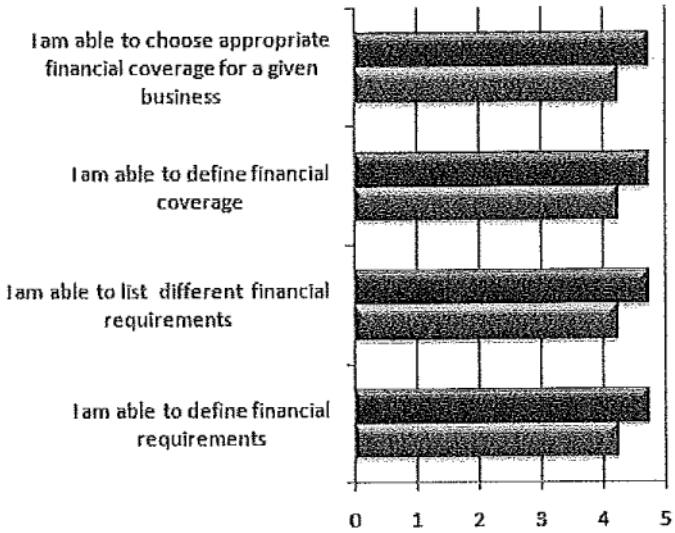

Figure 6.21 Objective: financial requirements and coverage

The objectives in Figure 6.22 were both classified as important and both achieved the same, high level.

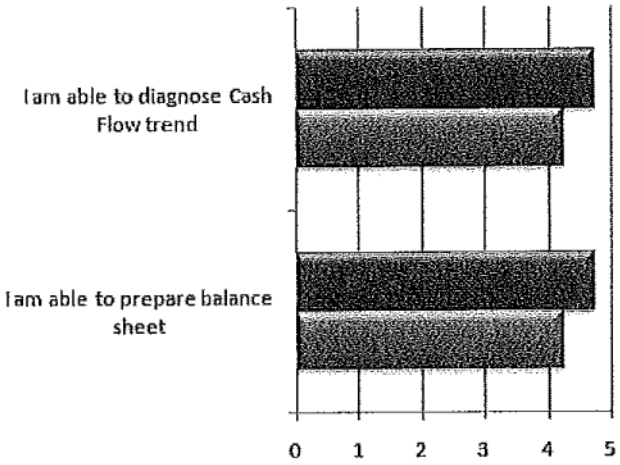

Figure 6.22 Objective: accounting

(2) training methods

In this part the students were asked to assess training methods using the scale from 0 to 5, where 0 – not effective; 5 – very effective. The usefulness of the training and the effectiveness of the training methods were assessed as being at a very high level (4,75) (Figure 6.23).

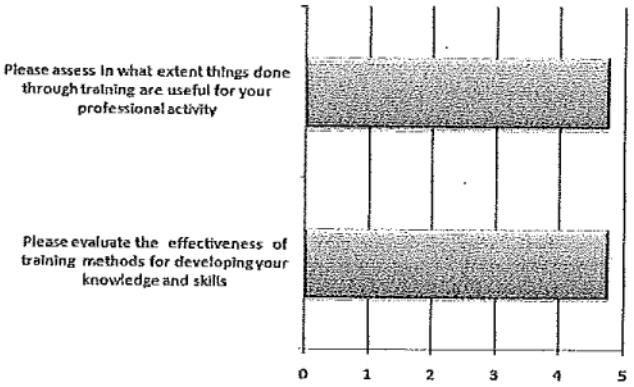

Figure 6.23 Usefulness of the training and the effectiveness of the training methods

(3) the role of the facilitator/teacher

In this part the students were asked to assess the role of the facilitator or teacher using the scale from 0 to 5, where 0 – very low; 5 – very high (Figure 6.24). All indicators from this group were assessed as very good by the students. They gave 5/5 points to each indicator so the role of the facilitator/teacher in this course was judged as really good.

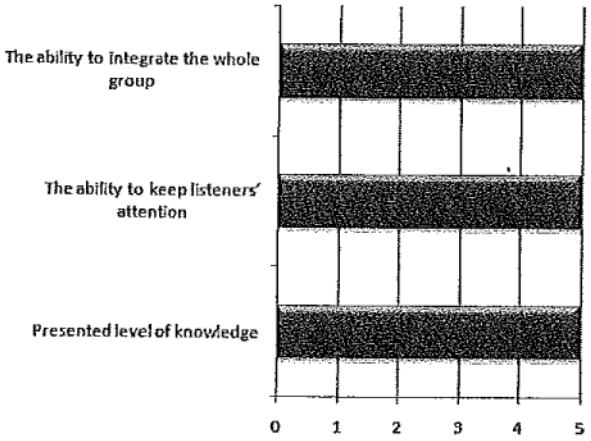

Figure 6.24 The role of the facilitator or teacher

(4) the training materials

Students were also asked to evaluate the quality and relevance of the training materials used during the training (0- not relevant, 5- relevant) (Figure 6.25). Two of these indicators were assessed as very good (5 points) – readability and adaptation of materials for training. Two other were assessed as being at the level of 4 points (relevant material element of visual saturation/visual attractiveness of materials), but it is still very high rate. The opinion about the other indicators in this category is placed between these two rates.

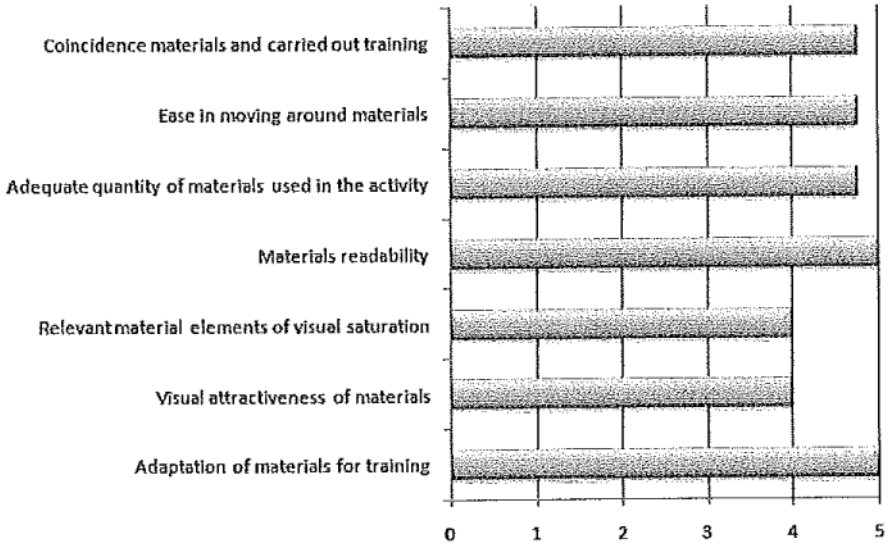

Figure 6.25 The quality and relevance of the training materials

In conclusion:

A comparison on the basis of the questionnaires' analysis, would favour the distance delivery model as being more effective than the blended model. The participants perceived to have achieved the majority of objectives in that model, and responded that they gained a lot of useful skills. The distance model itself got high notes (especially the teacher's role, which was given the biggest number of points). It should be noted though, that both models have been designed with the notion of serving two different kinds of target groups i.e., different institutions, environments and recipients (i.e., off-campus and on-campus). The blended model is, above all, aimed for traditional universities where courses constitute face to face interactions and students cooperate with each other in a classroom environment. As far as the distance model is concerned, this was prepared for online teaching, as students stemming from all over Europe, do not have possibility to take part in face to face meetings. Yet, the greatest asset of this approach was the preparation

of didactical materials in the form of filmed lectures along with rich Internet media delivery. It seems that this course characteristic is one of the success factors which is likely to have impacted the effectiveness and the evaluation of the course. As regards the formulation of objectives and the final results perceived by the students, the recommendation would be to focus on the aspects that received a relative low score in the pilot, and accordingly improve these aspects in next editions of the Masterclass.

6.2 Final stakeholder evaluation workshop

As an activity co-funded under the LLL Programme, Erasmus 'Cooperation between Universities and Enterprises', the European Association of Distance Teaching Universities (EADTU) convened a special workshop/seminar in Leuven (BE), to address the issue of entrepreneurship, and the associated stakeholder requirements for flexible entrepreneurship education and training. The entrepreneurship seminar convened local/national/European authorities, SME/employer representation, HE associations, and the European Commission (EACEA).

6.2.1 Introduction and aims

In face of enormous socio-economic and demographic challenges, Europe requires new activities within higher education, which better contribute to innovation, competitiveness and growth. *Entrepreneurship* is one such (key) activity, and a major contributor to overall employment. Not surprisingly, the European Commission invited all Member States of the Union, to strengthen activities in the area of entrepreneurship, in perspective of lifelong learning requirements.

The seminar offered a platform for the exchange of experiences & practices in the common field of interest: entrepreneurship. The seminar registered some 23 countries/regions with an interest in entrepreneurship. During this seminar, our European CBVE partners were given the opportunity to present their activities in a coherent manner, as regards their entrepreneurship research and education, and the results obtained thus far. The presentations focused on four key issues:

- Development and delivery of pedagogically-rich education materials for flexible and independent learning i.e., Masterclass entrepreneurship;
- Pilot models for virtual (entrepreneurship) business planning;

- The use of Web 2.0 technologies for entrepreneurial training & digital students' education and synergy with other ongoing European projects;
- University, country and region specificities of entrepreneurship and associated localisation needs.

The audience comprised of a mix of countries including different continents, providing individual or plenary feedback on projects and initiatives of entrepreneurship. Most entrepreneurship promotion seems funded university-internally, regionally or nationally, or funded by the European Commission (EACEA) under such lifelong learning strands as Leonardo da Vinci, Tempus and/or Erasmus (Directorate General Education and Culture). Also, the Directorate General Enterprise and Industry is responsible for awarding grants in the field, in particular in the field of mentoring starter-entrepreneurs. Several synergies between projects have been explicated more clearly during the seminar and will be used to valorise activities in the future. It is apparent that entrepreneurship and policy-making on entrepreneurship differ among the countries and regions. Policy determinants may be different for many regions/countries. Priority will likely be given to issues of prime concern to the region/country itself. In turn this explains why universities, countries and regions each have their specificities as regards entrepreneurship education and training, and accordingly makes a clear case for associated localisation of (existing) practices.

6.2.2 Questions from the audience

Questions on interactivity

The Masterclass contains entrepreneurship education for flexible and autonomous learning, resembling 2 ECTS of study load per lingual Masterclass; this may be exceeded depending on the localisation and/or or added support materials by the individual universities. Video professors have provided their best knowledge in multimedia by studio recordings in Rome (IT). Off-campus students can easily tap into the video lectures and *interact* with accompanying support presentations, articles, literature references, and other materials. The synchronogy of the Masterclass video lecture(s) is seemingly connected to the synchronogy of the offered support materials. At any point of time, the narration of the video lecture can be paused and associated educational materials pertaining to the subject be studied. Students can skip subjects or revisit earlier items of the lectures, bearing in mind that learning is an iterative and creative process. The Masterclass is *pedagogically-rich* in the sense that it has especially been designed for independent self-learning of all relevant course subjects. The Masterclass is extremely rich in *multimedia,* as catered for by the different modalities of audio, video, graphics, text and

hypermedia. The entrepreneurship Masterclasses are generated in five different languages: English, Spanish, Italian, Estonian, and Hungarian.

Questions on (shared) development and implementation

As regards the development of the Masterclass: the quality of the Masterclass and the associated educational and professional requirements to be satisfied for this Masterclass, have been looked after by installation of a scientific committee. This committee includes outstanding professionals having careers in academic, corporate, capital, banking, investment and financial domains. The CBVE partnership developed a shared vision with this scientific committee, on the development of the English Masterclass. Localised versions and derivatives of this Masterclass have successively been generated with and by partners, in accordance with need specificities of the different countries/regions. Based on this philosophy, Masterclass versions have been developed for five different countries, in five different languages: EN, HU, EE, ES, and IT.

In one overview, universities can transparently access the (list of) available Masterclass courses. However, in acknowledging the two main educational models present within the CBVE partnership i.e., traditional universities (on-campus) and open and distance teaching universities (off-campus), the physical implementation has been distributed. Masterclass versions serving particularly traditional universities are implemented on platform of the traditional university (University of Miskolc). Masterclass versions serving Open and Distance Teaching Universities (ODTUs), are implemented on platform of the ODTU. Since all courses are cross-linked, this implementation issue is irrelevant to the final user. It does however enable the capacity building within the CBVE partnership.

Question(s) on involvement of external stakeholders

UNED performed a business planning pilot, which (also) included the testing of the developed Masterclass materials. UNED falls in the category of ODTUs. For the CBVE pilot programme, UNED made a selection of (distance) students to be included into Spanish virtual business planning. Herein UNED deploys a model for the involvement of external stakeholders, which is restricted to the final phase of the entrepreneurship programme. Only the business plans that are actually regarded as viable by the professional university staff (i.e., experienced in the field), are considered eligible for (further) interaction with additional external stakeholders. The model prevents potentially insignificant proposals to reach external stakeholders.

The University of Miskolc performed a business planning pilot, which (also) included the testing of the developed Masterclass materials. The University of Miskolc is a traditional university. For the CBVE pilot programme, it deploys a blended model of entrepreneurship business planning, constituting a mix of traditional on campus students as well as off campus students i.e., young adults. The University of Miskolc provides for small business development and traditional cooperation with regional enterprises, chambers of commerce and alumni. The University of Miskolc includes participation of regional stakeholders in the execution of its local pilot groups. Miskolc additionally assesses the multi-cultural aspects of entrepreneurship through deployment of international pilot groups.

As to what approach would be favourable to adopt in general, is difficult to make out. Pilot configurations are evidently subject to the specificities each type of university. In this sense, we must take into account the historical advantage of research-based universities which have traditionally been able to proficiently exploit (regional) third party cooperation, whereas ODTU's have traditionally been built upon an (mass) education-delivery model.

Miscellaneous questions

As to the question why the Hungarian pilot was different: this is due to the differences in type of universities (as explained previously): traditional and ODTU. The University of Miskolc is not able to maintain a dedicated and/or proprietary platform as an ODTU does, instead the University of Miskolc has catered for a Moodle platform, accompanied by a wide variety of Open Source tools.

As to the question how long the specific pilots of the partners lasted: pilots were held with students which were regularly enrolled, and which followed the normal curriculum. The pilots were embedded. Students were enrolled in the business administration programme, and as far as the UNED was concerned, the only requirement was for students to have their own (initial) business idea.

As to the question whether students obtain credits, it follows also from the previous information that students do obtain their normal credits. How do the different countries manage the ECTS credits: this depends on the conducted pilot. The students obtain credits in their own country in accordance with their own university programme. The Masterclass itself is approximately 2 ECTS, but (if and) how it is embedded in a total course of certain ECTS points, is up to the (local) university. Moreover, the course is comprised of different (re)usable components, which provides for an additional flexibility.

As regards the development of the Masterclasses and both the technical and the studio production, compliments are brought over by the audience to the developers, as for an impressive job done. A lot of work needed to be done before making the video lessons: preparation of the materials and instructing and training the professors. For each lesson, approximately a tenfold of the time must be invested in all the related preparations.

A question was raised with respect to the Masterclass, as being mostly transfer of knowledge, whereas entrepreneurship also requires skills. The answer to this was that the Masterclass should not only be used as a stand-alone source of knowledge, but is best configured with business planning pilots of students, which has (also) been realised inside the CBVE project.

Another question was related to the OECD study concerning the Entrepreneurship Indicator programme (EIP), as to why companies in the countries did not survive, and whether this knowledge was incorporated per country, as a lesson learned in the Masterclass. The answer is no. The OECD study on company births/death contains mainly statistical information, making causal inferences on entrepreneurship difficult, for being non-linear and multifaceted.

In the end, some countries such as Croatia, provided information on their own university initiatives regarding entrepreneurship. One delegate from Crete (Greece) explained that they had a similar project idea on promoting entrepreneurship. An incubator accommodates and encourages students to take a training course, something their government highly encourages: to have universities integrate entrepreneurship into the curricula. Delegates from Anadolu (Turkey) explained that their university also has entrepreneurship courses included in the curricula: management, economics, engineering, et cetera. And moreover, free of charge courses. For more information on the (related) project and initiatives of entrepreneurship by the different countries, please refer to section 3 of this proceedings report.

6.2.3 Conclusions

A prime aim of organising the entrepreneurship seminar was to enable the CBVE partnership to have the development and delivery of pedagogically-rich education materials for flexible and independent learning (i.e., the Masterclass entrepreneurship), evaluated and ranked by external stakeholders. This proved a successful invitation. The entrepreneurship seminar drew the attention of quite a number of stakeholders, including those from countries outside Europe.

The Masterclass and the associated virtual business planning pilots were constructively assessed during the seminar. Advancements on the Masterclass and virtual business planning configuration can still be made, in particular whereas it concerns the (local) implementation of interaction with external stakeholders and perhaps even in successive stages: the extended coaching and/or incubation of successfully reviewed business plans[5]. From the seminar responses, a general observation can be made. Universities seem to be working in different phases of the 'university-entrepreneurship' competence cycle.

Some universities still stand at the beginning of commencing a dialogue on whether promotion of entrepreneurship should be done. Others don't ask that question any more, but are rather concerned about what (policy) issues to focus on, as regards the embedding of entrepreneurship in their regional situation. Even others have pulled-through and have actually started to roll-out entrepreneurship education as a transversal competence across the university curricula. And finally, some universities have come quite far: starting with an emerging practice, they have upgraded their performance to enter good and best practices, going beyond plain educational delivery to fully incubating student entrepreneurs and recording actual numbers of successful kick-offs.

[5] Though this falls outside the scope of the current CBVE project.

6.3 Project references

As a response to individual presentations and/or as part of the final plenary discussion, several participants coined (their) projects and initiatives. Discussions and associated project materials, reveals that there is wide variety of activities, spread across the spectrum/chain of entrepreneurship. Different issues within this spectrum/chain of entrepreneurship have been observed:

(1) Stimulating business ideas by stimulating student creativity;
(2) Creating education for building entrepreneurship skills and competences;
(3) Transversal implementation of entrepreneurship across programmes;
(4) Use of (open) Web 2.0 technologies for entrepreneurial training & digital students' education;
(5) Flexible internships for enhancing students' (self) employability and intrapreneurship;
(6) Student entrepreneurship incubation, prosperous business plans, and support in going 'live';
(7) Support for the mentoring of new entrepreneurs by coaches from experienced SMEs;
(8) Improving (regional) cooperation with business and social partner dialogue;
(9) Identifying emerging, good and best practices, and the cross-linking of these experiences;

Ad 1. Case example(s):

The Business Creativity Module (BCM), which is meant to introduce an innovative instrument in the new venture creation process combining entrepreneurship, creativity and innovation. BCM has been jointly designed and implemented by a network of 6 European Universities in Germany (Mainz), Scotland (Aberdeen), Portugal (Lisbon), France (Dijon), Poland (Wroclaw) and the Czech Republic (Prague) and presents one of the learning opportunities that the network developed since its establishment in 2004. It is now an innovative course integrated in the regular curricula and jointly taught by the partner universities.
Reference: www.coeur-module.eu

Ad 2. Case example(s):

The FoSentHE project is lead by the University of Zagreb, Faculty of Economics and Business, Croatia, funded by the Tempus programme of the European Commission. FoSentHE stimulates the internationalisation of curricula by launching new online courses on entrepreneurship – the process of designing detailed content and structure of the study programme, the compilation of core stakeholder groups and networks representing and linking the key entrepreneurship promotion actors. The underlying idea of FoSentHE is to stimulate students' entrepreneurial

activity by: Entrepreneurial mindset, e-Learning, Excellence Entrepreneurship centres, and European network.
Reference: www.efzg.hr/tempus

The CBVE project by EADTU, is a European Multilateral project under the Lifelong Learning Programme, Sub programme Erasmus – Cooperation between Universities and Enterprises. Its objective is to enhance the professional skills of students by lifelong, open and flexible, didactically-innovative and pedagogically-rich learning approaches, with a specific focus on the development, extension and expansion of entrepreneurial skills. CBVE is to pilot entrepreneurship in a novel way, as prospective part of the curriculum for students not (longer) part of traditional cohorts so reaching to students outside traditional cohorts.
Reference: www.eadtu.nl/cbve/

Ad 3. Case example(s):

The Universitat Oberta de Catalunya (UOC) is one of the frontrunners of the new model of onlin education of the knowledge society. The educational model of the UOC facilitates access to learning resources from any place and at any time, in a way that permits education to be integrated in people's lives. The UOC has been working for many years in different initiatives or the field of entrepreneurship. At present UOC is working on a new initiative which will consist of the introduction of entrepreneurship as core item in curricula of all areas of knowledge, as of September 2009. UOC will gain experience with this new initiative and will be able to report on experiences in the near future, after having testing it thoroughly. UOC's Economics and Busine Studies department is on top of this initiative.
Reference: www.uoc.edu/

Ad 4. Case example(s):

The ViCaDiS (Virtual Campus for Digital Students) is a Lifelong Learning project under Erasmu Virtual Campus, and supports the development of an innovative virtual campus for digital students. ViCaDiS synergises with entrepreneurship inside curricula, in as far as it provides for the usage of Web 2.0 technologies for entrepreneurial education and training. ViCaDiS aims a providing an innovative multilingual ICT-based environment unique in Europe (as an internatio virtual campus). It will incorporate several open educational resources (library, glossary, exterr links, student projects, course activities), open educational tools (wiki, blog, forum, calendar,

podcasting, instant messaging communication, audio-video conferencing over IP, RSS, mobile text messaging, mobile accessibility to ViCaDiS) and will promote social networking as an instructional method.
Reference: http://www.vicadis.net/

Ad 5. Case example(s):

The project 'Cross Sector Virtual Mobility: Stimulating European Employability through Cross Sector Virtual Mobility', has successfully experimented with flexible modality internships for enhancing students' employability. The main aims of the project were to sensitise (distance) higher education to the contribution of e-internships, provide distance higher education systems with increased business connectivity, stimulate employability, and accommodate for the training of skills & competences in a flexible manner. CSVM was supported by - New tools and interactive technologies, Remote matchmaking platform, and Cooperation with enterprises, local/regional bodies.
Reference: http://www3.interscience.wiley.com/journal/119388567/abstract

Ad 6. Case example(s):

Support for student entrepreneurship, progressing prosperous business plans, and the support in successfully going 'live' is supported by business incubation, and goes one step further than plain entrepreneurship education. Incubator tenants are provided facilities, business management support and other services, such as interactions with agents of the financial sector, universities, associations, trade unions and firms of different sectors. The Technical University of Crete (TUC) works towards creating a favourable environment for entrepreneurship. It conducts innovation promotion, technology transfer, and business start-up training. TUC works to establish an academic student environment conducive to entrepreneurship and innovation in the region of Crete.
Reference: http://www.seerc.org/iceird2009/programme.html

Ad 7. Case example(s):

Erasmus for Young Entrepreneurs is an action initiated by the EU (DG Enterprise and Industry). It aims at helping new entrepreneurs to acquire relevant skills for managing a small or medium-

sized enterprise by spending time in an enterprise in another EU country. It contributes to improving their know-how and fosters cross border transfers of knowledge and experience between entrepreneurs. Erasmus for Young Entrepreneurs comes under the Small Business Act for Europe which considers this action a key contribution "to create an environment within which entrepreneurs and family businesses can thrive and entrepreneurship is rewarded". The action is of interest to new entrepreneurs who might want to go abroad to learn from experienced entrepreneurs, experienced entrepreneurs who might want to host new entrepreneurs, and providers of business-related services who support entrepreneurs and the development of entrepreneurship. The overall objective of the action is to enhance the entrepreneurship, internationalisation and competitiveness of potential start-up entrepreneurs and newly established micro and small enterprises in the EU.
Reference:
http://ec.europa.eu/enterprise/entrepreneurship/support_measures/erasmus/feasability.htm

http://ec.europa.eu/enterprise/newsroom/cf/itemlongdetail.cfm?item_id=2941&lang=en

Ad 8. Case example(s):

Improving (regional) cooperation between universities, businesses and social partners is an important matter. Examples of successful co-operation between the sides exist throughout Europe. However, the level of co-operation remains very unequal across countries, universities and academic disciplines and the extent to which it has influenced governance and organisational cultures in both business and higher education so far, is limited. The commission has established the University-Business Forum. It involves higher education institutions, companies, business associations, intermediaries and public authorities. It enables and stimulates parties to exchange good practice, discuss common problems and work together on possible solutions.
Reference: http://ec.europa.eu/education/higher-education/doc1261_en.htm

Ad 9. (Best practice) example(s):

Identifying and utilising emerging, good and best practices, and cross-linking these experiences remains vital to obtaining more proficiency on the local level with regard to entrepreneurship. A report by the European Commission on helping to create an entrepreneurial culture (a guide on good practices in promoting entrepreneurial attitudes and skills through education), provides some helpful insights. In the publication 21 examples of good practice are proposed. It describes

entrepreneurial attitudes and good examples of educational systems and how these can help to promote the spirit of enterprise in young people, thus contributing to create a more entrepreneurial culture in our society. Also, the survey of entrepreneurship in higher education by NIRAS Consultants, FORA, ECON Pöyryis is very useful to consult. It contains interview reports of good practice examples with some 46 higher education institutions in Europe.

Reference:
http://ec.europa.eu/enterprise/entrepreneurship/support_measures/training_education/doc/entrepreneurial_culture_en.pdf

http://ec.europa.eu/enterprise/entrepreneurship/support_measures/training_education/highedsurvey_b.pdf

Appendices

Appendix I. List of partner universities

European Association of Distance Teaching Universities – EADTU

EADTU is Europe's leading representative association of distance education and e-learning. Its member base now counts 25 members and is comprised of renowned universities and consortia, dedicated to lifelong open and flexible learning and consortia, from over twenty-one different countries, serving off-campus target groups with accredited quality. Members of EADTU are universities which are dedicated to off-campus target groups, using distance teaching methods and systemic study guidance, mostly in regional study centres as well as organisations including consortia consisting of universities with mainly mainstream on-campus students but which also give priority to offering education for off-campus students. The European structure of EADTU is extensive and levers direct liaisons with academic officers on the local level. EADTU has a clear responsibility for leadership. Over the past years EADTU has taken the role of coordinator and valorisation of different European projects.

Universidad Nacional de Educación a Distancia – UNED

UNED was founded in 1972. It is a Spanish University funded by the Spanish Government. UNED provides preferential access to university and further education for all those who, while capable of pursuing higher studies, are unable to attend on-campus classes for working, financial, residential or any other similar reasons. UNED applies techniques and experience for distance teaching and innovates by means of new educational models, with the purpose of serving both students and any Universities or Institutions with which it holds cooperation agreements. UNED actively sets up and develops programmes for further education and for cultural and professional improvement. UNED courses are taught at a distance for students all over the world. Some Centres abroad are: Argentina, Belgium, Brazil, Equatorial Guinea, Japan, Morocco, and United States. UNED has more than 180.000 students enrolled in a year. Nowadays, UNED offers graduate studies in 22 different fields.

Tallinn University – TU

Tallinn University resulted from a merger of several universities and research institutes in Tallinn, and now consists of 6 faculties (Fine Arts, Educational Sciences, Physical Education, Philology, Mathematics and Natural Sciences, Social Sciences), 2 academic institutes (Institute of History, Estonian Institute of Humanities), the Baltic Film and Media School as well as 4 research institutes (Institute of Estonian Demography, Institute of Ecology, Institute of Educational Research, Institute of International and Social Studies) and two regional colleges. Its main strengths lie in the fields of humanities and social sciences, and a strong and constantly growing component of natural and exact sciences, as well as a notable tradition of teacher training and educational research. The University at present, is the fastest growing university in the country. The University operates within the Estonian Information Technology Foundation (EITF).

University of Miskolc – NHRDEC

The University of Miskolc, is one of the largest provincial universities of Hungary, offering both BSc, MSc and PhD degree courses in the widest range of disciplines, at 7 faculties, one college and 2 institutions, for approximately 7500 full-time and 7500 part-time students. Based on the long-term successful collaboration with the Faculty of Economics and the North Hungarian Regional Distance Education Centre, and the Chamber of Commerce and Industry of the Borsod-Abaúj-Zemplén county, several national and international projects have been implemented for developing advanced e-learning programmes, offered to entrepreneurs, SMEs and different sectors of the economy. Herein, the North Hungarian Regional Distance Education Centre i.e., the Open Distance Learning (ODL) unit of the University of Miskolc - is a main driver and coordinator of 28 national and international projects for developing infrastructure, ODL networking systems and course development.

The International Telematic University UNINETTUNO – UTIU

The International Telematic University UNINETTUNO (UTIU), established by Ministry Decree in April 2005, has been realised to valorise and enlarge the telematic didactic system settled by Consorzio NETTUNO as founded in 1992. It was enlarged at Euro-Mediterranean level, thanks to the Med Net'U Project (Eumedis Programme), in which a network was established among 31 partners of 11 countries of the Euromediterranean area, aimed at designing and realising university courses at a distance in a multilingual format. The UTIU confers academic

qualifications legally acknowledged in Italy, in Europe and in the Mediterranean countries; the didactic offer is designed and realised according to the Bologna Declaration (3+2) and structured in Credits (ECTS). The courses are completely on-line, delivered trough the learning environment on the Internet (www.uninettunouniversity.net), developed by the University in a multilingual format: contents and interfaces are available among others, in Arabic, French, English, and Italian.

Maria Curie Sklodowska University - MCSU

Maria Curie Sklodowska University has been steadily expanding to meet the changes of a leading European institution. About 33 thousand students are currently enrolled on full time, extramural, and evening undergraduate, graduate and teacher training courses provided by ten faculties in 30 different study programs. The university employs approximately 1800 staff members. Postgraduate and doctoral study programs have become increasingly popular. Maria Curie-Sklodowska University cooperates with the Academy of Humanities and Economics in Lodz, in the Polish Virtual University (PUW); herewith offering study programmes and extension courses over the Internet, with a main task to support traditional lectures and trainings as well as promote modern teaching methods. PUW is a competence centre for methodology, technology and organisation of eLearning with the capacity to provide state-of-the-art information technology and methodological support.

Appendix II. Published in this series

Front Cover

Project Information

Abstract

Preface

Table of Contents

Dorp, C.A. van (Eds). Stimulating European Employability through Cross Sector Virtual Mobility: European Funded Research on Flexible Modality Internships. By: Dorp, C.A. van, Virkus, S., Egaña y Espinosa de los Monteros. A.H. de, Baan, M. K., Sepe, R., Stefanelli, C., Lansu, A., Lohr, A., Jasinska, M., and A. Wodecki. Publication co-funded by the Leonardo da Vinci programme (Lifelong Learning). European Association of Distance Teaching Universities (EADTU), Heerlen, the Netherlands, September 2008. ISBN 978-90-79730-01-8.

Front Cover

Project Information

Abstract

Preface

Table of Contents

Dorp, C.A. van (Eds). Cross Border Virtual Entrepreneurship (CBVE): European Funded Research on Flexible Modality Entrepreneurship Education and Training. By: Dorp, C.A. van, Virkus, S., Egaña y Espinosa de los Monteros. A.H. de, Baan, M. K., Sepe, R., A., Jasinska, M., and A. Wodecki. Co-funded by the Erasmus programme (Lifelong Learning). European Association of Distance Teaching Universities (EADTU), Heerlen, the Netherlands, September 2009. ISBN 978-90-79730-03-2.

Appendix III. CBVE dissemination and valorisation

Books and Book Chapters

1. Dorp, C.A. van (Eds). Cross Border Virtual Entrepreneurship (CBVE): European Funded Research on Flexible Modality Entrepreneurship Education and Training. By: Dorp, C.A. van, Virkus, S., Egaña y Espinosa de los Monteros. A.H. de, Baan, M. K., Sepe, R., A., Jasinska, M., and A. Wodecki. Co-funded by the Erasmus programme (Lifelong Learning). European Association of Distance Teaching Universities (EADTU), Heerlen, the Netherlands, September 2009. ISBN 978 90 79730 03 2.

2. Dorp, C.A. van (Eds). Stimulating European Employability through Cross Sector Virtual Mobility: European Funded Research on Flexible Modality Internships. By: Dorp, C.A. van, Virkus, S., Egaña y Espinosa de los Monteros. A.H. de, Baan, M. K., Sepe, R., Stefanelli, C., Lansu, A., Lohr, A., Jasinska, M., and A. Wodecki. Publication co-funded by the Leonardo da Vinci programme (Lifelong Learning). European Association of Distance Teaching Universities (EADTU), Heerlen, the Netherlands, September 2008. ISBN 978-90-79730-01-8.

International Journal Publications

3. Dorp, K.J. van (2007). A premier European Platform for Clearing e-Internships. British Journal of Educational Technology (BJET), Blackwell Publishing, Volume 39, Number 1, January 2008, pp. 175-179(5). ISSN: 0007-1013, Online ISSN: 1467-8535.

4. Dorp, C.A. van, Egaña y Espinosa de los Monteros. A.H. de, and R. Sepe (2009). Entrepreneurship education: reaching out beyond traditional cohorts by flexible modality and technological-pedagogical innovations. The British Journal of Educational Technology (BJET), Blackwell Publishing, January 2009. ISSN: 0007-1013, Online ISSN: 1467-8535 (to be submitted).

International Conference Publications

5. H. de Egaña Espinosa de los Monteros, Dorp, C.A. van, and M. Solórzano García (2009). From Emerging to Good Practice: Flexible Master class Entrepreneurship and Virtual Business Planning at UNED. Paper to the 12th International Conference on Interactive Computer aided Learning (ICL2009), 23-25 September 2009, Villach, Austria, pp. 288-309. ISBN: 978-3-89958-481-3.

6. H. de Egaña Espinosa de los Monteros, Dorp C.A. van, and M. Solórzano García (2009). From Emerging to Good Practice: Flexible Master class Entrepreneurship and Virtual Business Planning at UNED. Extended Abstract to the 12th International Conference on Interactive Computer aided Learning (ICL2009), 23-25 September 2009, Villach, Austria, pp. 1-5. ISBN: 978-3-89958-481-3.

7. Dorp, C.A. van S. Virkus (2009). Sustaining the Practice of Flexible Modality Internships by means of 'Fast-Track Multiplication Cliniques'. Paper for the 23rd ICDE World Conference M-2009: "Flexible Education for All: Open – Global – Innovative", 7-10 June, Maastricht, the Netherlands.

8. H. de Egaña Espinosa de los Monteros, and M. Solórzano García (2009). Business Creation, Education and Experiences at UNED. Paper for the 23rd ICDE World Conference M-2009: "Flexible Education for All: Open – Global – Innovative", 7-10 June, Maastricht, the Netherlands.

9. Lukács , E., and M. Csiszárik (2009). New Opportunities for Enhancing Self-Employability – Developing Entrepreneurial Skills via International Virtual Programs (The Aims and Results of Cross Border Virtual Entrepreneurship Pilot-Programs In Hungary). Paper for the 23rd ICDE World Conference M-2009: "Flexible Education for All: Open – Global – Innovative", 7-10 June, Maastricht, the Netherlands.

10. Baan, M. (2009). Long Term Impact of EU Projects on Strategic Development of HEIs in Central-East Europe. Paper for the 23rd ICDE World Conference M-2009: "Flexible Education for All: Open – Global – Innovative", 7-10 June, Maastricht, the Netherlands.

11. Lansu, A., Löhr, A., and K.J. van Dorp (2009). Professional Development in e-Learning: Examples of Effective Remote Internship Models. Paper for the 23rd ICDE

World Conference M-2009: "Flexible Education for All: Open – Global – Innovative", 7-10 June, Maastricht, the Netherlands.

12. Dorp, C.A. van (2008). Cross Border Virtual Entrepreneurship: A Multilateral European Project under the Lifelong Learning Programme 2007-2013. Short paper for Online Educa's Book of Abstracts, 14th International Conference on Technology Supported Learning & Training, December 3-5, ICWE GmbH, Berlin, Germany, 2008, pp. 71-74. ISBN: 978-3-941055-01-8.

13. Dorp, K.J. van, and A.H. de Egaña Espinosa de los Monteros (2008). Professional experience by the click of a mouse, Viewpoint article on (remote) internships in single-mode (distance) education. Paper for EADTU's 20th Annual Conference 2008, Lifelong Learning in Higher Education: Networked Teaching and Learning in a Knowledge Society, 18-19 September 2008, Poitiers, France, pp. 1-13.

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European EADTU Newsletters

22. Newsletter: 29 national members representing 24 European countries, December 2007
23. Newsletter: 29 national members representing 24 European countries, January 2008
24. Newsletter: 29 national members representing 24 European countries, June-July 2008
25. Newsletter: 29 national members representing 24 European countries, March 2008
26. Newsletter: 29 national members representing 24 European countries, July 2008
27. Newsletter: 29 national members representing 24 European countries, January 2009
28. Newsletter: 29 national members representing 24 European countries, April 2009
29. Newsletter: 29 national members representing 24 European countries, June 2009
30. Newsletter: 29 national members representing 24 European countries, Sept/Oct 2009

Workshops, Seminars and Symposia

31. External European Stakeholder Seminar: 'Entrepreneurship: Education and Training by Flexible Modality', May 2009 Leuven (BE)
32. Local Staff and Student Content Evaluation Sessions in Spain, Italy, Estonia, Hungary
33. Pedagogical and Technological Staff Training sessions in Spain, Italy, Estonia, Hungary
34. EADTU - JKU Seminar on Distance Studies in Europe - Seminar sponsored by the Province of Upper Austria, City of Linz, and the Johannes Kepler University Linz
35. Integrated CBVE Workshop at the ICDE World Conference Maastricht (NL) - Entrepreneurship: Masterclass Education and Training Materials for Cross Border Virtual Entrepreneurship, June 2009
36. Integrated Staff and Stakeholder Workshop at the ICDE World Conference Maastricht (NL) - Entrepreneurship, Virtual Programmes and Digital Environments, June 2009

Websites and Portals

37. Public area project website on CBVE: www.eadtu.nl/cbve
38. Private area project website on CBVE (password protected)
39. Public CBVE Blog: www.eadtu.nl/blog
40. Multi-country "referatory" portal on entrepreneurship: http://www.eadtu.nl/cbve-portal/
41. Platform MC distance model: http://www.uninettunouniversity.net/CBVE_demo
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44. Adding Value to Open and Distance Education in the Post-2010 Decade, Dorp, K.J., van, Opening Conference Keynote Address at the International Conference ICL 2009, ICL - Interactive Computer Aided Learning, 23 - 25 Sept 2009, Villach/Austria
45. Cross Border Virtual Entrepreneurship: A Multilateral European Project under the Lifelong Learning Programme 2007-2013. Dorp, K.J., van, at the 14th International Conference on Technology Supported Learning & Training, December 3-5, ICWE, Berlin, Germany, 2008

46. Model for flexible employability enhancement, Dorp, K.J., van, at the EADTU - JKU Seminar on Distance Studies in Europe - Seminar sponsored by the Province of Upper Austria, City of Linz, and the Johannes Kepler University Linz
47. Entrepreneurship Education and Training by Flexible Modality, Dorp, K.J., van, at the European Entrepreneurship Stakeholder Seminar, 8 May 2009, Leuven (BE)
48. Development and Delivery of Pedagogically-rich Education and Training Materials for Masterclass Usage: A MULTILINGUAL DEMO, Sepe, R. at the European Entrepreneurship Stakeholder Seminar, 8 May 2009, Leuven (BE)
49. European Pilot on Virtual Entrepreneurial Masterclass and Virtual Business Planning: Configuration and Preliminary Results, Herrero, A., at the European Entrepreneurship Stakeholder Seminar, 8 May 2009, Leuven (BE)
50. The Hungarian Model for Virtual Business Planning: Configuration and Preliminary Results, Baan, M. and E. Lukacs, at the European Entrepreneurship Stakeholder Seminar, 8 May 2009, Leuven (BE)
51. The Use of Web 2.0 Technologies for Entrepreneurial Training & Digital Students Education – Synergy with ViCaDiS Project, Baan, M., Fekete, R., and D. Andone, at the European Entrepreneurship Stakeholder Seminar, 8 May 2009, Leuven (BE)
52. Entrepreneurship: Master Class Education and Training Materials for Cross Border Virtual Entrepreneurship. Sepe, R., Uninettuno, Italy, at the 23rd ICDE World Conference on Open Learning and Distance Education, 7-10 June 2009, Maastricht, The Netherlands
53. Business Creation, Education and Experiences at UNED, Monteros, A.H. de E.E.; Solórzano García, UNED, Spain, at the 23rd ICDE World Conference on Open Learning and Distance Education, 7-10 June 2009, Maastricht, The Netherlands
54. Professional Development by e-Learning: Examples of Effective Remote Internship Models, Lansu, A.; Löhr, A.,OUNL, The Netherlands, at the 23rd ICDE World Conference on Open Learning and Distance Education, 7-10 June 2009, Maastricht, The Netherlands
55. Sustaining the Practice of Flexible Modality Internships by Means of 'Fast-Track Multiplication Cliniques', Virkus, S., Tallinn University, Estonia; Kees-Jan van Dorp, EADTU, The Netherlands, at the 23rd ICDE World Conference on Open Learning and Distance Education, 7-10 June 2009, Maastricht, The Netherlands
56. New Opportunities for Enhancing Self-employability, Developing Entrepreneurial Skills via International Virtual Programs, Lukacs, E., University of Miskolc, Hungary, at the 23rd ICDE World Conference on Open Learning and Distance Education, 7-10 June 2009, Maastricht, The Netherlands

57. The Development of a Virtual Campus for Digital Students (Vicadis), Andone, D., Politehnica" University of Timisoara, Romania, at the 23rd ICDE World Conference on Open Learning and Distance Education, 7-10 June 2009, Maastricht, The Netherlands
58. Long Term Impact of EU Projects On Strategic Development of HEIs in Central-East Europe, Kocsic Baan, M., University of Miskolc, Hungary, at the 23rd ICDE World Conference on Open Learning and Distance Education, 7-10 June 2009, Maastricht, The Netherlands
59. Masterclass Entrepreneurship and International Business Planning Training for a New Population of Learners, van Dorp, K.J., van, EADTU, the Netherlands, at the EADTU Annual Conference 2008 in Poitiers, 18-19 September, France
60. Developing Entrepreneurial Activities and Abilities via International Virtual Programmes, Lukás, E., University of Miskolc, Hungary, at the EADTU Annual Conference 2008 in Poitiers, 18-19 September, France
61. Effectiveness of Virtual Internship Models in e-Learning, Löhr, A., Lansu, A., Open Universiteit Nederland, the Netherlands, at the EADTU Annual Conference 2008 in Poitiers, 18-19 September, France
62. Synergy of International Projects for Improved Efficiency and Sustainability, Baan, M., University of Miskolc, Hungary, at the EADTU Annual Conference 2008 in Poitiers, 18-19 September, France
63. Professional Experience by the Click of a Mouse, Herrero, A., UNED, Spain, at the EADTU Annual Conference 2008 in Poitiers, 18-19 September, France
64. Cross Border Virtual Entrepreneurship: A Multilateral European Project under the Lifelong Learning Programme 2007-2013, Dorp, K.J., van, at the 2nd International FINPIN 2008 Conference, Hämeenlinna, Finland, April 20-22, 2008
65. Progressing Virtual Internships: Employability Enhancement in Open and Distance Education, Dorp, K.J., van, at the SURF Onderwijsdagen 2007 'Matching Vraag & Aanbod, Onderwijs & ICT', November 13 and 14, 2007, Jaarbeurs Utrecht, the Netherlands
66. Stimulating Mobility and Employability in Distance Education by Platform of Remote Internship, Dorp, K.J., van, at EADTU's 20th Anniversary Conference "International Courses and Services Online: Virtual Erasmus and a New Generation of Open Educational Resources for a European and Global Outreach", 8-9 November 2007, Lisbon, Portugal

European Networks

67. Board meeting, 25-30 Principles and Rectors, April 2008 (Moscow)
68. Board meeting, 25-30 Principles and Rectors, September 2008 (Poitiers)
69. Rector meetings, 10 Rectors of Open Universities, September 2008 (Poitiers) .
70. Executive meeting, Subset of the Board, January 2008 (Madrid)
71. Executive meetings, Subset of the Board, April 2008 (Audio)
72. Executive meetings, Subset of the Board, June 2008 (Audio)
73. Associations meeting, 25-30 Principles, April 2009 (London)
74. Board meeting, 25-30 Principles and Rectors, April 2009 (London)
75. Executive meeting, Subset of the Board, October 2009 (Barcelona)

Committees, Keynotes

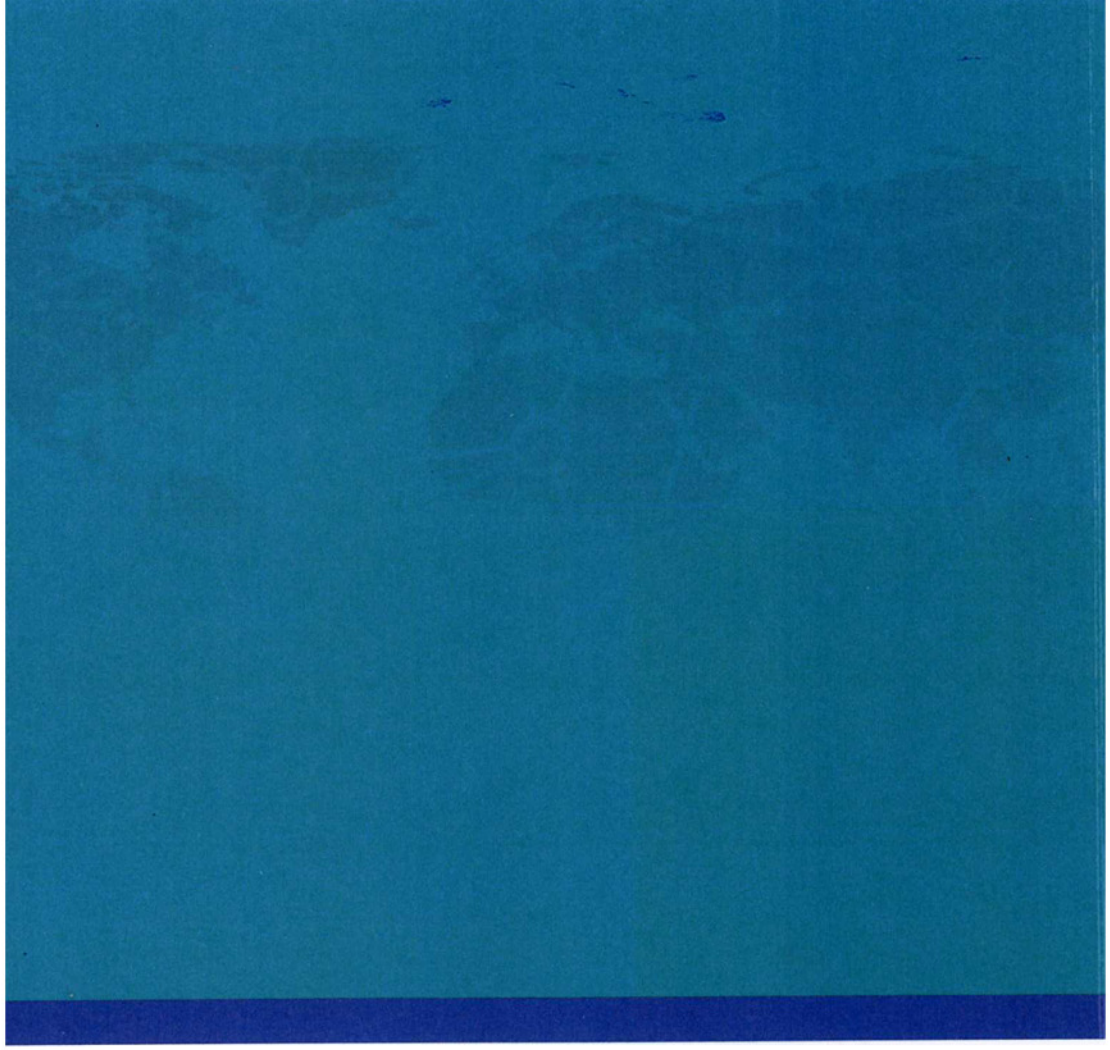
76. Opening Conference Keynote Address at the International Conference ICL 2009, ICL - Interactive Computer Aided Learning, 23 - 25 Sept 2009, Villach/Austria
77. Speaker at 'Distance Studies' Seminar, organised by the Johannes Kepler University Linz (JKU) and the Province of Upper Austria, in collaboration with the Ministry of Science and Research, 24 June 2009
78. Program Committee Member of the International Conference ICL 2009, ICL - Interactive Computer Aided Learning, 23 - 25 Sept 2009, Villach/Austria
79. Chair of the Conference Employability Strand at the 23rd ICDE World Conference M-2009: "Flexible Education for All: Open – Global – Innovative", 7-10 June, Maastricht, the Netherlands
80. Plenary (Closing) Panel Speaker at the International Conference ICL 2009, ICL - Interactive Computer Aided Learning, 23 - 25 Sept 2009, Villach/Austria
81. Peer Paper Reviewing Committee for the 23rd ICDE World Conference M-2009, on Open Learning and Distance Education, 7-10 June 2009, Maastricht (NL)
82. Chair of the European Seminar on 'Entrepreneurship: Education and Training by Flexible Modality', co-funded by the European Commission, 8 May, Leuven (BE)
83. Cross Sector Virtual Mobility (CSVM) recommendation for Good Practice Leonardo da Vinci project by Thematic Monitoring Group 5 (TG5 e-learning), Leonardo da Vinci, Annual report 2008
84. Plenary Speaker Thematic Forum on Continuing Education and Lifelong Learning, EC University - Business Cooperation, Brussels, European Commission – DG Education & Culture/Unit A.3, Brussels, 30 June 2008

85. Cross Sector Virtual Mobility (CSVM) recommendation for Good Practice Leonardo da Vinci project by Thematic Monitoring Group 5 (TG5 e-learning), Leonardo da Vinci, Annual report 2008
86. Programme Committee EADTU Annual Conference 2008
87. Plenary Panel Member of European Commission, EC University - Business Cooperation, Thematic Forum on Continuing Education and Lifelong Learning, Brussels, 2008
88. Programme Committee EADTU Annual Conference 2008
89. Plenary Panel Member of European Commission, EC University - Business Cooperation, Thematic Forum on Continuing Education and Lifelong Learning, Brussels, 2008
90. Track Chair Critical Research at EADTU's 20th Anniversary Conference 2007, Lisbon
91. Programme Committee EADTU Annual Conference 2007
92. Track Chair Employability at EADTU's 20th Anniversary Conference 2007, Lisbon

Stakeholder Consultations

93. EYCI Second Flagship Conference – Creativity, Innovation, People. The Regional Dimension of Creativity and Innovation Brussels, European Commission (DGEAC), Brussels, 8-9 July 2009
94. Open Forum: Removing the Barriers to Creativity and Innovation? Brussels, Madou Auditorium, European Commission (DG EAC), 27 May 2009
95. European expertee for 'European Exchange Mechanisms for e-Learning content for e-skills'. European Tender by the MENON Network EEIG and PAU on behalf of DG Enterprise and Industry, May 2009
96. Erasmus contribution to the Bologna priority action lines, Thematic Cluster Meeting, DGEAC/EACEA, MCE, Brussels, 19 and 20 March 2009
97. Stakeholder to the University-Business Forum, European Commission (DGEAC), Charlemagne, Brussels, 5 and 6 February 2009
98. Consultation draft policy paper of the Bologna Follow Up Group (BFUG) for the Ministerial Conference (Leuven and Louvain-la-Neuve, April 2009), at DGEAC Madou, Brussels, 23 January
99. UNESCO-EADTU consultation on Virtual Entrepreneurship and Internship, at Section International Cooperation HE, UNESCO Headquarters Paris, 26 November 2008
100. Joint Operational Consultation EADTU - Directorate General Education and Culture (DG-EAC), Brussels, 23 May 2008

101. EUA Consultation on Lifelong Learning Charter for European Universities, EUA Brussels, 15 April 2008



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