***Using wireless technologies for context sensitive education and training (CONTSENS)* and European policies**

Introduction

This is a report on the role of the Lifelong Learning Programme project *Using wireless technologies for context sensitive education and training* (Agreement number 2007-1968) in the implementation of European Commission priorities.

Six European Commission policy documents are considered:

- The Lisbon Agenda, 23 March 2000
- The Maastricht Declaration 12 October 2001
- The Copenhagen Declaration 29 November 2002
- The Helsinki Manifesto 20 November 2006
- European Year of Creativity and Innovation 2009This selection gives three fundamental European Commission declarations in recent years plus a recently released document on the European Year of Creativity and Innovation in 2009.
- The Bordeaux Communique 27 November 2008.

THE LISBON AGENDA

During the meeting of the European Council in Lisbon (March 2000), the Heads of State or Government launched a "Lisbon Strategy" aimed at making the European Union (EU) the most competitive economy in the world and achieving full employment by 2010. This strategy, developed at subsequent meetings of the European Council, rests on three pillars:

- An economic pillar preparing the ground for the transition to a competitive, dynamic, knowledge-based economy. Emphasis is placed on the need to adapt constantly to changes in the information society and to boost research and development.
- A social pillar designed to modernise the European social model by investing in human resources and combating social exclusion. The Member States are expected to invest in education and training, and to conduct an active policy for employment, making it easier to move to a knowledge economy.
- An environmental pillar, which was added at the Göteborg European Council meeting in June 2001, draws attention to the fact that economic growth must be decoupled from the use of natural resources.

A list of targets has been drawn up with a view to attaining the goals set in 2000. Given that the policies in question fall almost exclusively within the sphere of competence of the Member States, an open method of coordination (OMC) entailing the development of national action plans has been introduced. Besides the broad economic policy guidelines, the Lisbon Strategy provides for the adaptation and strengthening of existing coordination mechanisms: the Luxembourg process for employment, the Cardiff process for the functioning

of markets (goods, services and capital) and the Cologne process on macroeconomic dialogue.

The mid-term review held in 2005, for which a report was prepared under the guidance of Wim Kok, former Prime Minister of the Netherlands, showed that the indicators used in the OMC had caused the objectives to become muddled and that the results achieved had been unconvincing.

For this reason, the Council has approved a new partnership aimed at focusing efforts on the achievement of stronger, lasting growth and the creation of more and better jobs. As far as implementation is concerned, the coordination process has been simplified. The integrated guidelines for growth and employment will henceforth be presented jointly with the guidelines for macroeconomic and microeconomic policies, over a three-year period.

CONTSENS

The CONTSENS project contributes to making the European Union the most competitive economy in the world and achieving full employment in 2010.

Mobile learning is the next generation of learning, a successor to e-learning, and the use of wireless technologies will be a feature of the most competitive economy in the world.

The CONTSENS project prepares the ground for the transition to a competitive, dynamic, knowledge-based economy.

European Commission documentation tells us that Europe has world leadership in the development of wireless technologies, due largely to the work of Nokia in Finland, Ericsson in Sweden and Siemens in Germany. It is important that Europe should have world leadership in mobile learning too. The CONTSENS project is contributing to this.

The CONTSENS project contributes to the need to adapt constantly to changes in the information society.

Mobile learning is a highly innovative form of education and training provision which is characterized by constant adaptation to change, none more so that the incorporation of location specific and context sensitive courseware.

The CONTSENS project contributes to the move to a knowledge economy.

The knowledge economy depends on wireless technologies, including mobile learning, especially with context sensitive and location sensitive characteristics as a major factor.

The CONTSENS project contributes to the achievement of stronger, lasting growth.

The harnessing to education and training of the wondrous developments of wireless technologies including mobile learning, is a major contribution to stronger, lasting growth.

DECLARATION OF MAASTRICHT 12 OCTOBER 2001

Recognizing that the development of Northern societies is dependent on a well structured framework of research and an appropriate system of financing;

Recognizing that research has not fulfilled its potential to bring about the sustainable development of societies in the South;

Recognizing that the success of demand-led research for development requires a constituency of like-minded researchers, end users, intermediaries, policymakers and donors to champion it;

Recognizing that the need to build such a constituency led to the organization of the Seminar *Demanding Innovation: Articulating policies for demand-led research capacity building* involving researchers, research users and policymakers from 56 countries with different geographic, political economic, cultural and technological development;

Recognizing that the participants unanimously agreed to issue this joint Declaration in light of their experiences and the conclusions of the Seminar;

Resolve that the researchers and representatives of the private sector, donors, intermediaries and policymakers in the Seminar should build a constituency for demand-led research, committed to the production of knowledge that can address poverty, inequality and environmental degradation as well as the overall development and social transformation of Southern societies.

Further resolve in this regard that the Seminar intends to refine and ratify a Platform of Action that aims to cover the responsibilities, objectives, strategies and activities of stakeholders of demand-led research.

The Platform of Action urges research communities and institutions

- to enhance the knowledge base in the substantive and geographic areas where they work in a manner consistent with the needs of relevant stakeholders and with the view to ensuring its utilization;
- to advocate for the appropriate support and infrastructure for demand-led research in institutions of higher learning, autonomous research centers and local communities;
- to develop appropriate training programmes in order to build a critical mass of demand-led researchers and to refine participatory research methodologies;
- to establish databases that fully document the results of demand-led research.

For the European Union, the Platform of Action calls upon it

- to ask the Commission to reconsider recent decisions with respect to the organization and funding of development research in light of the need for and proven effectiveness of demand-led research;
- to maintain and/or establish effective mechanisms aimed at supporting demand-led research, and intensify the consultations and capacity building underpinning it;
- to meet with relevant groups to discuss the implications of proposed changes in the EU's system of research funding;

Further resolve to foster participatory and democratic approaches to research at every stage of the process, from agenda setting to enabling social innovation.

CONTSENS

The importance of the Declaration of Maastricht for the CONTSENS project is that it focuses on education and training and on educational research, which are central to the project. The Lisbon Agenda is focused on economic development and although education is important to it, it is not the central theme of the Lisbon Agenda.

The CONTSENS project builds a constituency for demand-led research, committed to the production of knowledge that can address poverty, inequality and environmental degradation.

The CONTSENS partnership is engaged in demand-led research that will contribute to the addressing poverty. It works in a field characterized by the existence of 3.300.000.000 mobile subscriptions and with the technology that has largely eliminated inequality as mobile devices are possessed by men and women and the young and the old. Mobile technologies are environmentally friendly.

THE COPENHAGEN DECLARATION 29 NOVEMBER 2002

DECLARATION OF THE EUROPEAN MINISTERS OF VOCATIONAL EDUCATION AND TRAINING, AND THE EUROPEAN COMMISSION, CONVENED IN COPENHAGEN ON 29 AND 30 NOVEMBER 2002, ON ENHANCED EUROPEAN COOPERATION IN VOCATIONAL EDUCATION AND TRAINING

Over the years co-operation at European level within education and training has come to play a decisive role in creating the future European society.

Economic and social developments in Europe over the last decade have increasingly underlined the need for a European dimension to education and training. Furthermore, the transition towards a knowledge based economy capable of sustainable economic growth with more and better jobs and greater social cohesion brings new challenges to the development of human resources.

The enlargement of the European Union adds a new dimension and a number of challenges, opportunities and requirements to the work in the field of education and training. It is particularly important that acceding member states should be integrated as partners in future cooperation on education and training initiatives at European level from the very beginning.

The successive development of the European education and training programmes has been a key factor for improving cooperation at European level.

The Bologna declaration on higher education in June 1999 marked the introduction of a new enhanced European cooperation in this area.

The Lisbon European Council in March 2000 recognised the important role of education as an integral part of economic and social policies, as an instrument for strengthening Europe's competitive power worldwide, and as a guarantee for ensuring the cohesion of our societies and the full development of its citizens. The European Council set the strategic objective for the European Union to become the world's most dynamic knowledge based economy. The development of high quality vocational education and training is a crucial and integral part of this strategy, notably in terms of promoting social inclusion, cohesion, mobility, employability and competitiveness.

The report on the 'Concrete Future Objectives of Education and Training Systems', endorsed by the Stockholm European Council in March 2001, identified new areas for joint actions at European level in order to achieve the goals set at the Lisbon European Council. These areas are based on the three strategic objectives of the report; i.e. improving the quality and effectiveness of education and training systems in the European Union, facilitating access for all to education and training systems, and opening up education and training systems to the wider world.

In Barcelona, in March 2002 the European Council endorsed the Work Programme on the follow-up of the Objectives Report calling for European education and training to become a world quality reference by 2010.

Furthermore, it called for further action to introduce instruments to ensure the transparency of diplomas and qualifications, including promoting action similar to the Bologna-process, but adapted to the field of vocational education and training.

In response to the Barcelona mandate, the Council of the European Union (Education, Youth and Culture) adopted on 12 November 2002 a Resolution on enhanced cooperation in vocational education and training. This resolution invites the Member States, and the Commission, within the framework of their responsibilities, to involve the candidate countries and the EFTA-EEA countries, as well as the social partners, in promoting an increased cooperation in vocational education and training.

Strategies for lifelong learning and mobility are essential to promote employability, active citizenship, social inclusion and personal development.

Developing a knowledge based Europe and ensuring that the European labour market is open to all is a major challenge to the vocational educational and training systems in Europe and to all actors involved. The same is true of the need for these systems to continuously adapt to new developments and changing demands of society. An enhanced cooperation in vocational education and training will be an important contribution towards ensuring a successful enlargement of the European Union and fulfilling the objectives identified by the European Council in Lisbon. Cedefop and the European Training Foundation are important bodies for supporting this cooperation.

The vital role of the social partners in the socio-economic development is reflected both in the context of the European social dialogue and the European Social Partners framework of actions for the lifelong development of competences and qualifications, agreed in March 2002. The social partners play an indispensable role in the development, validation and recognition of vocational competences and qualifications at all levels and are partners in the promotion of an enhanced cooperation in this area.

The following main priorities will be pursued through enhanced cooperation in vocational education and training:

On the basis of these priorities we aim to increase voluntary cooperation in vocational education and training, in order to promote mutual trust, transparency and recognition of competences and qualifications, and thereby establishing a basis for increasing mobility and facilitating access to lifelong learning.

European dimension

- Strengthening the European dimension in vocational education and training with the aim of improving closer cooperation in order to facilitate and promote mobility and the development of inter-institutional cooperation, partnerships and other transnational initiatives, all in order to raise the profile of the European education and training area in an international context so that Europe will be recognised as a world-wide reference for learners.

Transparency, information and guidance

- Increasing transparency in vocational education and training through the implementation and rationalization of information tools and networks, including the integration of existing instruments such as the European CV, certificate and diploma supplements, the Common European framework of reference for languages and the EUROPASS into one single framework.

- Strengthening policies, systems and practices that support information, guidance and counselling in the Member States, at all levels of education, training and employment, particularly on issues concerning access to learning, vocational education and training, and the transferability and recognition of competences and qualifications, in order to support occupational and geographical mobility of citizens in Europe.

Recognition of competences and qualifications

- Investigating how transparency, comparability, transferability and recognition of competences and/or qualifications, between different countries and at different levels, could be promoted by developing reference levels, common principles for certification, and common measures, including a credit transfer system for vocational education and training

- Increasing support to the development of competences and qualifications at sectoral level, by reinforcing cooperation and co-ordination especially involving the social partners. Several initiatives on a Community, bilateral and multilateral basis, including those already identified in various sectors aiming at mutually recognised qualifications, illustrate this approach.

1 Priorities identified in the Resolution on lifelong learning adopted by the Council of the European Union (Education and Youth) on 27 June 2002

2 Priorities identified in the Resolution on the promotion of enhanced European co-operation on vocational education and training approved by the Council of the European Union (Education, Youth and Culture) on 12 November 2002

Developing a set of common principles regarding validation of non-formal and informal learning with the aim of ensuring greater compatibility between approaches in different countries and at different levels.

Quality assurance

- Promoting cooperation in quality assurance with particular focus on exchange of models and methods, as well as common criteria and principles for quality in vocational education and training.

- Giving attention to the learning needs of teachers and trainers within all forms of vocational education and training.

The following principles will underpin enhanced cooperation in vocational education and training:

- Cooperation should be based on the target of 2010, set by the European Council in accordance with the detailed work programme and the follow-up of the Objectives report in order to ensure coherence with the objectives set by the Council of the European Union (Education, Youth and Culture).

- Measures should be voluntary and principally developed through bottom-up cooperation.

- Initiatives must be focused on the needs of citizens and user organizations.

- Cooperation should be inclusive and involve Member States, the Commission, candidate countries, EFTA-EEA countries and the social partners.

The follow-up of this declaration should be pursued as follows to ensure an effective and successful implementation of an enhanced European cooperation in vocational education and training:

1. Implementation of the enhanced cooperation in vocational education and training shall be a gradually integrated part of the follow-up of the objectives report. The Commission will reflect this integrated approach in its reporting to the Council of the European Union (Education, Youth and Culture) within the timetable already decided for the work of the objectives report. The ambition is to fully integrate the follow-up work of the enhanced co-operation in vocational education and training in the follow-up of the objectives report.

2. The existing Commission working group, which will be given a similar status to that of the working groups within the follow-up of the objectives report, in future including Member States, EFTA-EEA countries, candidate countries and the European social partners, will continue to work in order to ensure effective implementation and coordination of the enhanced cooperation in vocational education and training. The informal meetings of the Directors General for Vocational Training, which contributed to launching this initiative in Bruges 2001, will play an important role in focusing and animating the follow-up work.

3. Within this framework the initial focus between now and 2004 will be on concrete areas where work is already in progress, i.e. development of a single transparency framework, credit transfer in vocational education and training and development of quality tools. Other areas, which will be immediately included as a fully integrated part of the work of the follow-up of the objectives report organised in eight working groups and an indicator group, will be lifelong guidance, non-formal learning and training of teachers and trainers in vocational education and training. The Commission will include progress on these actions in its report mentioned in paragraph 1.

The ministers responsible for vocational education and training and the European Commission have confirmed the necessity to undertake the

objectives and priorities for actions set out in this declaration and to participate in the framework for an enhanced cooperation in vocational education and training, including the social partners. A meeting in two years time will be held to review progress and give advice on priorities and strategies.

CONTSENS

What is important about the Copenhagen Declaration is that its focus is Vocational Education and Training, the precise area in which the CONTSENS project works. As the document is short it has been reproduced here almost in full so that the partners can study it.

The transition towards a knowledge based economy capable of sustainable economic growth with more and better jobs and greater social cohesion

The CONTSENS project with its focus on wireless technologies and context sensitive courseware characteristics contributes to the knowledge based economy, better jobs and social cohesion.

Acceding member states should be integrated as partners in future cooperation on education and training initiatives at European level from the very beginning.

Partners from Bulgaria and Hungary are full members of the CONTSENS consortium and leaders of the use of wireless technologies for education and training in their countries.

The important role of education as an integral part of economic and social policies, as an instrument for strengthening Europe's competitive power worldwide, and as a guarantee for ensuring the cohesion of our societies and the full development of its citizens.

The use of technology in education is crucial to these goals. The CONTSENS project uses the most innovative of these technologies in mobile learning and the most far-reaching aspects of mobile learning: context sensitive and location sensitive technologies.

Improving the quality and effectiveness of education and training systems in the European Union, facilitating access for all to education and training systems, and opening up education and training systems to the wider world.

The CONTSENS project opens up education and training systems to the wider world by using a technology which is owned and constantly used by every student in every educational institution in every country in the EU, except for their education and training.

Europe will be recognised as a world-wide reference for learners.

It is essential that Europe should be recognized as the leader in the new field of mobile learning as well as other fields. The CONTSENS project achieves by pushing the boundaries of mobile learning so far, to new areas like context sensitive and location sensitive technologies.

THE HELSINKI MANIFESTO (2006) 20 NOVEMBER 2006

The Conference "Networked Business and Government: Something Real for the Lisbon Strategy", held in Helsinki, on 23-24 October 2006, arranged under the auspices of the Finnish Presidency in collaboration with the European Commission, the Finnish Government's Information Society Programme, the Center for Knowledge and Innovation Research CKIR at the Helsinki School of Economics, the European Union Member States, the banking sector, industry and other relevant stakeholders, manifests that new, concrete measures are needed for turning the Lisbon Strategy into a living reality and making Europe more competitive and innovative in a human-centric way.
The Finnish Presidency has given priority to the need to strengthen European global competitiveness and innovation in the framework of a revitalized Lisbon strategy, the i2010 policy and the European Programme for Competitiveness and Innovation (CIP) through necessary structural reforms and more efficient use of Information and Communication Technology (ICT).

There are justified concerns about European global competitiveness in productivity and creativity for innovation. The productivity gap with the United States is increasing and European companies invest less in R&D compared with USA.

Strong economic growth in Asian countries such as China and India attracts not only international manufacturing and services but also international R&D units for innovation.

The Helsinki Conference considered that in order to improve its global competitive position, Europe needs immediate and strong measures to boost its economic growth through productivity and innovation for job creation in 2007-2013. There is also an urgent need for institutional, structural and financial changes at EU, national and regional level to facilitate focused and innovation-based growth for Europe's global competitiveness.

These measures should strengthen overall entrepreneurship and risk-taking as well as borderless mobility, interoperability and compatibility of EU-wide services and businesses, including the mobility of knowledge workers and knowledge work.

While the overall education level is very high in Europe, it is vital for Europe to take the opportunity to create a globally competitive unique profile as a knowledge-intensive service economy. The R&D for knowledge-intensive service economy business and technology innovations should also facilitate the creation of single European markets for jobs and growth.

Therefore the Helsinki Conference promotes the immediate deployment of concrete EU-wide measures to support the European policy for competitiveness and innovation. This calls for concrete measures also in terms of structural and institutional changes for productivity and innovation at EU and national level. These measures should have a vitalizing impact on the way Europe implements mutually agreed on strategic priorities for growth and job creation. However, this also means reallocation of funding and other resources in favor of more dynamic and sustainable sources of competitiveness and innovation. These concrete measures to promote Europe's global competitiveness should be prepared and implemented right from the start of the first budget period of the 7th framework programme in the 2007-2008.

The Conference "Networked Business and Government: Something Real for the Lisbon Strategy" identified the potential domains where there already is a high readiness to boost European productivity and innovativeness for growth and job creation within the frame of the Lisbon Strategy, the i2010 policy and the European Program for Competitiveness and Innovation (CIP).

The Helsinki Manifesto road map for a self-renewing, human-centric and competitive Europe is set out below. There is also a need to clearly define who is responsible and what must be done to achieve these goals. The process should be continually monitored and evaluated to keep it on track and rectify slippages. All these initiatives would boost EU competitiveness but there is still a need to prioritize. Priority should be given to measures where it can already be demonstrated that the economic gains and other benefits can quickly and easily be achieved.

List of the proposed measures to boost European competitiveness and innovativeness during the Conference "Networked Business and Government: Something Real for the Lisbon Strategy":

1. Implementation of a European Network of Living Labs, a user-centric platform for products and services in co-creation processes
2. Reap the benefits of re-using bank infrastructure: realize e-invoicing with interoperable standards
3. Break down internal boarders for ICT services (keywords: roaming, ICT-interoperability, eID, secure pan-European e-services)
4. Renewing of the European innovation system
5. Creation of a market for innovative products and services supported by sufficient resources for R&D and innovation
6. Focus on services innovation, and establish services science, management and engineering as an academic discipline for driving innovation in services throughout Europe
7. Concrete funding and support for technology start-ups; an enabling entrepreneurial environment with both government and private sector funding available, commitment of early buyers beyond the project scope
8. Ensure data integration between IT-solutions to enable productivity in service provision

9. Intensify integration of retail banking market with full and prompt implementation of the Payments Services Directive (realise a single market in payments) and integration of key financial market infrastructure (Target2-Securities)
10. Implementation of European wide compatible e-invoicing system - common standards and definitions
11. Move from an organization-centered system to a citizen-centered system
12. Bring people actively to the information society (good basis for great PPP initiative for example to give ICT skills to 10 million adult people in Europe over a 3-year period).

CONTSENS

The CONTSENS project contributes to the European global competiveness in productivity and creativity for innovation.

Mobile learning is the future of learning, and the use of wireless technologies will be one of the key features of the most competitive and productive economy in the world.

The CONTSENS project prepares the ground for the transition from an organization-centered system to a citizen-centered system.

Mobile learning is mainly focused on the single person and not on an organization or a system. Mobility assures the user to access to the knowledge anywhere and anytime and to select the information he needs (context sensitive and location sensitive). The CONTSENS project is contributing to this.

The CONTSENS project contributes to the need to focus on services innovation and establish services science, management and engineering for driving innovation in services throughout Europe.

Wireless technologies provide clearly new and innovative forms of education and training: these instruments are able to introduce the new European generations to a new brand of services, such as provision of location specific and context sensitive courseware.

The CONTSENS project contributes to bring people actively to the information society.

Education and training are the first steps to bring people to an advanced and technological approach to manage knowledge, in particular the new generations, especially with context sensitive and location sensitive characteristics as a major factor.

EUROPEAN YEAR OF CREATIVITY AND INNOVATION (2009)

Europe needs to boost its capacity for creativity and innovation for both social and economic reasons. The European Council has repeatedly recognised innovation as crucial to Europe's ability to respond effectively to the

challenges and opportunities of globalisation. In December 2006, for example, it noted that “Europe needs a strategic approach aimed at creating an innovation-friendly environment where knowledge is converted into innovative products and services”. The modern economy, with its emphasis on adding value by means of better use of knowledge and rapid innovation, requires a broadening of the creative skills base involving the whole population. In particular, there is a need for skills and competences that enable people to embrace change as an opportunity and to be open to new ideas that promote innovation and active participation in a culturally diverse, knowledge-based society.

Innovative capacity is closely linked with creativity as a personal attribute based on cultural and interpersonal skills and values. To be harnessed to full advantage, it needs to be widely disseminated throughout the population. The role of education and training as a determining factor in enhancing creativity, innovation performance and competitiveness was again emphasised by the European Council in March 2007 when it put forward the concept of the “knowledge triangle” comprising education, research and innovation.

The “Education and Training 2010” work programme and the Community Action Programmes in the fields of Lifelong Learning and Youth policies, and in related fields such as culture, provide opportunities at European level for exchanging experience and good practices and for deepening stakeholders’ understanding of ways of promoting creativity and a capacity for innovation. In particular, the Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning provides a European reference framework covering eight key competences (defined as “knowledge, skills and attitudes”) which encompass a broad agenda for education and training at all stages of life. Many of these competences are relevant to creativity and innovation in the personal, interpersonal and intercultural fields, including "mathematical competence and basic competences in science and technology", "digital competence", "learning to learn", “social and civic competences”, “sense of initiative and entrepreneurship” and “cultural awareness and expression”.

Declaring a European Year is an effective way of helping to meet challenges by raising public awareness, disseminating information about good practices, stimulating research, creativity and innovation and promoting policy debate and change. By combining action at Community, national, regional and local levels, and creating openings for participation by interested stakeholders, it can generate synergies in information and awareness-raising activities, and help to focus policy debate on a specific issue.

The aim for 2009 is to promote creativity and capacity for innovation as key competences for all. This is consistent with the Commission Communication “*A broad-based innovation strategy for the EU*” which notes that “without education as a core policy, innovation will remain unsupported. It must promote talent and creativity from an early stage.” The Lifelong Learning Programme is thus an important vehicle for supporting this initiative. Other policies and programmes in related domains, such as enterprise, the

information society, research, cohesion or rural development, will support this European Year where appropriate.

Background

Creativity is a human characteristic that manifests itself in many fields and contexts, from works of art, design and craft to scientific breakthroughs and entrepreneurship, including social entrepreneurship. The multidimensional character of creativity implies that knowledge in a wide range of different domains – both technological and non-technological - can be the basis for creativity and innovation. Innovation is the successful realisation of new ideas; creativity is the *sine qua non* of innovation. New products, services, processes, strategies and organisations require people to generate new ideas and associations between them. Competences such as creative thinking and advanced problem-solving are therefore as essential in economic and social as in artistic fields.

The communities of creativity and innovation – those of the arts on the one hand and technology and business on the other – are often not well connected. An important contribution of the Year will be to bridge these worlds, by showing with concrete examples the value of considering the concepts of creativity and innovation together in a number of domains, such as in schools, universities, private and public organisations.

An important and often untapped source of innovation can be found outside of an organisation: the user. User needs can be the starting point for developing, improving and/or designing new, more competitive products and services. With appropriate competences, users can not only provide an innovation-friendly market environment as consumers, but also solve unforeseen problems and participate in the development of products and services themselves. The positive effect of consumer involvement explains why producers of new technologies who work closely with users have a good success rate with innovation.

The relationship between competences and innovation is dynamic: people's attitudes as well as their skills and knowledge help drive innovation, and innovation in turn contributes to changing demand for skills, in a society as well as at company level. No single skills mix is a recipe for successful innovation in all circumstances. Innovation processes are becoming increasingly networked, multidisciplinary and problem-oriented, setting ever higher demands for generic skills such as learning to learn and a capacity to interact effectively with others. Hence the importance of recognising competences as “knowledge, skills and attitudes”, as does the Recommendation on key competences. Attitudes to change may be as important as more formal qualifications.

A fundamental quality underpinning creative and innovative capacity is motivation and a sense of initiative. The foundations of such qualities are laid in the early phases of personal development. Creativity occupies a significant share of the curriculum in early school years, but its share diminishes

drastically in the course of pupils' education. One major challenge facing education systems is, therefore, how to keep the spark of creativity alive in children and young people. The responses have included, for instance, putting greater emphasis on creative subjects, developing new approaches to learning and fostering various extra-curricular activities.

At the same time, intercultural and interpersonal competences are vital to equip individuals to participate in an effective and constructive way in social and working life, particularly in increasingly diverse societies. Civic competence equips individuals to participate fully in civic life, based on knowledge of social and political concepts and structures and a commitment to active and democratic participation. These skills and knowledge sets are therefore also important to foster creativity and a capacity for innovation.

The mounting pressure to develop creative, innovative and critical skills implies that traditional teaching approaches based on direct instruction or lecturing are no longer adequate. They are being replaced by more learner-focused models that are based on the learner's active involvement in the process of reflection and interpretation. Learning is achieved together with others, creatively changing social practices and habits. An organisational culture supporting openness and creativity is a vital precondition for successful learning and innovation.

1. The overall objective of the European Year of Creativity and Innovation shall be to support the efforts of the Member States to promote creativity, through lifelong learning, as a driver for innovation and as a key factor for the development of personal, occupational, entrepreneurial and social competences and the well-being of all individuals in society.

2. The specific objectives of the European Year of Creativity and Innovation shall be to highlight, *inter alia*, the following factors which can contribute to promoting creativity and a capacity for innovation:

a) providing an environment which is favourable to innovation, flexibility and adaptability in a rapidly changing world and creative management of diversity; all forms of innovation, including social and entrepreneurial innovation, should be taken into account;
b) stimulating aesthetic sensitivity, emotional development, lateral thinking and intuition and fostering creativity in all children from the earliest stages of development, including pre-school care;

c) raising awareness of the importance of creativity, innovation and entrepreneurship for personal development, as well as for economic growth and employment; and fostering entrepreneurial mindsets, particularly among young people;

d) promoting education in basic as well as advanced mathematic, scientific and technological skills conducive to technological innovation;

e) fostering openness to change, creativity and problem-solving as competences conducive to innovation which are transferable to a variety of occupational and social contexts;

f) broadening access, and reducing disparities in access, to a variety of creative forms of self-expression, throughout formal education, and particularly during young people's most formative years, so that the personal development of some is not hindered;

g) raising awareness among people that creativity, knowledge and flexibility are important in a time of rapid technological changes and global integration for a prosperous and fulfilling life; and equipping people to improve their career opportunities in all areas where creativity and a capacity for innovation play an important role;

h) promoting closer links between arts, business and schools and universities;

i) developing creativity and innovative capacity through non-formal and informal youth activities;

j) encouraging those who are not on the labour market to develop their creative potential for personal fulfilment and those who seek employment to enhance their attractiveness on the labour market;

k) promoting design as a creative activity which significantly contributes to innovation, as well as innovation management and design management skills, including basic notions of protection of intellectual property;

l) highlighting openness to cultural diversity as a means of fostering intercultural communication and artistic cross-fertilisation; and

m) developing creativity and innovative capacity in private and public organisations through training, and encouraging organisations to make better use of the creative capacities of individuals, employees as well as of customers or users.

CONTSENS

Europe needs a strategic approach aimed at creating an innovation-friendly environment where knowledge is converted into innovative products and services

Mobile learning is the most innovative form of education and training and the project is well placed to create an innovation-friendly environment as it pushes the innovative field of mobile learning onto the new horizons of context sensitivity and location sensitivity.

The role of education and training as a determining factor in enhancing creativity, innovation performance and competitiveness was again emphasised by the European Council in March 2007 when it put forward the

concept of the "knowledge triangle" comprising education, research and innovation.

The CONTSENS project addresses all aspects of the knowledge triangle: mobile learning is a highly innovative form of training, it is the next generation of education and is based on ground-breaking research to develop a system based on RFID or IMS to bring for the first time the concepts of location and context sensitivity into courses.

Developing new approaches to learning

The CONTSENS project takes the latest new approach to learning, mobile learning, and brings it to new dimensions of context sensitivity and location sensitivity.

Raising awareness of the importance of creativity, innovation and entrepreneurship for personal development, as well as for economic growth and employment; and fostering entrepreneurial mindsets, particularly among young people

Young people are already, in great measure, expert users of mobile telephony. It is the job of the CONTSENS project to harness this expertise for use in education and training.

Raising awareness among people that creativity, knowledge and flexibility are important in a time of rapid technological changes and global integration for a prosperous and fulfilling life

The future is wireless. The CONTSENS project mirrors the rapid technological changes and global integration of mobile telephony and makes them available in educational contexts.

Developing creativity and innovative capacity in private and public organisations through training

The CONTSENS project is based on creativity and innovative capacity as it sets out for the first time to bring location sensitive and context sensitive technologies into education.

THE BORDEAUX COMMUNIQUE (2008) 27 NOVEMBER 2008

The four objectives set in Bordeaux for the period 2009-2010 are:

- Implementing the tools and schemes for promoting cooperation in the field of VET
- Heightening the quality and attractiveness of VET systems
- Improving the links between VET and the labour market
- Strengthening cooperation arrangements.

CONTSENS

The Contsens project can implement the tools for promoting cooperation in the field of VET, heighten the attractiveness of VET systems by putting them in contact with state of the art technologies, improve the links between VET and the labour market by developing just-in-time skills and strengthen cooperation between various educational sectors.