Making the village a virtual campus
- Best practice examples of learning regions in the CoLabs.eu project

By

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Foreword

Many universities are currently struggling with the issue of eLearning as an important new component in higher education in general, and for lifelong learning in particular. The project CoLabs.eu has addressed some of these issues and the present report gives some of the results and experiences of relevance for eLearning strategies at universities, especially those that make a closer connection between eLearning and the third mission for universities. Lund University has made such closer connections and considers eLearning for lifelong learning as an integral part of the third mission. The project has been coordinated by Lund University as an EU-project within the framework of “European networks learning regions”, the R3L-initiative.

In this report the focus is on the local and regional applications made within the CoLabs.eu network of partners in their home regions. The main conclusion of these practical examples of learning region initiatives has been to try to transform local communities, villages and regions into virtual campuses, i.e. instead of “importing” learners to the traditional university campus and instead of “exporting” lectures to learners “out there” according to conventional distance learning, a more revolutionary approach is recommended in which the whole new soft infrastructure can be used more effectively to establish collaborative networks that link the “real” life of citizens at their home regions with the “academic” life of researchers and teachers at universities in such a way that learning becomes a integral part of their daily life. The concept of life wide learning has, in the project, evolved as a key idea to proceed with in this direction.

The project has been managed by Erik Wallin, associate professor at the Department of Informatics and project manager at the Office for Continuous and Distance Education (OCDE). The project was initially formulated by Erik Wallin as an attempt to empirically test a model for third mission oriented eLearning called the Conversity model, developed by him. The conclusion reached from the project is that the Conversity model for locally embedded learning systems seems to be a promising model to develop further in order to better support local and regional innovation systems as an integral part of the third mission.

We appreciate the work done by Erik Wallin as the key manager of the project on behalf of Lund University. As a consequence of the project, Lund University has decided to support a new application from Erik Wallin for a grant from Vinnova, the Swedish agency for innovation systems, to prepare for a bigger and more long-term investment in the proposed direction to establish a European Conversity for dedicated research and education oriented towards the third mission with the support of modern eLearning technology.

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1. EXECUTIVE SUMMARY AND ABSTRACT

The R3L CoLabs.eu project sets up a set of CoLabs, i.e. regionally adopted collaborative eLearning environments, in order to support the third mission of universities to enhance the innovation capacity of regions by taking the partner regions as initial cases to learn and work with, both by intra-regional and by inter-regional collaboration between project partners.

The general aim consists in specifying, designing, testing and evaluating prototypes of six regionally adopted virtual collaboratories that are dedicated to support the third mission of universities in the region by applying available knowledge to support learning processes and increase the innovation capacity of the region. In the context of European Projects, it is important to present, in detail, best practices.

By presenting the best practice examples of learning regions carried out by CoLabs partners, the knowledge foundation is set about the work carried out making it easier to embrace information in the other booklets on Commercialization strategies evolved from the CoLabs.eu project and Internal evaluation of the CoLabs.eu project.
2. INTRODUCTION

The project colabs.eu was funded by the European Commission in the framework of the R3L (regional life-long learning initiative). The project started in December of 2002 and ended in September of 2004.

Three public organizations - Lund University in Sweden, University of Vaasa in Finland, and CSP (an Information-and-Communication-Technology Research Centre in Italy) and three private enterprises - KnowNet in Wales, ed-consult in Denmark, and ed-lab in Germany started with collaborative experiments for life-long learning in their respective regions.

All six regions involved in colabs.eu carried out valuable experiments in their regions and promoted in their own ways sustainable lifelong-learning. The triple-helix alliances formed during the project have led to long-term partnerships and networks.

The project has displayed the potential for developing Co-laboratories as a means to linking economic development and learning in the different regions of Europe. Furthermore it has displayed the potential of linking different regional learning projects within Europe.

The basic idea of colabs.eu was to set up a group of micro-clusters of Triple-Helix-alliances related to eLearning and the digital knowledge in the six selected regions across Europe. Each micro-cluster should contribute with regional knowledge and competencies to the common and shared collaborative accumulation, exchange, and sharing of knowledge and competence related to eLearning, digital knowledge management, and carrying out regional support of the universities’ 3rd mission in particular. Each partner had the option to set up a regionally adopted collaborative entity (in other words a ‘Collaboratory’), a CoLab, based on a prototype and a set of templates for collaborative eLearning evolving in the common, shared collaborative environment for all the partners.

The network of colabs.eu experimented with a number of different learning scenarios, virtual fieldtrips, and both physical and virtual workshops to exchange experiences and learn from each other.

2.1 BACKGROUND - THE NEED FOR EDUCATION PROCESS REENGINEERING

The background to the colabs.eu project is a need for dedicated facilities and establishments to support the 3rd mission of universities in EU-member states. In this context, the 3rd mission is considered to be the application of knowledge to existing regional problems, to contribute to the generation of competencies to solve such problems now and in the future, and to contribute to the general development of industrially relevant competencies in the regional population.
Some of the problems with the 3rd mission in relation to the 1st and 2nd mission) research and teaching) are:

- From a R&D-perspective, the problems involved are often inter- and cross-disciplinary in nature, embedded in the regional context, and difficult to address to specific scientific discipline as an ‘x-ological’ problem.

- From an educational perspective, the group of persons of relevance for further and continuous learning is very heterogeneous and has a mixture of varying backgrounds, experiences, and personal ambitions for the future. The kind of education characteristic for the 3rd mission is confronted with difficulties in creating suitable classes on a traditional campus and there is a need for higher customization and personification of the learning process.

- The competence needed to solve regional problems is a mixture of scientific disciplinary knowledge and industry-specific know-how. Often there is a need to establish formal proof of attainment of competencies with some kind of certificate or authorization making the individuals eligible for certain positions and jobs in which such qualifications are needed. These qualifications differs often from the conventional degrees and credits offered by traditional universities as they are related to emerging new competencies, jobs, and functions on the labor market.

With this background taken into account, there is a general need for an Education Process Reengineering to make possible a number of shifts and conversions to transform relevant educational institutions from the old educational framework to the eLearning framework, such as a well-defined ‘learner centric’ approach instead of a ‘teacher centric’ architecture for the learning environment. This is especially true in the case of employed adults engaged in continuous, further education according to the 3rd mission. Such learning should be done off-campus (no need for locus change), at home, or at the office and at most part-time (integrated within other daily duties and routines at the home or at the workplace). This target group seldom has interest to take part in an educational program that takes 1-2 years to complete. Instead, they are interested in and are highly motivated to join very short update seminars or courses that could be completed in hours, days, or weeks and selected from a variety of such learning offerings. They are also willing to pay for these eLearning opportunities, therefore bolstering a market for eLearning as a business opportunity.

2.2 OBJECTIVES

The vision and main goal within the colabs.eu project has been to establish a learning environment that fully supports the 3rd mission for universities by taking advantage of modern ICT, modern theories of learning, and current best practice of collaborative eLearning in a network of collaborating partners, each with an interest to achieve this in their home region. The envisioned learning environment is called a Collaboratory, or CoLab for short. It can be seen as an integration of different facilities for learning that
have evolved over time into a new kind of learning environment that is adopted to the
new “Habitorium” that eEurope will be and where the “eCitizen” will live, not the least
as an “eLearner”. The ambition of colabs.eu was to set up and equip CoLabs that contain
most of these learning facilities in a blended form where physical and virtual space is
used most effectively for learning.

The following objectives where set up for the colabs.eu project:

a) To specify and design a prototype of a CoLab, that is dedicated to collaborative
blended eLearning for the 3rd mission of universities, i.e. application of available
knowledge to regional problems and contribute to continuous and further
education of people at risk or in need for complementary competence to increase
employability.

b) To establish a set of regional Triple-Helix-alliances of representatives for
academia, industry, and public authorities that will be a hosting organization for
regionally adopted version of a CoLab to support 3rd mission activities in the
learning region.

c) To exchange ideas, experiences, knowledge, and competencies in the field of
collaborative learning between the partner regions in such a way that a common,
shared accumulation of exchanges can be made into a series of Know-Ledgers,
i.e. repositories and accounts for different types of learning resources, such as
definitions, literature, and courses.

d) To enhance innovation in the participating regions by prototyping and
experimenting with special features of the CoLabs that will allow the creation of
new business ideas and virtual companies as an integrated part of the learning
process, creating pilot versions of virtual business research parks in each region.

e) To demonstrate, test, and evaluate current state-of-the-art technologies in the field
of collaborative learning technology to identify R&D issues of importance to
allow more advanced learning scenarios and deep learning for learners engaged in
3rd mission-related programs.

f) To identify and specify a formal framework for the description, design,
implementation, and management of collaborative learning processes in a
software architecture that adheres to current and future industrial standards, such
as XML.

This report is based on information supplied by the contractors of the colabs.eu project,
ed-consult in Denmark, ed-lab in Germany, University of Vaasa in Finland, Lund
University in Sweden, KnowNet in Wales and CSP in Italy.
3. COLABS FINAL REPORT – ED-CONSULT, DENMARK

3.1 AMBITIONS AND EXPECTATIONS

3.1.1 THE COLABS JOURNEY IN WEST JUTLAND

CoLabs West Jutland began with the ambition to develop a large network of learning communities throughout the region of West Jutland. The first task was to develop a triple-helix association between academic, civic, and private enterprises. The CoLabs journey started in Esbjerg. We approached the key stakeholders in the region and the existing ‘learning regions’ projects and networks. The project “Learning Regions from North to South” led by EU Vest developed policy recommendations on how lifelong learning can be an instrument to support economic growth, how the learning region can support lifelong learning, how learning regions can measure the performance of their support, and how they can ensure the quality of the learning region. After several meetings and discussions it became clear that for EU Vest and many other actors in the field, the learning region stops at the border of the city or the university campus.

3.1.2 GETTING INVOLVED

We were invited to join the research park community at the Esbjerg university campus, and did so in order to keep up the communication with the academic and the research community. But we knew we must focus our attention on the rural and remote areas of West Jutland.

See [http://www.r3l.net](http://www.r3l.net)

Along the CoLabs journey up the coast of West Jutland, ed-consult got involved in several associations. One of them was FJORDNET, an interdisciplinary network for mainly academic people, who moved to the Ringkjøbing Fjord area. The mission of the association was to organize leisure and cultural activities, informal learning, and to contribute to regional development. They had been cooperating with the municipalities and the media around the fjord and one major event was the award for “frontier breakers” – grænsebryder, people who initiated innovation and development in the region. Unfortunately, some of the initiators moved east again and the focus of the association drifted towards leisure activities. ed-consult established an online community for the group and Jenny Kinch got involved as a board member.

See [www.fjordnet.dk](http://www.fjordnet.dk)

Another association which was triggered by the CoLabs discussion is Kulturhus Bovbjerg. The initiator, Mette Iversen, had many meetings with ed-consult, and also ed-lab in Germany, to get ideas to turn a lighthouse into a cultural house and a lifelong learning center for people at the west coast. Ultimately, an association was founded with representatives from Lemvig municipality to get the project started. Unfortunately, there are still many bureaucratic hurdles to overcome before the project can be implemented.
has been difficult to get the banks to finance this lifelong learning project, and approval is needed from the waterway authorities. But the foundational goals are to make a model lifelong learning centre out of this lighthouse. The collaboration room for the association and the e-learning environment has already been created and is waiting to be activated.

Another opportunity opened up in Nymindegab in the spring of 2003. There were plans to create an art museum in Nymindegab and a support association was founded to promote activities in the museum. ed-consult got involved in the board and is promoting the development of lifelong learning activities within the museum. A collaboration forum was created for the now 40 members and a website was set-up. The construction work started in September. Nymindegab expects a major economic push with this museum. See www.nymus.dk

3.1.3. THE VILLAGE IS THE CAMPUS

The activities in the online communities developed very slowly. At the end of our journey, through talking with many stakeholders and people in the region, we found out that there was a need for a physical space for people to experiment with tools for e-learning and to get pedagogical coaching to access e-learning sources and online communities. We decided to focus on the small village of Nymindegab and carry out our collaborative experiments in this small place. The people in this village need to travel 30
kilometers to access lifelong learning communities. Training providers in Denmark are well advanced in their offerings of e-learning courses, but people in the remote regions have not developed skills to ‘e-learn’ by themselves. The e-learning market is too diffuse for the normal people. Most families have a computer, even internet, but to use it critically and creatively for learning and collaboration is a new skill to be developed.

We tried to find out about the learning needs of the people. Apart from the local people, (who live mainly on tourism and fishing, while some of them commuting to the big cities), there are many tourists, mostly Germans, who come especially in the months of July and August. This results in a sort of xenophobia. The locals provide services to the tourists, but they are not fond of them. It is extremely difficult for the Germans to get to know the locals. Most of them have been coming to Nynindegab for many years and are keen on learning about the people and the culture, and communicating with the locals. So we negotiated with the local hotel Nynindegab Kro to rent an old former course centre, which was not in use. We turned the place into an experimental learning lab with eight iMac computers connected to the Internet via ADSL, a set of CD-ROMs for language learning, and a roundtable with a blackboard. A “Schnupperkurs Danish” course was offered. This turned out to be a big success. 40 people attended the course, and suddenly the locals became interested in the learning lab. They started to understand what we were doing. They identified with our activities since they also earned a living with the tourists in this harsh environment, and now they were happy that the village was moving ahead, and they approached us with their learning needs. So we identified a permanent place in the village to turn into the LEARNING HOUSE. The banks believed in the lifelong learning initiative and made a quick decision to finance. So the foundations for the permanent learning house were laid.

3.1.4. THE REGIONAL CONTEXT

West Jutland is not a political region. It stretches over three counties along the west coast of Denmark – Ribe, Ringkøbing, and Viborg Amt. It stretches from Esbjerg in the south to Hanstholm in the north. It is a geographical and cultural region – the people speak their own dialect and are rather reserved. They have to make a living in this harsh climate. The major industries are tourism, followed by the off-shore industry and fishing. There are many SMEs, mainly crafts, in the region. There are also some high-tech industries present like Bang & Olufsen and Vestas.

The major problem is the brain flight. Young people, as soon as they are 18, move east to the universities, and they never come back. The unemployed rates are rather low, since people make their living with their small enterprises. On the one hand a lack of academics to bring innovation and development into the region, and on the other hand there are not enough academic jobs. When couples are head-hunted into the region there is often not a job opportunity for one partner.

There are not many educational facilities. West Jutland does not have a university. At the Esbjerg campus there are just a few faculties from the South Danish and Aalborg universities. To access high quality further education and training, people must travel a
long way. Public transport is poor in the region and maintaining a car is very expensive. The young people are frustrated and for the elderly and disableds it is extremely difficult to access lifelong learning. The same applies to SMEs. There is a great need for lifelong learning initiatives in small and remote villages.

3.2 COMMUNICATION AND COLLABORATION

3.2.1. OPEN DOORS – OPEN HORIZONS – OPEN OPPORTUNITIES

The collaborative experiments in the open learning lab showed that there is a great need to make education and training easily accessible for people. The LEARNING HOUSE was the solution.
LEARNING HOUSE

An old fisherman’s house in the middle of the village was turned into a learning house, with an open learning room for supported self-paced learning, small rooms for tutor-supported learning, and shelves with learning resources.

3.2.2. THE PEOPLE MAKE THE CURRICULUM

The experimental lab started with just one course offering, an Introduction to Danish Language and Culture. In two hours, people learn a lot of tips and tricks, and bits and bytes on how to get in contact with the Danish people. They learn why the Danish are so reserved and how the intonation can lead to misunderstandings. Nearly all the learners want to continue learning — they use the CD-ROMs in the learning lab, they have the opportunity to join the online learning club. They are excited to learn and come up with new ideas for learning. The local business people send their clients and now want to learn German. Elderly people approach us because they want to learn how to work with a digital camera and process images. The house is open for ideas. The village’s people and guests in the village make their own curriculum.

3.2.3. SKILLS DEVELOPMENT

There is also a course offering on skills development. People are taken on virtual fieldtrips with a digital backpack and then go to the open learning lab and develop their own stories, thus learning how to, for example, use work-processing tools, presentation tools, video programs, and photo-processing programs. They develop media literacy skills in a creative and critical way, and at the same time embark on a lifelong learning
journey. If they want to learn more there are opportunities. Pedagogical coaches help to find the right online courses – from beginners’ to university level. Collaborations have started with a number of online course providers.

People need the physical surroundings, communication with others, and the right pedagogical support in order to get started. As soon as they are able to comprehend and control the new media and learning environment, they start communicating online in the open learning lab.

3.3. PROCESSES

Beyond the lifelong open learning offerings for the people and the visitors in the village, the LEARNING HOUSE also intends to attract stakeholders from Denmark and the rest of Europe. The first visitors already came in spring 2004 from Salford University on a Leonardo mobility tour. The concept was presented and visits to the Lighthouse project in the north and to the research park in Esbjerg were arranged. The result was that long-term projects were initiated, bringing more content and partners into the learning house, thus widening the opportunities for the learners.

For the final CoLabs event we tried to mobilize all the stakeholders in the region we had been talking to during the project to discuss the lifelong learning needs of the people in the remote regions. For them, it is not enough that there are some publicly accessible computers in the town halls (which will be moved further away from the rural people
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after communal reforms). The civics and the academics in the region did not show up, which was to be expected, since there is a kind of big city arrogance to the smaller towns and villages. Although this was disappointing, the CoLabs model attracted visitors from the very north in Skagen and from the east coast. The experiences in all the regions were shared and a sustainable collaboration was initiated. The new alliance of small organizations facilitating lifelong learning in the rural regions got together and developed a new project to motivate academics to come home and develop innovative clusters in the rural regions. A next step will be to form an association of Lifelong Learning in Denmark to initiate further collaboration and projects in the regions to promote the LEARNING HOUSE model.

3.4. LEARNING AND KNOWLEDGE

3.4.1. LOCAL PEOPLE AS AUTHORS
Following the success of the collaborative experiments, the new LEARNING HOUSE will now open its doors in the autumn with a festival of learning, hopefully attracting the local civic stakeholders as well.

The LEARNING HOUSE will be a model for informal learning on the village campus. The people will be involved actively and contribute to developing their own contents in the field of cultural heritage, language, history, but also in business and entrepreneurship, especially in tourism. The stories told by the people will then be used as learning resources for other learners, youth, and the foreign visitors (tourists). The village campus will be shaped by the local people.

The concept will be transferable to other learning houses or emerging learning communities – the Lighthouse at Bovbjerg, FJORDNET, the Museum Network, and further emerging communities.

3.4.2. LOCAL PEOPLE AS TEACHERS
At present ed-consult provides the teaching and pedagogical support. In the long run it is planned that the local people will take over. Younger generations can support the older ones in acquiring computer skills, while the older generations can contribute with their knowledge on cultural heritage, nature, and history. The Danish also will teach the Germans, and the other way round.

Collaboration and sharing are the key processes.
3.5. PRODUCTS, SERVICES AND ACHIEVED RESULTS

3.5.1. ONLINE COMMUNITIES

CoLabs West Jutland supported a number of communities and organizations to get ready for e-learning, e-collaboration, and e-communication. We started to develop online communities. Fjordnet was the first community - a network of 50 academics interested in cultural and economic development in the region.

*Online community FJORDNET*
Kulturhuset Bovbjerg Fyr at the North Sea coast near Lemvig was the next community set-up on ed-consult’s platform.

**Kulturhuset Bovbjerg Fyr Community**

The platform should facilitate the communication between the members and board members and should later on be extended into a learning community. Kulturhuset Bovbjerg Fyr was the first LEARNING HOUSE concept to be developed as a cultural meeting place on a regional level - locally rooted and with international perspectives.

The Bovbjerg Lighthouse is one of the strongest symbols of West Jutland’s identity, situated on the top of the Bovbjerg cliffs with a breathtaking view over the sea and the landscape characteristic of West Jutland.

An association has been founded with the purpose of creating a cultural centre and keep the lighthouse open to the public year round. The purpose is to create cultural growth and e-learning skills in a rural area where young people tend to move away for education and do not return, and where the unemployment rate is high.
The Centre will include a café, exhibitions on art and culture, creative workshops, courses on-site, as well as virtual courses providing cultural interaction between local village lifestyles and urban living and between Danes and foreigners. Through e-learning and cultural networking, the Centre will build bridges between tradition, cultural development, and tourism on local premises. This will benefit the surrounding area and create a greater European understanding of cultural diversities and common ideas.

The house has a social perspective by creating job opportunities for marginalized groups such as long-term unemployed women, immigrants/refugees, and handicapped people.

The Association is still pushing hard to get financial support to implement the project.

The third community established on ed-lab’s platform was the Nymindégab Museum Association.

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**Nymindégab Museum Association Community**

At present, mostly the board members are active in all the three communities, engaged in collaborative work, chatting, and exchanging minutes and news. Following the opening of the new LEARNING HOUSE in Nymindégab, all the members have the opportunity to come and learn how to use the technology, moderate groups, and actively participate in the communities.
3.5.2. NYMINDEGAB LEARNING
The local people in Nymindegab, a village of 200 people, will all have the opportunity to join the museum network, and with some support, develop an active communication and learning community.

3.6. TOWARDS THE FUTURE
The physical LEARNING HOUSE with the online communities is a model. There is already a great interest in this model nationally and internationally. The members of the North Sea Commission Educational Research group are interested as well as the folk high schools in Germany and some of the actors in the field of lifelong learning in Denmark. The next two years will show whether the LEARNING HOUSE in the village is a sustainable model.

The major risk is the financing of the project. Up until now the LEARNING HOUSE has been financed privately. It is the intention to provide free access to the open learning center and to the online learning and collaboration communities. Revenue must be generated by selling skills-oriented training to enterprises and by ‘follow-up’ national- and European-funded projects which support the development of further courses/content and maintaining the services for the people.

Already now, during the two months of collaborative experiments, the feedback is only positive. The banks screened and accepted the concept. The local enterprises expect growth and development for the whole community.

A catalyst will be the opening of the Art Museum, exhibiting paintings of the Nymindegab artists’ community, who later moved to Skagen. This will attract many more tourists to a place (which otherwise just offers a picturesque landscape) and it will offer opportunities to develop further learning offerings in the field of cultural and natural heritage, and regional, national, and international learning opportunities.

ed-consult will support other initiatives in the villages to develop similar concepts.

The dialogue with academics, universities and colleges in Esbjerg and the rest of Denmark, and Lund University needs to be kept. After all, the LEARNING HOUSE supports the 3rd mission of the universities by facilitating access to high quality education delivered by the universities via e-learning.

3.7. CONCLUSION
CoLabs West Jutland started as an ambitious project. A number of online communities were created and bridges to the academics in Esbjerg were built. We experienced that the academics and the civics are not yet interested in the outer regions. For them there is no critical mass. The learning regions stop at the border of the cities and towns. With the
LEARNING HOUSE as the final highlight of CoLabs, the foundation for the rural learning region of the future has been laid.

“Regions are becoming focal points for knowledge creation and learning in the new age of global, knowledge-intensive capitalism, as they in effect become learning regions. The learning regions function as collectors and repositories of knowledge and ideas, and provide the underlying environment or infrastructure which facilitates the flow of knowledge, ideas and learning”

-Richard Florida

4. COLABS FINAL REPORT – ED-LAB, GERMANY

4.1. AMBITIONS AND EXPECTATIONS

4.1.1. GOING ON THE JOURNEY

With the project CoLabs, ed-lab went on a journey trying to form a triple-helix alliance based on the Conversity model trying to create new synergies between the academic, the
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private, and the civic. ed-lab represents in this model the private, or in other words, the beauty motivated by wealth and the will to innovate. The project CoLabs should contribute to create added value, sustainability, trust, shared future, and welfare through the triple-helix alliance. This was a rather challenging adventure, since it is not easy to make the academic and the public authorities listen to a small enterprise in the field of e-learning, which is still hard to grasp for public authorities in the rural and remote regions of Mecklenburg-Vorpommern.

ed-lab was lucky to be awarded another project – eCOMPETE – Developing e-competences for SMEs – as a lead contractor. The two projects helped ed-lab to get access to the academic and the civic, as well as private investors.

4.1.2. GETTING INVOLVED

Starting with the CoLabs project, ed-lab got involved in regional lifelong learning networks and initiatives. The first idea was to reach out to all the public, private, and academic stakeholders in the region. The on-going national Learning Regions projects were a good starting point to disseminate the CoLabs idea and to establish national collaboration.

One of the projects was “Lernende Regionen – Mittleres Mecklenburg Küste” coordinated by BiLSE-Institut in Güstrow. 55 public, private, and academic stakeholders collaborate in this project. The network carries out a great number of smaller projects in the regions, such as educational coaching for SME, learning in rural regions, quality in education, and innovative approaches to learning and working, etc. ed-lab has established close collaborative contacts with the aim to implement e-learning in existing or future projects. Regular meetings have taken place between BiLSE and ed-lab and will continue.

See http://www.lernburg-kueste.de

Another Learning Regions project ed-lab got involved in is EGOS, coordinated by Wismar University. EGOS connects 47 stakeholders in lifelong learning in the region of Mecklenburg-Vorpommern. The project’s focus is on strengthening the economy by promoting technical and mathematical/scientific education and training. The project also tries to reach out to the socially excluded, unemployed people, and enterprises who are not used to learning. ed-lab has been included as one of the network partners. Best practice results are shared at workshops and events organised by EGOS and ed-lab.

See http://www.mb.hs-wismar.de/~egos/Homepage_Egos/05_egos_region.htm

All of these networking activities were not enough. ed-lab wanted to initiate something concrete, and decided to focus on collaborating with just a few stakeholders instead of with the huge networks.

So along the CoLabs journey, ed-lab got involved in three collaboration projects with major stakeholder in the region - Rostock University (the academic), IFNM and the Institute for New Media (the private), and the Association of Folk High Schools in
Mecklenburg-Vorpommern (the civic). Sustainable projects were launched in collaboration with these partners, contributing to making multipliers in the region – teachers, trainers, personnel developers - ready for e-learning and lifelong learning.

4.1.3. THE PLACE AS THE CAMPUS

Another contribution to regional development which was triggered by the projects CoLabs and eCOMPETE was the decision to extend GUT GREMMELIN, ed-lab’s major company seat, into a state-of-the-art e-learning competence centre, catering for the training needs of mainly SMEs in the region, but also attracting more and more regional, national, and international stakeholders in competence development and e-learning to workshops and think-tank meetings.

The centre offers high standard accommodations for up to 55 people and all rooms are equipped with computers. The entire house and the surrounding park have wireless LAN. Therefore, that there are plenty of opportunities to combine creative learning in natural environments with high-end ICT skills development training.

Two international workshops, the Euroclustering workshop on Competence Development in SMEs and the final CoLabs meeting, were hosted by Gut Gremmelin. Furthermore, Gut Gremmelin was the venue for a three-day final CoLabs event, where the regional learning partners shared their best practice experiences and cases with representatives from adult learning organisations in Germany and Denmark. www.gutgremmelin.de
4.1.4. THE REGIONAL CONTEXT

Mecklenburg-Vorpommern is one of the new federal states in eastern Germany. It was founded in 1990 and consists of 989 municipalities. The capital is Schwerin. The size is 23,173 km², which is 6.5% of Germany. 1.8 million people live in the state, which is only 76 persons per km². It is the most thinly populated region in Germany.

Apart from agriculture and food industries, the ship-building, fishery, and tourism industries are most predominant. Tourism is one of the emerging industries since the state offers a healthy environment and many picturesque resorts.

The state has two major problems: It has one of the highest unemployment rates in Germany (the actual rate is 21.7%) and the state suffers enormously from ‘brain-drain’. Young people and educated people tend to move to the big cities or to the former West-German states. The infrastructure in the countryside is still desolate. The roads are still in poor condition and the ICT infrastructure is bad. Young people have nowhere to go in their free time and public transport is insufficient. The rate of drug addicts is high. Development is very slow in the rural and remote regions.

Gut Gremmelin as a competence development center has existed for approximately 6 years, first catering for 11 persons, and now for up to 55. It certainly attracted highly educated people to buy houses in the surrounding village of Gremmelin. Hopefully, with the attraction of regional, national, and international audiences, more and more people will move into the town and trigger off economical development.

The state of Mecklenburg-Vorpommern

But what could a triple-helix alliance contribute to the development?
Making the village a virtual campus
2003-0312/001-001 EDU Regnet

ed-lab’s approach was to reach out to multipliers in the region. The universities – providing high-end training to enterprises and institutions in their 3rd mission activities; the folk high schools (which are present in all the 989 municipalities) – through e-learning they can bring a greater and better offering into remote and rural places and maybe thus contribute to reducing the “‘brain-drain’”; the private training initiatives – helping the unemployed to get ready for e-learning and e-business and make a living with these new e-skills.

4.2. COMMUNICATION AND COLLABORATION

Towards the end of the first explorative journey into the learning region Mecklenburg-Vorpommern, ed-lab embarked on three projects.

Rostock University invited ed-lab’s director to become a member of the Scientific Board and to join the project ‘Media and Education’, a pilot master study for educators, trainers, and e-learning project leaders to acquire media literacy and didactical skills.

This was a large-scale interdisciplinary project involving a great number of academic, public, and private partners. Three faculties and six institutes at Rostock University along with three university centres collaborated, joined by seven further universities in Germany and eight public and private institutions.

ed-lab’s contribution was to supply a course on moderating techniques in e-learning. The two-year pilot was successful, and has been integrated into Rostock University’s course offerings. ed-lab will further contribute to providing e-learning consulting and pedagogical support to the Master’s programme.

Further information: http://www.medienundbildung.de

The collaboration with the Association of Folk High Schools in Mecklenburg-Vorpommern is another success story along the CoLabs journey. The association was looking for an e-learning platform and traveled to Denmark to find best practice models. They had not been aware that there was a specialist for e-learning platforms in their neighbourhood. Through the national organization DIE – the German Institute for Adult Education, where ed-lab provided support for a Self-Paced Learning Project, the connection was established. Following several meetings and a workshop, the Association gained confidence and chose ed-lab as a major partner for their e-learning projects to provide supporting technology and pedagogical support.

The Association developed an ambitious strategy to take all folk high school teachers in Mecklenburg-Vorpommern through e-learning management courses, and get them to develop their own e-learning projects. During the CoLabs project, four empowerment courses were delivered by teachers for teachers, with the support of ed-lab. Six e-learning projects in the fields of language learning, health, and natural science have been developed and were presented at the final CoLabs event. The teachers are highly
motivated. A lively community of teachers and learners has been established on ed-lab’s e-learning platform, empowering the whole region for e-learning.

Further information: http://www.vhs-verband-mv.de/

The learning environment for the VHS e-learning empowerment courses

The third focus group on the CoLabs journey was the unemployed. Instead of working directly with the unemployment offices, ed-lab chose again to collaborate with a leading provider of ICT courses for unemployed people. IFNM – the Institute for New Media approached ed-lab to provide e-learning support in terms of infrastructure and pedagogical input on how to design e-learning courses to a group of unemployed academics in the Rostock area. The course was a success. Although the e-learning scenario was not real – the students had to stay in one classroom according to the unemployment agency’s rules, the students were highly motivated. A lively learning community was developed and seven e-learning courses – a program for kids to learn mathematics, a program on stress, one on creativity, one on geography and several programs on history were developed by 13 unemployed students.

The students also contributed to evaluating the CoLabs Busy City platform and launched a forum on the platform.

The major findings in the platform evaluation were that it is not the technology which counts, although it should be simple, user-friendly, cross-platform, and enhance communication and collaboration. It is the motivation for the topic and subject matter and
the lively moderation which provides fast feedback and involves the students which are the ingredients to lively communities.

### 4.3. PROCESSES

By the end of the project ed-lab had contributed to supporting teachers, trainers, SMEs, and unemployed people to become ready for e-learning. In the case of the pilot projects with Rostock University, the students have graduated. A new group has begun in October. The support has been a great success and is sustainable.

The 13 unemployed students at IFNM have also passed their examinations and have either found jobs or started their own enterprises in the field of multimedia. This is another success story which will be continued through another group of unemployed academics, who have not escaped to the West, but like their own region, and want to do something new. Each academic who can be convinced to stay and is empowered to make a career or start an enterprise is a profit to the regions. They employ other persons, attract other businesses, and trigger off regional development.

The most motivated and long-lasting community is probably the teachers networked in the Association of Folk High Schools in Region. They have been empowered by ed-lab to teach themselves. ed-lab has created space in their learning environment for the schools. Now they are making new multipliers ready for ICT and e-learning in all subjects offered by the Folk High Schools. Thus the whole region will be prepared for e-learning. And the teachers in folk high schools usually work part-time. They work full-time in other schools in enterprises, or are self-employed. This way, innovative forms of e-learning are carried into many organizations in the country further mobilizing people to join the community of e-teachers and e-learners.

### 4.4. LEARNING AND KNOWLEDGE

The folk high schools provide a good example for knowledge sharing and co-production of knowledge. In each multiplier course they develop a set of new courses with learning objectives and media-libraries with learning materials, exercises, video files, and sound files which they share with the other teachers in the region. Thus, a whole repository of learning objects is developed.

The folk high school teachers are not experts in developing professional learning programmes. But they have excellent pedagogical skills. They know how to create motivating stimuli in their lessons and how to involve their learners in exciting discourse. In folk high schools the learners vote with their feet, i.e. if the lessons are not motivating, the students stay away. Online this is even worse. If the students do not become involved they will easily switch off. The folk high school teachers have learnt this very quickly and design exciting learning scenarios, with a nearly zero student dropout level.
4.5. PRODUCTS, SERVICES AND ACHIEVED RESULTS

- Engagement, social capital growth
- Organization, established associations and networks
- Learning processes, study circles, learners, tutors, coaches
- Learning outcomes, books, buildings, new services
- Technological support, websites

CoLabs established a sustainable network with Rostock University supporting the 3rd mission of universities through the new Master’s programme on Media and Education. The programme attracts multipliers from the region, even from the most remote parts, and carries innovative learning services into enterprises, thus promoting social growth and the development of new ICT services. ed-lab developed a long-lasting contact, thus influencing the university’s 3rd mission strategies in the Scientific Board, and contributed to the course with pedagogical approaches to e-learning. Through this process, ed-lab could win trust and confidence, which helped to promote its own courses in the future and could lead to new networks and collaborations in emerging projects.

In collaboration with IFNM, a new study course was developed, integrating new forms of learning into traditional courses for unemployed people, and empowering the learners for online collaboration and learning.

The folk high schools developed a whole set of new products and services with the technical and pedagogical support of ed-lab.

The language teachers have been quite fascinated by the communicative possibilities of the e-learning environments. All of the five language projects were led by women, who had not been so used to working with computers at all. They quickly understood the new paradigms of learning to produce innovative course products.

One of the products which emerged was an English course starting with the topic water – Fascination Water. The students work with the topic of water - water as a tourist attraction, water supply, environmental issues, and the chemistry of water. While communicating on water in their region, they develop skills in creative writing, syntax and semantics, and grammar.

The pilot course has been very motivating for learners spread across the region of Mecklenburg-Vorpommern in relation to the different water landscape, those being the Baltic Sea, and the Lake District in Mecklenburg-Schweiz. The students identified with the topic, and were happy to share their impressions and views in a foreign language. They used a foreign language naturally to communicate their ideas. The teacher provided language support, corrected errors, and kept the communication lively with stimuli.

The first pilot was successful and will be repeated in the region.
From the course *Fascination Water*

Another pilot course was developed for Biology. This course targeted general adult learners and also learners studying for a final secondary school or high school certification. The topic was nutrition. The students were to learn the chemical basics of...
nutrition – fats, proteins, and carbohydrates. The teacher developed a whole set of learning objects which can be used and shared by other teachers.

4.6. TOWARDS THE FUTURE

All of the three focus projects will be carried on. For the Rostock University course the decision has already been made to take up the pilot Master’s programme into the standard course offering of the university. IFNM will offer another course, including the e-learning management course. Also, the folk high schools are highly motivated to continue on their path and make all of the schools in the region ready for e-learning. These are the strengths and major achievements of CoLabs in Mecklenburg-Vorpommern. Approximately 100 multipliers are keen on e-learning and are spreading the idea throughout the state.

But there are weaknesses and threats. It is still hard work to convince the public authorities and the people in the rural and remote regions of the opportunities of e-learning. Learners still need the physical spaces for learning. The teachers must give the learners hands-on experience with the new technologies and these technologies need to be simple, communicative, and user-friendly. The first course also needs to be thrilling in order to keep the learners online. This is a major challenge. ed-lab managed to make the multipliers and teachers excited. Now the teachers need to have success with their courses. If they can keep the momentum and their motivation, they will be on the right track to turn Mecklenburg-Vorpommern into a lively e-learning region.

ed-lab will provide continuous coaching, platform support, and organize best practice workshops on a regular basis at Gut Gremmelin.

ed-lab also coaches the schools in developing European networks, and further develops and refines its courses for a transnational teacher/trainer and learner community. This will be a further opportunity for the committed teachers and schools to disseminate their innovative ideas.

Whether the projects have produced growth and sticky capital in the region is difficult to measure now. It would be useful to measure in three years time how the actions to make multipliers ready for e-learning have prevented ‘brain-drain’ and triggered growth in the region. If people, organizations, and enterprises in the remote regions are ready for e-learning, they are also ready for e-business, e-commerce, and collaboration via networks. This will stimulate economic growth.

4.7. CONCLUSIONS

CoLabs in Mecklenburg-Vorpommern has reached out to large existing learning regions and networks, and finally saw through three concrete projects which all targeted multipliers – teachers, trainers, academics, and start-ups – to make them ready for e-
learning. With the activities, multipliers in the whole regions, including those in the most remote corners, were accessed. The CoLabs activities have made the participants excited about the new forms of learning and have provided them with skills to implement e-learning in the whole area of Mecklenburg-Vorpommern.

5. COLABS FINAL REPORT – UNIVERSITY OF VAASA, FINLAND

5.1. THE COLABS JOURNEY IN WESTERN FINLAND

Virtual learning on how to give proper maintenance to “villageware”, an ultra local information service based on Linux servers

5.1.1. INTRODUCTION

Electronic Village Network (Ekylve) of South Ostrobotnia, Western Finland is one of the first serious attempts to affect to the paradigm of the digital divide phenomenon in the rural areas of Western Finland. 22 rural villages participate in the three year EU-financed project and its aim is to fight against the unequal share of digital services, especially in non urban areas. The main idea was to fulfil the needs of the villagers to first have computers with legal software, secondly, to have fast internet connections, and thirdly, to have the skills to use the villages’ own internet–based information platforms, which we call “Villageware–software or service”. Finally, the task was to create the fully empowered online communities which serve a variety of purposes. The CoLabs (European Learning regions) project strongly involved the creation of a technologically based online community of 15 persons, which was dedicated to give proper maintenance to the Linux servers in which the Villageware service runs.

5.1.2. DESCRIPTION OF THE REGION

The basic element in the Finnish countryside is a rural village, which is a concentration of the population where all the activities of rural area inhabitants take place. The concept of the village is a regional centre of education with its village primary school, centre of commercial activities (which normally occur in the village shop or kiosk), village bank office (if there are still are any), and in the village rural hardware store. In the centre of larger villages there have emerged a set of newborn commercial activities such as PC-maintenance or other specialized micro size enterprises.

The village is also a centre of civic activities, which normally take a place in the village house. The village house is a cradle of different associations such as farmers association, hunting and fishing associations, sports associations, adult learning groups etc.
A typical quality of the South Ostrobotnian countryside is a scattered population, which means a lack of a strong and central provincial authority and a great number of rural villages scattered throughout the region. The size of the villages varies from almost extinguished villages consisting of a few houses to upwards of 400 households (or one could say regional centres of perhaps a 1000 inhabitants or so). The distance to the province’s centre Seinäjoki can be anywhere up to 100 kilometres and the distances to municipal centres varies from 5 to 40 kilometres. This means that the appearance and “quality” of the village varies a lot as well as the services provided to the villagers by enterprises or authorities. The assumed advantages to use Internet based local services are the strongest, in relation to when the distance from the village to the “civilization” is greatest.

5.1.3. BACKGROUND SITUATION

As almost anywhere in the European countryside, the way of living of rural regions is in turmoil. The traditional ways of making a living, such as agriculture and farming, is in the state of continuous change and new alternatives of livelihood are emerging at too slow a pace. The young generations tend to migrate to the urbanized parts of the country and the rural areas are suffering the consequences of diminishing populations. The reasons of the movement is said to be a lack of services provided by companies and authorities. On the other hand, the lack of population increases the deterioration of the same services. Local shops are vanishing. Many village primary schools are closing their doors. The traditional way of staying connected in the local activities between villages is vanishing at the same pace.

The information highway, internet, and digital services which accompany them are expected to be at least a partial cure to this negative development. The expectations of new working alternatives, virtually maintained distance jobs, distance learning, e-commerce, and digitally created virtual connections to the “world” are giving at least some hope to the inhabitants of rural regions to continue existing. But the coin has two faces. Internet-based local services demand to their users to acquire new skills and attitudes, which in many cases, are very hard to gain.

On the other hand, the active use of internet offers a new possibility to maintain contact with other inhabitants on the local level. The providing of local internet-based services to a neighbourhood is a tentative alternative to local one-person enterprises. The local school has vanished in many of the villages, but the school building has undergone a complete transformation to be a cradle of local activities - a village house. In one best case, the village has been able to maintain both the village school and the village house in one and the same building. These fortunate villages are quite few in numbers though. These village houses can serve as a base of the internet transformation, where the inhabitants can get familiar with this new phenomenon through the help of other co-villagers.

To facilitate this development, 22 rural villages in the South Ostrobotnia province in Western Finland took an initiative to create an electronic village network, where internet-
based local services provided to villagers is the backbone of all other activities. This eKylve (Finnish abbreviation) project, financed by EU and hosted by University of Vaasa, Seinäjoki extension unit, has five main goals, which all were aimed to reduce the digital divide gap between urban and rural areas. All of these initiatives were created by the villagers themselves and their very practical problem solving background came in great use.

5.1.4. LOCAL PROBLEMS AND THEIR POSSIBLE SOLUTIONS

All of the activities of the village network were based on a simple, yet complex chain of reasoning. To use internet-based services, the villagers need to have decent computers in their home or at least have access to decent computers. These computers need to have proper software in them and their maintenance must be organised locally. Secondly, computers have to be interconnected to the internet with a high speed service. These are of course irrelevant if villagers are not able to use them. Therefore, local education and encouraging sessions need to be organized. Also appears the question “why?” If there were no local services, is there a good reason for villagers to use these sophisticated devices? To solve this problem, the Villageware—internet services were created to provide all associations, school classes, and inhabitants of villages a local and highly interactive platform to present their village’s activities and information. The main goal of this ultra-local internet service is to give a virtual stage to all actors of rural areas to perform their activities and invite their members and counterparts to share locally created social capital. A sense of the result was a mixture between a wall of a local shop (with its tiny pieces of paper and messages) and a section of the local newspaper (with where to go, what has happened in our village, information etc). Finally, the creation of interconnected rural online—communities, based on locally maintained and created internet-services within the different fields of activities, was the ultimate aim of this initiative.

Firstly, the second hand computer distribution network was created to provide relatively new, but very cheap computers to use for the common villagers, net-cafés of the village houses, and the village school’s computer classes. The computers were maintained, the legal software was installed, and the first sets of advice were given to the future users of devices. The maintenance and local telephone guide was arranged. During the period of 3 years, more than 1200 computers were distributed to the use of inhabitants of rural villages and we are proud to say that most of them are in continuous use.

Secondly, the coverage of the internet connections was solved by creating a connection between local telephone companies and the village associations. In every village more than 20 families made a common commitment to have a *DSL–based internet service. The local internet service provider committed to deliver this kind of service, if there were 20 clients or more in each village. In almost every of the 22 villages participating in eKylve, the DSL–connection was created for the use of villagers and the village school.

Thirdly, there was the matter of educating the villagers. Most of them had no previous experience of use of any computer or digital device. This meant that a huge program of
education on basic use of computers and internet-based services was to be organized. This was possible with the help of various adult community colleges, which are an active part of education in the Finnish countryside. These institutions used the uniform internet –cafés and the computer classes created by the project to give basic ‘how to’ type education to more than 800 individuals in 15 villages.

Fourthly, the problem was finding the answers to the question “Why should I, as an inhabitant of a rural village, use Internet based services?” The whole idea was that most of the people are more interested in local information, being able to communicate with the neighbours, and being informed and involved in local activities and happenings instead of national and international events. ‘Local’ is near and affects everyday life. ‘Global’ is somewhere beyond the reach and interest to most of the members of the rural communities. The solution for this was the creation of “Villageware software”, a virtual and highly interactive internet platform to use for all associations and communities of the rural villages participating in the project. The villagers participated and were highly involved in the process of design and engineering the platform. They completely decided how they wanted the local services to be and the students and the staff of the university did their best to make it so. Every village has their own kind of appearance, even though many of the services, village calendars, interactive links, emailing lists, buy and sell markets, voting services, and interactive photo galleries are technically quite the same in every one of the villages. The main thing is that every villager is able to introduce his own ideas and own messages, whatever they are, to the service, as there are no technical or intellectual gatekeepers in the groupware. Adding a message or photo or any kind of information to the groupware is simply done through using the web browser. Any special skills are not needed to be a full and empowered member of the village’s online community.

The final problem was the creation of local online communities capable of being sustained such as in terms of maintenance of the Linux-servers (on which the service is based on) or adhering to any other technical issues which emerged in the creation of the virtual platform. Even taking into account the second hand computers’ maintenance became a factor. All kinds of online communities are supported, whether they are technically based or simply a group of persons interested in the same thing. As an example it is worth mentioning the horse breeding community, a community which organizes the whip sleds World Championships and other associations such as the fishing and hunting associations.

As a part of this process, the CoLabs – The European learning regions – project was involved in the creation and education of a virtual online community and provided the proper maintenance to the Linux-servers where the Village groupware–platform was running.

5.1.5. DESCRIPTION OF THE ON-LINE COMMUNITY IN THE STUDY

The electronic village network of the Etelä-Pohjanmaa (ekylve) consists of 22 villages which have networked in order to guarantee a more impartial development of an
information society in their area of operation and to make possible the versatile telecommunications and ICT services to the inhabitants of its villages. One of these services is public village-groupware to which the villagers can update (with the help of set of interactive functions) a village-specific calendar, event descriptions, digital photographs of separate events, contact information, e-mail addresses, and link listings according to the subject matter. For the use of each village there is each village’s own independent groupware which is located on the common Linux server of villages, which is initially maintained by the staff at the Seinäjoki unit of the University of Vaasa. The server is then moved, after a suitable time has passed, into the village house of a participant village where the sites of different villages are maintained and are updated by the own expert network of villages.

The online community which forms the foundation of this study consists of the 14 inhabitants of the aforementioned villages who are more interested in ICT (and especially the use of WWW applications) than the average village and are willing to begin being a member of the expert network which manages the WWW server for the villages. The members of the group consisted of 4 females and 10 males. The age distribution was relatively even from the ages of 21 years up to 72 years. The members were located in South Ostrobotnia spread geographically across 10 different villages. The longest geographical distance was 98 km from Seinäjoki, where the teaching without virtual systems would have been arranged otherwise (Table 2).

<table>
<thead>
<tr>
<th>Village</th>
<th>Municipality</th>
<th>Distance</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sydänmaa</td>
<td>Alavus</td>
<td>42</td>
<td>1</td>
</tr>
<tr>
<td>Seinäjärvi</td>
<td>Alavus</td>
<td>78</td>
<td>2</td>
</tr>
<tr>
<td>Tiistenjoki</td>
<td>Lapua</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>Ruotsala</td>
<td>Kauhava</td>
<td>52</td>
<td>2</td>
</tr>
<tr>
<td>Kitinoja</td>
<td>Ylistaro</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>Jokikylä</td>
<td>Evijärvi</td>
<td>98</td>
<td>3</td>
</tr>
<tr>
<td>Kasperi</td>
<td>Seinäjoki</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Munakka</td>
<td>Ilmajoki</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Vimpeli month.</td>
<td>Vimpeli 85</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Purmojärvi</td>
<td>Kortesjärvi</td>
<td>80</td>
<td>1 (a teacher)</td>
</tr>
<tr>
<td>All together</td>
<td></td>
<td></td>
<td>14</td>
</tr>
</tbody>
</table>

*Table 2: Participants of online community and their distance from the teaching place.*
Entering one of the villages

In practice, every member of the group participated in the education that was mainly arranged in using the virtual platform because the usual education would not have been possible for them due to work obstacles, transportation obstacles, or the lack of sufficient motivation. When the group was asked for the participants’ roles in the education to be arranged in another ways, everyone’s answer was negative. One would not have participated in the usual education if one could not have participated in teaching from home manually.

The members of the group used economical and other resources participate. The economic investing for almost all the members of the group was relatively little because there was a PC already used by nearly everyone. Two persons had to invest in a DSL connection in order to participate in the education and three persons participated from elsewhere than home because of the lack of a data communications link. The necessary cameras, headsets, routers, and cables were lent out by the project to those who lacked them. The majority of the group acquired the necessary devices themselves while participating in the education. The education was free to the participants. Thus the biggest relative benefit from arranging the education with the help of the video based distance learning was had by those with a place of residence which was the most distant. According to this, one can think that the education sessions which are based on the virtual teaching place and on the virtual control of the teaching situation are especially useful where the distances are long and the road connections are bad. Data communications links at least make the use of the DSL technology possible to perform the data transfer.
5.2. COMMUNICATION AND COLLABORATION

The purpose of the teaching was not to share merely the information about the installing and maintenance of the WWW servers which function with the Linux operating system. The purpose also was to create a group sense of administrators and act interactively according to the principles of problem solving. Because of this, it was decided to use as a main learning base, a video-connected classroom, to which a web-based learning environment was connected. Thus the learning event became multi-level. The actual teaching, the teacher's advice, interactions, and grouping were bound together with the help of the PC which functioned as a videoconferencing device, and thus the virtual teaching room and teaching place came to be. Accordingly, all the material of the course was available in a virtual learning environment, which 'virtualized' the time of study and studying environment. The exercises were carried out as distance learning tasks but one could also say they were carried out physically through the Linux PC which was given to every student to use which is where a VNC server had been connected too. Then the teacher could watch every pupil’s progress virtually and independently from the Linux machine. The teacher also may have directed the pupil virtually and may have corrected mistakes made in the student’s task without actually being physically present with the student. The simultaneous ‘virtualization’ of several factors which reflected a normal teaching situation of a normal class size was reached with this kind of combination. The difference, of course, was that every student and teacher also participated in the teaching situation from the comfort of their own homes.

Considering the holistic development of the use of internet–based services in the rural villages, this formation of a virtual online community and of the maintenance of Linux-servers pinpointed totally new ways of cooperation between rural villages and their actors. Normally, villages have not acted as a single group of actors, but every village has created its own group of activities, no matter what the kind of activity has been. The informal and distributed management of expertise was totally new for most of the villagers and it created, in the beginning, some misunderstandings among them. For example, it was a slightly confusing to some of the participants, that the quantity of participants per village was not restricted and that anyone interested was able and encouraged to participate in the learning sessions. The students were more used to acting with the inhabitants of their own village, and the participants in the most distant villages were somewhat hesitant. Even more interesting, beginning to use new technology was less disturbing than the presence of a set of totally unknown persons in the virtual group.

The sense of belonging and trust was gradually created by the participants through the common goal and the shared vision of future tasks. The students noticed that ideas, tasks, problems, and benefits of every village were practically equal and the formation of a virtual community took a leading part. Because of the specific nature of the task of the community, the sharing of the tasks, and the responsibilities of maintaining the Linux
servers of the commonly used Village-ware software, the specialization of different tasks within workgroups of maintenance took place.

From the very beginning, the ownership of the learning session, the future vision of the shared task, and the responsibility of the learning group were realized and a mutual confidence was reached. The main conclusion was that ‘learning by doing’ together, even in virtual form and through a set of networked computers, was of uttermost importance to the success of the project.

5.3. LEARNING AND KNOWLEDGE

Linux academy-concept was chosen to be executed because it has a clear take on the online community which carried out the case. The pupils did not have to be specially sought out or motivated because the knowledge and skills acquired in the learning situation will be available immediately for the administration of the groupware of each village. The training work which is closely related to the learning event was carried out directly and also based on practice. Thus end users estimated their quality immediately. Linux academy-concept had been carried out earlier in connection with engineering education in the information technology of polytechnic academy and it has been estimated to be 10 credits worth. In a virtual learning environment, the material to be divided had been already designed through the data network and its use had been tested in connection with earlier education which the same teacher carried out. Thus, mainly the virtual distance learning and ‘virtualization’ of the teaching place were new in the education environment. So too was the Linux computers’ distant maintenance.

The pupil’s and the teacher’s environment, or in other words, the user interface situated at home, was similar for both parties. It consisted of two computers. In one, there was a PC based videoconferencing environment and Marratech system, and in the other there was the Linux server. Both were in connection to the data network either through the DSL-level connection or through the data communications link which is quicker. In practice, every participant built the local area network which had been conveniently routed to the net solution in use.
The demand was that at the outset, every pupil would hear and would see all the other pupils and the teacher in real time and all the time. Every pupil has to be also in contact with the teacher's computer and the teacher. The pupil's computer, with the help of the VNC connection, eased solving problem situations and the fast personal guidance would be possible. Every pupil also can use all the interactive server material of the course in real time. All of this must also fit for telecommunications and for the computer in accordance to the definitions of minimum requirements which were mentioned earlier. An attempt was made to also avoid as many costs as possible which resulted in the machines of the members of the online community using the lowest DSL-level data communications link.

For the teacher it was stressed that old teaching material does not need to be rewritten. The basic requirement was that the Power Point presentations (included transparent slides) and Word documents were to be available and divided up accessibly onto the ‘document share part’ of the video conferencing environment.

The case was carried out during the spring and autumn of 2003. In the autumn of 2002, a traditional video-conferencing environment was used bridging between four different points of interaction, because there was no Marratech server yet in use. The use of the Marratech video conference began in February 2003 and ended in December of the same year. During this period, ten teaching sessions which lasted for four hours each were carried out. It should be stated as a small detail that the teaching time was always 16:00 - 20:00 on Fridays – which speaks volumes for the pupils' high motivation level. In connection with carrying out the case, constant technical support in problem situations
was provided for the participants. The researchers participated in every session and four of the sessions were recorded.

The virtual village campus was formed. The reason to participate was besides learning, contribution to the important task for the future communication of each village and between different villages, and participation in informal learning sessions within the project. The video-conferencing platform was actively used by participants, not only to participate in the formal learning sessions, but to participate in a set of virtual social events. In retrospect, they were playing with a new toy, and even this reinforces the ability of the villagers to use the different features of the software.

Many everyday activities of the villagers were practiced in the virtual form. Some of them used the platform to enhance meetings of their own associations. Maybe the most unconventional way to use the new platform was the innovation of a group of old farmers, who normally are not active users of computers. They innovated to organize a Friday–evening party on the internet: Each member of the group discussed completely informally and sipped ‘a kind of refreshment’ simultaneously and gathered all together online, while never leaving their own houses. New takes on life-long learning, life-wide learning, and new forms of knowledge accumulation were reached in these informal, unconventional, and unforced forms of village activities and socializing efforts.

5.4. TOWARDS THE FUTURE

About half of the participants had earlier participated in one sort of net study or another. The Marratech software - 76% of the participants used it at home and thus participated in a real-time network-based learning situation. These participants were extremely satisfied with the learning situation. From the ones which participated in the education from elsewhere, all except one hoped that they could be able to participate from their home in the education.

The participants' discussion with the members and outsiders of the group varied fairly much. Half of the members of the group said that they had had discussions with all the other members of the group. All had had discussions with the teacher of course. About half discussed during the sessions with a member of their family or an acquaintance outside the software.

76% replied that technical difficulties at one point or another had prevented discussion and interaction with others. Shyness had an effect on one person and overlapping talking affected two. Three interviewees hoped to pay more attention to the conduct rules of the video conference even though they also praised the virtual behaviour of their own group. On the one hand, seeing the discussion partner, and on the other hand, pre-conceptions of the discussion partner promoted discussion and most interactions. Also, being encouraged to talking and discuss were regarded as being important. The presence of the video picture was emphasized by about half of the interviewees. Without the video picture, 76% which answered would not have participated in these kinds of sessions at all. The
support received by the participants was on the one hand an encouragement, and on the other hand, technical advice and support. Some of the participants hoped for the software in Finnish and complained of the foreign language of the software.

The PC-based videoconferencing platform forms a vital part of the future internet behaviour of the villagers in every village where the platform has been taken into use. The easiness, the unconventional form, and the unforced nature of the sessions encourage the use of the platform for a wide variety of village activities. Ideas which emerged within the online community pinpointed to the future use of the software in the context of primary schools, where many learning activities take a place. As an example, language learning and music learning are planned at least partially to be organized using the PC-based videoconferencing environment. At the time of writing the report, the active virtual music teaching of the music academy of Etelä-Pohjanmaa has taken form and is used weekly for three groups in different geographical areas.

5.5. DISCUSSION

From the pedagogical standpoint, the study brought out a necessity to define “the new learning circle” in which the properties of the virtual distance learning should be included and where the relations between the “real” face-to-face interaction and the virtual interaction are defined. It also is justified to continue the estimation of the success factors of different learning platforms and directing them towards new types of groupware, which until now, have gone untested. At the same time, one can look for new and unheard of areas of operations for this software which makes possible exceptional distance teaching and meeting practices and truly versatile virtual and genuinely interactive social operation such as the virtual village meetings, elderly people’s safety and care services, or virtual consultation services. Different purposes of use for the programme could be useful, for instance, in the field of electronic commerce. Then the manifestation of use culture and of tailored use outlines of software could be important as common uses of the software.

6. COLABS FINAL REPORT – FLYINGE COMMUNITY, SWEDEN

6.1. THE COLABS JOURNEY IN FLYINGE

*The role of externalisations to increase innovation capacity in a region - Investigating the art of creating a common and shared vision of the community*
and its future as a platform for collaborative learning directed to higher local welfare.

The Flyinge Community is a micro region that in some respects is similar to the Öresund Region with the two different townships (Eslöv to the north and Lund to the south) and two bridges over the river Kävlingeån. The Community contains some 800 households and 100 companies.

The Flyinge Community

6.1.1. THE REGIONAL CONTEXT

In the CoLabs project, the Flyinge Community is regarded as one that can handle the trademark problems which often face similar communities of all sizes, such as the Öresund Region, which need to work across administrative, geographical, and other boundaries.

That the community has so many international contacts and is globally well known within horsing circle, there pops up European and global development questions in a natural way which directly relate to the community on a local level. The community lies near Lund and Lund University, making it very accessible to perform studies in the field.

6.1.2. OPEN DOORS – OPEN HORIZONS – OPEN OPPORTUNITIES

The CoLab local partner, Flyinge Utveckling, (translated – ‘Flyinge Development’) stood before a number of interesting development opportunities that touch upon the problems and possibilities surrounding learning and seeing to community general interests. For
further details regarding this relationship between Lund University and Flyinge Utveckling, please refer to the CoLabs Final Report.

The logotype of the Flyinge Community

6.2. FLYINGE UTVECKLING’S INITIATIVES:

Flyinge Utveckling - One of the first key actions was to create a sustainable local organization for the long-term development within the selected micro-region of Flyinge. This resulted in the idealistic association Flyinge Utveckling. http://www.flyinge.nu/fu

Community web portal – A website was launched in 2000, see http://www.flyinge.nu, where a daily update of things and events of relevance for the Flyinge Village and surrounding area is made. Over 1000 hours have been devoted to developing and updating the site and the site contains over 800 A4 pages of relevant information and over 120 articles with pictures which visitors can download. The website was professionally developed and pictures on the site were taken over a period of 16 months by a professional photographer. The main idea behind the site was to create a common interest point for area inhabitants which has a ‘daily newspaper’ and ‘constantly updated’ feel to it.

The Flyinge Book - Local inhabitants were also mobilized in the collaborative authoring of a basic textbook, the ‘Flyinge Book’, promoting further learning of the region, its
Making the village a virtual campus
2003-0312/001-001 EDU Regnet

history (both present and future) through local stories, events, companies, and “local heroes”. A summary of the book, its layout, and contents can be seen at the CoLabs site for Flyinge at http://ec.ics.lu.se/eu/colabs/Flyinge. This book has over 400 pages containing around 200 local stories and interviews with inhabitants and local companies. The main idea behind the book is to see used as a resource from which area inhabitants can understand the history of the area and thus promote better integration and interaction of inhabitants and with one another. Over 1000 hours have been spent on development of this book.

The Flyinge Book

Flyinge Local Foresight Group – Chaired by Erik Wallin (Lund University) The Local Foresight Group was created in May of 2004 and members were selected among local inhabitants and cover a broad spectrum of future relevant areas, such as housing, local industry, horse industry, ecology for recreation, local associations, and the social capital management. A dedicated website for the Foresight group has been established at http://ec.ics.lu.se/eu/colabs/flyinge/foresight.

Broadband access - Intensive lobbyism for broadband expansion in Flyinge has been carried out, aimed towards actors on the broadband market to cover the Flyinge micro-region. Now households and businesses in the region have access to broadband.

The region as a social fact - Flyinge as a micro-region is now a social fact, often referred to, and with, a clear meaning. This is an important stepping stone to further learning activities and makes sustainability a lot more likely.
6.2.1. THE VILLAGE IS THE CAMPUS

Creating the intangible ‘village capital’ through a variety of drives and initiatives is key to making sure a village is a prominent and ‘seen’ and that the villagers and village in itself is a constant learning entity. Drives and initiatives by Flyinge Utveckling:

- The community web portal
- The Flyinge Book
- Successful meetings and petitions in early 2002 to keep the local bank from closing down
- Newcomers’ booklets developed for people who have moved to the area
- Events postings, such as the Christmas market, posted on the community web portal
- Broadband access
- Walking tour pamphlets for tourists and inhabitants
- Souvenirs which have the Flyinge logo on them
- Flags and road signs with the Flyinge logo visible at all major roads leading to the area (this ‘self branding/marketing’ initiative is unique of Flyinge in all of Sweden).

6.2.2. COMMUNITY WEB PORTAL

http://www.flyinge.nu/

As mentioned earlier, a website was launched in 2000 where a daily update of things and events of relevance for the Flyinge Village is made. The website promotes local events and news and is created and maintained by voluntary manpower. The website is very popular, and is a vehicle for forming the identity of the micro-region. As a result, people’s interest in their local surroundings has increased.

The local portal site also functioned as a virtual meeting place for local and global interest groups. Local engagement of inhabitants and local authorities also was strengthened through the site. A natural result was increased contact of inhabitants with each other both virtually and in person. Local interests are always a priority in steering the content on the site.
6.3. COMMUNICATION AND COLLABORATION

As mentioned earlier, local inhabitants were also mobilized in the collaborative authoring of a basic textbook, the ‘Flyinge Book’, promoting further learning of the region through its history (both present and future), through local stories, events, companies, and “local heroes”. The authoring process was, under a short period, supported by different ICT tools for collaboration, one of them being VCP, Virtual Community Platform, and its Composer engine.

Among the many local activities initiated by Flyinge Uteveckling and the CoLabs-project is one of special importance for lifelong learning, also related to the production of the Flyinge Book as a “regional learning textbook”, namely the Flyinge Local Foresight Group as mentioned earlier. The members were selected among local inhabitants and cover a broad spectrum of future relevant areas, such as housing, local industry, horse industry, ecology for recreation, local associations, and the social capital management.

The learning process initiated a number of potential local development opportunities which have been identified and are further tackled within the project such as development of interchange of horse-enthusiasts with other regions in Europe. Investigations have been conducted in order to identify potential clusters, i.e. a horse cluster and a potential motor vehicle cluster. Knowing the region is a prerequisite for further collaborative activities, a potential progression is the development of an online community targeting the cluster and engaged citizens.
6.3.1. FLYINGE LEARNING

During the project’s period, a book was created called “att lyfta fram sin bygd” © 2004 – written by Gunnar Petersson of Flyinge Utveckling. Roughly translated the book’s title reads “to lift up your village”. The book acts as a sort of a step-by-step guide for how villages can use their local resources and surroundings to their advantage while embracing ICT and eLearning technologies in order to ‘lift up’ the village. Village branding, creating and improving village meeting places, a village SWOT analysis guide, media strategies, and much more are covered in the book.

A report by Flyinge Utveckling called ‘Lärande Bygd - Local Learning Systems AB’ recently finished in the fall of 2004, presents a business model for learning regions. (See Booklet B for more information). Lärande Bygd translated means ‘Learning Village’.

Cover page excerpt: Lärande Bygd - Local Learning Systems AB

Another study report by Flyinge Utveckling, called ‘Förstudie rastplats Gårdstånga’ written in the summer of 2004, was a study to investigate the viability in establishing a tourist center at one of the busiest motorway resting stops in the south of Sweden located near Flyinge.
7. COLABS FINAL REPORT – KNOWNET, WALES

New approaches to learning: Steps towards building a learning community in North West Wales

7.1. ABSTRACT

The project was based on a type of learning environment called the CoLab. The CoLab uses both physical and virtual space to promote positive learning outcomes. Features of the CoLab include receptive, active and creative knowledge systems; it takes a holistic view of learning incorporating many different approaches in a collaborative structure.

The CoLab is intended to target the “3rd mission” of universities. This 3rd mission is to apply available knowledge to regional problems and to contribute to the continuous and further education of people at risk or in need of training, so as to improve competence and employability. The project suggested a triple helix approach, integrating academic, industrial and public bodies in the production, organisation and support of learning environments.

In North Wales, the project work was led by KnowNet, a Small Enterprise established as a university spin-out company, and focused on the development and application of Information and Communication Technologies (ICT) for learning and knowledge development. This chapter explains the context behind this approach to learning in the North Wales region, and how we brought about the development of a learning Co-Laboratory, bringing together learners, researchers and developers in new relationships to tackle the problems of the region and the problems of individual learners. This chapter explains the context and background to the region and to the group of learners on whom the project focused. We go on to look at the region as a context for learning and knowledge sharing. Emergent new forms of lifelong learning, the use of ICT for learning, and the new skills required in the digital economy are examined. We then look at the more practical issues involved in developing learning networks, and explain our approach to those issues. We finally suggest how this approach could be further developed.

7.1.1. BACKGROUND AND CONTEXT

In this section we provide the background and context to the CoLab project in North West Wales. The section starts out by looking at the geographical, social and economic structure of the region. The second part examines the community around which we chose to focus the project, and explains the reasons for our choice.

7.1.2. BACKGROUND TO THE REGION

North West Wales is a predominantly rural area, with poor economic infrastructure. Geographically dominated by the Snowdonia mountains, the main transport routes lie
along the coast. There are few major towns, the largest being the University town of Bangor with a population of about 40,000 in term-time.

The region lies within the West Wales and the Valleys European Union Objective One region. Unemployment is high, and there is little manufacturing industry. Major employment areas are services, local government, the health service and education. The other major industry is tourism, but this is heavily seasonal and low paid.

A 2001 estimate of GDP per capita in Wales as a whole was just 82% of the UK average, while average earnings lag the UK average by around 10%. Between half a million and three-quarters of a million people in Wales were calculated to be living in a low-income household in 2001/02. One in five people lived in low-income households before housing costs were taken into consideration. This proportion rose to one in four (25 per cent) after housing costs were deducted (ONS). It is probable that income levels are lower, and low-income households more frequent, in North Wales.

Unemployment in the region is relatively high, with a number of unemployment blackspots in towns such as Holyhead. There is a high percentage of part time and seasonal employment.

North West Wales is a bilingual area. Although only 20.5 per cent of the population of Wales speak Welsh, and although there are few monoglot Welsh speakers, the North West region is one of the major concentrations of first-language Welsh speakers, especially outside the main towns. In the county of Gwynedd 90.9 per cent of the population speak Welsh (1997 Welsh Household Interview survey). As Wikipedia notes, Welsh is very much a living language. It is used in conversation every day, and seen in Wales everywhere. Local government and the Welsh Assembly use Welsh as their official language, public bodies issue official literature and publicity in Welsh versions (e.g. letters to parents from schools, library information, and council information) and all road signs in Wales are in English and Welsh, including the Welsh versions of place names.

Despite relatively high levels of participation in post compulsory education, educational attainment levels remain low. Furthermore, because of limited employment opportunities, there is a tendency for the better-qualified young people to emigrate from the region to South Wales or England.

7.2. THE COLAB

The target group for the project was the music community in North West Wales. There were a number of reasons for this choice. Firstly, there is a vibrant music community in the region. For young people, music and the music industry offer an alternative and attractive source of potential employment while pursuing an activity they enjoy. It also can be combined with other more routine and seasonal jobs. The entertainment sector is a growing source of employment.

The economy and skill requirements of the sector are changing rapidly, with the well-
documented advent of file swapping and the subsequent decline in domination of the large music companies. Equally important is the use of digital technologies for recording music, making widely available the ability to produce high quality recordings on a home PC and to distribute music through the internet.

While skill requirements are changing rapidly, there is limited formal education or training provision in this sector. Musicians are predominantly self-employed, and the employment structures and status of participants in the community is often somewhat informal! The sector includes a wide variety of occupations other than musicians, embracing recording engineers and studio managers/owners, record shop and other retailer employees, promoters and venue staff and multimedia industry jobs such as video directors and producers.

We were particularly interested in the organisation of the sector. As might be expected given the informal nature of employment and the predominance of SMEs or self employed freelancers, sector organisation does not correspond to traditional business models. The community is organised around a series of interlinking and fluid networks, based as much on social as business contacts and relations. This has a large impact on how knowledge is developed and exchanged within the sector; this impact will be considered further in the next section.

In terms of the “third mission’ and triple helix approaches piloted through the CoLab, we believe the informal and less hierarchal structures of the music and entertainment industry may be a pointer to future and emergent forms of industrial and economic organisation at the regional level.

Finally, many (although by no means all) of our target group have low levels of formal education and training qualifications. Many are skeptical about the value of formal education, and fail to see its relevance to their interests. This is not to say that they are not interested in learning. This issue, too, will be explored further in the next section.

7.3. SOME THEORETICAL CONSIDERATIONS

7.3.1. NETWORKS FOR LIFELONG LEARNING

The first of our four cornerstones was the idea of networks for lifelong learning. The development of ubiquitous computer-based technologies, the shortening of the product life-cycle, and changing forms and organisation of production have all contributed the idea of life long learning becoming a central plank of policy discourses at national and European level. No longer are initial qualifications seen as sufficient for a lifetime of work; instead individuals must continue to accumulate new skills and knowledge throughout their working lives.

The use of ICT has been seen as a key means for facilitating access to lifelong learning. However, in the main, strategies for lifelong learning have tended to focus on an
extension of access to existing, institution-based learning, or on an expansion of continuing education and training for those in employment. At the same time, there has been a wide variety of measures targeted at those deemed at risk of social exclusion because they lack initial education and training qualifications.

Although these policies have undoubtedly benefited many individuals, it is difficult to assess their success at a strategic or systems level. At best the outcomes are uneven. There is some evidence to suggest that those who have benefited most in access to new learning opportunities are those with the best qualifications and those in secure employment.

Just as the introduction of new technologies tends to take place within existing thinking and paradigms, lifelong learning seems initially to have taken place within traditional institutional and pedagogic paradigms of learning. Thus lifelong learning is seen overwhelmingly as either extending access to traditional institutional based learning or extending the volume of traditional training programmes.

ICT has also been used to provide ‘virtual’ access to traditional forms of learning, by extending traditional distance learning provision or through the development of ‘virtual classrooms’. Much of the software produced for learning in the last three years has focused on managing learning - through Learning Management Systems - or rather on making the institutional management of students more efficient.

I would suggest that the major role for ICT is in supporting lifelong learning in innovative ways, rather than in imitating traditional classroom learning. To develop lifelong learning requires challenging traditional paradigms of learning. This provides a compelling rationale for the 3rd mission for universities and for CoLabs: to develop new institutional relations and learning practices so as to transform existing paradigms of teaching and learning.

Essentially, we need to reframe the landscape of education in order to support lifelong learning. To do this we need to connect learners, experts, and teachers across the borders of schools, work, countries, and cultures in order to stimulate learning and provide multiple & wider perspectives of learning and knowledge (Koper, 2004). This new paradigm of learning will be based on learning networks.

Learning Networks comprise a group of persons:

- connected to each other in a social sense
- connected to each other in a technical sense
- connected to relevant learning resources
- connected to each other in order to learn from and with each other (also producing new learning resources)

… and as independent as possible of constraints like: location, institution, job, time, and specific technologies.
Our aim through the R3L project was to build a learning network within the music community in North Wales in which participants learn not through traditional courses (whether face-to-face or on-line), but from each other and through processes of developing and interacting with learning resources.

7.3.2. LEARNING REGIONS

The second of the cornerstones of the R3L project in Wales was the idea of the learning region.

The learning region concept is underpinned by the idea of learning as a social process in which individual and institutional actors collaborate and interact on specific subjects or themes (Guile and Young). Knowledge is acquired, developed and applied through the interpretation of experience. This process is based on idiosyncratic frameworks and networks which at the same time favour and limit the individual processes of sense making (Resnick, 1991). Knowledge networks are buttressed by complex social relationships; the production of new knowledge is increasingly dependent upon access to such knowledge networks and opportunities to participate actively within them (Lundvall, Johnson, 1994). Knowledge networks, bound by professional and spatial demarcations, are critical to the process of transforming tacit knowledge into practice and innovation. Innovation springs from the continuous and dynamic interaction between implicit and explicit knowledge (Nonaka and Takeuchi, 1995).

What are the implications of these theoretical constraints? Regions provide a spatial context in which networks and partnerships can develop new learning strategies for knowledge production and innovation. Within a region, partnerships and networks are dependent on the interaction between the different actors, who form communities of practice (Attwell and Deitmer). While these networks are based on the direct relationships between participants, they are also partially dependent on the influence and mediation of facilitators and intermediaries. The facilitation of learning is based on the availability of both human and physical resources, as is the generation of new knowledge leading to innovation in networks.

The description of a network or partnership is therefore more than a description of the flows of information and the differential availability of this information. It is an expression of the knowledge that influences the capability and competence of individual actors, as information leads to new social relations. A basic assumption in this context is that knowledge comprises more than just information. Information consists of identifying who will cooperate and who has what kind of capabilities. Know-how is the knowledge of how the capabilities of individual institutions within a region might be harnessed through cooperation (Morgan, Nauwelaers, 1998).

In other words, learning networks develop in a spatial context and are key to innovation within the region. They are comprised of social layers of participation broader than just learners themselves, bringing together all those interested in learning, knowledge and innovation.
7.3.3. NEW DIGITAL SKILLS

The third cornerstone of the R3L network was an understanding of the new skills required in the digital age.

In a report on Key Competencies, Eurydice (2002) point out that any definition of key competencies is shaped by the scientific background and social role of the person(s) supplying the definition. They cite the World Declaration on Education for All: Meeting Basic Learning Needs (World Conference on Education 1990) in stating:

“Every person – child, youth and adult – shall be able to benefit from educational opportunities designed to meet their basic learning needs. These needs comprise both essential learning tools (such as literacy, oral expression, numeracy, and problem solving) and the basic learning content (such as knowledge, skills, values, and attitudes) required by human beings to be able to survive, to develop their full capacities, to live and work in dignity, to participate fully in development, to improve the quality of their lives, to make informed decisions, and to continue learning.”

World Declaration on Education for All: Meeting Basic Learning Needs (World Conference on Education 1990)

Over the last five years, competency in the use of ICT has generally come to be seen as a key qualification:

“Advances in telecommunication and microprocessor technology have expanded, intensified and altered the ways in which people interact. ICT has revolutionised business, public administration, education and the home. The magnitude of its economic and social implications has made universal access to computers and the Internet a top priority. With the mass of information available on line, the ability to access, select and administer relevant data is considered a key competence. Computer literacy, meaning the constructive and critical application of ICT, is the key to successful participation in the information society. Proficiency in ICT also serves as a catalyst for literacy, numeracy and many subject based competencies. Familiarity with the etiquette of text messaging, electronic mail and chatrooms is a social competence for any cyberspace user. Gaps in online access and inadequate ICT competence in parts of the population could have serious repercussions for social cohesion by creating a digital divide into the information-rich and the information-poor.”

(Eurydice, 2002)

However, while the Eurydice report stressed the ability to access, select and administer relevant data, and the constructive and critical application of ICT, in reality the implementation of curricula has probably been far narrower. A report by the Socrates I-Curriculum project entitled “An Overview of Current ICT” (Ulicsak and Owen, 2003) concludes that in practice:

“there is a focus on operational skills; the competencies tend to focus on
how to use ICT rather than at a meta-competency level, that is, how technology can be used to model and transform an activity. Even in Germany, where the goal is to shift to project-oriented education so that the students understand the relevance of ICT and use it to model and hence reflect on problems, it was noted that operating skills are taught initially, and then weeks or months later the role of ICT in the wider context is addressed.”

(Ulicsak and Owen, 2003)

Furthermore, there is an emerging age gap in expertise in the use of technology. While there are still many adults who are functionally illiterate in the use of computers, nearly every young person growing up today learns how to use computers as part of everyday life. A survey undertaken by the Leonardo da Vinci sponsored ICT and SME project undertaken in some 350 enterprises in seven different European projects concluded that basic technical skills in the use of ICT were not seen as a problem within Small and Medium Enterprises (Admiraal, forthcoming). What is at issue is how those skills might be used in the workplace.

The International ICT Literacy Panel - comprising experts from education, government, non-governmental organisations, labour and the private sector, including representatives from five countries (Australia, Brazil, Canada, France and the United States) - have a wider definition of ICT literacy as:

“using digital technology, communications tools, and/or networks to access, manage, integrate, evaluate and create information in order to function in a knowledge society.”

(International ICT Literacy Panel, 2002)

The “continuum of skills and knowledge” required, they said, included:

- Access – knowing about and knowing how to collect and/or retrieve data
- Manage – applying an existing organisational or classification scheme
- Integrate – interpreting and representing information. It involves summarising, comparing and contrasting
- Evaluate – making judgements about the quality, relevance, usefulness, or efficiency of information
- Create – generating information by adapting, applying, designing, inventing, or authoring information

The EC funded Socrates I-Curriculum project has a similar position. They distinguish between transformational, integrating and operational skills and knowledge, and have put forward the following table with table categories and examples of criteria from each as a stage towards the development of a framework for digital skills (I-Curriculum, 2003).
Our aim in the R3L project was to see how learning opportunities could be developed leading to transformational skills and knowledge.

### 7.3.4. NEW WAYS OF LEARNING

The fourth cornerstone underpinning the design and development of the R3L project in Wales was research into new ways in which young people are learning.

John Seely Brown, in a speech in 1999 entitled “Learning, working and playing in the digital age”, looked at the different ways young people were using Information and Communication Technologies for learning. He pointed to the growth of discovery or experiential learning. As kids work in the new digital media, he said, they deploy bricolage rather than abstract logic. Bricolage as a concept relates to the concrete, and has to do with the ability to find something—an object or a tool, a piece of code, a document—and to use it in a new way and in a new context. But to be a successful bricoleur of the virtual rather than the physical, you have to be able to decide whether or not to trust or believe these things. Therefore the need for making judgments is greater than ever before. Navigation is coupled with discovery and discovery coupled with bricolage, but these require judgement concerning the quality and trustworthiness of information and sources. In his speech, Seely Brown drew attention to the importance of action. He suggests new forms of learning are based on trying things and on action, rather than on more abstract knowledge: “Learning becomes as much social as cognitive, as much concrete as abstract, and becomes intertwined with judgement and exploration”.

Such an approach to learning requires new pedagogies based on action and making. Traditional learning software has tended towards supporting traditional didactic
pedagogies (Attwell, 2004). However, as Blinco et al (2004) point out, ICT based 
learning is not limited to educational applications.

“Because there exists an ever-increasing range of information and 
communications technologies (ICT) the range of options that facilitate 
learning is likewise increasing.

Participants in learning already have many choices in terms of how 
they engage with ICT, and encounter ICT across a full range of activities 
in work and leisure. An increasing proportion of learners are “digital 
natives”, whose thought processes, socialization, and engagement with 
ICT differs radically from that of previous generations. Google queries; 
ad hoc surfing of the Web; numerous messaging and interaction 
technologies (email, web-forums, and real-time chat); personal weblogs; 
collaborative websites such as wikis; research tools that enable the 
classification and clustering of queried results on the fly; purchase of 
goods and services, sophisticated virtual reality and simulation 
environments; gaming and role-play applications are not only the daily 
experience and key methods of interaction for the digital native, but they 
are both the normal expectation and historical experience.

Moreover, there is an increasing range of user interfaces, physical 
devices and supporting infrastructure that facilitate this engagement. 
Rarely are technologies used in e-learning developed specifically for the 
learning community. ICT developments are harnessed to support 
learning.”


In a study of the use of ICT for learning in Small and Medium Enterprises (Attwell, 
2003), I pointed out that although there was little evidence of engagement with formal e- 
learning programmes or software, this did not mean ICT was not being used for learning. 
Instead of using formal e-learning programs, workers in SMEs were using everyday 
business and office software such as email and the web to obtain information and to 
discuss their own learning needs with others. Engineers were using list servers and 
discussion groups to solve problems. In the paper I suggested that learning must be 
integrated into everyday work processes and activities, rather than seen as a separate 
activity.

For the Co-Lab, this meant designing activities which met the needs of participants and 
into which informal learning could be embedded.

7.4. OUR APPROACH TO DEVELOPING THE COLAB

In this third section of the chapter, I will describe the activities we have undertaken to put 
our ideas into practice. This is a description of work in progress: under CoLabs we have 
basically undertaken the proof of concept and design phase of our community building
Making the village a virtual campus
2003-0312/001-001 EDU Regnet

exercise. Work is ongoing in further developing community use of the web portal and tools around which the community is organised.

The first stage in developing the project was to develop a common understanding of the ideas by the project team. KnowNet formed a team to undertake the work. Graham Attwell developed many of the underpinning ideas, which have been explained above. The technical development was undertaken by Mike Malloch and Steve Tuffail, both experienced software designers. The team was led by two younger members of staff, Claire Middleton and Med Davies, later joined by Mathew Rutherford; all of them were extensively embedded in the North Wales music scene. The reason for this decision was that we felt it important that the community could identify with the KnowNet team leaders. We did not want to present ourselves as external researchers coming in and telling the community what was good for them. We perceived the project as action research, with the KnowNet researching part of the community rather than outside it. Both Claire and Med had a keen interest in the subject and community they were working in and Claire, from her student days, had experience in promoting bands. It was also important that Med and Mathew were native Welsh speakers.

Stage two in the work was a scoping study of the community. This was undertaken both through a series of meetings and semi structured interviews with members of the target community, and through a literature study - or rather more accurately a study of existing web sites and resources. We also contacted other projects working in similar areas.

The next phase was to publicise the project. A bilingual flyer was produced - see Appendix 1 - and was distributed widely at music gigs, in record shops, pubs and cafes and at festivals. As a result of this initial publicity we were invited to explain the ideas of the project on BBC Wales radio.

A series of meetings were held to build a core group from the community. Meetings tended to be informal, as few of the group had any prior experience of organising a project. This group was central to the development of the web portal. The web portal had the following aims:

- to be an information resource for the music community
- to be an organising centre for the community
- to allow members to publish their music
- to be a space for the exchange and development of ideas

The critical issue for us was that the group should feel ownership of the project and of the web portal. To that end, we used an iterative design process. The group was initially asked to explore the features and uses they wanted for the portal, and what the look and feel of the portal should be. The designers then produced a rapid demonstration version, which was taken back to the group for comments and evaluation. Meetings took place about every two weeks, and functionality was built up slowly over a period of time.
A key aim for us in this period was that the group themselves were involved in learning. They had to learn a series of so-called soft skills: how to communicate, how to work as a team and how to articulate ideas. They also were involved in learning about software design - about what is possible and what would take too long to implement, about trade-offs between functionality and usability, and about graphical design and presentation. This was co-learning, since neither of the KnowNet staff leading the project were software designers themselves. A downside of the work was the difficulty of holding such an informal group together. We were aware that the community we were working with was difficult to organize, and often frustratingly mobile. Members would work with us for a period but go off for two or three months for a job elsewhere. It was often difficult to find a time when everyone could attend a meeting. The changing membership of the group was frustrating in that vital knowledge and experience would be lost and the learning process would have to start again. Of course, that knowledge is not lost to the community as a whole, but it does make project organisation problematic.

The platform design has now completed two iterations of intense co-development, and the next stage of the work has begun in developing the use of the platform. Learning will transfer from face-to-activities to on-line activities. We do not know how successful this will be, or whether the project will be able to gain sufficient momentum to be self-sustaining.

7.4.1. THE DEVELOPMENT OF THE PLATFORM

Developing the web-application portal and platform for the R3L project in North Wales makes an interesting story in itself. It bears on a crucial issue facing a wide range of educators and community organisers: is it possible to assemble a usable and difference-making web portal using open-source software components? If so, how hard is it to do so? It also bears on an equally crucial issue facing developers and advocates of open-source educational software: if the answer to the previous question is ‘no’, where should developers concentrate efforts to enable real-world communities to construct effective informal-learning platforms and interfaces?

7.4.2. WHY OPEN SOURCE?

KnowNet chose to base the R3L platform on open-source web application frameworks and portal interfaces. Why? Essentially, because there are no off-the-shelf commercial solutions which meet the needs of informal learning communities, and commercial vendors are extremely unlikely to apply concerted development effort towards meeting those needs (at least until the market possibilities have been pioneered by public or open-source projects). It was clear to us that, at the very least, intensive customization of the server software was going to be required. To accomplish this it is essential that the developers have transparent access to its source code. Another urgent reason for choosing open-source solutions to base the platform on is that the open-source community is, itself, just that: a community. We are not alone in wanting to assemble or create effective informal-learning portals. In fact, informal learning has received much
attention from open source developers - though few would think to call what they want ‘informal learning’ or learning of any kind – but ad-hoc communities have sprung up around common interests, and open-source projects have emerged to meet their needs with online environments. This is a vital resource for developers like ourselves. A third reason for going open-source is good internet citizenship and good project management: if all publicly funded projects with a software development aspect tried hard to produce sharable open-source solutions, there would be far fewer ‘orphaned’ half-built systems, left to the dustbins of history once project funding ceases, and there would be far more software for the next generation of projects to build on.

The open-source software we chose to base the platform on was a combination of Zope and Content-Management Framework / Plone. Zope (http://www.zope.org/) is a powerful and flexible web-application framework, largely written in the object-oriented programming language Python. It is fairly mature, and has a large and expert developer community. Plone (http://plone.org/) is a carefully-crafted suite of front-end tools and template-generation code which sits on top of the Content Management Framework for Zope to provide an easily customized end-user web interface into portal functionalities. One of the key strengths of Plone is its emphasis on quality front-ends and compliance with web standards and accessibility guidelines (a sadly neglected aspect of many open-source projects).

We must note, in passing, that the development of the R3L portal sits within a much larger development activity on the part of KnowNet, incorporating basic software development and active deployments and experiments in a range of online communities and activities. Thus we were able to assign resources towards meeting the projects aims far beyond the very limited budget of the R3L project. The choice of Zope / CMF / Plone, for instance, is the outcome of a year-long concerted investigation by KnowNet in 2002 and early 2003. We carefully evaluated a wide range of potential platforms, and choose Zope/Plone because of the size, talent and ambitions of its developer community, and because of its sound object-oriented base and component architecture. This has turned out to have been a wise (or lucky!) decision, both from the point of view of ascendance in the open-source marketplace (Plone especially is becoming increasingly popular, and thus is rapidly growing in components and developers), and from the point of view of our own software development within that framework (the architecture and object-orientation of Zope and Plone make it possible to create very powerful components which integrate tightly within an overall application suite). A downside is that Zope has an extremely steep and difficult learning curve; it has taken us over a year of extremely concerted development effort in Zope and Plone to feel comfortable exploiting their more powerful concepts.

7.5. THE R3L PORTAL: REQUIRED FEATURES
We took the key features of the portal to be roughly as follows:
1. Excellent presentation of music-related content
2. Easy and highly visible access to music by community members
3. Comprehensive interface for publicising events and news
4. Community-development support and activities (forums, resource-sharing, etc)
5. Easy creation of content by musicians and other community members
6. Features for members to ask questions and share knowledge
7. Ownership of site areas so that bands, etc could host and customize their own mini-sites
8. Overall management of content, members and activities, largely delegated to the members themselves

Stage 1: ‘out of the box’ systems integration of the mark-one portal

As we noted above, a key question being addressed in this project is whether it is possible to create an effective informal learning portal without doing ‘deep’ software engineering, and if so, how?

The good news is that we were able to very rapidly create an attractive portal which supported features 1, 2 and 3 quite well, and offered support for features 4 – 8. For instance, members could upload MP3 music files quite well, thanks to open-source components developed elsewhere. All of the features were addressed in the mark-one release, but uptake was poor.

We tried hard to analyse the obstacles and problems that ordinary end-users were encountering, and discovered that features 4-8, though ostensibly strengths of Plone, were in fact just not well-enough implemented to be compelling to non-technical, untrained users. Among the problems were:

- Content-management was too cumbersome and techie-oriented
- Available discussion systems were either feature-poor or slow and buggy
- Delegating management was made impossible because management interfaces were also cumbersome and techie-oriented
- There were no available components directed specifically at knowledge and question sharing

We will retain the following archival version of the stage-1 portal prototype:

http://www.tirnagog.net/
Stage 2: some dedicated software development to address problems encountered in stage 1

We decided that the key end-user obstacle encountered in stage 1 was the difficulty users had in creating their own high-quality content. To address that issue in particular, we initiated two development strands:

- Blogging: integrating member-managed weblogs into the portal environment
- Site-Content management: radically improving the ease of creating well-structured web content with appealing displays

The second of these was very labour-intensive, and required determined co-development with an existing and sophisticated community of content-creators. We thus undertook this effort within the framework of another, more mature, project (the National Guidance Research Forum - http://www.guidance-research.org). This development strand required many iterations of co-development between the NGRF site editors and KnowNet, and so did not become part of stage-2 for the R3L project. We will take this up again when discussing stage-3

Weblogging, we felt, would offer an easy and compelling way for members to create, manage and customise their own web content. Because the content structures and navigational motifs of weblogs are very constrained (news items organized in daily or chronological or categorical views), it is easy to maintain consistent content in them. Weblogs also provide a natural interface for conducting discussions within or between blogs.
The problem was that, surprisingly, there was no Plone weblogging component available from 3rd parties. Several Plone components existed which addressed the issue in a shallow way, but none supported the important weblogging standards (trackback for communicating between weblogs, APIs for posting content from other applications). A weblogging product did exist for Zope (without the Plone or Content-Management layers), and so we undertook to adapt this to our needs (COREBlog). Unfortunately, we quickly discovered that COREBlog delivered very poor HTML markup, which did not make use of the CSS stylesheets used ubiquitously in delivering weblog content from the major providers. To address that problem, we undertook to rewrite the rendering engine in COREBlog to produce a good, tight, and standards-compliant markup which was ‘stylish’ with MovableType stylesheets. We then discovered that COREBlog had extremely poor architecture (the rendering logic was distributed around a plethora of small templates, represented in out-of-date templating technology, and was dependent on a baffling abundance of request-manipulation).

In order to turn COREBlog into a product suitable for the end-users of the R3L portal, we expended over 30 developer days, rationally reconstructing its rendering architecture and delivering high quality markup with a range of alternative ‘look and feel’ stylesheets. We of course shared this work with the COREBlog developer community.

Still, however, we discovered that this solution was not good enough to be compelling to end-users. Though we were able to effect some integration between members’ blogs and the rest of the portal, because COREBlog was not CMF-aware or Plone-compliant, this was shallow. And because COREBlog had so poor architecture, it was not a good place to start from in creating the solution required. For those reasons, KnowNet ceased work on improving COREBlog, and planned some much more fundamental work to effectively render tightly-integrated weblogs within the portal environment. Again, see the section on stage-3 work for more information.

We will retain the following archival version of the stage-2 weblogging prototype: http://www.knotes.net/Members/ClaireM/weblog/
Stage-3: lessons learned and new developments

The basic lesson we learned was that, no, it was not possible to systems-integrate off-the-shelf open-source components to affect a successful online learning community portal. There have been some examples of successful communities affected with open-source tools, but these can all be attributed to the energy of the community itself, and almost always are restricted to technologically sophisticated users. We also discovered that a moderate amount of core software engineering was not enough to address the problems encountered.
So KnowNet spent a large amount of core software engineering to address the problems, on the reasonable assumptions that (a) given all these experiences, we know a lot about what is required, and how to effect it in software, and (b) if we don’t do it, who will? We have deployed several thousand developer and architect hours so far, and have begun to make very good progress. We outline below the new components we have developed. These will be shared with the wider open-source developer community, and will be used as the basis of the stage-3 attempt to create a successful ‘music-community learning’ and ‘sharing’ portal.

We have built:

- **KNDiscussion**: an excellent, very flexible and very fast discussion system for Plone
- **KNBlogging**: tightly integrated with KNDiscussion and with Plone content, a very lightweight but powerful blogging system, supporting all the blogging standards. It even makes ordinary Plone site content trackback-aware, so that externally-hosted weblogs can integrate into the portals
- **KNFastFolders**: An extremely powerful, fast and easy to use way of viewing and interacting with discussions, which also provides a much more usable interface for managing portal content
- **KNSiteContent** (‘IndexFolder’ and ‘panesfolder’ as was): A very rich suite of content-management and content-display products and tools to allow ordinary users to manage effective site content, even if that content is extensive and highly structured
- **KNTeamTasks**: A powerful family of goal-directed collaboration motifs which combine KNSiteContent and KNDiscussion to provide a discursive and process-oriented wrapping for discussions around knowledge-development activities
- **KNResources** (not yet deployed): A powerful abstraction interface to allow Plone sites to organize resource repositories – or interact with other repositories
- …and a number of smaller-scale content-types, tools and products for enhancing and specializing the use of Plone for particular learning communities; for instance AnnotatedReference and LitReview for sharing and discussing bibliographic citation, and several wizard tools for easily creating online questionnaires with rich structure

Core work is completed on the above, though some interface work remains on some of them. Some of the above are currently in beta testing; the others will be coming onstream within the next months. We look forward to our 3rd effort at creating and sustaining a learning community web portal for the North Wales music community! We also look forward to sharing these developments, and to collaborating with other groups to explore in greater depth the real-world issues in assisting such communities to grow and learn.
At an early stage in the R3L project, we became acquainted with a larger American project with very similar aims (the Plone for Artists project: http://plone4artists.org/). They have been concentrating their efforts on music sharing technologies, which complement the efforts we have been making on more general community-building technologies. We hope that, by this time next year, we will have effected a close co-operation with plone4artists to produce the system we always wanted for the R3L project.

In short, the lesson of the R3L project has been that, while open-source technologies did not then exist to allow real-world educators and community members to create online informal learning portals, these technologies can be developed, and will be available to others in the future.

Appendix 1 – Publicity Flyer

WANTED

bands, promoters, managers, studios, venues, publishers, traders, musicians, producers, teachers, bands, promoters, managers, studios, venues, publishers, traders, musicians, producers, teachers, bands, promoters, managers, studios, venues, publishers, traders, musicians, producers, teachers, bands, promoters, managers, studios, venues, publishers, traders, musicians, producers, teachers, bands, promoters, managers, studios, venues, publishers, traders, musicians, producers, tea

A European grant has been given to a North Wales software development company to construct a non-profit website for the music community in North Wales. This site will be created by people like you for people like you. We put up the money and the tech. There’s no catches and no strings. All we want from you are ideas and inspiration. We need local bands and others in the music industry to help us design what you would want, need and use. This would mean giving us input on the construction of the site and on its development once built.

tag guide, band biogs, MP3, for sale/wanted, musicians wanted, equipment for sale, management, contacts, studios, venues, webcasts, promotion, suppliers, gig guide, band biogs, MP3, for sale/wanted, musicians wanted, equipment for sale, management, contacts, studios, venues, gig guide, band biogs, MP3, for sale/wanted, musicians wanted, equipment for sale, management, contacts, studios, venues, gig guide, band biogs, MP3, for sale/wanted,

If you are interested in getting involved, or would just like to be kept up to date, Please email Claire or Med at the following:

claire@theKnowNet.com
or
med@theKnowNet.com
or call 01248 360254
Yn Eisiau

Bandiau, Hyrwyddyr, Rheolwyr, Stiwdio, safleoedd, cyhoeddwdyr, masnachwyr, cerddorion, cynhyrchwyr, athrawon, Bandiau, Hyrwyddyr, Rheolwyr, Stiwdio, safleoedd, cyhoeddwdyr, masnachwyr, cerddorion, cynhyrchwyr, athrawon, Bandiau, Hyrwyddyr, Rheolwyr, Stiwdio, safleoedd, cyhoeddwdyr, masnachwyr, cerddorion, cynhyrchwyr, athrawon, Bandiau, Hyrwyddyr, Rheolwyr, Stiwdio, safleoedd, cyhoeddwdyr, masnachwyr, cerddorion, cynhyrchwyr, athrawon, Bandiau, Hyrwyddyr, Rheolwyr, Stiwdio, safleoedd, cyhoeddwdyr, masnachwyr, cerddorion, cynhyrchwyr, athrawon, bandiau

Mae grant Ewropeaidd wedi cael ei roi i gwmni datblygu meddalwedd er mwyn adeiladu gwefan ddí-dlwy i’r gymdeithas cerddoriaeth yng Ngogledd Cymru. Bydd y gwefan yn cael ei cheu gan pobl fel chi er mwyn bobl fel chi. ‘Does dim cost, ni fydd yn cyflenwi’r arian a’r wybodaeth dechnegol. Yr unig beth yr ydym ni angen yw eich syniadau a’ch ysbrydoliaeth. ‘Rydym ni angen bandiau a rhagor o’r diwydiant cerddoriaeth i’n cynorthwyo ni i gynllunio’r ‘wefan yn union fel buasech chi ei angen ac i wylio ei ddathlygiad ar ôl iddo gael ei godi.

Os oes gennych chi ddiddordeb mewn cymeryd rhan, neu os fuasech yn hoffi gwybod sut mae’r ‘wefan yn datblygu, cyswllt:

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8. COLABS FINAL REPORT – CSP, ITALY

8.1. DSCHOLA – A REGIONAL COMMUNITY SCHOOL

8.1.1. BACKGROUND

CSP – ICT innovation is an Information and Communication Technology Research Centre, recognized by the Italian Ministry of Education, University, and Scientific Research. CSP is a non-profit consortium, whose shareholders include local government (CSI-Piedmont, City of Turin), University (Turin Polytechnic, University of Turin) and industrial organizations (Unione Industriale, FederPiedmont). CSP helps both local
government and private clients to implement innovative ICT services in order to support local development in the face of global competition. More specifically, CSP acts as a facilitator between local government, private business, and University with the aim of introducing front-office e-government services.

8.1.2. ACTIVITIES

CSP is one of the partners of the «Piedmont School Network» (Rete Regionale delle Scuole del Piedmont – www.scuole.Piedmont.it). This project aims to implement a unitary telemetric network for all Piedmont schools, to offer and co-ordinate a set of basic and advanced services for didactics, and to develop a stable relations system with and among all the school subjects. Main promoters of the project are the Italian Ministry for Education, the Piedmont Region, the City of Torino, the Regional Direction of the Ministry of Education, the Education Superintendents, IRRSAE Piedmont (regional research body supporting the educational system), the University and the Polytechnic of Turin. One of CSP activities in the project is to help defining the general work plan, model and scenario for the development of ICT solutions in Piedmont education. Specifically CSP manages activities related to the construction of Regional Excellence Poles (www.dschola.it), the “Dschola Project”. CSP has been working on this task since the autumn of 2000. The ‘Poles’ are schools that have the didactical, technological and managing requirements (e.g. good internet knowledge, ICT expertise, school self-government capacity, strong didactic methodologies and standards) to become reference structures and models for the other schools. CSP is helping defining the experimentation work plan and making the broad band telemetric infrastructure.

8.2. THE COLABS JOURNEY

More in-depth in the CoLab initiative, “Dschola” is a community of schools consisting of a selected group of primary and secondary schools, the so-called Centres of Service, Animation and Experimentation (CSAS), with proven technical and didactical excellence at a regional level aimed at disseminating their experiences and expertise towards all the schools in the Piedmont and Valle d’Aosta Region (North West Italy). The network, involving 2.828 educational structures and about 50.000 teachers, is developed through a collaborative work structure among different players, all working at a distance in a shared, cooperative, and interactive environment using ICT and multimedia, and therefore sharing the aim of improving educational, training, and experimental services through ICT. An investment of 21 millions of Euro by the Bank foundation Fondazione Cassa di Risparmio di Torino has given the project a boost for its start-up economic support, in order to enhance ongoing networking activities.

Since its beginning, CSAS have joined the project following an innovative operational model. Merging a top-down (overcoming the digital divide in the educational field as a whole promoting a conscious use of ICT) with a bottom-up approach (promoting a framework to enhance bottom-up initiatives and expertise), CSAS aims at building and
expanding opportunities for skill acquisition and applying technological innovation towards didactics or organizational management.

The project policy concern is moreover directed towards proposing a model for the implementation of the ICT use in the educational field, founded on:-

- highlighting best practice experiences,
- sustaining the creation of a virtual community of schools in a cooperative framework - as suggested by the slogan of the project: “Schools for schools”,
- customizing the use of ICT knowledge and technical innovation,
- providing a training model in which teachers’ skills are used and improved.

As far as concerns for the community’s physical nature, in its first running period, the project has focused on every single CSAS service, animation, and experimentation activity, with particular attention paid to teacher training and on the optimization of the network’s technical infrastructure. Schools are, in a way, a particular environment where teachers are used to working independently from one another or in small groups: and that’s why, in its former part, the project has promoted face-to-face meetings and training activities (i.e. project management courses).

When schools have started feeling more comfortable with their project activities, they have started working in co-operation on more incisive and major topics. Moreover, from the autumn 2002 and onwards the project has been following an action line based upon the creation of thematic regional labs, organized in networks of schools, on various topics such as e-learning

Furthermore, from the beginning of 2003 and onwards, the Piedmont Regional Government, acknowledging the importance of the CSAS in the regional territory, has financed a group of ICT-based projects developed by the schools involved in the Dschola community. Those projects are managing the implementation of administrative systems and tools for schools. They are more precisely focusing on defining and implementing administration procedures and tools that support structured and effective service provisioning to improve quality and cost effectiveness.

8.3. VIRTUAL MEETING POINT

Digitally speaking, the community meets its members in a virtual meeting point, the official web site of the project: www.dschola.it. The website represents the evidence of all the activities running in the network - as a service (training), animation (seminars, conferences), experimentation activities, and particular attention to official records and broadcasting work in-progress reports in order to disseminate every single data related to the project.
The website is organized in thematic sections, providing information on the community’s ongoing activities, an ICT and school topics press release, and the supplying of a constant overview on EU programmes, activities, and projects related to ICT use in the educational environment. The website is based upon an open source platform (PHP Nuke) allowing direct contribution by the readers and the community members. In the Italian version of the website, which is also available in English, Spanish and soon in French, all of the members of the community can manage and directly enrich Dschola publishing news, comments, events, and file sharing. The network is moreover animated through community services, forums, mail hosting, project information mailing lists, and weekly newsletters on the topics dealt with the website. In particular, in order to reinforce community spirit, every project-related official information or data transmission is shared through the website or disseminated via mailing lists.

8.4. MAP.DSCHOLA.IT

The community of practice map.dschola.it originated in Piedmont as a meeting place between theory and didactic praxis concerning the topic of the knowledge representation and conceptual maps in the first place. Its conceiving and organization are based on the outcomes of a didactic-related technological competencies for teachers’ regional training courses, running at national level, where participants showed how sometimes trainers and trainees have sometimes a sort of confusion on significance and theory afferent to “mind mapping”, “concept mapping”, and “graphic organizers” expressions. In the same occasion, furthermore, it has been appreciated that the possibility of a “blended” training, where people sharing a common space on one side meet each other and operate on a high-rate socio-cultural sharing territory, and on the other side strengthen and intensify relationships and comparison between collaborative and distance tools. Therefore, the aim of the community is to relaunch and contribute to the discussion on didactic maps, starting from a common language and a shared theoretical basis.

Online

The official web site of the Map.Dschola CoLab is http://map.dschola.it

The community relied on the Dschola project, which opened a web site hosted on a Microsoft SharePoint© platform (for collaborative activities such as forums, document sharing and co-writing) and a Cmap server (through CmapTools® and therefore structured with cooperative activities, such as the shared elaboration of maps and the opening of discussion threads concerning single conceptual nodes).

Learning and knowledge /Process

A specific initiative carried out in the CoLabs.eu project framework has been the set up of a community of practice on concept mapping in education. In the very beginning, the community has created and shared some founding documents: the Manifesto, and the Documentation Template. At present time, the community discusses problems emerging
from the evidence of meaningful experiences from joining teachers and transferring the major awareness of essential elements in a progressive refinement of materials.

Mind maps are characterised by an associationalist logic, by which the relations between the nodes develop outwards from a central argument, and in general, from the great emphasis on the iconic, symbolic and graphic aspects – see the writings of Buzan. Concept maps are characterised by a connectionalist logic, by which the relations between the nodes are oriented, and above all must be explicated, principally through main indicators, such as verbs and conjunctions – see the writings of Novak. The relationships between the two concepts constitutes a proposition; the meaning of the map as a whole is given by concepts, relationships, propositions. If the relationships are not explicated with a precise label, the map loses its meaning, until having not one at all. The two models are not in contrast with each other; in the didactic framework they can be integrated, but they must be clearly distinct.

Mind maps can be used for brainstorming or ascertaining the state of understanding at the beginning of the learning process, while concept maps can be used for more complex and “mature” moments of representation. Also the extremely interesting method of Sewcom proposes actually an initial phase with mind maps and a closing phase of the process with conceptual maps.

One of the reasons for the confusion is the extensive use and success of the MindManager, software translated in Italian aiming at constructing mind maps (www.mappementali.com), unfortunately misunderstood, and presented by many to colleagues as a way to build concept maps. This is not correct, whereas it is true that the concept maps programmes also allow the elaboration of mind maps. For information on how to get hold of the programmes see the link www.pavonerisorse.to.it/cacrt/mappe/ where there are also accessible considerations and indications on how to use them.

In the same way, concept maps are defined often as simple schematic connections between blocks of text, graphically enriched, which do not strictly obey however the model theorised by Novak. For clarification on these aspects, see the link http://www.graphic.org/goindex.html

8.5 COMMUNICATION AND COLLABORATION

The initial appliance of mind mapping has quickly yielded and shown critical issues. It has been necessary to associate to the community Sharepoint’s homepage refers to a series of different knowledge representations examples, aiming at valuing the strength and the immediacy of the visual illustration, clarifying theoretical affirmations. This increased the effectively shared acquaintance and reduced misunderstandings and the “background noise” often distinguishing distance communication.

Community members published on the Cmap server their conceptual maps (or other different knowledge representations, as long as they were defined precisely) equipped
with a proper documentation representing in explicit form the processes founding the elaboration of a graphical representation and constituting an element not easy to be identified, fixed, or described to others.

This is annexed to this document, as it constitutes a crucial element – as forums and co-writing of documents - of the shared debate as a whole and of the single experiences.

Thus the community was born on a regional basis, and it has quickly reached a certain national visibility, also thanks to a fast index-linking of search engines and to it being linked by some web sites focusing of the same topics.

Other teachers, particularly from Lombardia, Marche and Basilicata have joined to the original Piedmontese nucleus. These teachers were coming from very different training frameworks and could appreciate the importance of the blended, entirely repeatable, model.

The community has moreover presented a paper to the First international conference on Conceptual, held in September 2004 in Pamplona, Spain- (http://cmc.ihmc.us/myreviewcmc2004/ListAcceptedPapers.php).

The level of the debate and the discussions are high and complex, and this does not facilitate the new influx of teachers and educational operators, not involved from the onset of the experience. In particular, some find difficult to participate in forums and publish their own materials, fearful of receiving any negative judgments.

**The people make the curriculum / Local people as authors**

This aspect, between the cultural and relational, is surely the more delicate point of the community framework. If, on the one side, the community aims to be theoretically rigorous, on the other side it is necessary that this approach does not appear to the external framework as potentially ratifying.

Therefore, at present time, the community focuses on the construction of logical spaces and effective discussion and publishing areas where analysing and exploiting proposed materials, taking into account positive and negative aspects, takes precedent rather than comparing them with "absolute" models.

An essential and critical aspect is the motivation in the participation to the community. With no economical nor career-related acknowledgment, teachers participating in this kind of activity act on a substantially volunteer basis, aiming at deepening theoretical issues and improving their own didactic praxis based on their own intellectual curiosity and professional reliability.

The strong accent on technological issues, moreover, acts sometimes as catalyst for some colleagues, reducing their enthusiasm and participation when acquainting that ‘this is not the matter of accumulating files on a server and digital practices in their minds’, but of participating in a debate concerning theoretical and pedagogical issues where ICT are not the core, but a mean for a widespread and fast sharing.
Local people as teachers / From general to particular: school projects

The discussion and the sharing of the didactical praxes started a very interesting phenomenon: in some schools, projects on the knowledge representation use in the didactical framework have been set up with more strength and effectiveness in comparison to the past.

Towards the future

The comparison with the experiences (but also with the core acquaintances) of colleagues sharing the foundation and "maintenance" of the community seems to have motivated and strengthen the initiative of teachers towards students.

Also, for some students (gradually involved in the process by their teachers) the idea of their work on the internet is often an added value: to leave school through a digital door and show themselves to the world are still strong motivational elements.

Products, services and achieved results /Conclusion

The future of the community is articulated on the following three core issues:

a. to verify the effectiveness of local plans
b. to disseminate the outcomes of local plans
c. to prosecute the discussion and the comparison
d. to improve interaction between discussions as a whole and school projects

http://map.dschola.it/
9. CONCLUSIONS

This booklet has presented a detailed overview of how each CoLabs partner carried out valuable experiments in their regions and promoted in their own ways sustainable lifelong-learning. At the onset, the basic idea was to set up a group of micro-clusters of Triple-Helix-alliances related to eLearning and the digital knowledge in the six selected regions across Europe. Each CoLab contributed to the best of its ability with regional knowledge and competencies to the common and shared collaborative accumulation, exchange, and sharing of knowledge and competence related to eLearning, digital knowledge management, and carrying out regional support of universities’ 3rd mission.

Booklets B and C will delve further into partner business plans, dissemination and exploitation, and full evaluation of the CoLabs project.

“Collaboratories”
10. ANNEXES

10.1. SUGGESTED READINGS


